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TABLE 1. TEST TIRES

| TIRE NO. | MANUFACTURER | % OF MARKET* | MODEL | CARCASS TYPE | TREAD TYPE |
|----------|-------------------|--------------|--------------------------|--------------|------------|
| 1a&b | Goodyear | 20% | Unisteel-2 | Radial | Rib |
| 2a&b | Goodyear | | Himiler Special | Bias | Rib |
| 3a&b | Goodyear | | Custom Quiet Drive | Bias | Rib |
| 4a&b | Goodyear | | SuperHiMiler | Bias | Rib |
| 5a&b | Goodyear | | Custom Hi-Miler | Bias | Rib |
| 6a&b | Firestone | 18% | Power Drive | Bias | Lug |
| 7a&b | Firestone | | Transteel | Radial | Rib |
| 8a&b | Firestone | | Long Hauler | Bias | Rib |
| 9a&b | Firestone | | Super All Traction | Bias | Lug |
| 10a&b | Kelly-Springfield | 6.5% | Registered Armor-Trac | Bias | Rib |
| 11a&b | Kelly-Springfield | | Registered Drive Trac | Bias | Lug |
| 12a&b | General | 6.1% | GQT | Bias | Rib |
| 13a&b | General | | QCL | Bias | Lug |
| 14a&b | Michelin | 6.0% | XZA | Radial | Rib |
| 15a&b | Michelin | | XZZ | Radial | Rib |
| 16a&b | Uniroyal | 5.2% | Fleetmaster Triple Tread | Bias | Rib |
| 17a&b | Uniroyal | | Fleetmaster Superlug | Bias | Lug |
| 18a&b | B.F. Goodrich | 5.0% | Extra Miler XL | Bias | Rib |
| 19a&b | B.F. Goodrich | | Traction Express Custom | Bias | Lug |
| 20a&b | Sears | 4.6% | Plus Mileage Rib | Bias | Rib |
| 21a&b | Sears | | Silent Trac | Bias | Lug |
| 22a&b | Armstrong | 4.5% | SD-200 | Bias | Rib |
| 24a&b | Dayton | 2% | Thorobred Premium ESD | Bias | Rib |
| 26a&b | Recap | | Uniroyal Fleet Carrier | Bias | Rib |

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Vertical Load
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Vertical Load
Inflation Pressure
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Vertical Load
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versus s curve suggests that higher braking force will be obtained from the rib-type pattern. This finding should be confirmed with over-the-road tests.

The open tread pattern undoubtedly improves overall tire performance in mud and snow as well as on wet pavement. It would be unfair to grade this, or any, tread pattern solely on the basis of flat bed tests.

EFFECT OF WEAR

The direct effect of wear is to change the tread pattern as well as the tread profile. Minor pattern components, such as kerfs and sipes, are seldom as deep as grooves. A worn tire is retained in service on the basis of its remaining groove depth, although the altered pattern may change its traction performance considerably. This statement is more true for wet traction performance than dry.

It was found in the present test program that groove depth reduction in the worn profile has a significant influence on low-speed dry-traction performance. Tread pattern stiffness is primarily responsible for the distinctive differences in the following data (Table 3) obtained from a test series in which the rib-type II pattern (Fig. 6B) was tested with three levels of tread wear.

The data in Table 3 are derived from measurements made at rated pressure (85 psi) and rated load (5430 lb). The new tire had no highway break-in. The worn tires were run on a loaded test vehicle for 1500 miles to insure full service growth. They

were then ground to specified tread depths—0.25 in for half worn; 0.0625 in for fully worn—and again run on the highway for 200 miles. The data in Table 3 were taken from three separate tires, one for each state of wear.

The reasoning presented earlier for the influence of tread pattern also applies to the effect of wear. Table 3 shows that tire traction stiffness (C_s, C_α, C_γ) increases as the tread is worn. This increase derives from the reduction in lateral and longitudinal tread compliance which is present to a greater or lesser degree in all patterns. The tire spring rates, mainly measures of carcass compliance, are essentially unaffected.

Figs. 10 and 11 illustrate the effect of wear on lateral force generation capability. As may be anticipated from the variation in C_γ (Table 3), the lateral force due to camber (camber thrust) is extremely sensitive to wear. The carpet plot comparison in Fig. 11 shows the fully worn tire developing, in some instances, more than twice the camber thrust obtained from the new tire operated under the same conditions.

The increase in traction stiffness with tire wear is definitely a dry-traction phenomenon. The reduction in groove depth will have a highly adverse effect where wet traction is concerned. Data of the type shown in Table 3 should not be taken out of context in evaluating overall tire behavior.

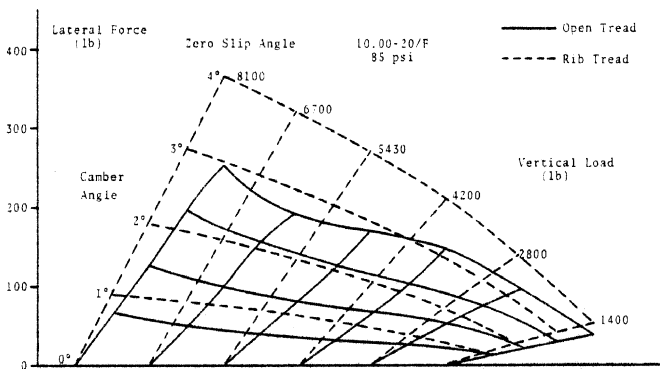


Fig. 9 - Lateral force versus camber angle and vertical load on open and rib-type II tread patterns

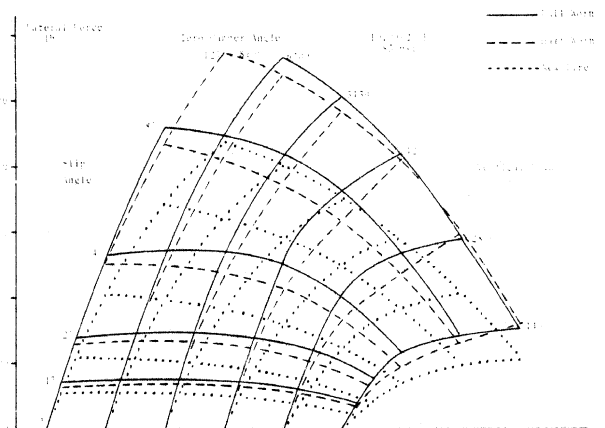


Fig. 10 - Lateral force versus slip angle and vertical load on 10.00-20/F tire in three states of wear

Table 3 - Measured Mechanical Properties for Nylon 10.00-20/F Rib-Type II Tire Design in Three States of Wear

| | New | Half Worn | Fully Worn |
|----------------------|--------|-----------|------------|
| C_s , lb/unit slip | 42,000 | 52,000 | 60,000 |
| C_α , lb/deg | 523.4 | 690.5 | 771.5 |
| C_γ , lb/deg | 69.0 | 104.4 | 147.7 |
| K_y , lb/in | 1,618 | 1,784 | 1,886 |
| K_z , lb/in | 4,700 | 3,939 | 4,600 |

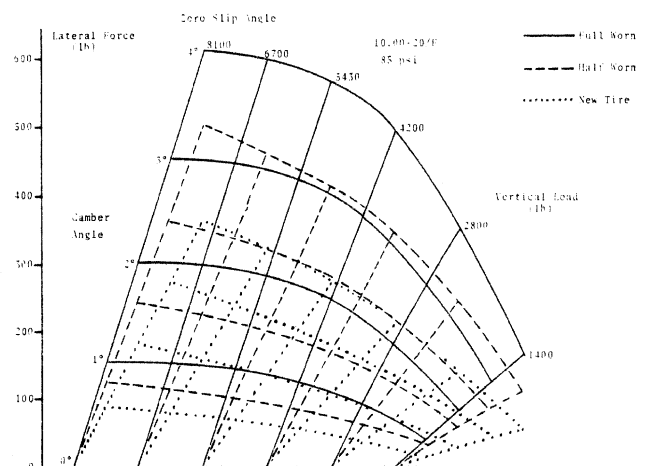


Fig. 11 - Lateral force versus camber angle and vertical load on 10.00-20/F tire in three states of wear

measured increase in C_{α} and by the carpet plot comparison given in Fig. 7.

Fig. 7 represents the extreme in force variation found in this study of ply rating and tire size. More tests are needed to establish firmly the trends evident in Table 2.

TREAD PATTERN INFLUENCE

It is widely recognized that the tread pattern is a very important factor in wet traction performance. However, it also appears that pattern influence is noticeable in the data from low-speed dry-traction flat bed tests. Fig. 6 shows the three 10.00-20/F nylon tires, similar except for tread design, that were tested in this study. Listed beneath the tires are the five basic mechanical properties defined earlier. The values shown were measured at rated inflation pressure, 85 psi, and rated load, 5430 lb.

From an examination of the data, it appears that tread design has little influence on the tire spring rates K_y and K_z . The cornering stiffness, C_{α} , was affected very little although the open tread did generate slightly higher lateral force at higher slip angles than the rib-type pattern (see comparison presented in Fig. 8). The camber stiffness, C_{γ} , was substantially changed by the tread pattern. In Fig. 9, it is seen that the open tread generated considerably less lateral force (or camber thrust) than the rib-type pattern.

The marked decrease in longitudinal stiffness, C_s (Fig. 6),

is a result of increased tread compliance*. It would be of considerable interest to compare the peak braking traction of the rib-type and open tread tires. Although the force measuring equipment employed in these tests was incapable of responding to a longitudinal slip much above $s = 0.04$ ** , the higher initial slope (indicated by the measured C_s) of the F_x

*This is to be expected in the open pattern which has approximately twice the void area of the closed rib-type pattern.
 **Far below that required for peak braking force generation.

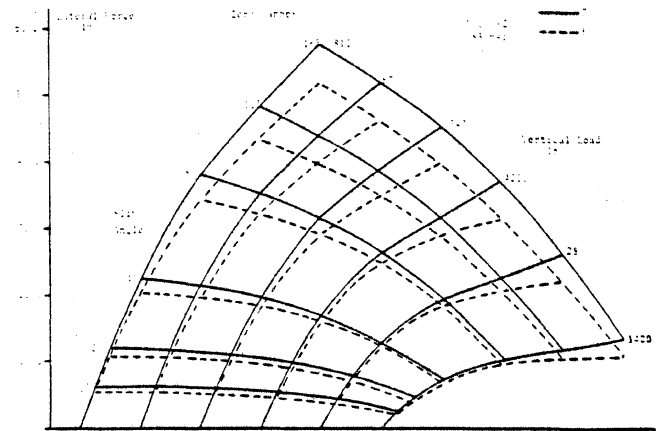


Fig. 7 - Comparison of lateral force versus slip angle and vertical load on 10.00-20 tires with ply ratings F and G

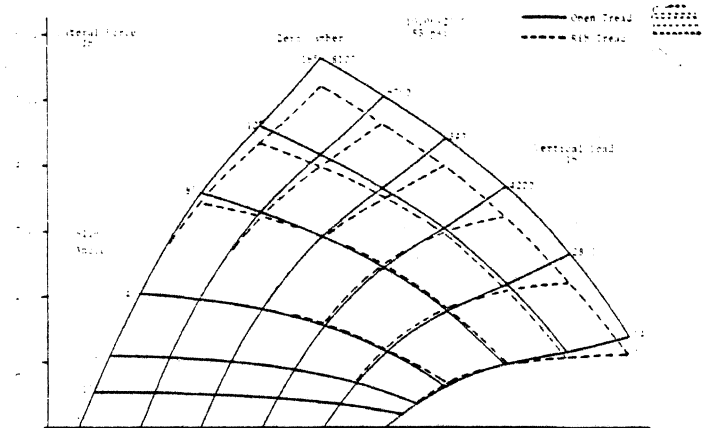


Fig. 8 - Lateral force versus slip angle and vertical load on open and rib-type II tread patterns

Table 1 - Tires Tested to Determine Influence of Ply Rating and Tire Size on Mechanical Properties

| Tire Size and Rating | Test Pressure, psi | Test Load, lb |
|----------------------|--------------------|---------------|
| 9.00-20/E | 80 | 4160 |
| 9.00-20/F | 85 | 4250 |
| 10.00-20/F | 85 | 5430 |
| 10.00-20/G | 85 | 5430 |
| 11.00-22/F | 85 | 6290 |
| 11.00-22/G | 90 | 6140 |

Table 2 - Measured Mechanical Properties for Three Sets of Two Tires Which Differ Only in Ply Rating

| Tire Rating | 9.00-20 | | 10.00-20 | | 11.00-22 | |
|-----------------------|---------|--------|----------|--------|----------|--------|
| | E | F | F | G | F | G |
| C_s , lb/unit slip | 41,000 | 41,000 | 42,000 | 50,000 | 47,000 | 51,000 |
| C_{α} , lb/deg | 466.1 | 479.4 | 523.4 | 588.8 | 542.7 | 536.9 |
| C_{γ} , lb/deg | 59.6 | 64.4 | 69.0 | 74.6 | 63.3 | 62.8 |
| K_y , lb/in | 1,673 | 1,889 | 1,618 | 1,482 | 2,116 | 1,909 |
| K_z , lb/in | 3,824 | 4,122 | 4,700 | 4,363 | 5,578 | 5,850 |

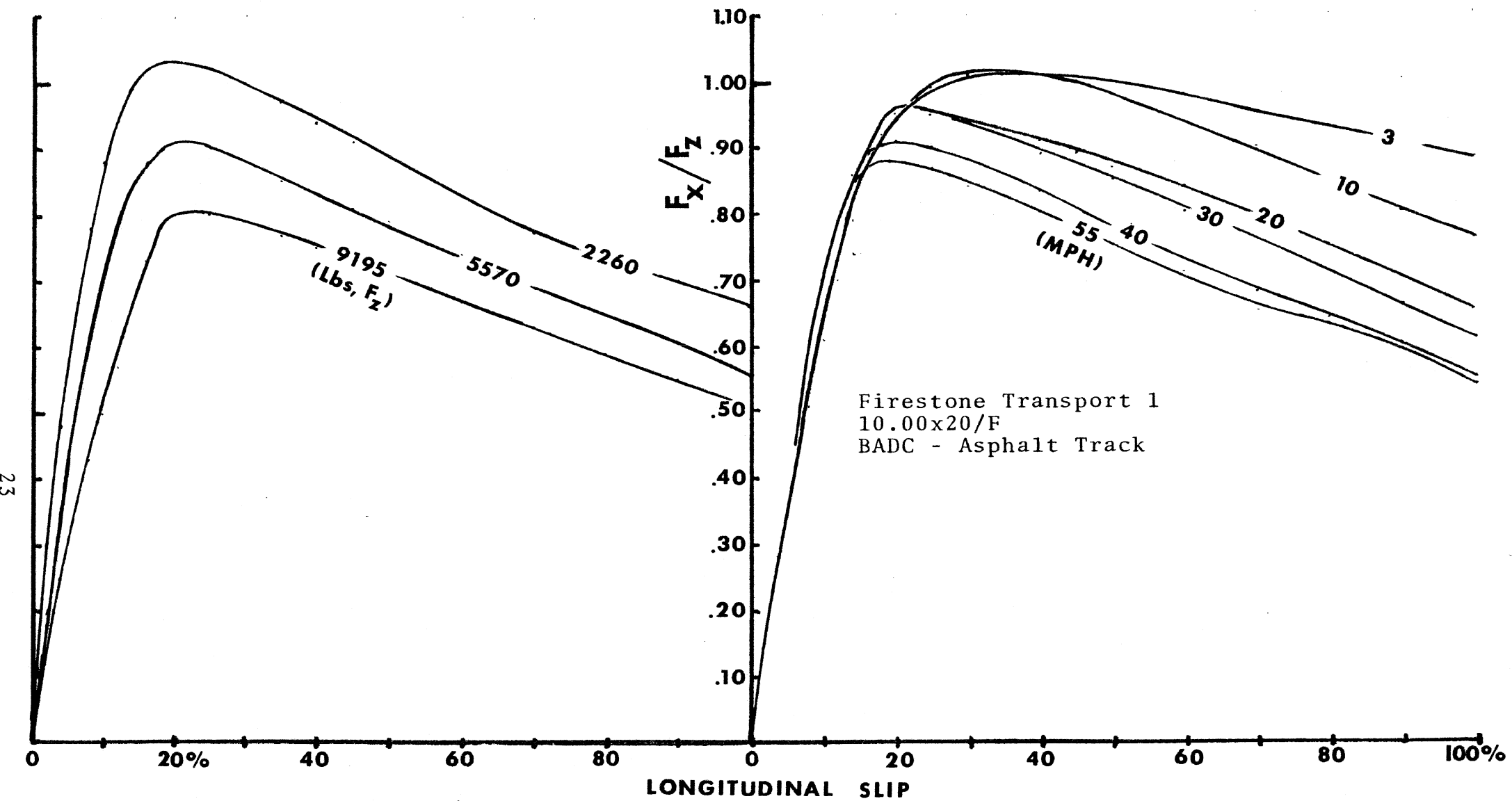


Figure 14. Typical load and velocity influences on the F_x/F_z versus slip behavior of a 10.00x20/F tire.

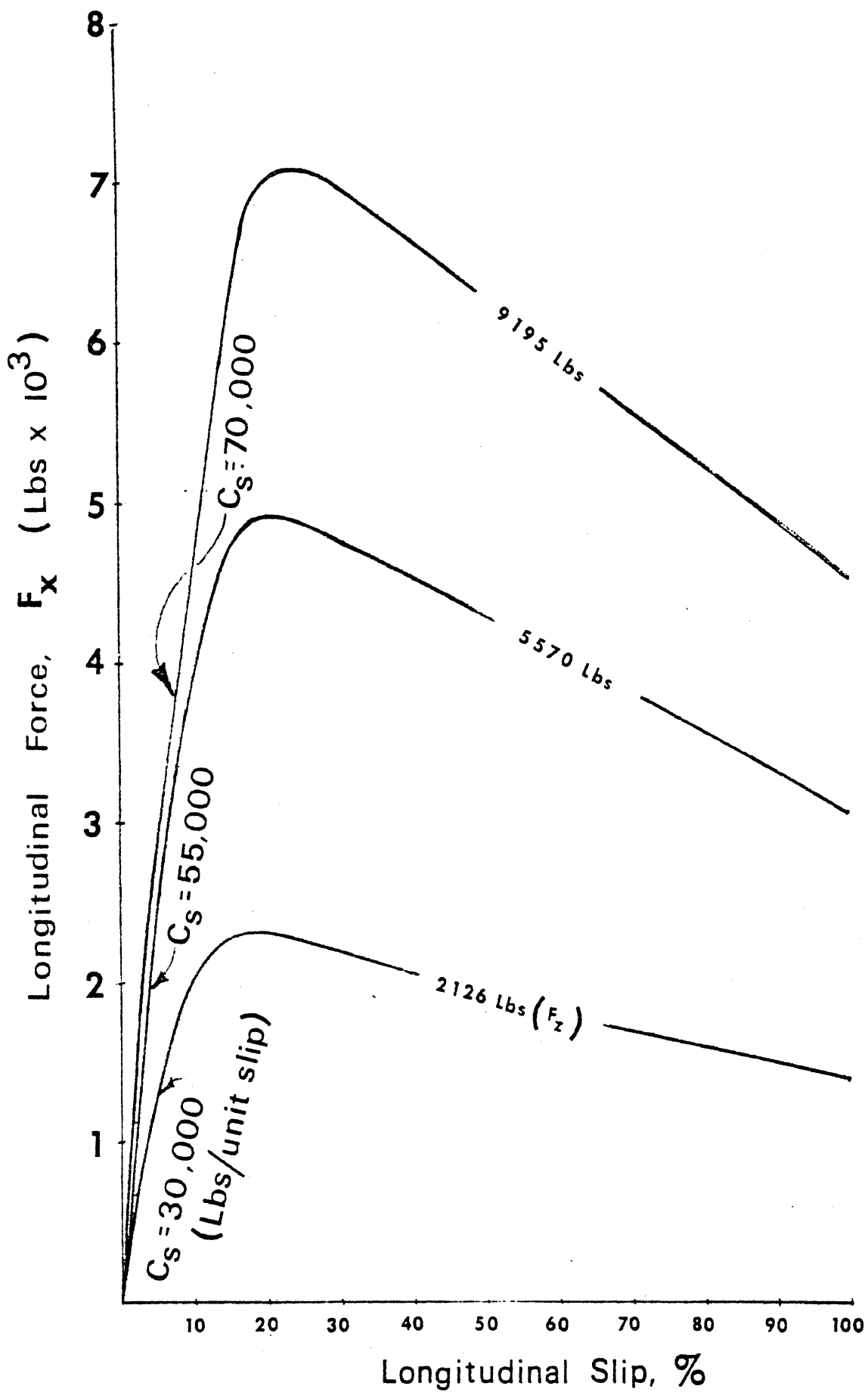


Figure 15. Influence of vertical load on the non-normalized (F_x) versus slip behavior of a Firestone 10.00x20/F on the BADC asphalt surface.

the velocity sensitivity of the peak traction performance of the General Power Jet, 10.00x20/F code G2J10 (a tire examined in the earlier work), was found to be less pronounced than reported earlier.

To demonstrate the influence of pavement surface characteristics on peak and slide traction, the measured results have been summarized as load and velocity sensitivities for each of the two baseline tires tested on the four test surfaces. Figures 20 and 21 illustrate the extent to which the four pavement selections altered the load sensitivities of each tire. While there appears to be a changing rank among the surfaces in terms of the peak and slide traction values of both tires, the two asphalt surfaces generally provided higher peak traction performances than did the two concrete surfaces.

These same data are replotted in Figure 22 to illustrate the manner in which the two baseline tires differ in their generation of braking force on each of the four surfaces. These data illustrate that, although one tire may rank rather consistently higher than another, the spread in their performances may be largely surface-dependent.

Figures 23 and 24 indicate the influence of the pavement differences on velocity sensitivities. Whereas previously reported measurements indicated a profound difference between peak traction performances on concrete and asphalt, these data show basically comparable trends among the two asphalt and two concrete surfaces. However, a few curious departures from the median behavior are observed in Figure 24 in which excursions in the slide values on the BADC asphalt and the peak values on the TRC asphalt are notable.

With these same data plotted in an alternate format, Figure 25 illustrates the manner in which the velocity sensitivities of the two baseline tires differ as measured

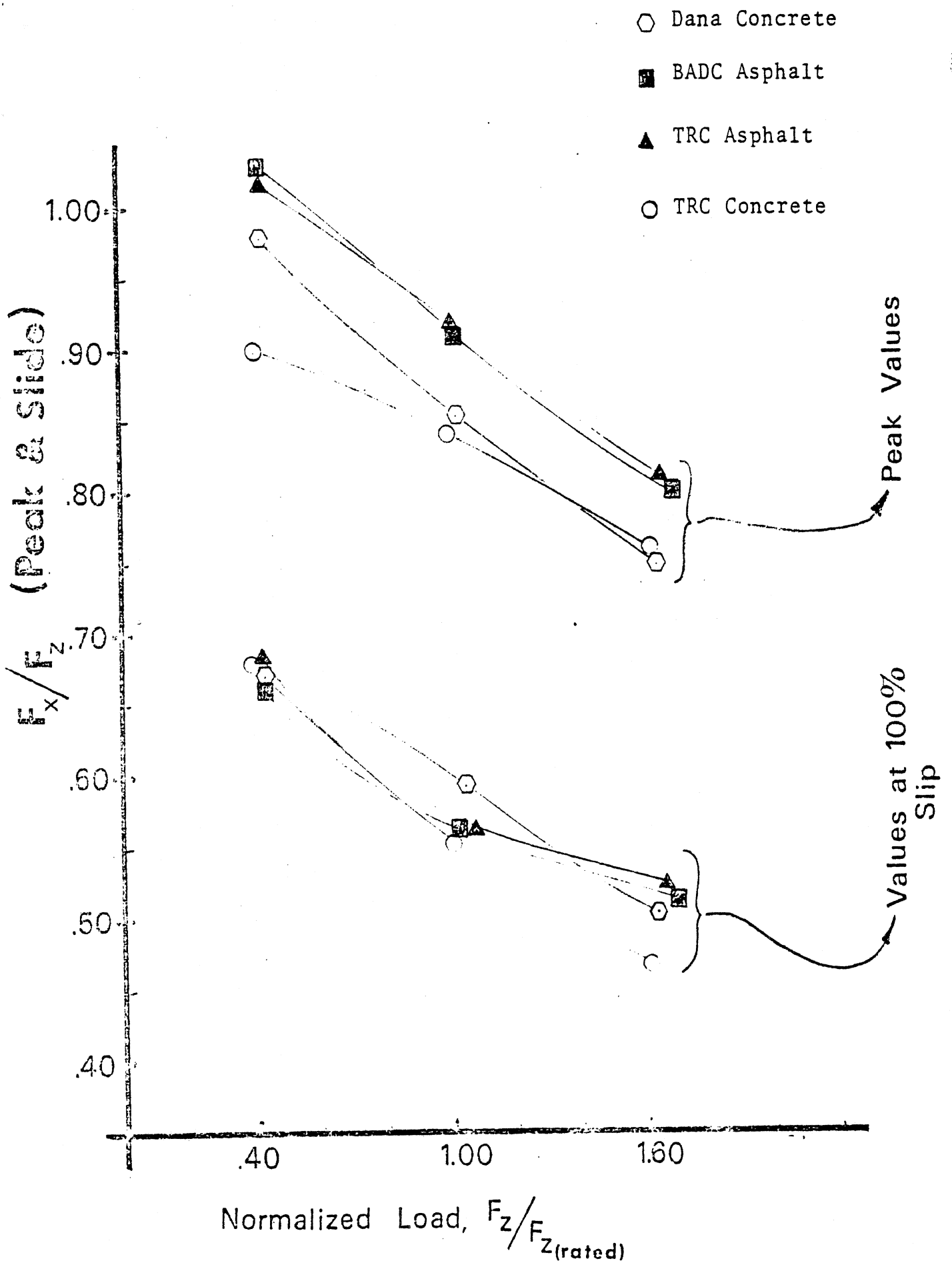


Figure 20. Influence of normalized load on the peak and slide traction of the Firestone Transport 1 (10.00x20/F) on four surfaces.

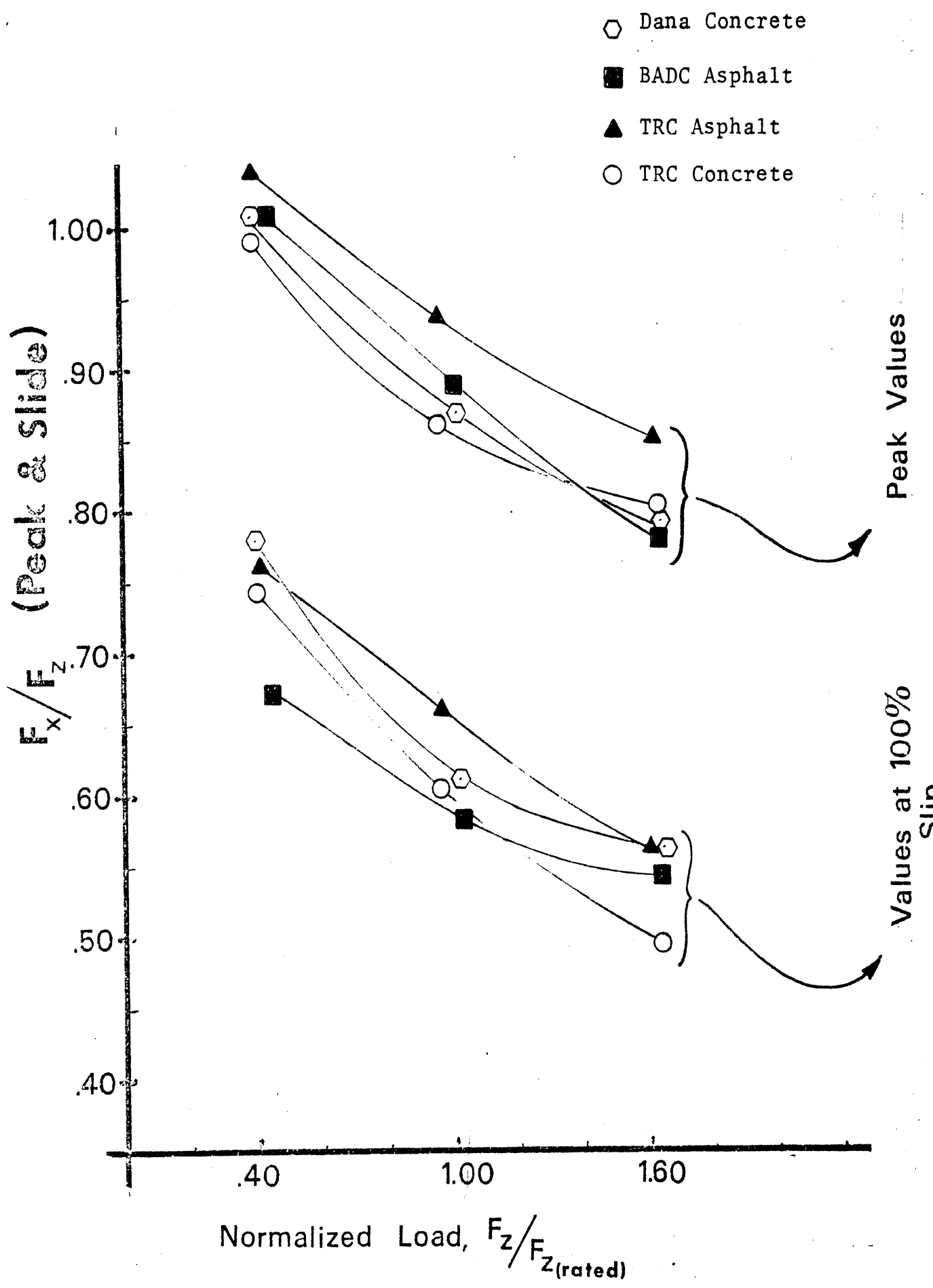


Figure 21. Influence of normalized load on the peak and slide traction of Goodyear Super Hi Miler (10.00x20/F) on four surfaces.

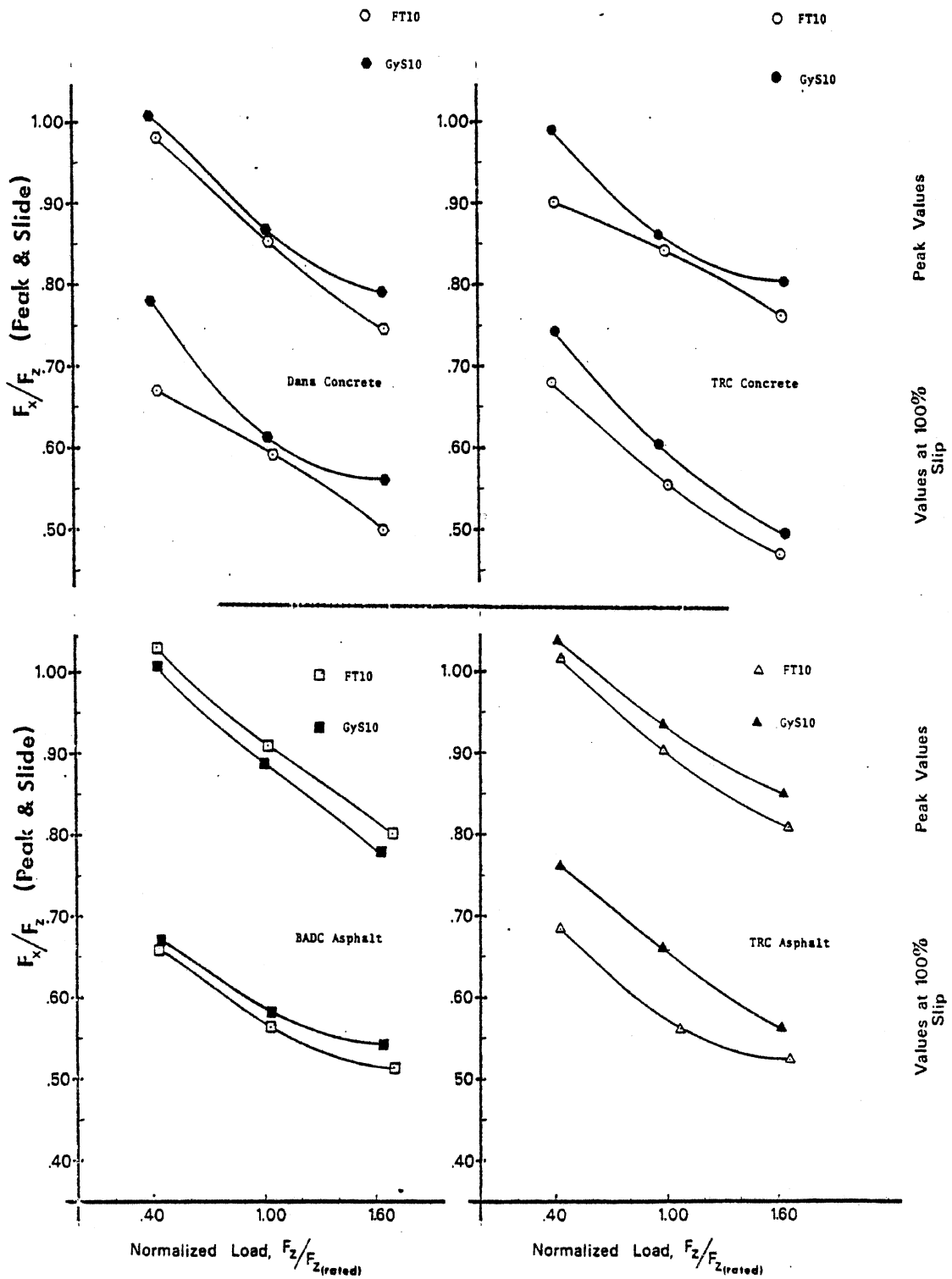


Figure 22. The differing influence of pavement surface on the load sensitivities of two tires.

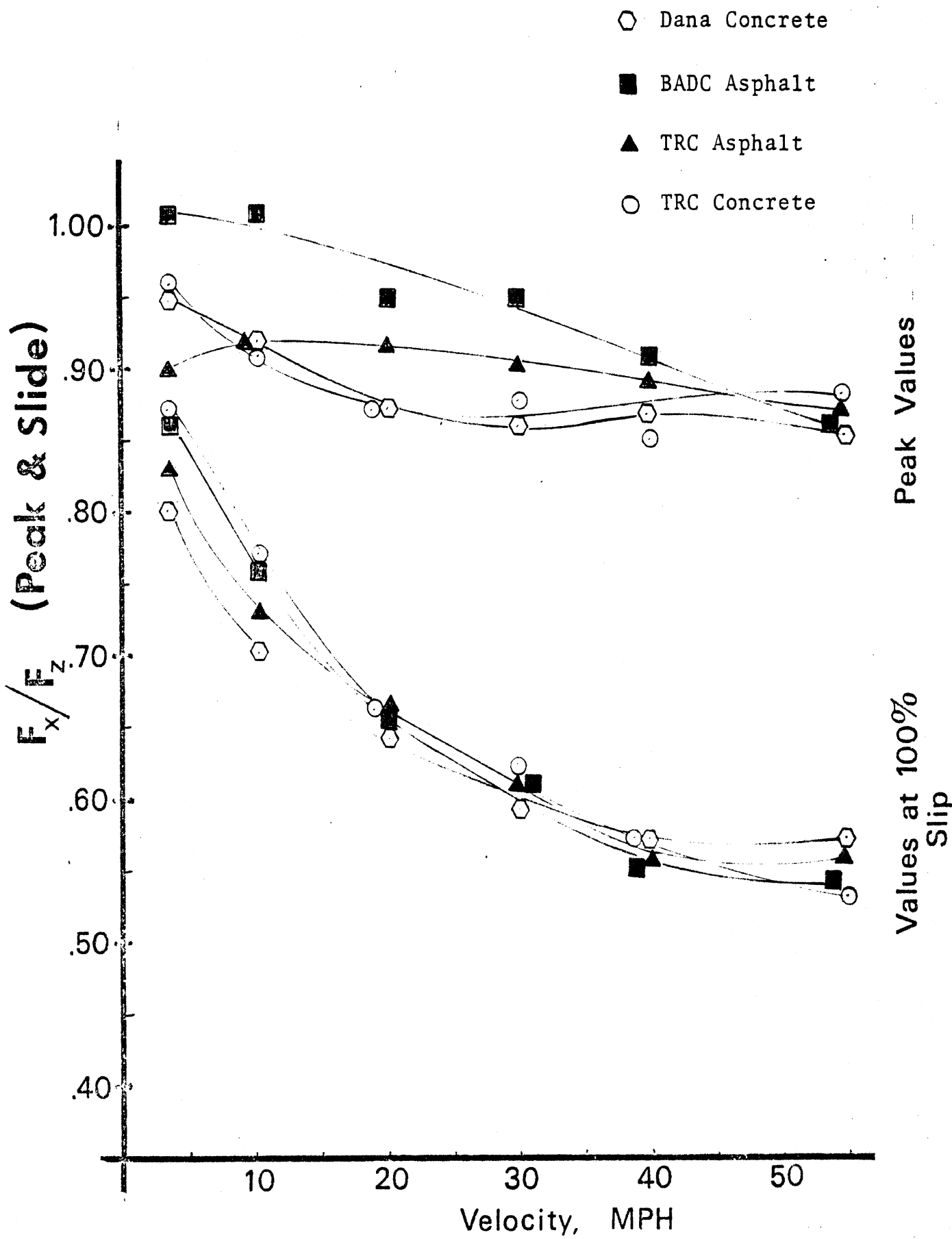


Figure 23. Influence of test velocity on the peak and slide traction of the Firestone Transport 1 (10.00x20/F) on four surfaces.

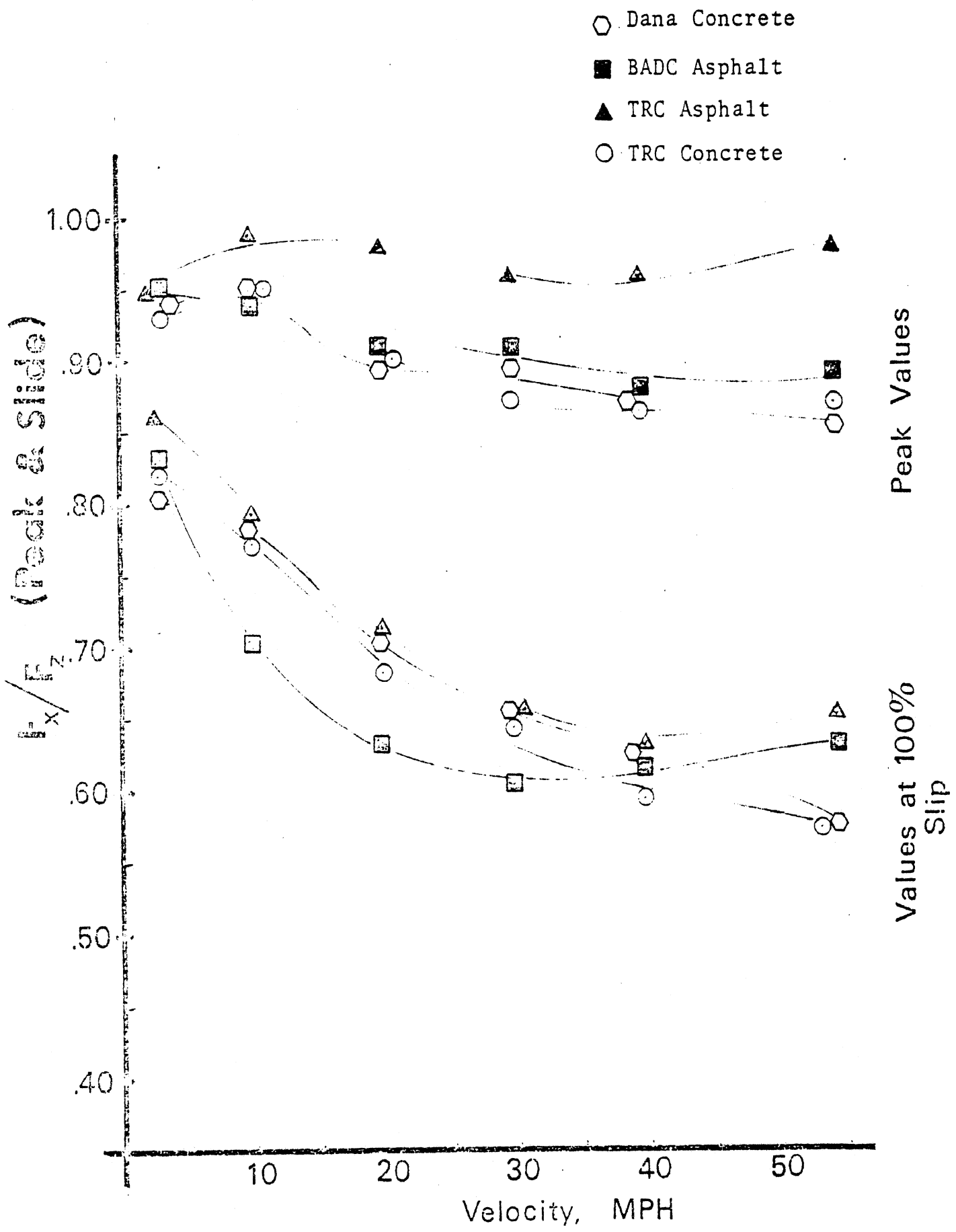


Figure 24. Influence of test velocity on the peak and slide traction of the Goodyear Super Hi Miler (10.00x20/F) on four surfaces.

(B)

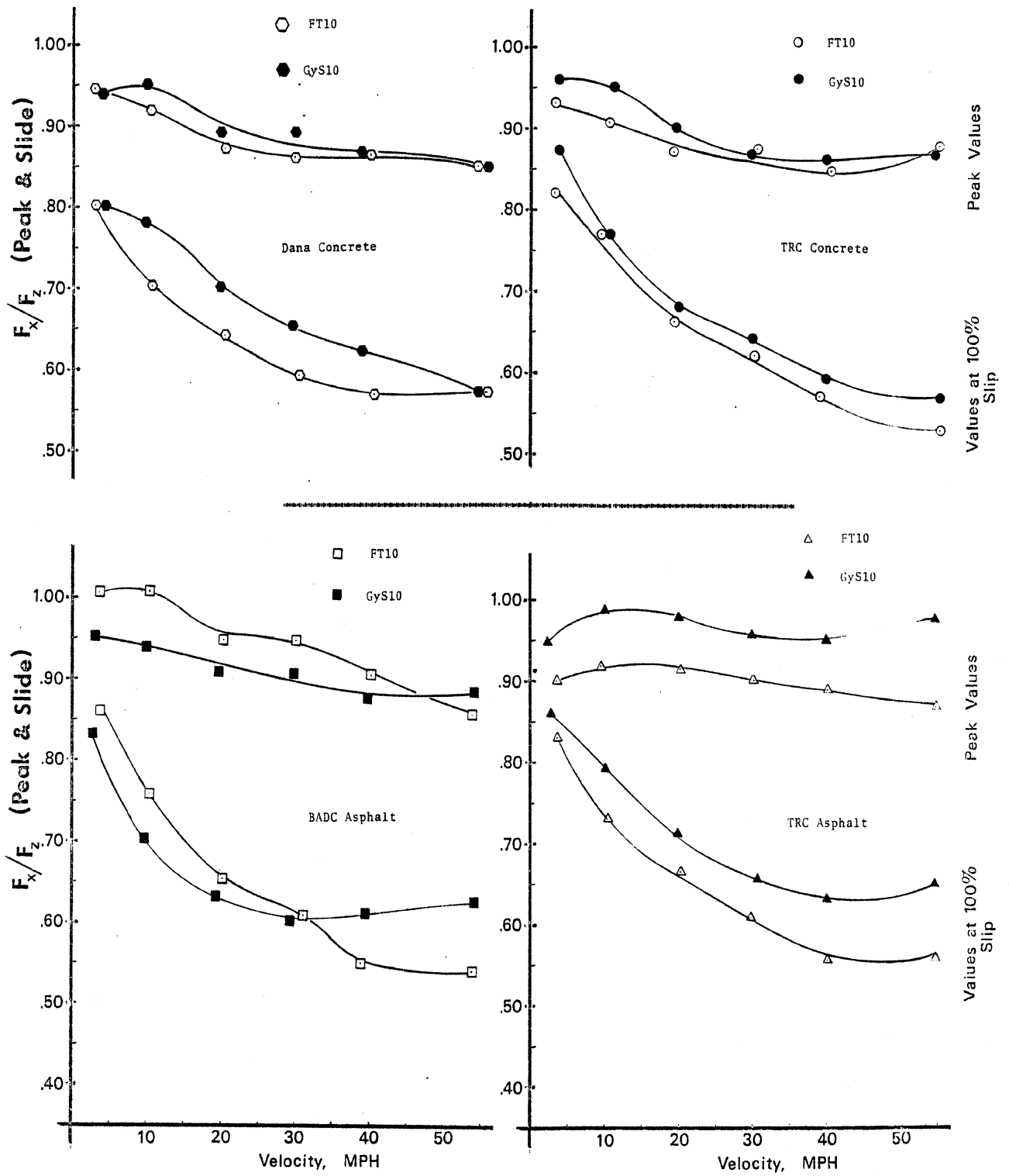


Figure 25. The differing influence of pavement surface on the velocity sensitivities of two tires.

on each surface. It is seen that the two baseline tires exhibit a wider spread in velocity sensitivity on the two asphalt surfaces. In addition, the overall traction performance of the Firestone tire (code FT10) is generally superior on the BADC asphalt, while the Goodyear tire (code GyS10) exhibits decidedly superior traction performance on the TRC asphalt surface.

The data in Figure 26 are presented in view of the continuing discussion over the merits of the ASTM skid number measurement as a test pavement characterization. The figure presents the mean values of peak and slide traction which derived from the repeated check runs on the two baseline tires. As shown, these data are plotted versus the most recent SN_{40} (dry) measurements which were available for each surface. Since, as indicated earlier, SN measurements were not available concurrently with HSRI's test operations at the Dana and TRC facilities, Figure 26 does not constitute a high quality examination of the indicated relationships, and thus no correlation coefficients have been computed. Note, however, that on surfaces with SN_{40} values from 75 to 82 these truck tires were only able to produce locked-wheel friction values of approximately 0.6.

To characterize the statistical repeatability of the data describing pavement influences, the "check run" values of peak and slide traction are plotted for each baseline tire in Figures 27 and 28. As before, these data points are plotted from left to right as they were acquired. It is significant to note that the higher variability in the repeated check run measurements indicated for the TRC-concrete data is common to both tire samples. It is believed that this variability derives from a spatial inhomogeneity which characterizes the TRC Hi Speed Track facility. As a consequence of a pavement grinding operation which was employed to correct certain "high spots" which ensued from the paving process, there exist areas of differing surface texture (and apparently differing friction

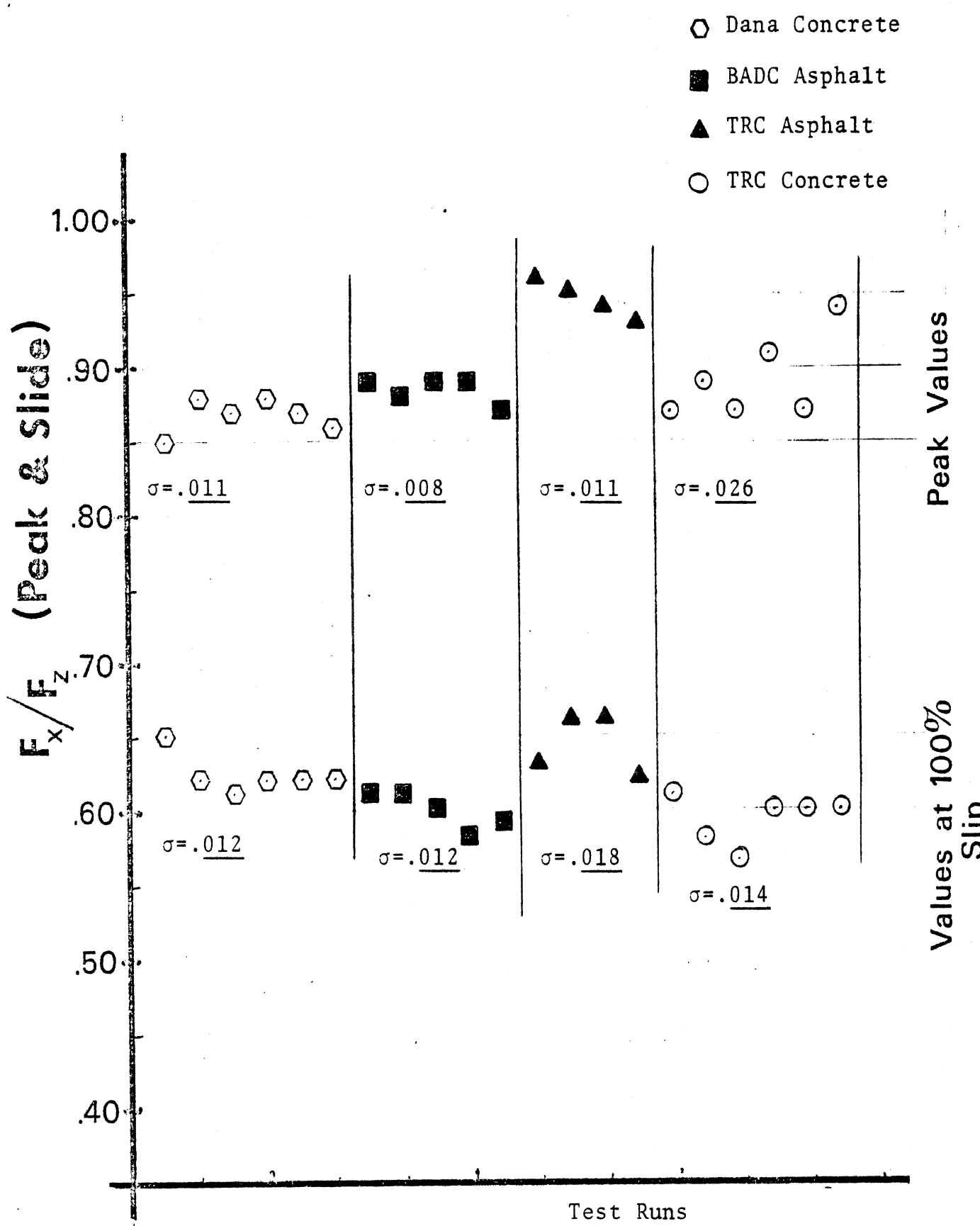


Figure 28. Peak and slide values deriving from repeat runs of the Goodyear Super Hi Miler (10.00x20/F) on four surfaces.

potential), among which areas HSRI did not discriminate in conducting its traction experiments.

Comparing the repeatability data presented in Figures 27 and 28 and previously in Figure 19, it would appear that the repeatability of measurements of truck tire longitudinal traction depends more upon pavement uniformity than upon the stationarity of innate tire properties.

3.1 ADDITIONAL DATA SAMPLE

During the same time frame in which the presented data were gathered, a set of measurements were made on a Uniroyal Triple Tread 10.00x20/F sample at the General Motors Proving Grounds in Milford, Michigan. Given the general dearth of available truck tire traction data, these measurements are included herein for further comparison with the measurements already presented.

Figures 29 and 30 show that the data taken on GM's asphalt-paved Vehicle Dynamics Test Area complement both the trends and the absolute values described by the envelope of data taken on all 10.00x20/F tires on all surfaces examined in this study. The data points shown in Figure 30 should actually be adjusted downward, however, by a value of approximately 0.04 to account for the 4200 lb. vertical load at which these data were gathered—in contrast to the nominally 5400 lb. load at which all other velocity-sweep data were gathered on 10.00x20/F tires. This adjustment (estimated from the load sensitivities shown in Figure 29) gives the GM-Uniroyal Triple Tread combination a nearly median locus within the envelope of measurements made in this study. Also, the repeatability measures render a standard deviation comparable to that obtained with the two baseline tires on TRC's Vehicle Dynamics Area (an asphalt surface).

● Uniroyal Triple
Tread 10.00x20/F

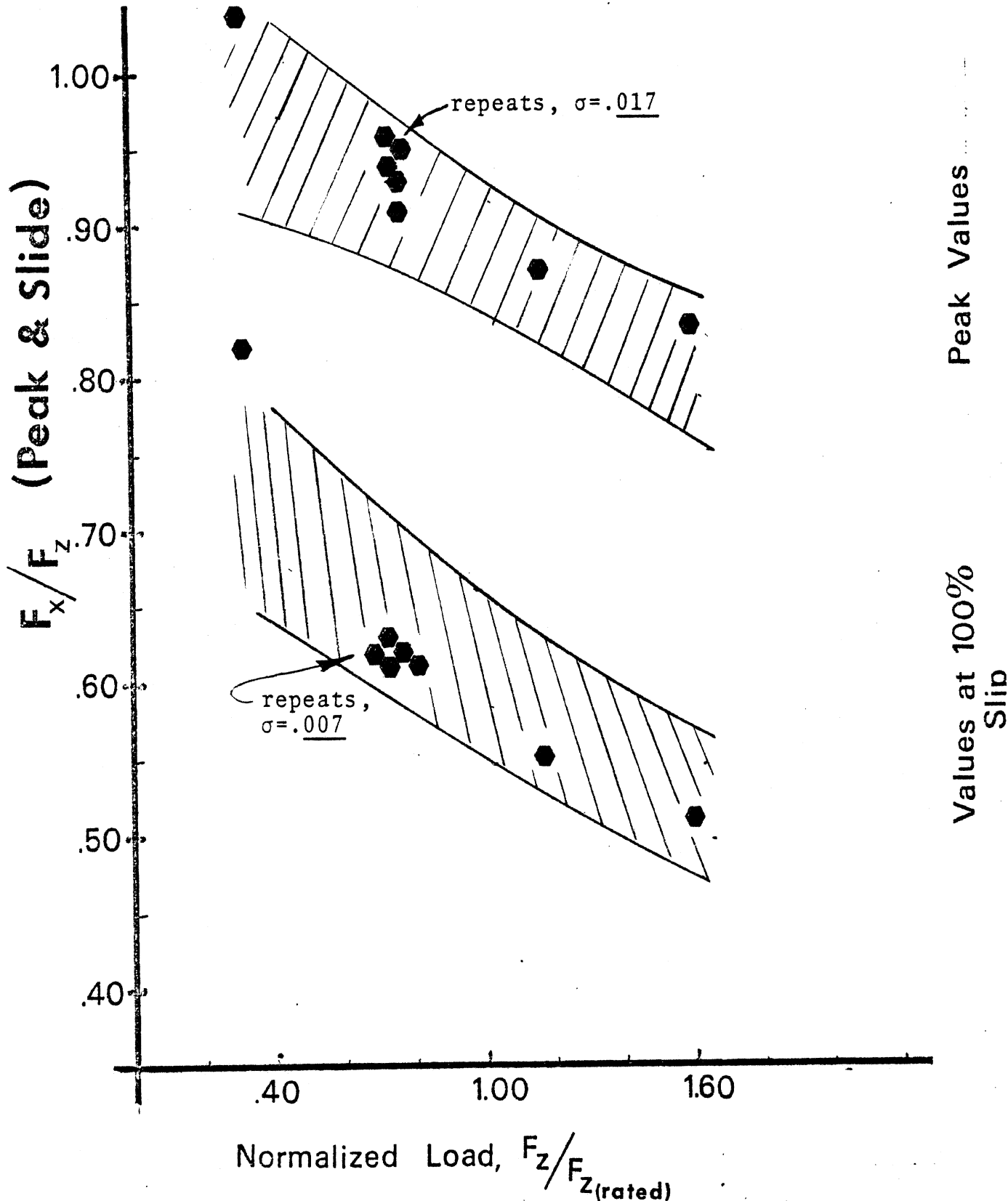


Figure 29. The load sensitivity of peak and slide traction obtained for a Uniroyal Triple Tread (10.00x20/F) at G.M. Proving Grounds—overlaid on the envelope of all other (10.00x20/F) data gathered on four other surfaces in this study.

Uniroyal Triple Tread (10.00x20/F)

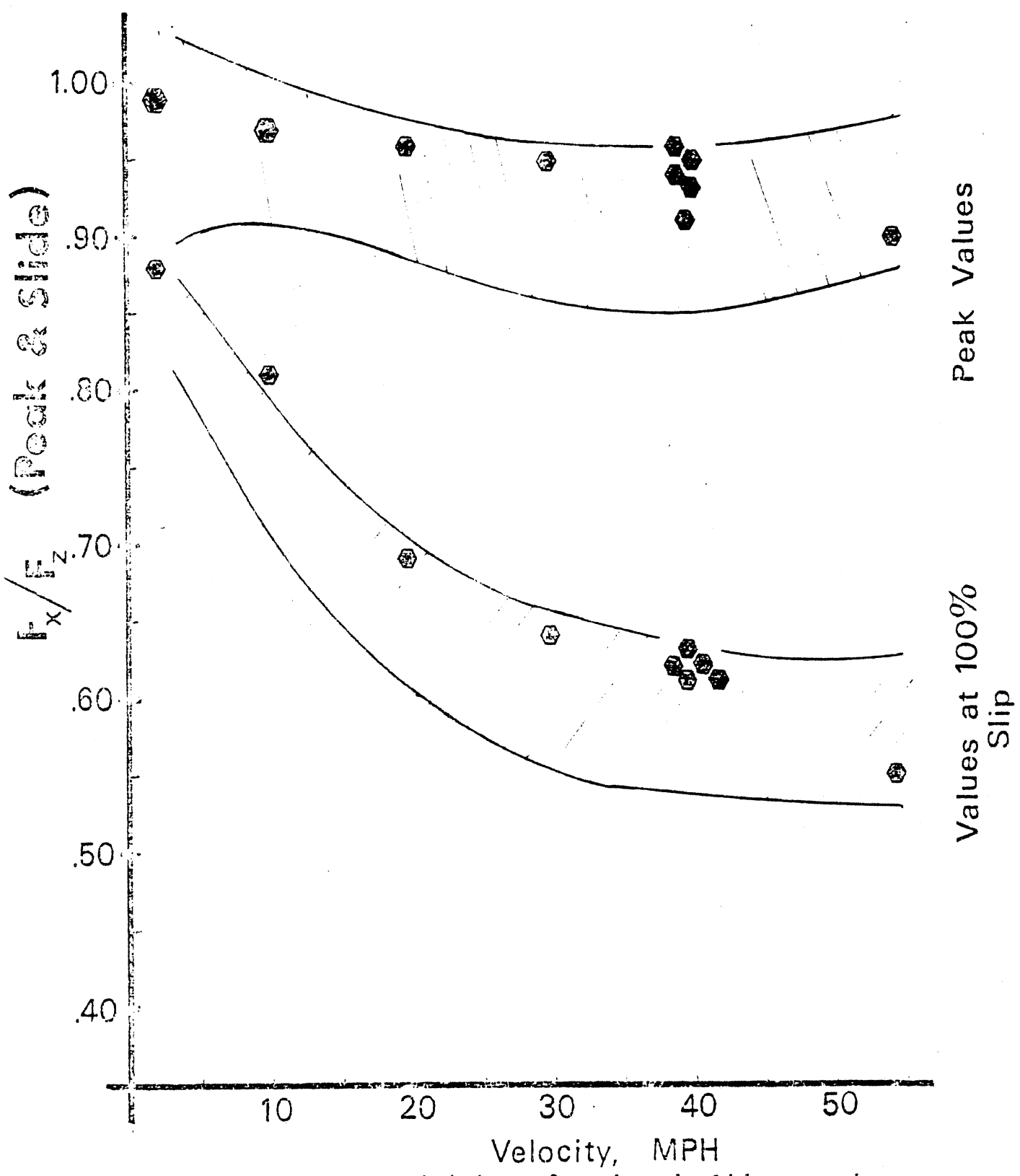


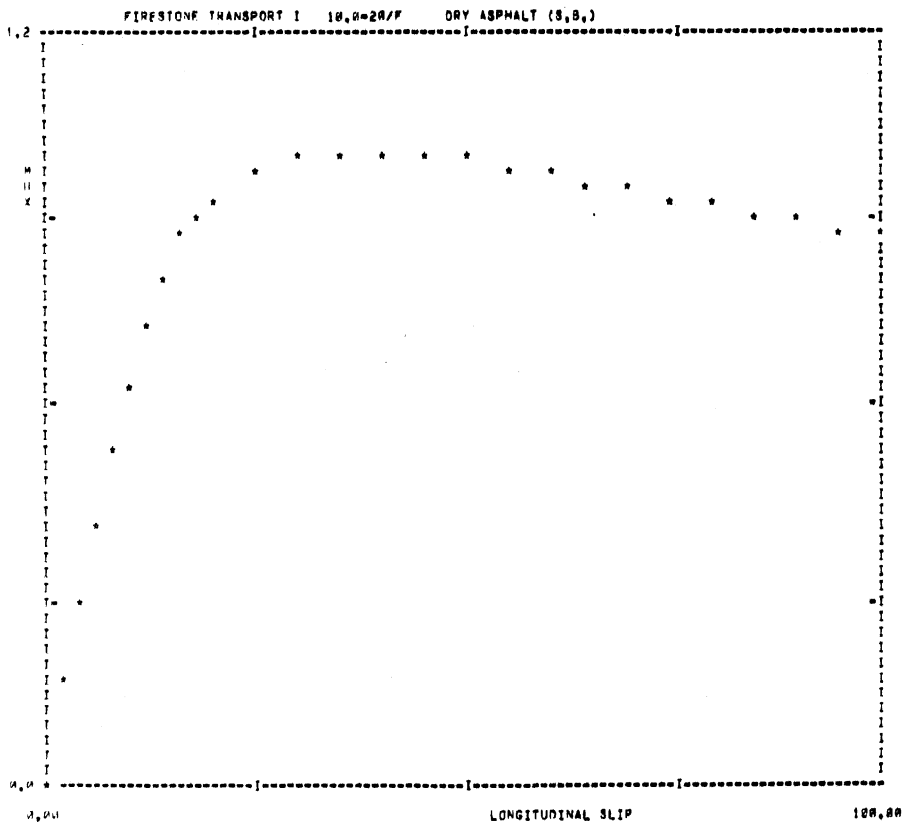
Figure 30. The velocity sensitivity of peak and slide traction obtained for a Uniroyal Triple Tread (10.00x20/F) at G.M. Proving Grounds—overlaid on the envelope of all other (10.00x20/F) data gathered on four other surfaces in this study.

(B)

FIRESTONE TRANSPORT 1, 10.00 x 20/F - BADC ASPHALT

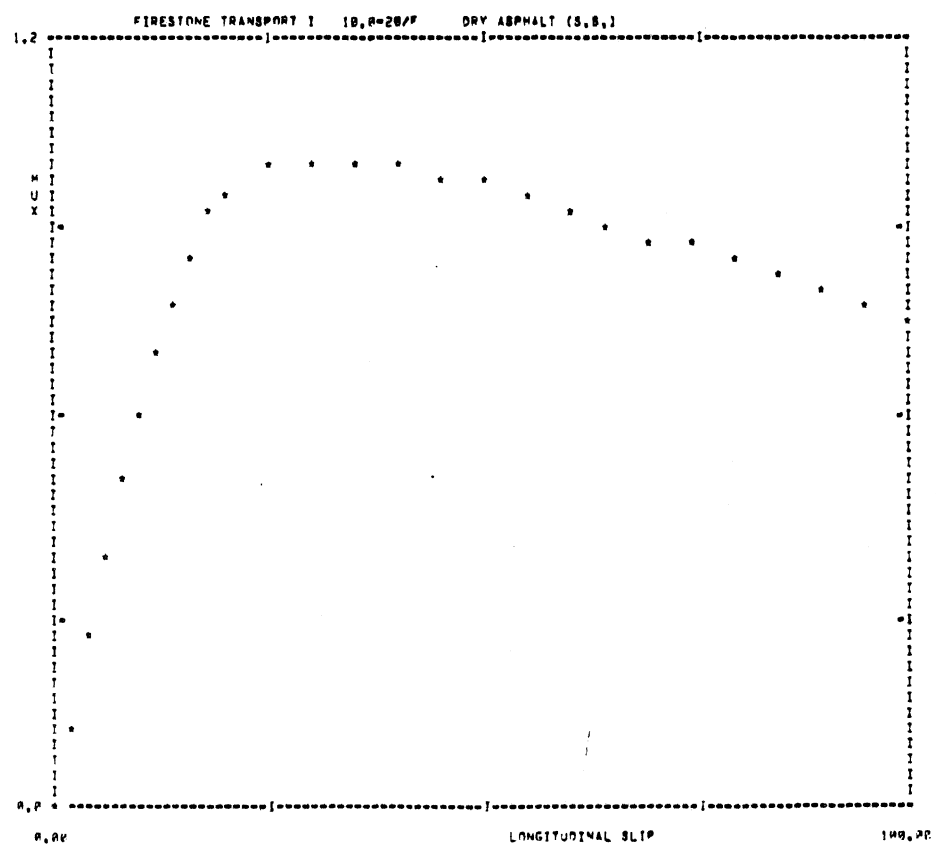
** A=0 FILE 110 NEW FILE 41 TEST SAMPLE201 **
 AVERAGE OF FILE 110 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10,0-20/F DRY ASPHALT (S,B,)

| SLIP | MHX | TORQUE | FX | |
|------|------|----------|--------|---------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.17 | 14707.5 | 921.8 | |
| 0.04 | 0.29 | 26356.5 | 1510.2 | |
| 0.06 | 0.42 | 39717.2 | 2100.6 | |
| 0.08 | 0.53 | 51289.8 | 2764.8 | |
| 0.10 | 0.64 | 62136.1 | 3310.4 | |
| 0.12 | 0.74 | 71978.9 | 3811.5 | |
| 0.14 | 0.82 | 79714.3 | 4206.6 | |
| 0.16 | 0.87 | 85482.6 | 4486.3 | |
| 0.18 | 0.91 | 90023.2 | 4696.7 | TQAV = 87375.0 LOAD = 5305.3 VEL = 3.0 MPH. |
| 0.20 | 0.94 | 93768.2 | 4852.2 | |
| 0.25 | 0.99 | 98885.2 | 5096.1 | MUPEAK = 1.01 MULOCK = 0.88 RATIO = 1.15 |
| 0.30 | 1.01 | 103438.9 | 5194.8 | |
| 0.35 | 1.01 | 104181.6 | 5171.0 | |
| 0.40 | 1.01 | 103685.8 | 5109.6 | |
| 0.45 | 1.00 | 102667.3 | 5109.9 | |
| 0.50 | 1.00 | 101521.6 | 5061.4 | |
| 0.55 | 0.99 | 100273.6 | 5008.6 | |
| 0.60 | 0.98 | 98974.7 | 4953.6 | |
| 0.65 | 0.96 | 97650.3 | 4897.6 | |
| 0.70 | 0.95 | 96313.2 | 4841.8 | |
| 0.75 | 0.94 | 94969.8 | 4784.1 | |
| 0.80 | 0.93 | 93623.1 | 4727.1 | |
| 0.85 | 0.92 | 92274.8 | 4670.0 | |
| 0.90 | 0.91 | 90840.6 | 4611.7 | |
| 0.95 | 0.89 | 89235.7 | 4550.8 | |
| 1.00 | 0.88 | 87375.0 | 4486.2 | |



FZ = 5305.3 VFL = 3.0 MULOCK = 0.88 MUPEAK = 1.01 RATIO = 1.15 A=0 FILE 110 NEWFILE 41 SAMPLE 201

| ** A-D FILE 119 | | NEW FILE 42 / | | TEST SAMPLE 202 ** | |
|------------------------------------|------|-----------------------|--------|------------------------------|-------------------------------|
| AVERAGE OF FILE 119 FOR 5 RECORDS. | | FIRESTONE TRANSPORT I | | 10.0-20/P DRY ASPHALT (S.S.) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.13 | 10464.7 | 699.4 | | |
| 0.04 | 0.26 | 24735.8 | 1449.8 | | |
| 0.06 | 0.40 | 37277.6 | 2005.8 | | |
| 0.08 | 0.51 | 46365.6 | 2640.2 | | |
| 0.10 | 0.61 | 50326.9 | 3144.3 | | |
| 0.12 | 0.70 | 67547.5 | 3607.2 | | |
| 0.14 | 0.79 | 76135.4 | 4032.5 | | |
| 0.16 | 0.87 | 83000.1 | 4414.7 | | |
| 0.18 | 0.92 | 90037.2 | 4714.3 | TRAV = 72200.0 | LOAD = 5270.4 VEL = 10.0 MPH. |
| 0.20 | 0.96 | 94864.9 | 4873.5 | | |
| 0.25 | 0.99 | 99905.4 | 5051.0 | MUPEAK = 1.01 | MULOCK = 0.76 RATIO = 1.33 |
| 0.30 | 1.01 | 104036.1 | 5125.0 | | |
| 0.35 | 1.01 | 107070.6 | 5127.9 | | |
| 0.40 | 1.01 | 109612.1 | 5094.1 | | |
| 0.45 | 0.99 | 111900.9 | 5030.2 | | |
| 0.50 | 0.98 | 113507.3 | 4967.4 | | |
| 0.55 | 0.96 | 112524.6 | 4887.2 | | |
| 0.60 | 0.94 | 109630.3 | 4790.0 | | |
| 0.65 | 0.92 | 105039.5 | 4672.7 | | |
| 0.70 | 0.90 | 100490.8 | 4553.1 | | |
| 0.75 | 0.87 | 96253.7 | 4436.0 | | |
| 0.80 | 0.85 | 92201.1 | 4320.3 | | |
| 0.85 | 0.83 | 88243.6 | 4205.5 | | |
| 0.90 | 0.80 | 83097.7 | 4080.5 | | |
| 0.95 | 0.78 | 78695.2 | 3966.5 | | |
| 1.00 | 0.76 | 72200.0 | 3837.0 | | |



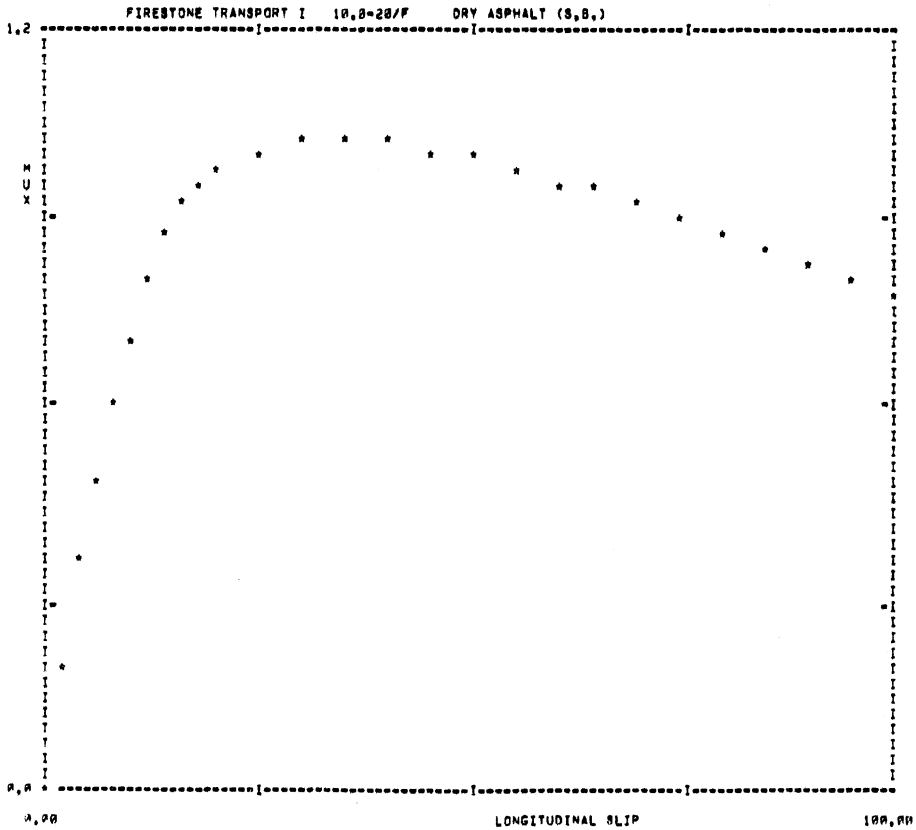
FZ = 5270.0 VFL = 10.0 MULOCK = 0.76 MUPEAK = 1.01 RATIO = 1.33 A-D FILE 119 N-FILE 42 SAMPLE 202

** A=0 FILE 120 NEW FILE 43 TEST SAMPLE 203 **
 AVERAGE OF FILE 120 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10.0-20/F DRY ASPHALT (S,B.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.20 | 14490.2 | 1027.6 |
| 0.04 | 0.37 | 31285.0 | 1911.5 |
| 0.06 | 0.50 | 44613.1 | 2502.0 |
| 0.08 | 0.61 | 55049.6 | 3166.4 |
| 0.10 | 0.72 | 65788.0 | 3675.7 |
| 0.12 | 0.81 | 74560.5 | 4127.7 |
| 0.14 | 0.86 | 81640.0 | 4472.0 |
| 0.16 | 0.93 | 87572.3 | 4731.7 |
| 0.18 | 0.97 | 92242.0 | 4916.0 |
| 0.20 | 0.99 | 95255.5 | 5014.9 |
| 0.25 | 1.02 | 99915.9 | 5122.2 |
| 0.30 | 1.03 | 103186.2 | 5163.4 |
| 0.35 | 1.03 | 105520.3 | 5162.0 |
| 0.40 | 1.03 | 107486.1 | 5129.4 |
| 0.45 | 1.02 | 109263.5 | 5080.7 |
| 0.50 | 1.00 | 110602.5 | 5017.0 |
| 0.55 | 0.99 | 109986.9 | 4941.0 |
| 0.60 | 0.97 | 107210.3 | 4847.3 |
| 0.65 | 0.95 | 103053.3 | 4742.1 |
| 0.70 | 0.93 | 98951.9 | 4637.0 |
| 0.75 | 0.91 | 95091.0 | 4533.7 |
| 0.80 | 0.88 | 91373.9 | 4431.4 |
| 0.85 | 0.86 | 87729.0 | 4329.7 |
| 0.90 | 0.84 | 83712.3 | 4225.0 |
| 0.95 | 0.82 | 78898.2 | 4117.1 |
| 1.00 | 0.80 | 72854.2 | 4001.3 |

TQAV = 72854.2 LOAD = 5226.7 VEL = 10.0 MPH.

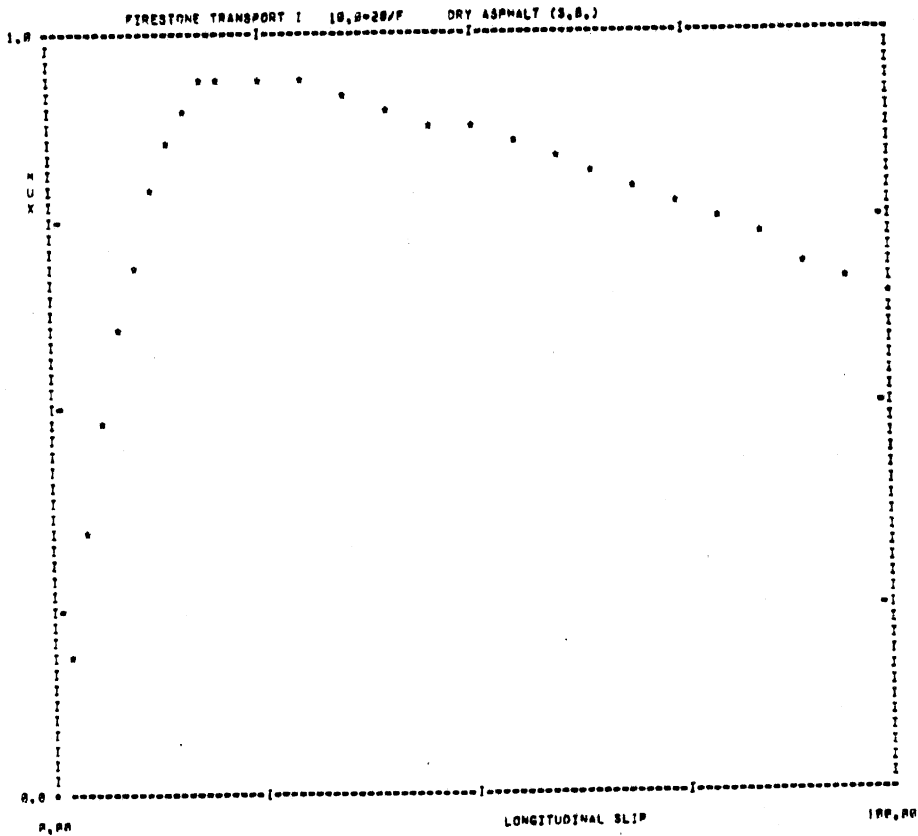
MUPEAK = 1.03 MULOCK = 0.80 RATIO = 1.29



FZ = 5226.7 VEL = 10.0 MULOCK = 0.80 MUPEAK = 1.03 RATIO = 1.29 A=0 FILE 120 NEWFILE 43 SAMPLE 203

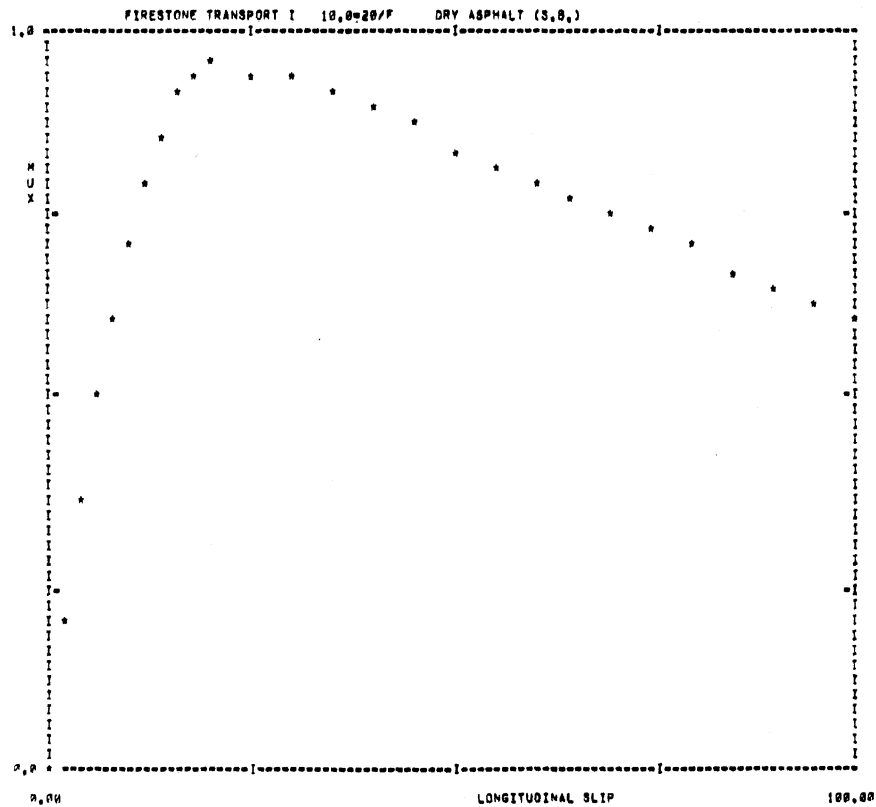
** A=0 FILE 125 NEW FILE 45 TEST SAMPLE205 **
 AVERAGE OF FILE 125 FOR 6 RECORDS. FIRESTONE TRANSPORT I 10.0=20/F DRY ASPHALT (0.0.)

| SLIP | MUX | TORQUE | FZ | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.19 | 19002.3 | 1035.3 | |
| 0.04 | 0.36 | 36615.5 | 1986.6 | |
| 0.06 | 0.50 | 51016.0 | 2671.7 | |
| 0.08 | 0.61 | 62734.5 | 3251.5 | |
| 0.10 | 0.71 | 73524.7 | 3767.5 | |
| 0.12 | 0.80 | 82679.8 | 4243.3 | |
| 0.14 | 0.86 | 90661.4 | 4625.7 | |
| 0.16 | 0.91 | 97032.1 | 4883.6 | |
| 0.18 | 0.94 | 101437.2 | 5035.7 | TQAV = 65770.0 LOAD = 5990.7 VEL = 20.0 MPH. |
| 0.20 | 0.95 | 103517.3 | 5066.1 | |
| 0.25 | 0.95 | 107000.0 | 5079.6 | MUPEAK = 0.95 MULLOCK = 0.65 RATIO = 1.46 |
| 0.30 | 0.94 | 104795.3 | 5023.9 | |
| 0.35 | 0.92 | 112111.4 | 4942.0 | |
| 0.40 | 0.91 | 114172.2 | 4843.1 | |
| 0.45 | 0.89 | 115957.9 | 4740.8 | |
| 0.50 | 0.87 | 117925.1 | 4630.8 | |
| 0.55 | 0.85 | 119672.4 | 4530.6 | |
| 0.60 | 0.84 | 120322.4 | 4441.6 | |
| 0.65 | 0.82 | 119467.8 | 4343.5 | |
| 0.70 | 0.80 | 116353.1 | 4242.9 | |
| 0.75 | 0.78 | 110095.8 | 4125.5 | |
| 0.80 | 0.75 | 102542.5 | 3993.2 | |
| 0.85 | 0.73 | 93830.9 | 3800.6 | |
| 0.90 | 0.70 | 85037.5 | 3726.8 | |
| 0.95 | 0.68 | 75775.4 | 3587.6 | |
| 1.00 | 0.65 | 65770.0 | 3400.0 | |



FZ = 5990.7 VFL = 20.0 MULLOCK = 0.65 MUPEAK = 0.95 RATIO = 1.46 A=0 FILE 125 NEWFILE 45 SAMPLE 205

| ** A=0 FILE 126 | | NEW FILE 46 | | TEST SAMPLE206 ** | |
|------------------------------------|------|-----------------------|--------|-------------------|-------------------------------|
| AVERAGE OF FILE 126 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | | 10.0=20/F | DRY ASPHALT (S.B.) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.21 | 21670.1 | 1180.4 | | |
| 0.04 | 0.37 | 38874.7 | 2041.5 | | |
| 0.06 | 0.50 | 52898.2 | 2723.9 | | |
| 0.08 | 0.61 | 65506.8 | 3312.9 | | |
| 0.10 | 0.72 | 76308.2 | 3848.1 | | |
| 0.12 | 0.80 | 84235.4 | 4267.9 | | |
| 0.14 | 0.86 | 91045.2 | 4597.8 | | |
| 0.16 | 0.91 | 96888.1 | 4848.4 | | |
| 0.18 | 0.94 | 100999.4 | 5086.7 | TDAV = 62166.7 | LOAD = 5427.0 VEL = 30.0 MPH. |
| 0.20 | 0.95 | 102921.9 | 5090.5 | | |
| 0.25 | 0.95 | 106309.5 | 5031.3 | MUPEAK = 0.95 | MULOCK = 0.61 RATIO = 1.56 |
| 0.30 | 0.94 | 100699.0 | 4948.3 | | |
| 0.35 | 0.92 | 110313.1 | 4837.8 | | |
| 0.40 | 0.89 | 111455.8 | 4719.7 | | |
| 0.45 | 0.87 | 112468.6 | 4596.8 | | |
| 0.50 | 0.85 | 113319.6 | 4471.8 | | |
| 0.55 | 0.82 | 114187.7 | 4349.2 | | |
| 0.60 | 0.80 | 115147.6 | 4232.6 | | |
| 0.65 | 0.78 | 115917.8 | 4117.9 | | |
| 0.70 | 0.76 | 115293.2 | 4006.3 | | |
| 0.75 | 0.73 | 111583.5 | 3891.5 | | |
| 0.80 | 0.71 | 104045.8 | 3768.6 | | |
| 0.85 | 0.68 | 94083.4 | 3648.9 | | |
| 0.90 | 0.66 | 84208.5 | 3511.2 | | |
| 0.95 | 0.64 | 73489.1 | 3379.2 | | |
| 1.00 | 0.61 | 62166.7 | 3243.7 | | |



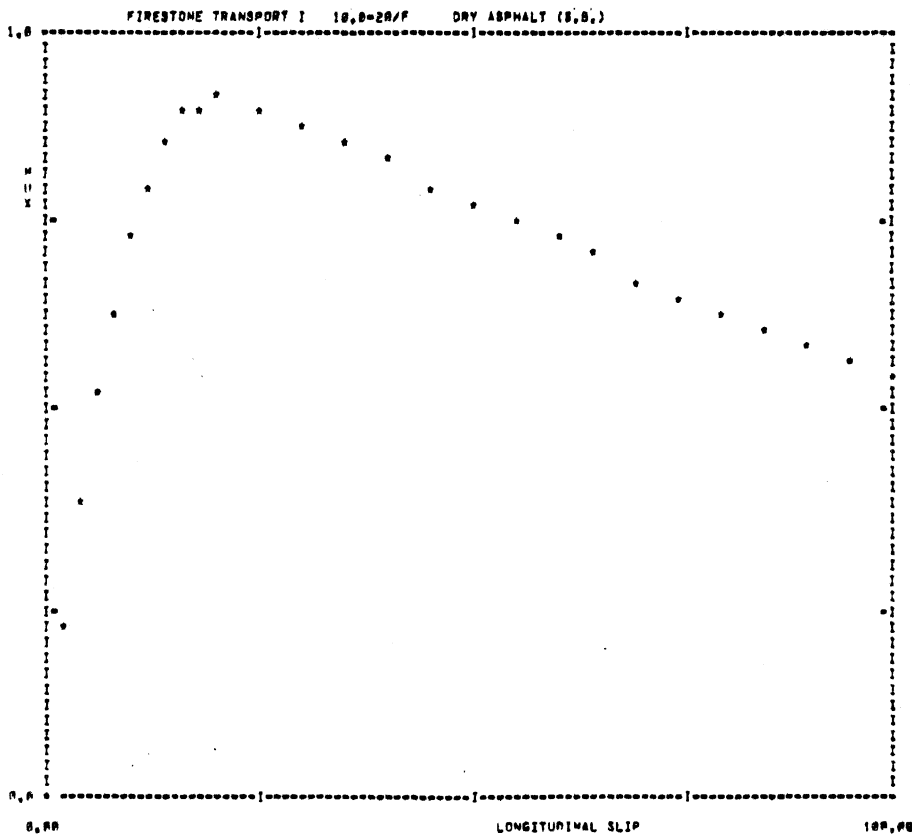
FZ = 5427.0 VEL = 30.0 MULOCK = 0.61 MUPEAK = 0.95 RATIO = 1.56 A=0 FILE 126 N=FILE 46 SAMPLE 206

** A=0 FILE 130 NEW FILE #7 TEST SAMPLE207 **
 AVERAGE OF FILE 130 FOR 5 RECORDS, FIRESTONE TRANSPORT I 10,0-20/P DRY ASPHALT (S,B.)

| SLIP | MUX | TORQUE | Px |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.22 | 24203.3 | 1242.9 |
| 0.04 | 0.39 | 42436.7 | 2172.1 |
| 0.06 | 0.53 | 57193.9 | 2905.5 |
| 0.08 | 0.64 | 69431.8 | 3511.9 |
| 0.10 | 0.74 | 79536.8 | 3996.0 |
| 0.12 | 0.81 | 87992.1 | 4397.8 |
| 0.14 | 0.86 | 94145.9 | 4617.6 |
| 0.16 | 0.89 | 98659.4 | 4789.0 |
| 0.18 | 0.91 | 101946.7 | 4881.5 |
| 0.20 | 0.91 | 103088.1 | 4894.8 |
| 0.25 | 0.90 | 106622.4 | 4880.9 |
| 0.30 | 0.88 | 108791.4 | 4751.5 |
| 0.35 | 0.86 | 110399.5 | 4633.4 |
| 0.40 | 0.83 | 111455.8 | 4501.7 |
| 0.45 | 0.80 | 112057.5 | 4366.2 |
| 0.50 | 0.78 | 112339.4 | 4236.5 |
| 0.55 | 0.75 | 112568.3 | 4112.0 |
| 0.60 | 0.73 | 112908.1 | 3983.6 |
| 0.65 | 0.71 | 113547.4 | 3857.7 |
| 0.70 | 0.68 | 114118.5 | 3732.2 |
| 0.75 | 0.66 | 112928.7 | 3611.3 |
| 0.80 | 0.64 | 108227.5 | 3490.0 |
| 0.85 | 0.62 | 99824.4 | 3367.4 |
| 0.90 | 0.60 | 86671.9 | 3249.2 |
| 0.95 | 0.57 | 73172.5 | 3132.1 |
| 1.00 | 0.55 | 58588.0 | 3015.0 |

TOAV = 58588.0 LOAD = 5584.9 VEL = 48.8 MPH.

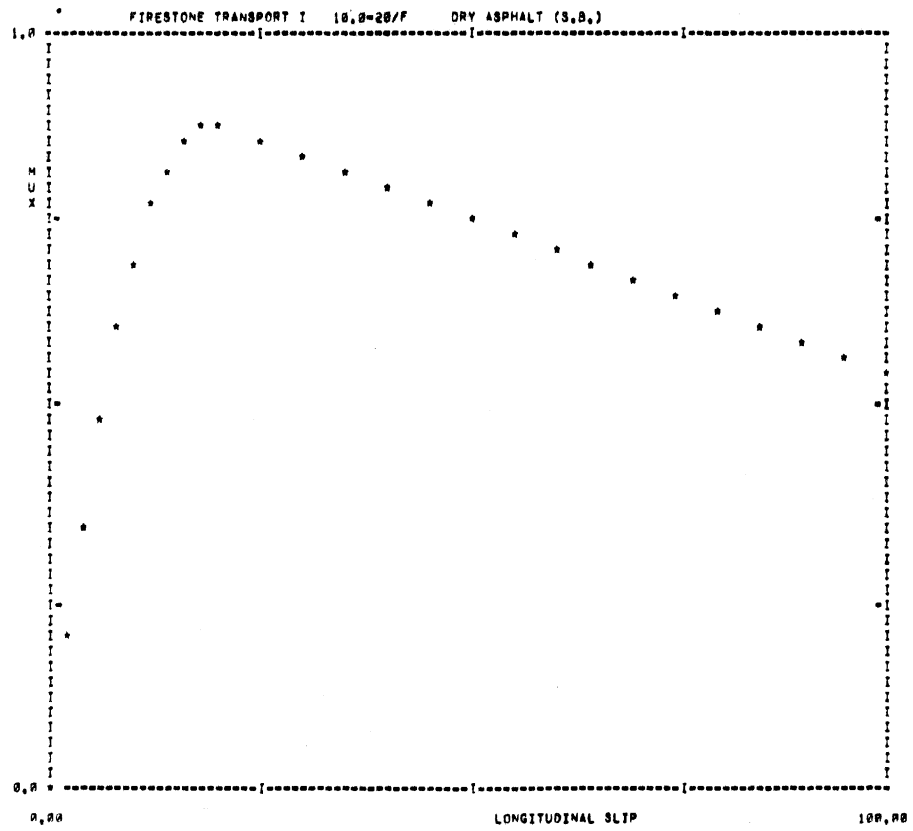
MUPEAK = 0.91 MULLOCK = 0.55 RATIO = 1.64



PZ = 5584.9 VEL = 48.8 MULLOCK = 0.55 MUPEAK = 0.91 RATIO = 1.64 A=0 FILE 130 NEWFILE #7 SAMPLE 207

** A=0 FILE 131 NEW FILE 481 TEST SAMPLE200 **
 AVERAGE OF FILE 131 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10,0=20/F DRY ASPHALT (3,0,)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 21450.7 | 1147.0 | |
| 0.04 | 0.36 | 40302.5 | 2029.2 | |
| 0.06 | 0.49 | 55974.6 | 2775.2 | |
| 0.08 | 0.61 | 69201.9 | 3400.1 | |
| 0.10 | 0.70 | 80132.4 | 3933.7 | |
| 0.12 | 0.78 | 88405.4 | 4329.9 | |
| 0.14 | 0.83 | 94650.8 | 4610.0 | |
| 0.16 | 0.86 | 99307.9 | 4789.0 | |
| 0.18 | 0.88 | 102600.3 | 4878.2 | TOAV = 57729.2 LOAD = 5700.4 VEL = 55.0 MPH, |
| 0.20 | 0.88 | 104200.9 | 4879.4 | |
| 0.25 | 0.87 | 106609.7 | 4795.6 | MUPEAK = 0.88 MULLOCK = 0.54 RATIO = 1.62 |
| 0.30 | 0.84 | 100705.3 | 4677.1 | |
| 0.35 | 0.82 | 100712.8 | 4504.9 | |
| 0.40 | 0.80 | 100041.0 | 4414.5 | |
| 0.45 | 0.77 | 100096.6 | 4200.5 | |
| 0.50 | 0.75 | 100054.3 | 4102.3 | |
| 0.55 | 0.73 | 100710.9 | 4037.9 | |
| 0.60 | 0.71 | 100561.3 | 3922.1 | |
| 0.65 | 0.69 | 100016.0 | 3815.0 | |
| 0.70 | 0.67 | 100236.4 | 3713.4 | |
| 0.75 | 0.65 | 107307.5 | 3613.5 | |
| 0.80 | 0.63 | 105700.3 | 3512.1 | |
| 0.85 | 0.61 | 100209.7 | 3405.5 | |
| 0.90 | 0.59 | 80655.2 | 3200.0 | |
| 0.95 | 0.57 | 74403.1 | 3166.0 | |
| 1.00 | 0.56 | 57729.2 | 3042.5 | |



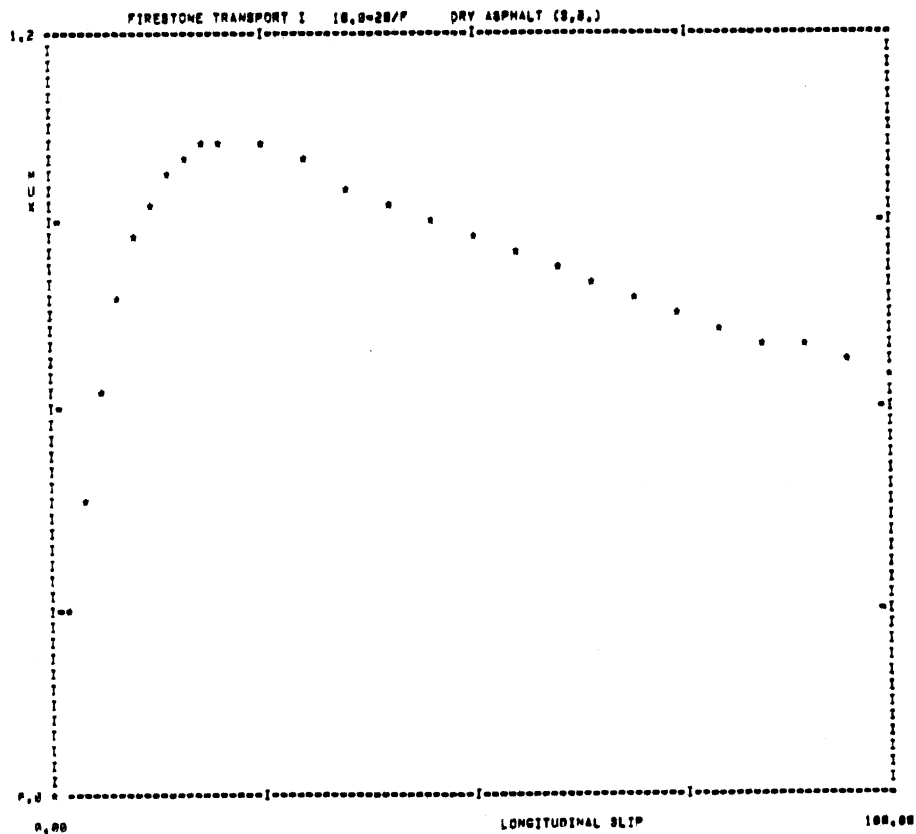
FZ = 5700.4 VEL = 55.0 MULLOCK = 0.54 MUPEAK = 0.88 RATIO = 1.62 A=0 FILE 131 NHFILE 48 SAMPLE 200

** A=D FILE 136 NEW FILE 5W TEST SAMPLE210 **
 AVERAGE OF FILE 136 FOR 5 RECORDS. FIRESTONE TRANSPORT I 10.0=20/F DRY ASPHALT (S.S.)

| SLIP | MUX | TORQUE | PX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.30 | 12202.0 | 674.5 |
| 0.04 | 0.48 | 21800.6 | 1004.2 |
| 0.06 | 0.64 | 29813.0 | 1456.6 |
| 0.08 | 0.76 | 36305.3 | 1775.3 |
| 0.10 | 0.80 | 41037.4 | 2001.4 |
| 0.12 | 0.94 | 45655.6 | 2150.4 |
| 0.14 | 0.99 | 48812.9 | 2242.4 |
| 0.16 | 1.02 | 51316.0 | 2292.3 |
| 0.18 | 1.03 | 53471.3 | 2300.0 |
| 0.20 | 1.03 | 55040.2 | 2300.4 |
| 0.25 | 1.02 | 57546.7 | 2260.4 |
| 0.30 | 1.00 | 59599.0 | 2210.3 |
| 0.35 | 0.97 | 61250.1 | 2141.7 |
| 0.40 | 0.94 | 62404.0 | 2074.4 |
| 0.45 | 0.91 | 63400.1 | 2011.0 |
| 0.50 | 0.89 | 64172.2 | 1951.0 |
| 0.55 | 0.86 | 65137.4 | 1892.4 |
| 0.60 | 0.83 | 66071.7 | 1830.4 |
| 0.65 | 0.80 | 66950.6 | 1765.3 |
| 0.70 | 0.77 | 67687.1 | 1704.4 |
| 0.75 | 0.75 | 70041.4 | 1649.0 |
| 0.80 | 0.73 | 68147.0 | 1602.5 |
| 0.85 | 0.72 | 61201.0 | 1564.2 |
| 0.90 | 0.70 | 51447.7 | 1525.4 |
| 0.95 | 0.68 | 40603.1 | 1485.4 |
| 1.00 | 0.66 | 20750.0 | 1444.5 |

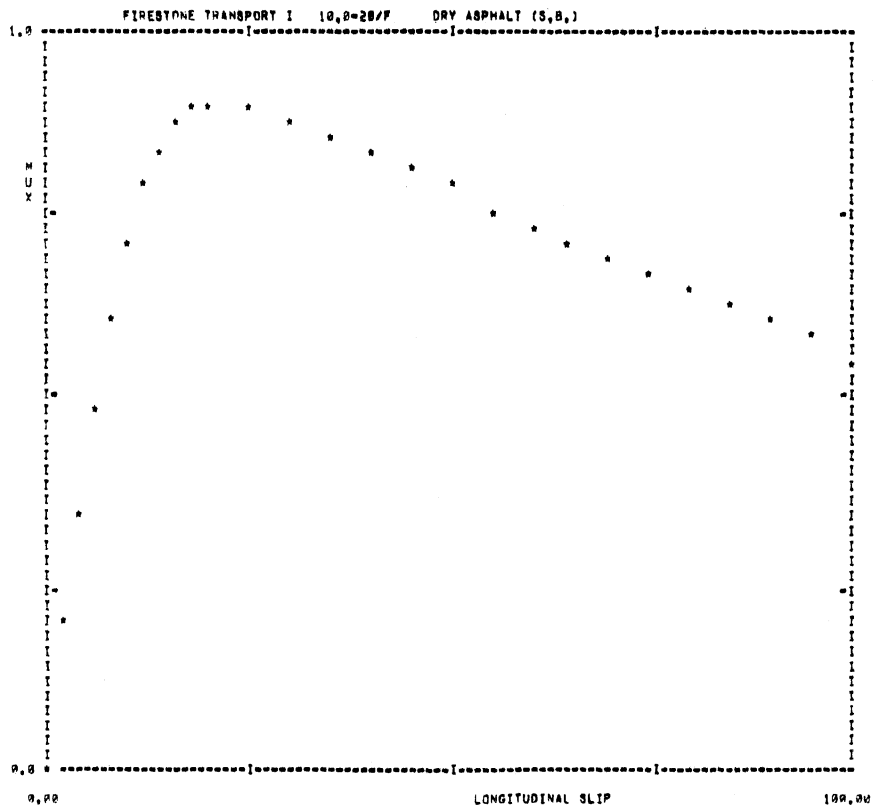
TOAV = 20750.0 LOAD = 2260.0 VEL = 40.0 MPH

MUPEAK = 1.03 MULOCK = 0.66 RATIO = 1.56



PZ = 2260.0 VEL = 40.0 MULOCK = 0.66 MUPEAK = 1.03 RATIO = 1.56 A=D FILE 136 NEWFILE 5W SAMPLE 210

| ** A=0 FILE 137 | | NEW FILE 51 | | TEST SAMPLE211 ** | |
|------------------------------------|------|-----------------------|--------|-------------------|-------------------------------|
| AVERAGE OF FILE 137 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | | 10.0=20/F | DRY ASPHALT (S,B.) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.20 | 22150.4 | 1100.0 | | |
| 0.04 | 0.35 | 30230.4 | 1961.5 | | |
| 0.06 | 0.49 | 52970.1 | 2690.9 | | |
| 0.08 | 0.61 | 67037.7 | 3350.7 | | |
| 0.10 | 0.71 | 78575.0 | 3895.1 | | |
| 0.12 | 0.79 | 87479.1 | 4301.5 | | |
| 0.14 | 0.84 | 94145.3 | 4594.7 | | |
| 0.16 | 0.88 | 99307.4 | 4787.2 | | |
| 0.18 | 0.90 | 103029.4 | 4901.3 | TQAV = 59950.3 | LOAD = 5570.0 VEL = 40.0 MPH. |
| 0.20 | 0.91 | 105145.2 | 4931.5 | MUPEAK = 0.91 | MULOCK = 0.56 RATIO = 1.61 |
| 0.25 | 0.90 | 109460.9 | 4874.9 | | |
| 0.30 | 0.88 | 112790.0 | 4770.4 | | |
| 0.35 | 0.85 | 114035.0 | 4655.7 | | |
| 0.40 | 0.83 | 115067.3 | 4505.4 | | |
| 0.45 | 0.81 | 116335.5 | 4435.9 | | |
| 0.50 | 0.79 | 116029.1 | 4320.4 | | |
| 0.55 | 0.77 | 117536.6 | 4195.0 | | |
| 0.60 | 0.74 | 110363.0 | 4065.4 | | |
| 0.65 | 0.72 | 119170.2 | 3937.4 | | |
| 0.70 | 0.69 | 119453.9 | 3809.3 | | |
| 0.75 | 0.67 | 117129.0 | 3609.9 | | |
| 0.80 | 0.65 | 110930.4 | 3570.2 | | |
| 0.85 | 0.63 | 100323.5 | 3459.1 | | |
| 0.90 | 0.61 | 87407.6 | 3337.1 | | |
| 0.95 | 0.59 | 73910.1 | 3210.9 | | |
| 1.00 | 0.56 | 59950.3 | 3070.7 | | |

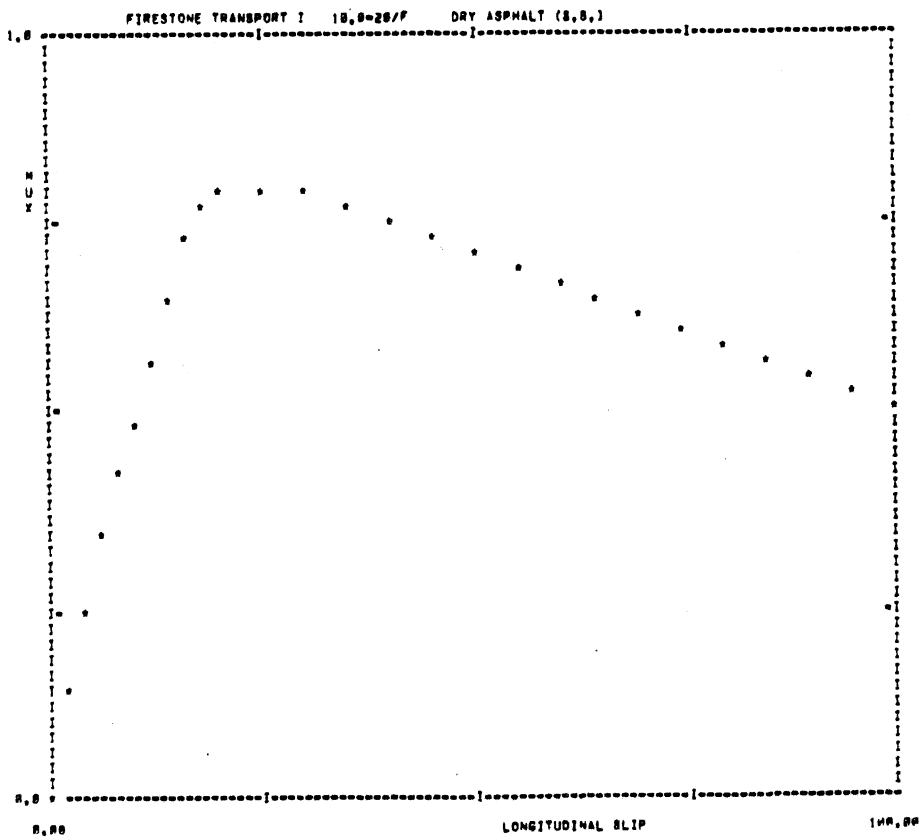


FZ = 5570.0 VEL = 40.0 MULOCK = 0.56 MUPEAK = 0.91 RATIO = 1.61 A=0 FILE 137 NEWFILE 51 SAMPLE 211

** A=0 FILE 130 NEW FILE 52 TEST SAMPLE 212 **
 AVERAGE OF FILE 130 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10.0=20/P DRY ASPHALT (0.0.)

| SLIP | MUX | TORQUE | PZ |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0. |
| 0.02 | 0.15 | 24664.2 | 1390.0 |
| 0.04 | 0.25 | 43234.3 | 2290.0 |
| 0.06 | 0.34 | 60902.6 | 3126.5 |
| 0.08 | 0.43 | 74441.9 | 3845.4 |
| 0.10 | 0.50 | 87007.2 | 4455.0 |
| 0.12 | 0.57 | 100000.7 | 5087.2 |
| 0.14 | 0.66 | 116012.0 | 5887.1 |
| 0.16 | 0.73 | 128004.4 | 6581.5 |
| 0.18 | 0.78 | 136886.0 | 6886.5 |
| 0.20 | 0.80 | 141010.3 | 7031.6 |
| 0.25 | 0.80 | 146638.9 | 7075.0 |
| 0.30 | 0.79 | 149025.0 | 6991.0 |
| 0.35 | 0.77 | 151610.5 | 6838.5 |
| 0.40 | 0.75 | 152237.0 | 6657.5 |
| 0.45 | 0.73 | 152000.6 | 6474.3 |
| 0.50 | 0.71 | 151370.7 | 6294.2 |
| 0.55 | 0.69 | 150712.0 | 6113.1 |
| 0.60 | 0.67 | 150254.2 | 5931.6 |
| 0.65 | 0.65 | 149964.5 | 5749.5 |
| 0.70 | 0.63 | 149396.4 | 5571.0 |
| 0.75 | 0.61 | 148909.5 | 5400.5 |
| 0.80 | 0.59 | 148530.2 | 5232.0 |
| 0.85 | 0.57 | 129692.9 | 5066.0 |
| 0.90 | 0.55 | 115570.1 | 4896.0 |
| 0.95 | 0.53 | 100410.4 | 4724.1 |
| 1.00 | 0.51 | 84270.8 | 4550.0 |

TQAV = 84270.8 LOAD = 9195.3 VEL = 40.0 MPH.
 MUPEAK = 0.80 MULOCK = 0.51 RATIO = 1.56



PZ = 9195.3 VEL = 40.0 MULOCK = 0.51 MUPEAK = 0.80 RATIO = 1.56 A=0 FILE 130 N=FILE 52 SAMPLE 212

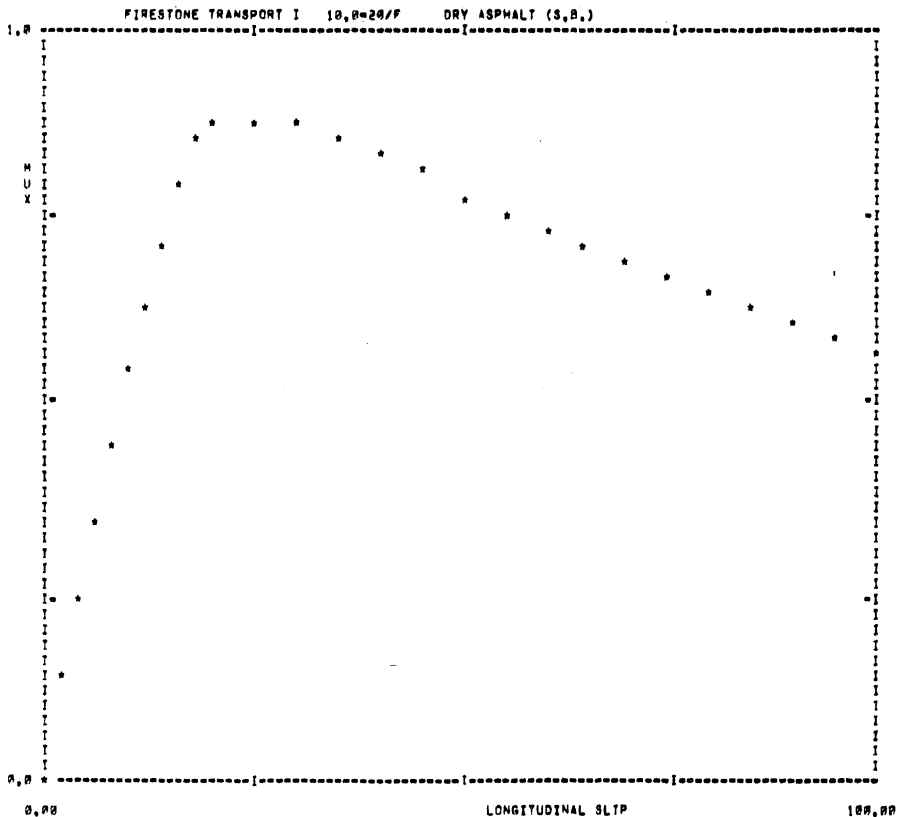
** A=0 FILE 132 NEW FILE 49 TEST SAMPLE289 **
AVERAGE OF FILE 132 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10,0=20/F DRY ASPHALT (S,B,)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.14 | 14114.9 | 761.1 |
| 0.04 | 0.25 | 26402.0 | 1302.6 |
| 0.06 | 0.34 | 37533.9 | 1926.4 |
| 0.08 | 0.44 | 48662.3 | 2456.5 |
| 0.10 | 0.55 | 61033.3 | 3001.3 |
| 0.12 | 0.64 | 72168.0 | 3548.1 |
| 0.14 | 0.72 | 80035.6 | 3922.9 |
| 0.16 | 0.80 | 91093.2 | 4365.6 |
| 0.18 | 0.86 | 98523.9 | 4660.7 |
| 0.20 | 0.88 | 101801.9 | 4763.0 |
| 0.25 | 0.89 | 106022.9 | 4793.0 |
| 0.30 | 0.88 | 110208.9 | 4741.2 |
| 0.35 | 0.86 | 112625.1 | 4643.5 |
| 0.40 | 0.84 | 114323.5 | 4524.8 |
| 0.45 | 0.81 | 115651.7 | 4396.4 |
| 0.50 | 0.78 | 116975.1 | 4263.0 |
| 0.55 | 0.76 | 118284.4 | 4124.4 |
| 0.60 | 0.73 | 119375.3 | 3991.6 |
| 0.65 | 0.71 | 120034.3 | 3871.6 |
| 0.70 | 0.69 | 119858.6 | 3759.4 |
| 0.75 | 0.67 | 117497.2 | 3653.7 |
| 0.80 | 0.65 | 110376.0 | 3553.6 |
| 0.85 | 0.63 | 99131.5 | 3408.1 |
| 0.90 | 0.61 | 86470.0 | 3332.3 |
| 0.95 | 0.59 | 73376.6 | 3212.1 |
| 1.00 | 0.57 | 59812.5 | 3087.5 |

40.0
TQAV = 59812.5 LOAD = 5639.1 VEL = 30.0 MPH.

MUPEAK = 0.89 MULOCK = 0.57 RATIO = 1.57

check Run #3



40.0
FZ = 5639.1 VEL = 30.0 MULOCK = 0.57 MUPEAK = 0.89 RATIO = 1.57 A=0 FILE 132 HWFILE 49 SAMPLE 289

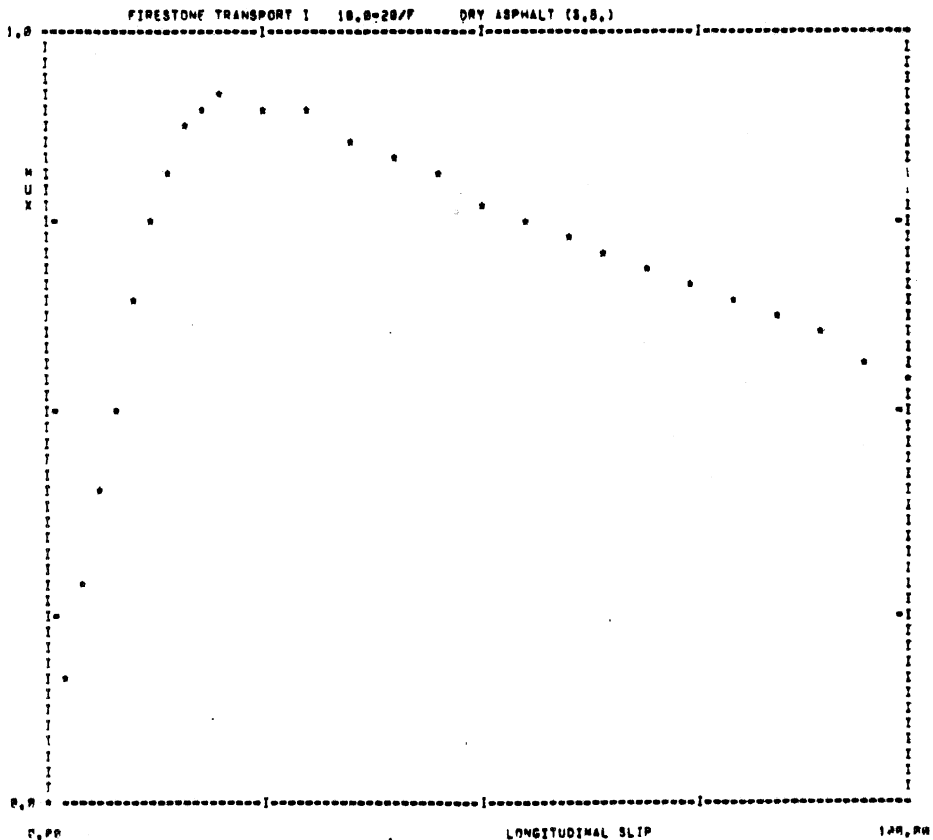
AVERAGE OF FILE 139 FOR 5 RECORDS. FIRESTONE TRANSPORT I 10.0-20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 16494.6 | 920.4 |
| 0.04 | 0.29 | 31000.6 | 1623.2 |
| 0.06 | 0.40 | 44102.6 | 2236.0 |
| 0.08 | 0.52 | 56743.5 | 2855.2 |
| 0.10 | 0.65 | 72101.2 | 3564.0 |
| 0.12 | 0.75 | 83435.7 | 4129.0 |
| 0.14 | 0.82 | 92006.0 | 4512.5 |
| 0.16 | 0.88 | 98355.5 | 4788.4 |
| 0.18 | 0.91 | 103066.9 | 4968.3 |
| 0.20 | 0.91 | 106246.6 | 5082.2 |
| 0.25 | 0.91 | 110153.0 | 4978.6 |
| 0.30 | 0.89 | 112776.2 | 4895.6 |
| 0.35 | 0.87 | 115275.2 | 4765.7 |
| 0.40 | 0.84 | 117617.3 | 4610.0 |
| 0.45 | 0.81 | 119498.0 | 4471.9 |
| 0.50 | 0.78 | 121061.0 | 4330.0 |
| 0.55 | 0.76 | 122043.2 | 4201.2 |
| 0.60 | 0.74 | 122523.4 | 4081.0 |
| 0.65 | 0.72 | 122667.9 | 3968.3 |
| 0.70 | 0.70 | 121776.0 | 3859.6 |
| 0.75 | 0.68 | 118229.0 | 3747.0 |
| 0.80 | 0.66 | 111000.0 | 3620.7 |
| 0.85 | 0.63 | 100317.4 | 3499.1 |
| 0.90 | 0.61 | 87366.9 | 3361.1 |
| 0.95 | 0.58 | 73678.0 | 3221.1 |
| 1.00 | 0.56 | 59250.0 | 3079.5 |

TRAV = 59250.0 LOAD = 5621.2 VEL = 40.0 MPH

MUPEAK = 0.91 MULOCK = 0.56 RATIO = 1.63

Check Run #5

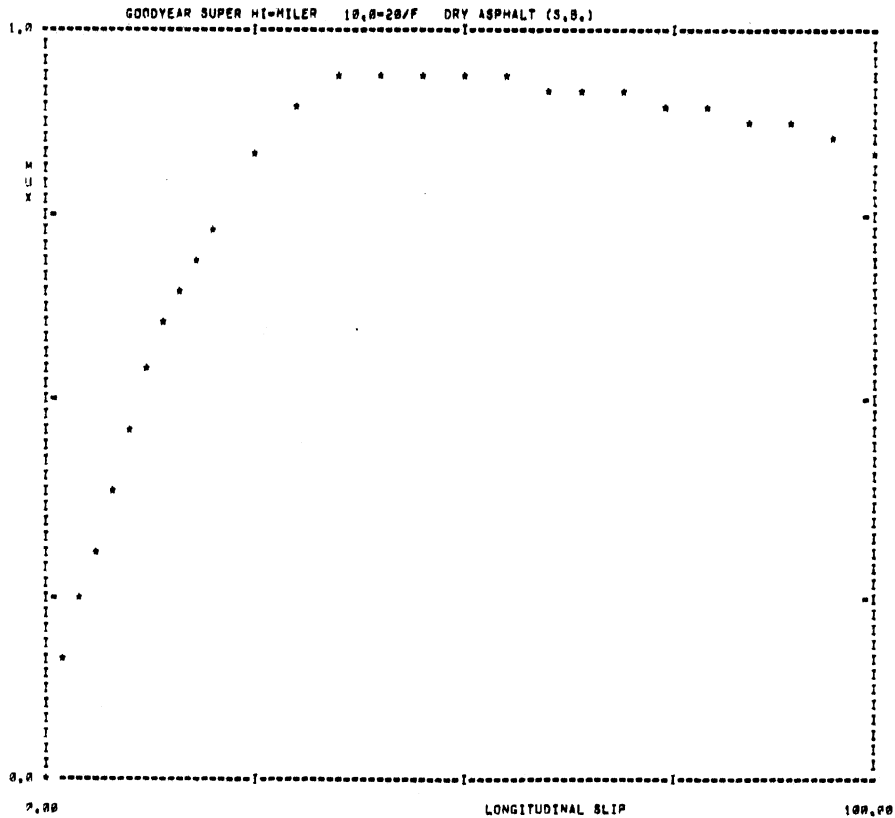


FZ = 5621.2 VEL = 40.0 MULOCK = 0.56 MUPEAK = 0.91 RATIO = 1.63 A=0 FILE 139 M=FILE 53 SAMPLE 213

GOODYEAR SUPER HI MILER, 10.00 x 20/F, BADC ASPHALT

** A=D FILE 147 NEW FILE 55 TEST SAMPLE251 **
 AVERAGE OF FILE 147 FOR 7 RECORDS. GOODYEAR SUPER HI-MILER 10.0-20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|---------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.16 | 17291.3 | 885.3 | |
| 0.04 | 0.24 | 25738.7 | 1327.7 | |
| 0.06 | 0.31 | 33520.6 | 1721.6 | |
| 0.08 | 0.38 | 41989.8 | 2128.2 | |
| 0.10 | 0.47 | 51234.5 | 2568.7 | |
| 0.12 | 0.54 | 59136.1 | 2975.6 | |
| 0.14 | 0.60 | 65288.9 | 3295.7 | |
| 0.16 | 0.65 | 70341.3 | 3554.1 | |
| 0.18 | 0.70 | 74945.7 | 3774.4 | TOAV = 92918.7 LOAD = 5479.4 VEL = 3.8 MPH. |
| 0.20 | 0.74 | 79491.1 | 4022.9 | |
| 0.25 | 0.83 | 89389.9 | 4467.9 | MUPEAK = 0.95 MULLOCK = 0.85 RATIO = 1.12 |
| 0.30 | 0.90 | 96379.5 | 4775.4 | |
| 0.35 | 0.93 | 100629.7 | 4938.6 | |
| 0.40 | 0.94 | 102322.3 | 4993.5 | |
| 0.45 | 0.95 | 102652.8 | 4995.8 | |
| 0.50 | 0.94 | 102324.0 | 4971.3 | |
| 0.55 | 0.94 | 101669.5 | 4935.8 | |
| 0.60 | 0.93 | 100051.9 | 4892.5 | |
| 0.65 | 0.92 | 99952.9 | 4846.9 | |
| 0.70 | 0.91 | 99813.1 | 4799.7 | |
| 0.75 | 0.90 | 98852.9 | 4751.8 | |
| 0.80 | 0.89 | 97882.6 | 4703.4 | |
| 0.85 | 0.88 | 96107.2 | 4654.9 | |
| 0.90 | 0.87 | 95103.2 | 4605.1 | |
| 0.95 | 0.86 | 94046.3 | 4552.8 | |
| 1.00 | 0.85 | 92918.7 | 4496.8 | |



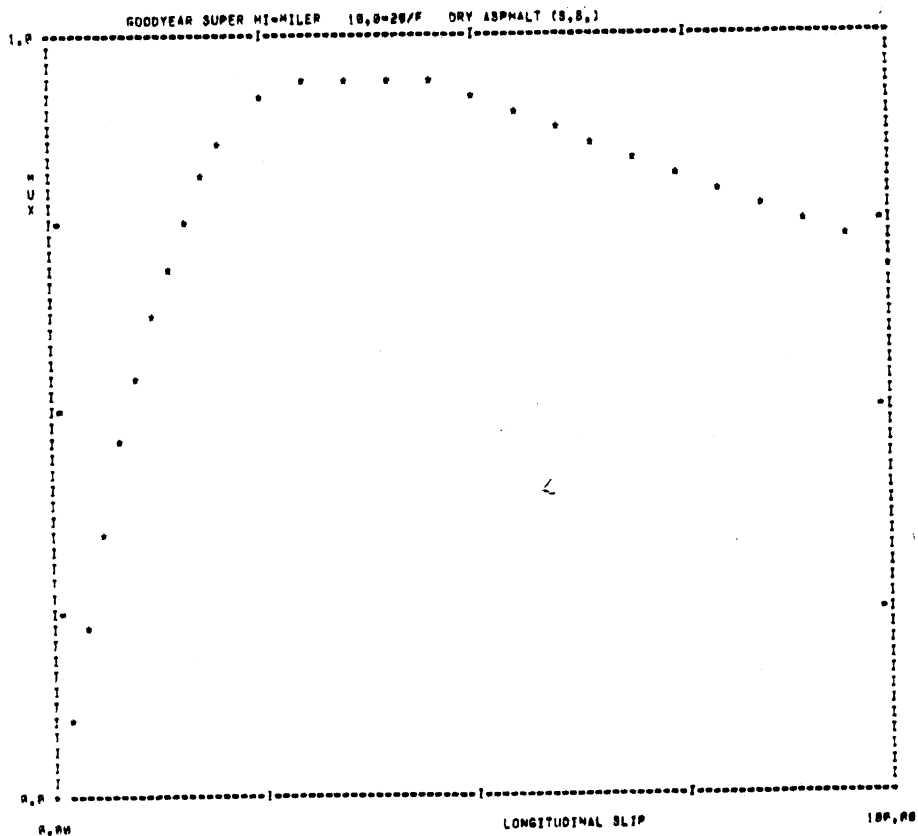
FZ = 5479.4 VEL = 3.8 MULLOCK = 0.85 MUPEAK = 0.95 RATIO = 1.12 A=D FILE 147 NEWFILE 55 SAMPLE 251

** A=D FILE 148 NEW FILE 56 TEST SAMPLE 252 **
 AVERAGE OF FILE 148 FOR 6 RECORDS. GOODYEAR SUPER MI-MILER 18.0-20/P DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.09 | 9264.7 | 516.5 |
| 0.04 | 0.22 | 23321.0 | 1199.5 |
| 0.06 | 0.35 | 36069.9 | 1888.7 |
| 0.08 | 0.46 | 49816.3 | 2581.8 |
| 0.10 | 0.55 | 59105.9 | 2979.0 |
| 0.12 | 0.63 | 67197.7 | 3367.0 |
| 0.14 | 0.69 | 74556.7 | 3700.0 |
| 0.16 | 0.76 | 81248.0 | 4071.1 |
| 0.18 | 0.82 | 87173.5 | 4355.2 |
| 0.20 | 0.86 | 91304.6 | 4586.4 |
| 0.25 | 0.91 | 97535.2 | 4882.1 |
| 0.30 | 0.94 | 102942.3 | 4921.9 |
| 0.35 | 0.94 | 105304.1 | 4953.3 |
| 0.40 | 0.94 | 108072.7 | 4931.6 |
| 0.45 | 0.93 | 110051.0 | 4885.7 |
| 0.50 | 0.92 | 111459.1 | 4824.0 |
| 0.55 | 0.91 | 111200.5 | 4747.0 |
| 0.60 | 0.89 | 108209.4 | 4640.9 |
| 0.65 | 0.87 | 104865.3 | 4524.2 |
| 0.70 | 0.84 | 99947.8 | 4407.4 |
| 0.75 | 0.82 | 96034.2 | 4291.9 |
| 0.80 | 0.80 | 92230.6 | 4177.1 |
| 0.85 | 0.78 | 88583.7 | 4062.7 |
| 0.90 | 0.76 | 84488.4 | 3945.5 |
| 0.95 | 0.73 | 79861.6 | 3822.7 |
| 1.00 | 0.70 | 74312.5 | 3691.2 |

TRAV = 74312.5 LOAD = 5509.2 VEL = 18.0 MPH.

MUPEAK = 0.94 MULOCK = 0.70 RATIO = 1.35

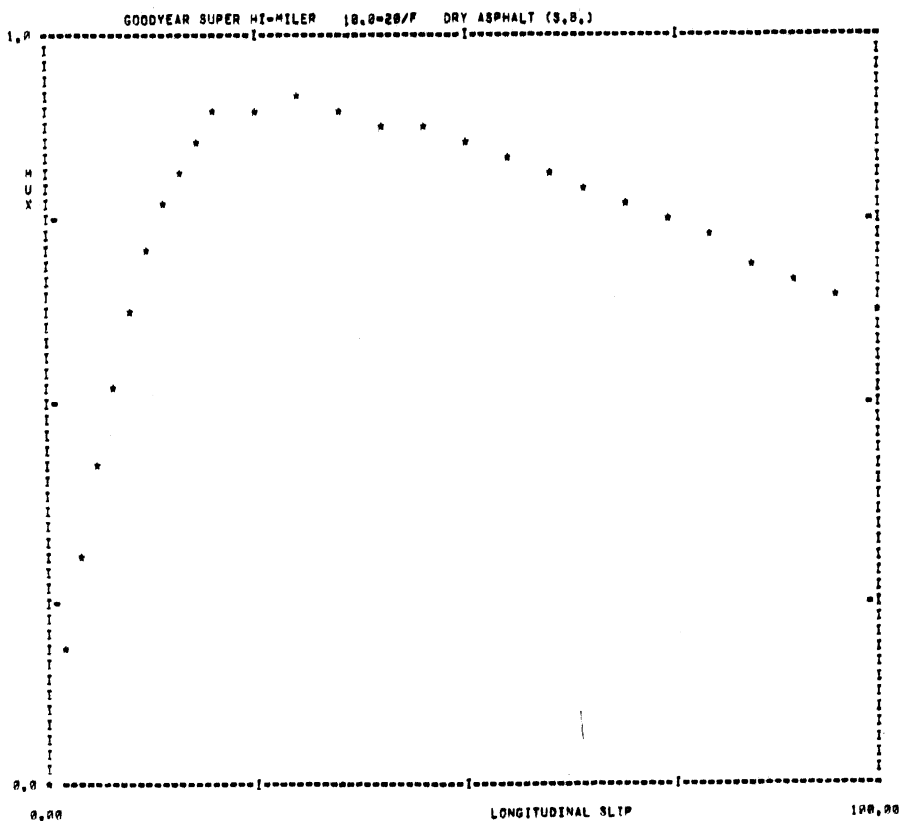


FZ = 5509.2 VEL = 18.0 MULOCK = 0.70 MUPEAK = 0.94 RATIO = 1.35 A=D FILE 148 NEWFILE 56 SAMPLE 252

** A=0 FILE 149 NEW FILE 57 TEST SAMPLE253 **
 AVERAGE OF FILE 149 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10.0=20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 19755.0 | 983.0 |
| 0.04 | 0.31 | 34672.0 | 1730.0 |
| 0.06 | 0.42 | 47001.0 | 2333.1 |
| 0.08 | 0.53 | 59447.5 | 2936.9 |
| 0.10 | 0.63 | 69920.3 | 3407.1 |
| 0.12 | 0.71 | 78765.1 | 3914.5 |
| 0.14 | 0.77 | 85752.9 | 4232.2 |
| 0.16 | 0.83 | 90838.9 | 4485.3 |
| 0.18 | 0.87 | 94888.6 | 4670.7 |
| 0.20 | 0.89 | 97731.2 | 4774.2 |
| 0.25 | 0.91 | 102665.3 | 4852.2 |
| 0.30 | 0.91 | 106348.0 | 4848.7 |
| 0.35 | 0.90 | 109038.3 | 4799.2 |
| 0.40 | 0.89 | 111141.1 | 4725.5 |
| 0.45 | 0.87 | 112741.2 | 4642.5 |
| 0.50 | 0.86 | 113923.2 | 4554.3 |
| 0.55 | 0.84 | 114970.2 | 4460.4 |
| 0.60 | 0.82 | 115920.6 | 4361.6 |
| 0.65 | 0.80 | 116133.4 | 4261.1 |
| 0.70 | 0.78 | 114326.4 | 4154.3 |
| 0.75 | 0.76 | 109955.5 | 4041.0 |
| 0.80 | 0.73 | 103162.4 | 3916.7 |
| 0.85 | 0.71 | 94590.3 | 3707.1 |
| 0.90 | 0.68 | 85430.9 | 3452.4 |
| 0.95 | 0.65 | 75733.9 | 3514.7 |
| 1.00 | 0.63 | 65270.8 | 3372.5 |

TOAV = 65270.8 LOAD = 5592.0 VEL = 20.0 MPH,
 MUPEAK = 0.91 MULLOCK = 0.63 RATIO = 1.46



FZ = 5592.0 VEL = 20.0 MULLOCK = 0.63 MUPEAK = 0.91 RATIO = 1.46 A=0 FILE 149 NHFILE 57 SAMPLE 253

== A=0 FILE 150

NEW FILE 50

TEST SAMPLE 254 ==

AVERAGE OF FILE 150 FOR 4 RECORDS.

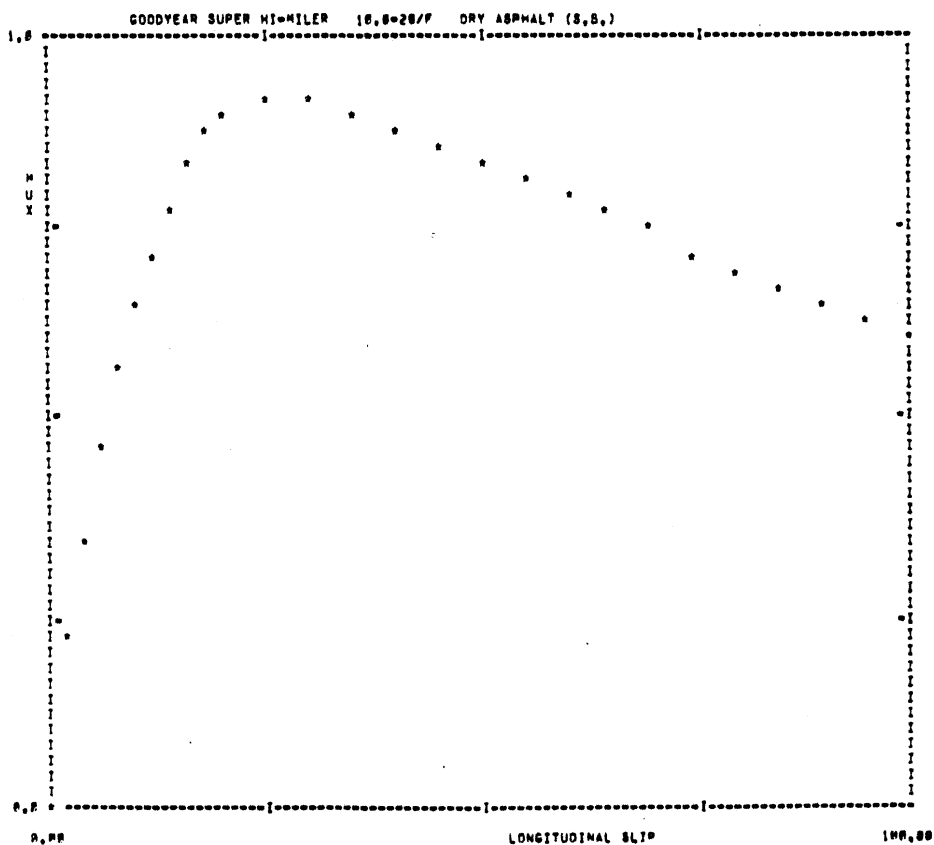
GOODYEAR SUPER MI-MILER

10.0-20/P DRY ASPHALT (8.0.)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.23 | 22972.6 | 1260.5 |
| 0.04 | 0.35 | 37847.4 | 1936.4 |
| 0.06 | 0.47 | 51320.3 | 2574.6 |
| 0.08 | 0.57 | 63033.7 | 3119.6 |
| 0.10 | 0.65 | 72169.1 | 3536.1 |
| 0.12 | 0.72 | 79430.0 | 3884.0 |
| 0.14 | 0.78 | 85923.7 | 4200.1 |
| 0.16 | 0.84 | 91850.5 | 4480.3 |
| 0.18 | 0.88 | 95676.6 | 4689.0 |
| 0.20 | 0.90 | 98046.0 | 4796.1 |
| 0.25 | 0.91 | 104227.0 | 4893.0 |
| 0.30 | 0.91 | 108534.5 | 4899.4 |
| 0.35 | 0.90 | 111620.7 | 4845.5 |
| 0.40 | 0.88 | 113412.6 | 4750.9 |
| 0.45 | 0.86 | 114396.7 | 4653.3 |
| 0.50 | 0.84 | 115063.3 | 4530.0 |
| 0.55 | 0.82 | 115504.1 | 4417.9 |
| 0.60 | 0.79 | 116019.2 | 4297.2 |
| 0.65 | 0.77 | 116445.7 | 4176.4 |
| 0.70 | 0.75 | 116175.0 | 4055.2 |
| 0.75 | 0.72 | 113293.1 | 3934.2 |
| 0.80 | 0.70 | 106792.4 | 3800.7 |
| 0.85 | 0.68 | 97430.0 | 3675.9 |
| 0.90 | 0.65 | 86919.3 | 3539.0 |
| 0.95 | 0.63 | 75031.9 | 3401.1 |
| 1.00 | 0.60 | 64031.2 | 3250.0 |

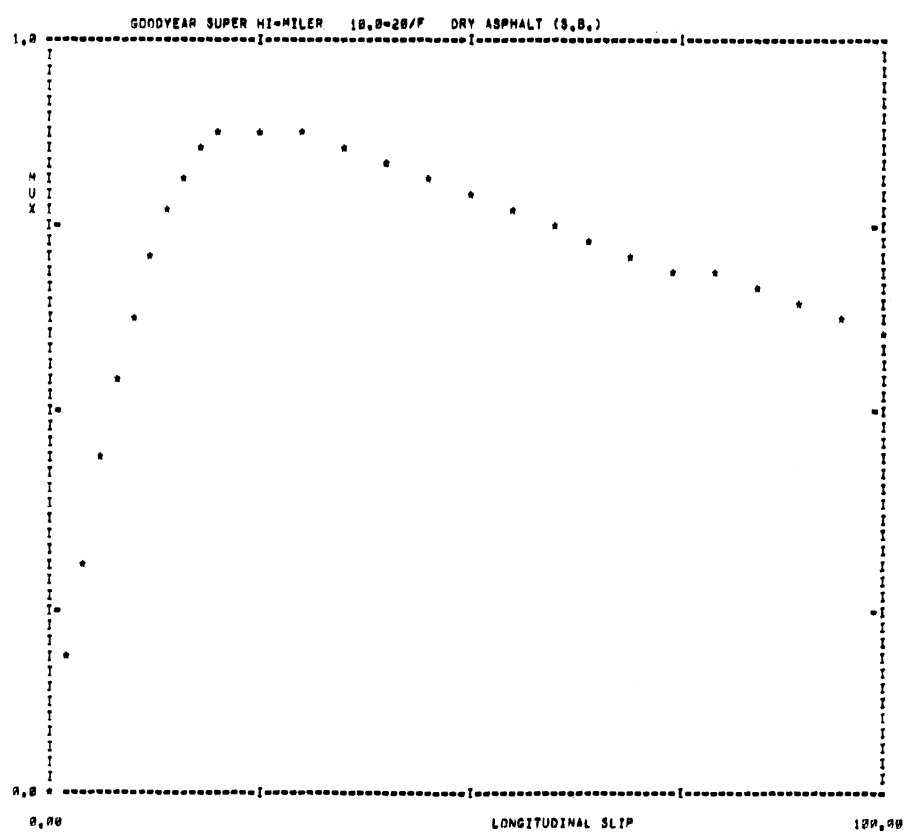
TOAV = 64031.2 LOAD = 5512.2 VEL = 30.0 MPH.

MUPEAK = 0.91 MULLOCK = 0.60 RATIO = 1.51



PZ = 5512.2 VEL = 30.0 MULLOCK = 0.60 MUPEAK = 0.91 RATIO = 1.51 A=0 FILE 150 NEW FILE 50 SAMPLE 254

| ** A=D FILE 151 | | | NEW FILE 501 | TEST SAMPLE 255 ** |
|------------------------------------|------|----------|-------------------------|----------------------------------------------|
| AVERAGE OF FILE 151 FOR 5 RECORDS. | | | GOODYEAR SUPER HI-MILER | 10.0=20/F DRY ASPHALT (8.8.) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.88 | 0.0 | 0.0 | |
| 0.02 | 0.18 | 19797.3 | 988.5 | |
| 0.04 | 0.32 | 35458.4 | 1752.8 | |
| 0.06 | 0.44 | 49539.1 | 2444.5 | |
| 0.08 | 0.55 | 61608.6 | 3031.7 | |
| 0.10 | 0.64 | 72608.6 | 3543.6 | |
| 0.12 | 0.72 | 81414.0 | 3966.9 | |
| 0.14 | 0.78 | 88498.3 | 4289.9 | |
| 0.16 | 0.83 | 94849.5 | 4538.7 | |
| 0.18 | 0.86 | 98178.6 | 4714.1 | TOAV = 63550.0 LOAD = 5567.1 VEL = 40.0 MPH. |
| 0.20 | 0.87 | 101877.6 | 4778.6 | |
| 0.25 | 0.88 | 105281.6 | 4777.8 | MUPEAK = 0.88 MULLOCK = 0.61 RATIO = 1.43 |
| 0.30 | 0.88 | 107937.0 | 4734.8 | |
| 0.35 | 0.87 | 109774.8 | 4658.7 | |
| 0.40 | 0.85 | 111328.0 | 4559.3 | |
| 0.45 | 0.83 | 112843.9 | 4443.7 | |
| 0.50 | 0.81 | 114286.7 | 4322.3 | |
| 0.55 | 0.78 | 115475.8 | 4198.7 | |
| 0.60 | 0.76 | 116666.2 | 4076.8 | |
| 0.65 | 0.74 | 117345.5 | 3965.1 | |
| 0.70 | 0.72 | 117376.2 | 3862.4 | |
| 0.75 | 0.70 | 115471.9 | 3778.1 | |
| 0.80 | 0.69 | 109518.2 | 3682.5 | |
| 0.85 | 0.67 | 99778.6 | 3592.4 | |
| 0.90 | 0.65 | 88318.5 | 3508.6 | |
| 0.95 | 0.63 | 76263.1 | 3407.8 | |
| 1.00 | 0.61 | 63558.0 | 3313.5 | |



FZ = 5567.1 VEL = 40.0 MULLOCK = 0.61 MUPEAK = 0.88 RATIO = 1.43 A=D FILE 151 NHFILE 50 SAMPLE 255

.. A=0 FILE 155
 AVERAGE OF FILE 155 FOR 5 RECORDS.

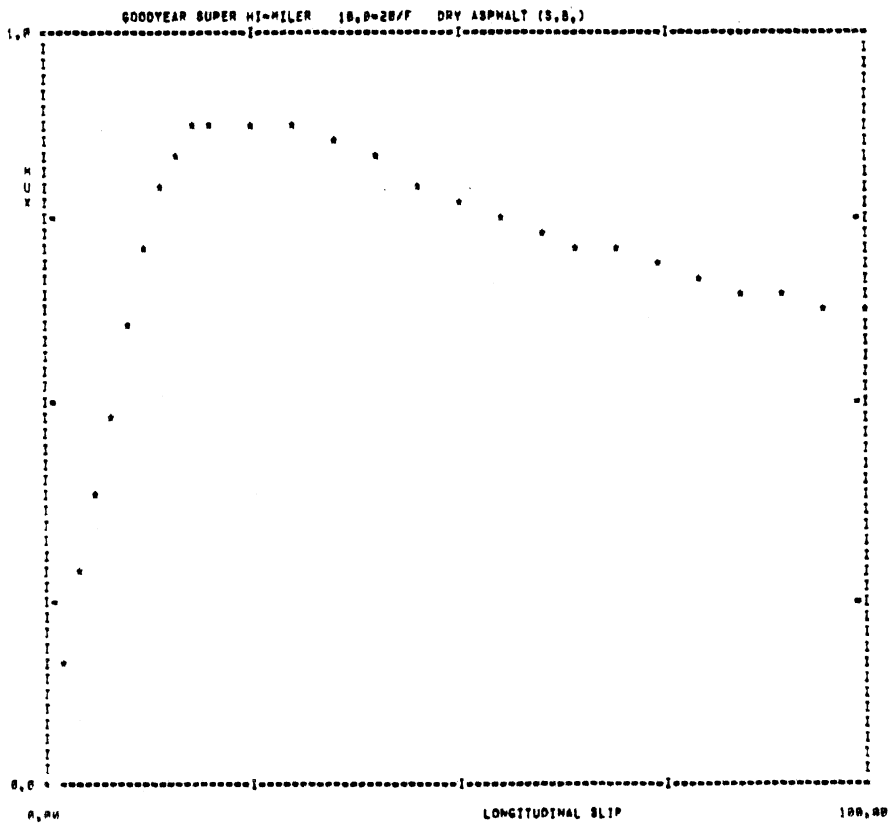
NEW FILE 68
 GOODYEAR SUPER MI-MILER

TEST SAMPLE 256 ..
 1R, 0=20/F DRY ASPHALT (S, 0,)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 15675.3 | 659.4 |
| 0.04 | 0.20 | 29710.0 | 1507.0 |
| 0.06 | 0.30 | 41900.5 | 2083.5 |
| 0.08 | 0.40 | 53019.9 | 2644.6 |
| 0.10 | 0.62 | 67045.0 | 3321.6 |
| 0.12 | 0.72 | 78949.7 | 3855.5 |
| 0.14 | 0.79 | 86907.0 | 4242.0 |
| 0.16 | 0.84 | 93318.0 | 4517.3 |
| 0.18 | 0.87 | 98136.0 | 4601.0 |
| 0.20 | 0.89 | 100644.9 | 4742.6 |
| 0.25 | 0.90 | 105730.0 | 4716.0 |
| 0.30 | 0.87 | 100659.1 | 4601.9 |
| 0.35 | 0.85 | 110509.4 | 4902.5 |
| 0.40 | 0.83 | 112300.2 | 4425.2 |
| 0.45 | 0.81 | 114102.2 | 4302.0 |
| 0.50 | 0.78 | 116137.0 | 4170.1 |
| 0.55 | 0.76 | 117836.1 | 4063.0 |
| 0.60 | 0.74 | 118946.7 | 3950.4 |
| 0.65 | 0.72 | 119795.1 | 3850.7 |
| 0.70 | 0.71 | 120027.6 | 3772.3 |
| 0.75 | 0.70 | 118073.1 | 3692.3 |
| 0.80 | 0.68 | 114571.3 | 3610.6 |
| 0.85 | 0.67 | 105464.5 | 3523.0 |
| 0.90 | 0.65 | 92571.1 | 3442.0 |
| 0.95 | 0.64 | 78135.4 | 3363.7 |
| 1.00 | 0.63 | 62500.0 | 3289.5 |

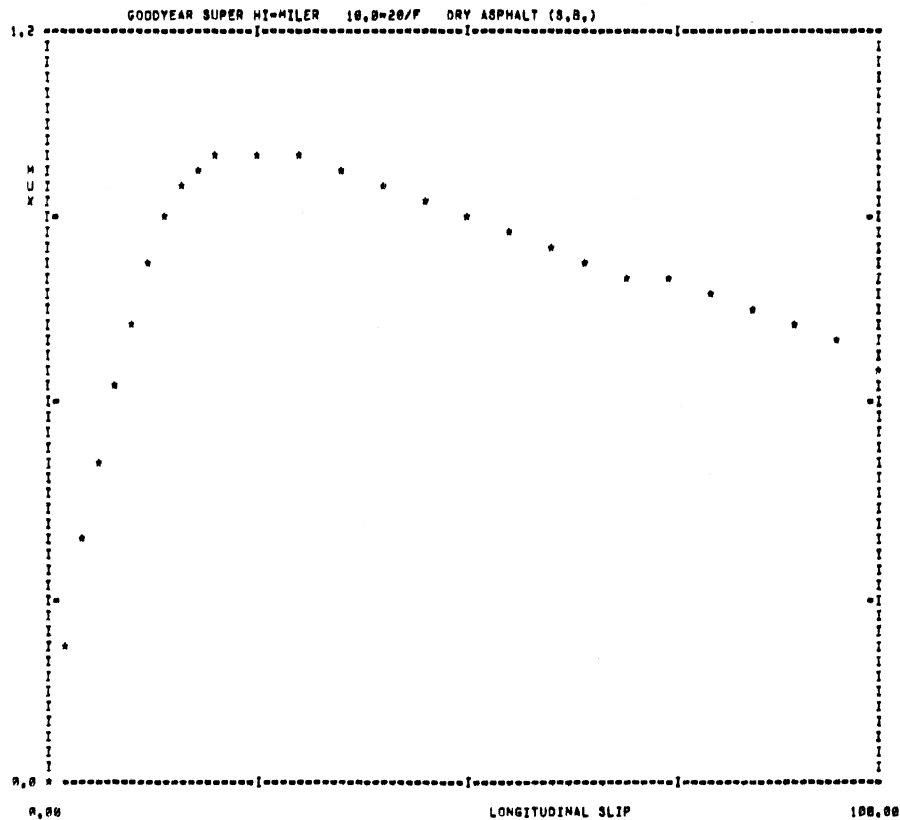
TOAV = 62500.0 LOAD = 5463.7 VEL = 55.0 MPH,

MUPEAK = 0.89 MULLOCK = 0.63 RATIO = 1.42



PZ = 5463.7 VEL = 55.0 MULLOCK = 0.63 MUPEAK = 0.89 RATIO = 1.42 A=0 FILE 155 NEWFILE 68 SAMPLE 256

| ** A=D FILE 160 | | NEW FILE 62 | | TEST SAMPLE258 ** | |
|------------------------------------|------|-------------------------|--------|------------------------------|-------------------------------|
| AVERAGE OF FILE 160 FOR 6 RECORDS, | | GOODYEAR SUPER HI-MILER | | 18.8=28/F DRY ASPHALT (S.B.) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.22 | 9418.1 | 503.7 | | |
| 0.04 | 0.38 | 17748.5 | 881.4 | | |
| 0.06 | 0.52 | 24744.8 | 1197.7 | | |
| 0.08 | 0.64 | 31471.3 | 1466.3 | | |
| 0.10 | 0.74 | 36749.8 | 1697.1 | | |
| 0.12 | 0.83 | 41235.0 | 1891.2 | | |
| 0.14 | 0.91 | 44943.6 | 2063.9 | | |
| 0.16 | 0.96 | 47967.8 | 2192.1 | | |
| 0.18 | 0.99 | 50789.8 | 2266.4 | TOAV = 31791.7 | LOAD = 2377.8 VEL = 48.8 MPH. |
| 0.20 | 1.00 | 52642.7 | 2298.0 | | |
| 0.25 | 1.01 | 56384.2 | 2380.2 | MUPEAK = 1.01 | MULOCK = 0.67 RATIO = 1.51 |
| 0.30 | 1.00 | 59198.3 | 2271.1 | | |
| 0.35 | 0.98 | 61253.2 | 2227.6 | | |
| 0.40 | 0.96 | 62836.6 | 2175.1 | | |
| 0.45 | 0.93 | 64351.4 | 2118.1 | | |
| 0.50 | 0.91 | 65929.3 | 2061.5 | | |
| 0.55 | 0.88 | 67629.7 | 2003.6 | | |
| 0.60 | 0.86 | 69343.0 | 1948.7 | | |
| 0.65 | 0.83 | 70998.8 | 1908.6 | | |
| 0.70 | 0.82 | 72374.0 | 1858.4 | | |
| 0.75 | 0.80 | 72778.4 | 1828.5 | | |
| 0.80 | 0.78 | 73122.3 | 1782.0 | | |
| 0.85 | 0.76 | 63397.6 | 1734.3 | | |
| 0.90 | 0.73 | 53924.8 | 1675.3 | | |
| 0.95 | 0.70 | 43407.4 | 1609.4 | | |
| 1.00 | 0.67 | 31791.7 | 1535.0 | | |



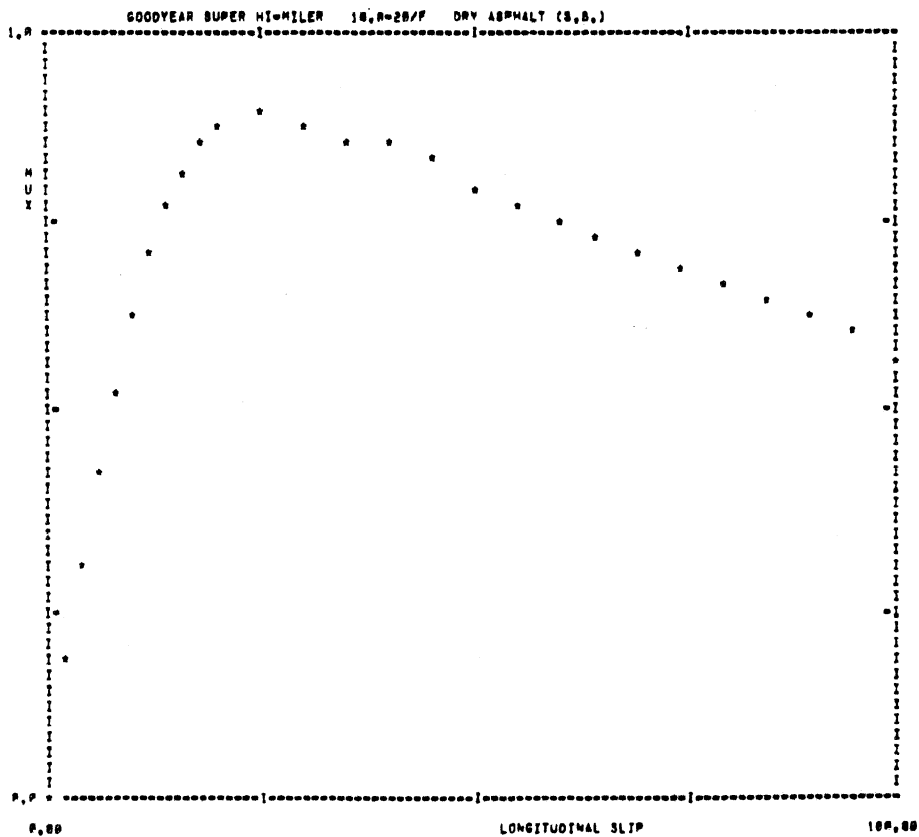
FZ = 2377.8 VEL = 48.8 MULOCK = 0.67 MUPEAK = 1.01 RATIO = 1.51 A=D FILE 160 NEWFILE 62 SAMPLE 258

A=D FILE 161 NEW FILE 63 TEST SAMPLE 259 **
 AVERAGE OF FILE 161 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10.0-20/P DRY ASPHALT (S,B.)

| SLIP | MUX | TORQUE | F1 |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 19317.3 | 983.8 |
| 0.04 | 0.32 | 35795.6 | 1761.9 |
| 0.06 | 0.43 | 49304.2 | 2415.9 |
| 0.08 | 0.50 | 60924.8 | 2967.8 |
| 0.10 | 0.63 | 71816.6 | 3454.1 |
| 0.12 | 0.71 | 79270.0 | 3876.3 |
| 0.14 | 0.78 | 86041.5 | 4215.9 |
| 0.16 | 0.83 | 91835.2 | 4473.9 |
| 0.18 | 0.86 | 96412.8 | 4661.2 |
| 0.20 | 0.88 | 99594.6 | 4758.2 |
| 0.25 | 0.89 | 105387.7 | 4786.2 |
| 0.30 | 0.86 | 109669.3 | 4749.4 |
| 0.35 | 0.87 | 112628.2 | 4673.9 |
| 0.40 | 0.85 | 114687.4 | 4588.3 |
| 0.45 | 0.83 | 116324.3 | 4476.8 |
| 0.50 | 0.81 | 117698.2 | 4366.5 |
| 0.55 | 0.78 | 119086.7 | 4288.2 |
| 0.60 | 0.76 | 120335.1 | 4126.8 |
| 0.65 | 0.74 | 121285.8 | 4016.7 |
| 0.70 | 0.72 | 121390.1 | 3906.7 |
| 0.75 | 0.70 | 119118.8 | 3805.9 |
| 0.80 | 0.67 | 113383.3 | 3708.8 |
| 0.85 | 0.65 | 103093.5 | 3586.7 |
| 0.90 | 0.63 | 98483.1 | 3462.9 |
| 0.95 | 0.60 | 77086.1 | 3333.2 |
| 1.00 | 0.58 | 62895.8 | 3196.3 |

TOAY = 62895.8 LOAD = 5588.7 VEL = 49.8 MPH.

MUPEAK = 0.89 MULOCK = 0.58 RATIO = 1.58

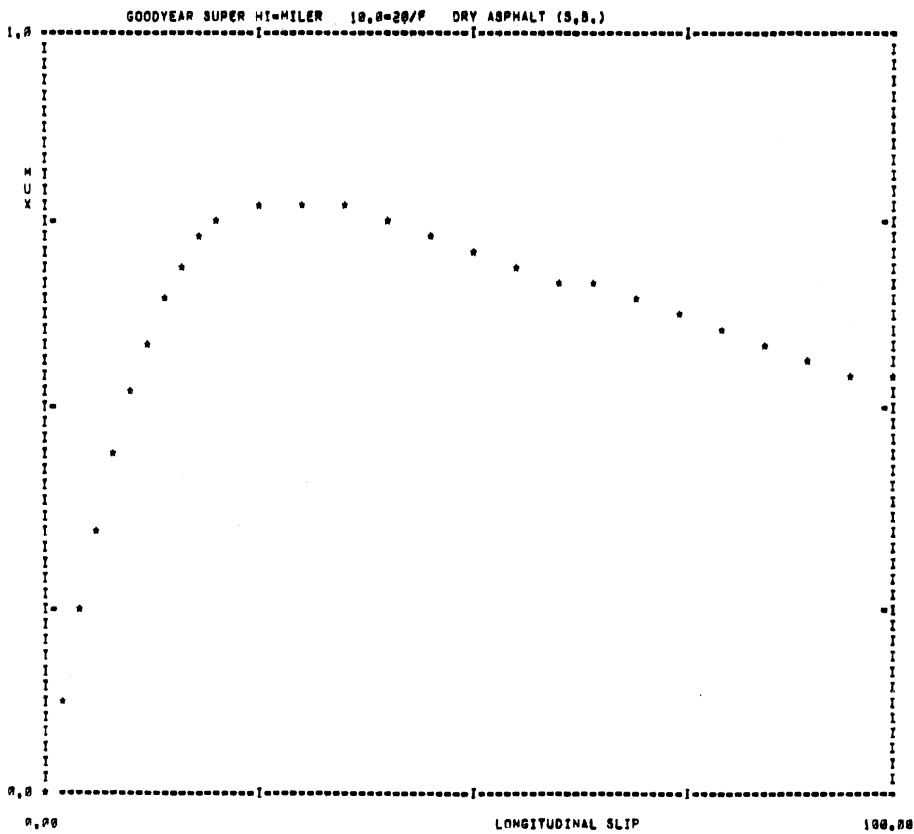


FZ = 5588.7 VEL = 49.8 MULOCK = 0.58 MUPEAK = 0.89 RATIO = 1.58 A=D FILE 161 NEW FILE 63 SAMPLE 259

** A=0 FILE 162 NEW FILE 64 TEST SAMPLE 268 **

AVERAGE OF FILE 162 FOR 5 RECORDS, GOODYEAR SUPER HI-MILER 10.0=20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.13 | 21046.5 | 1116.4 | |
| 0.04 | 0.25 | 43261.8 | 2106.9 | |
| 0.06 | 0.35 | 61403.8 | 3007.1 | |
| 0.08 | 0.44 | 77374.0 | 3902.4 | |
| 0.10 | 0.53 | 91562.4 | 4603.3 | |
| 0.12 | 0.60 | 103905.4 | 5223.6 | |
| 0.14 | 0.66 | 114203.5 | 5743.8 | |
| 0.16 | 0.70 | 122606.3 | 6123.8 | |
| 0.18 | 0.74 | 128612.0 | 6397.1 | TQAV = 86300.0 LOAD = 8950.2 VEL = 40.0 MPH. |
| 0.20 | 0.76 | 132521.2 | 6551.7 | |
| 0.25 | 0.77 | 138532.8 | 6660.9 | MUPEAK = 0.78 MULOCK = 0.54 RATIO = 1.43 |
| 0.30 | 0.78 | 142495.3 | 6642.9 | |
| 0.35 | 0.77 | 145379.4 | 6547.2 | |
| 0.40 | 0.76 | 147830.2 | 6407.9 | |
| 0.45 | 0.74 | 149855.1 | 6253.7 | |
| 0.50 | 0.72 | 151473.5 | 6096.7 | |
| 0.55 | 0.70 | 152023.2 | 5940.2 | |
| 0.60 | 0.68 | 153717.2 | 5789.6 | |
| 0.65 | 0.67 | 154096.2 | 5645.7 | |
| 0.70 | 0.65 | 153450.7 | 5507.7 | |
| 0.75 | 0.63 | 150594.7 | 5370.7 | |
| 0.80 | 0.61 | 143040.0 | 5231.2 | |
| 0.85 | 0.60 | 131031.2 | 5000.0 | |
| 0.90 | 0.58 | 116930.1 | 4946.2 | |
| 0.95 | 0.56 | 102040.8 | 4805.6 | |
| 1.00 | 0.54 | 86300.0 | 4666.5 | |



FZ = 8950.2 VEL = 40.0 MULOCK = 0.54 MUPEAK = 0.78 RATIO = 1.43 A=0 FILE 162 NWFILE 64 SAMPLE 268

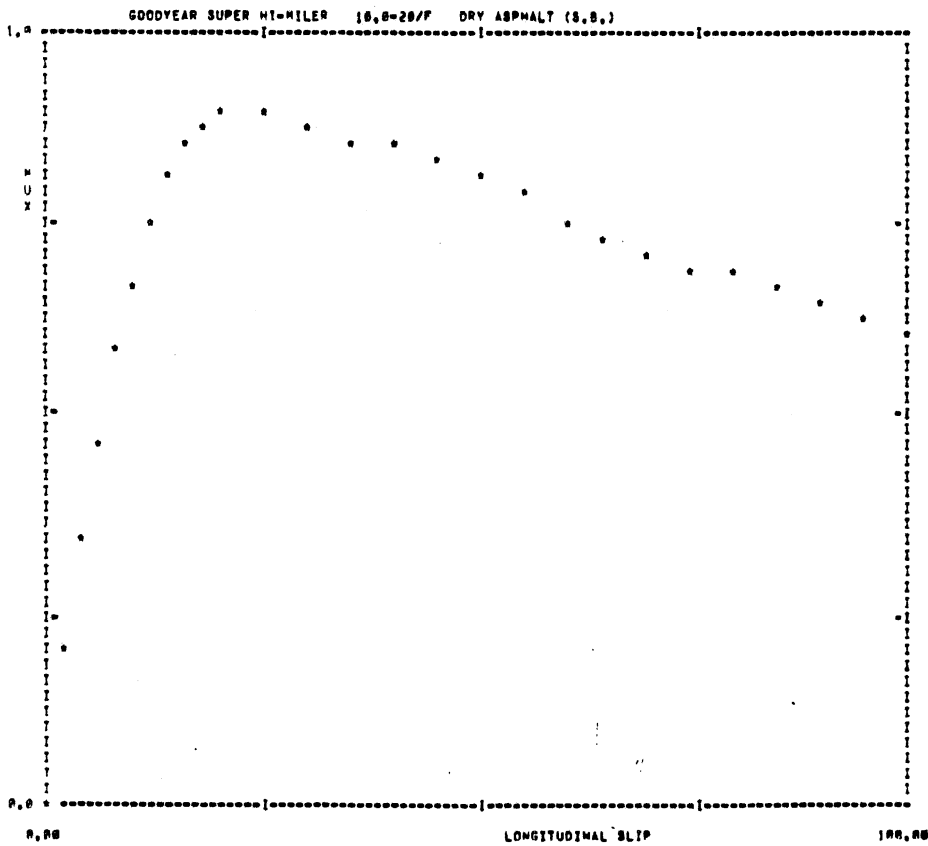
** A-D FILE 146 NEW FILE 58 TEST SAMPLE 258 **
 AVERAGE OF FILE 146 FOR 4 RECORDS, GOODYEAR SUPER MI-MILER 10.0-20/F DRY ASPHALT (3.0.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 20366.4 | 1138.9 |
| 0.04 | 0.35 | 36970.1 | 1885.8 |
| 0.06 | 0.46 | 51638.7 | 2575.3 |
| 0.08 | 0.59 | 62076.2 | 3154.2 |
| 0.10 | 0.60 | 72014.0 | 3648.8 |
| 0.12 | 0.75 | 81335.2 | 4064.6 |
| 0.14 | 0.81 | 88182.5 | 4352.7 |
| 0.16 | 0.85 | 92642.8 | 4549.8 |
| 0.18 | 0.88 | 95489.7 | 4677.7 |
| 0.20 | 0.89 | 97550.1 | 4722.5 |
| 0.25 | 0.89 | 101749.4 | 4697.7 |
| 0.30 | 0.88 | 105329.0 | 4624.7 |
| 0.35 | 0.87 | 107542.3 | 4530.1 |
| 0.40 | 0.85 | 100425.0 | 4450.4 |
| 0.45 | 0.84 | 100642.2 | 4357.1 |
| 0.50 | 0.81 | 100781.2 | 4249.6 |
| 0.55 | 0.79 | 100030.7 | 4136.5 |
| 0.60 | 0.77 | 100081.9 | 4020.4 |
| 0.65 | 0.74 | 100179.7 | 3905.1 |
| 0.70 | 0.72 | 100091.1 | 3808.7 |
| 0.75 | 0.70 | 100172.0 | 3707.3 |
| 0.80 | 0.69 | 100377.5 | 3617.7 |
| 0.85 | 0.67 | 96009.7 | 3525.0 |
| 0.90 | 0.65 | 86672.6 | 3429.5 |
| 0.95 | 0.63 | 75259.1 | 3331.7 |
| 1.00 | 0.61 | 62486.2 | 3236.6 |

TDAY = 62486.2 LOAD = 5482.7 VEL = 40.0 MPH.

MUPEAK = 0.89 MULLOCK = 0.61 RATIO = 1.47

Check Run #1



FZ = 5482.7 VEL = 40.0 MULLOCK = 0.61 MUPEAK = 0.89 RATIO = 1.47 A-D FILE 146 NEWFILE 58 SAMPLE 258

** A-D FILE 156 NEW FILE 61 TEST SAMPLE257 **

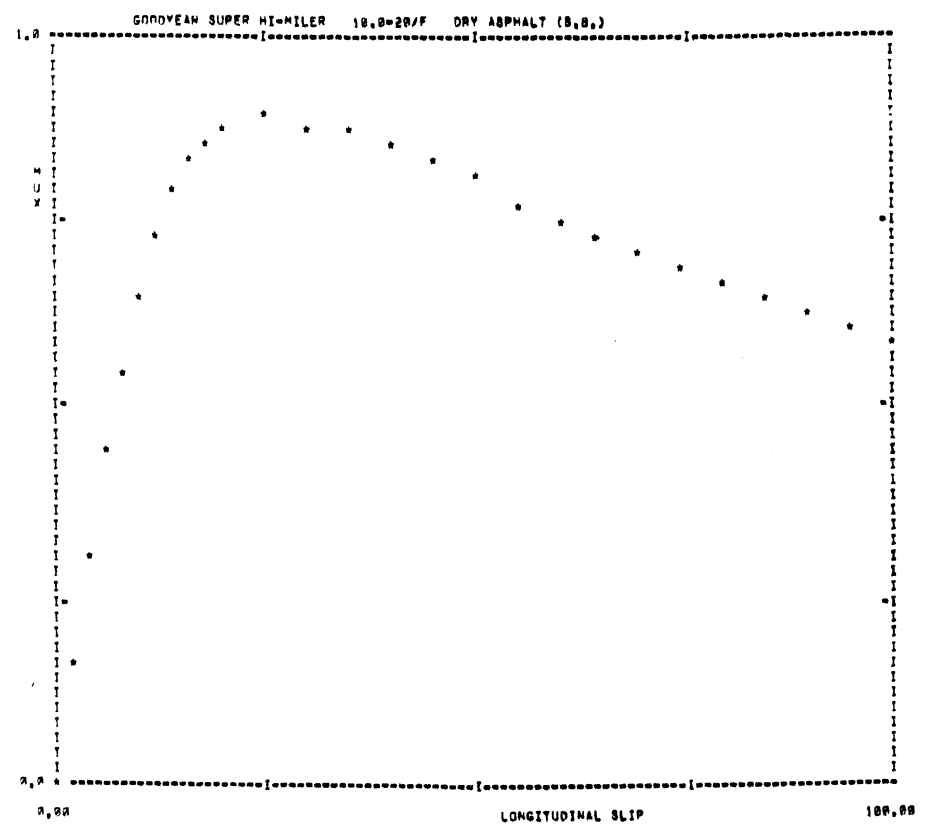
AVERAGE OF FILE 156 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10,0=20/F DRY ASPHALT (8,8.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.17 | 19667.0 | 973.0 |
| 0.04 | 0.32 | 35054.4 | 1771.1 |
| 0.06 | 0.44 | 49457.0 | 2467.3 |
| 0.08 | 0.56 | 60764.2 | 3077.7 |
| 0.10 | 0.66 | 70917.3 | 3602.4 |
| 0.12 | 0.73 | 79099.0 | 4030.5 |
| 0.14 | 0.79 | 87619.3 | 4354.2 |
| 0.16 | 0.84 | 93201.5 | 4600.6 |
| 0.18 | 0.87 | 97359.9 | 4779.8 |
| 0.20 | 0.89 | 100494.5 | 4862.1 |
| 0.25 | 0.89 | 105644.5 | 4980.4 |
| 0.30 | 0.89 | 109151.6 | 4864.4 |
| 0.35 | 0.87 | 111700.4 | 4781.6 |
| 0.40 | 0.85 | 113670.4 | 4676.6 |
| 0.45 | 0.83 | 115191.9 | 4561.0 |
| 0.50 | 0.81 | 116434.2 | 4440.9 |
| 0.55 | 0.79 | 117443.2 | 4317.1 |
| 0.60 | 0.76 | 118267.4 | 4192.4 |
| 0.65 | 0.74 | 118950.0 | 4070.5 |
| 0.70 | 0.72 | 119027.0 | 3951.0 |
| 0.75 | 0.70 | 116709.0 | 3837.3 |
| 0.80 | 0.68 | 110555.9 | 3726.1 |
| 0.85 | 0.66 | 100000.4 | 3610.6 |
| 0.90 | 0.64 | 88753.6 | 3493.6 |
| 0.95 | 0.62 | 75909.1 | 3375.2 |
| 1.00 | 0.60 | 62416.7 | 3255.0 |

TQAV = 62416.7 LOAD = 5502.0 VEL = 40.0 MPH.

MUPEAK = 0.89 MULLOCK = 0.60 RATIO = 1.50

check Run #3



FZ = 5502.0 VEL = 40.0 MULLOCK = 0.60 MUPEAK = 0.89 RATIO = 1.50 A-D FILE 156 NEWFILE 61 SAMPLE 257

** A-D FILE 163
 AVERAGE OF FILE 163 FOR 5 RECORDS.

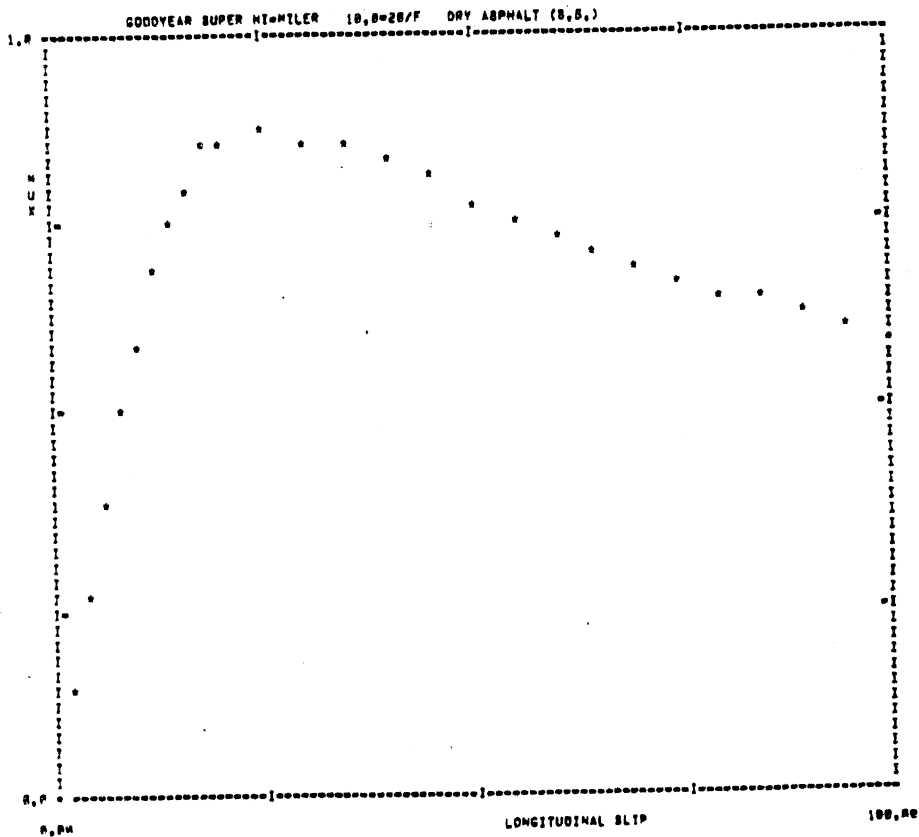
NEW FILE 65 TEST SAMPLE 261 **
 GOODYEAR SUPER MI-MILER 10,0-20/F DRY ASPHALT (8,8.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.14 | 17953.0 | 762.7 |
| 0.04 | 0.27 | 31010.0 | 1510.7 |
| 0.06 | 0.39 | 45577.1 | 2170.0 |
| 0.08 | 0.50 | 57444.0 | 2762.4 |
| 0.10 | 0.60 | 67371.0 | 3275.5 |
| 0.12 | 0.69 | 76652.9 | 3750.3 |
| 0.14 | 0.76 | 84070.3 | 4111.2 |
| 0.16 | 0.81 | 92004.2 | 4411.3 |
| 0.18 | 0.85 | 96656.3 | 4637.7 |
| 0.20 | 0.87 | 100239.3 | 4716.7 |
| 0.25 | 0.87 | 105959.0 | 4732.2 |
| 0.30 | 0.87 | 109070.7 | 4679.0 |
| 0.35 | 0.85 | 112510.5 | 4590.3 |
| 0.40 | 0.83 | 114521.0 | 4479.6 |
| 0.45 | 0.81 | 116252.0 | 4357.6 |
| 0.50 | 0.79 | 117015.2 | 4230.2 |
| 0.55 | 0.76 | 119205.2 | 4090.5 |
| 0.60 | 0.74 | 120306.1 | 3972.0 |
| 0.65 | 0.72 | 121236.2 | 3853.1 |
| 0.70 | 0.70 | 120900.9 | 3740.3 |
| 0.75 | 0.68 | 118256.2 | 3600.8 |
| 0.80 | 0.66 | 112100.0 | 3559.3 |
| 0.85 | 0.65 | 101693.5 | 3467.1 |
| 0.90 | 0.63 | 88915.0 | 3370.0 |
| 0.95 | 0.61 | 75000.0 | 3271.1 |
| 1.00 | 0.59 | 61000.0 | 3160.0 |

TOAV = 61900.0 LOAD = 5570.3 VEL = 80.0 MPH.

MUPEAK = 0.87 MULOCK = 0.59 RATIO = 1.47

Check Run #5

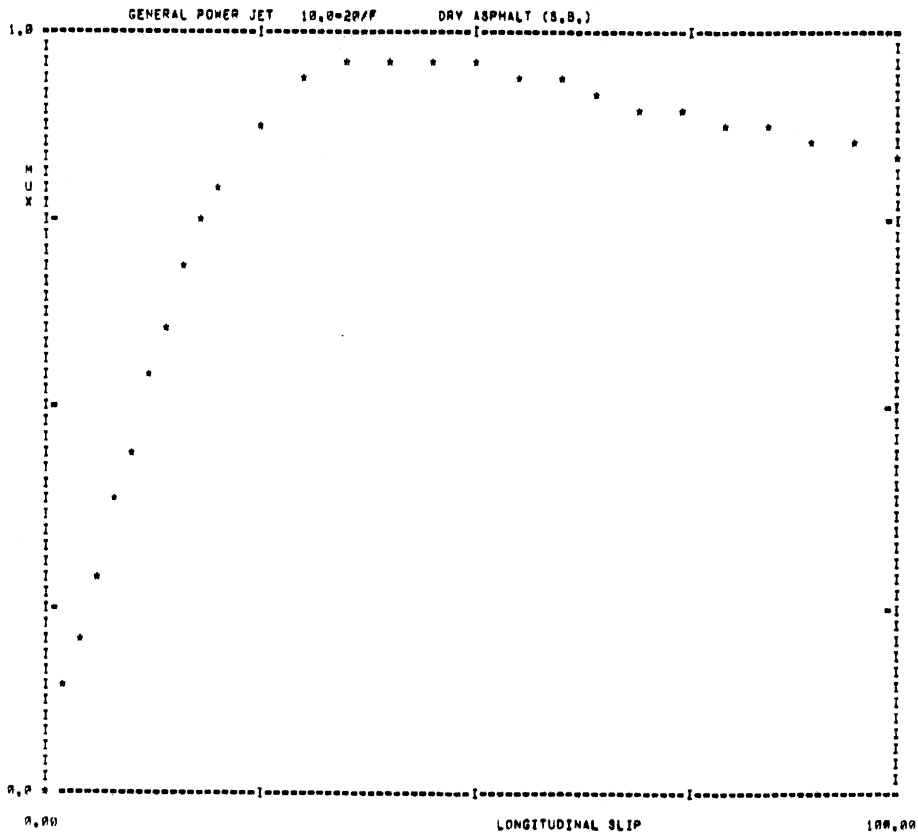


FX = 5570.3 VEL = 80.0 MULOCK = 0.59 MUPEAK = 0.87 RATIO = 1.47 A-D FILE 163 NHFILE 65 SAMPLE 261

GENERAL POWER JET, 10.00 x 20/F, BADC ASPHALT

** A=D FILE 172 NEW FILE 67 TEST SAMPLE301 **
AVERAGE OF FILE 172 FOR 5 RECORDS. GENERAL POWER JET 10.0=20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|---------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.14 | 13666.6 | 784.9 | |
| 0.04 | 0.20 | 21371.9 | 1142.0 | |
| 0.06 | 0.30 | 31103.2 | 1644.5 | |
| 0.08 | 0.38 | 40036.5 | 2090.8 | |
| 0.10 | 0.46 | 49403.7 | 2507.1 | |
| 0.12 | 0.55 | 59767.1 | 2994.6 | |
| 0.14 | 0.62 | 68266.9 | 3407.1 | |
| 0.16 | 0.69 | 74715.0 | 3755.6 | |
| 0.18 | 0.75 | 80840.8 | 4052.1 | TQAV = 91100.0 LOAD = 5592.9 VEL = 3.0 MPH. |
| 0.20 | 0.79 | 84952.3 | 4292.0 | |
| 0.25 | 0.88 | 94241.3 | 4726.3 | MUPEAK = 0.96 MULLOCK = 0.84 RATIO = 1.15 |
| 0.30 | 0.93 | 100065.1 | 4996.2 | |
| 0.35 | 0.96 | 103913.4 | 5119.6 | |
| 0.40 | 0.96 | 104501.3 | 5142.9 | |
| 0.45 | 0.96 | 104244.0 | 5121.0 | |
| 0.50 | 0.95 | 103467.5 | 5078.9 | |
| 0.55 | 0.94 | 102477.5 | 5026.0 | |
| 0.60 | 0.93 | 101381.5 | 4969.0 | |
| 0.65 | 0.92 | 100232.6 | 4910.3 | |
| 0.70 | 0.91 | 99057.1 | 4849.6 | |
| 0.75 | 0.90 | 97860.5 | 4780.3 | |
| 0.80 | 0.89 | 96673.2 | 4726.6 | |
| 0.85 | 0.87 | 95474.7 | 4664.9 | |
| 0.90 | 0.86 | 94197.3 | 4601.5 | |
| 0.95 | 0.85 | 92764.7 | 4535.0 | |
| 1.00 | 0.84 | 91100.0 | 4464.0 | |



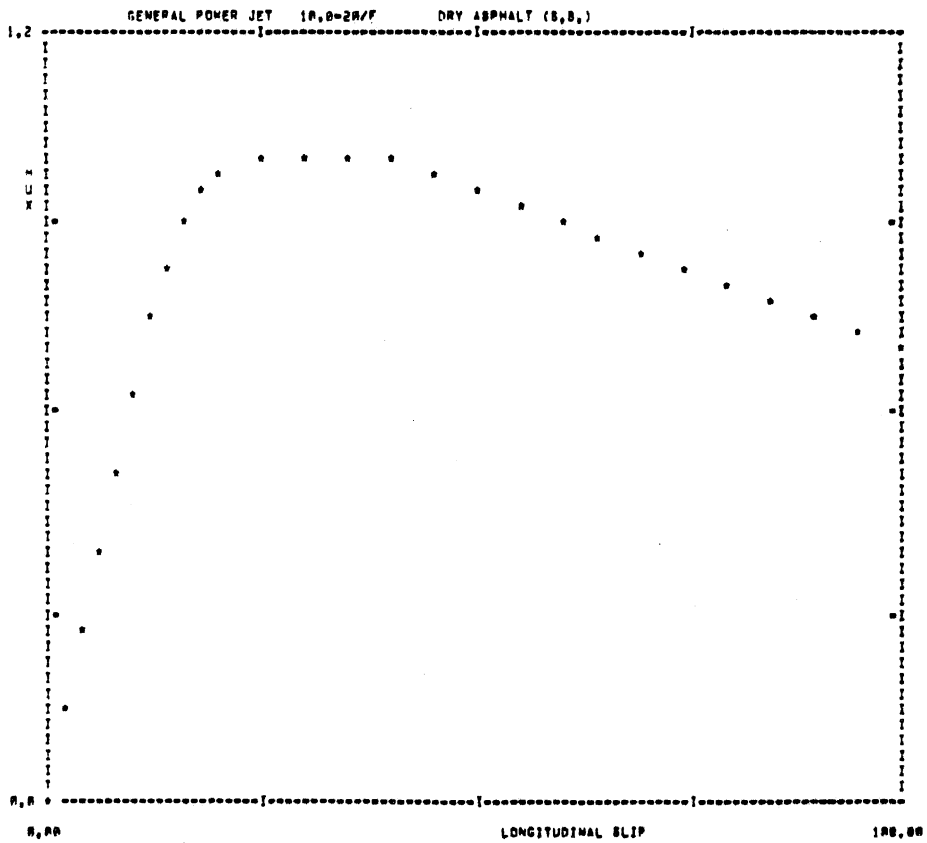
FZ = 5592.9 VEL = 3.0 MULLOCK = 0.84 MUPEAK = 0.96 RATIO = 1.15 A=D FILE 172 NEWFILE 67 SAMPLE 301

** A=0 FILE 173 NEW FILE 00 TEST SAMPLE 302 **
 AVERAGE OF FILE 173 FOR 4 RECORDS. GENERAL POWER JET 10,0-20/F DRY ASPHALT (S,B,)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.15 | 13773.1 | 826.4 |
| 0.04 | 0.26 | 26545.3 | 1457.8 |
| 0.06 | 0.39 | 41138.3 | 2160.1 |
| 0.08 | 0.52 | 55312.4 | 2835.0 |
| 0.10 | 0.64 | 68468.4 | 3477.4 |
| 0.12 | 0.75 | 80832.4 | 4056.0 |
| 0.14 | 0.84 | 89988.9 | 4495.9 |
| 0.16 | 0.91 | 96795.1 | 4858.7 |
| 0.18 | 0.95 | 101939.0 | 5086.1 |
| 0.20 | 0.98 | 105568.0 | 5287.8 |
| 0.25 | 1.00 | 110804.1 | 5329.2 |
| 0.30 | 1.01 | 114088.0 | 5364.8 |
| 0.35 | 1.01 | 117116.2 | 5342.8 |
| 0.40 | 1.00 | 119358.0 | 5286.4 |
| 0.45 | 0.98 | 121422.9 | 5206.4 |
| 0.50 | 0.96 | 122274.0 | 5195.9 |
| 0.55 | 0.94 | 118922.4 | 4981.8 |
| 0.60 | 0.91 | 114038.3 | 4851.1 |
| 0.65 | 0.89 | 109252.7 | 4719.8 |
| 0.70 | 0.86 | 104720.8 | 4580.7 |
| 0.75 | 0.84 | 100338.4 | 4457.7 |
| 0.80 | 0.82 | 96012.7 | 4326.8 |
| 0.85 | 0.79 | 91731.4 | 4195.9 |
| 0.90 | 0.76 | 87868.1 | 4063.2 |
| 0.95 | 0.74 | 81577.4 | 3926.8 |
| 1.00 | 0.71 | 74875.8 | 3785.8 |

TQAV = 74875.8 LOAD = 5574.5 VEL = 10.0 MPH

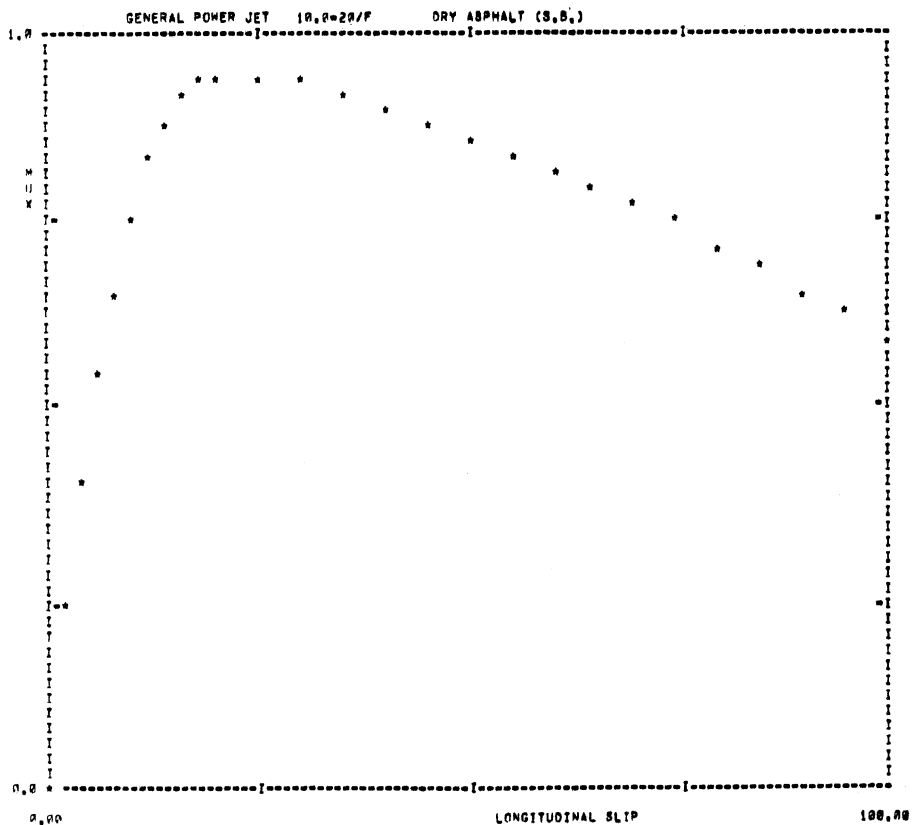
MUPEAK = 1.01 MULLOCK = 0.71 RATIO = 1.43



F2 = 5574.5 VEL = 10.0 MULLOCK = 0.71 MUPEAK = 1.01 RATIO = 1.43 A=0 FILE 173 NEWFILE 00 SAMPLE 302

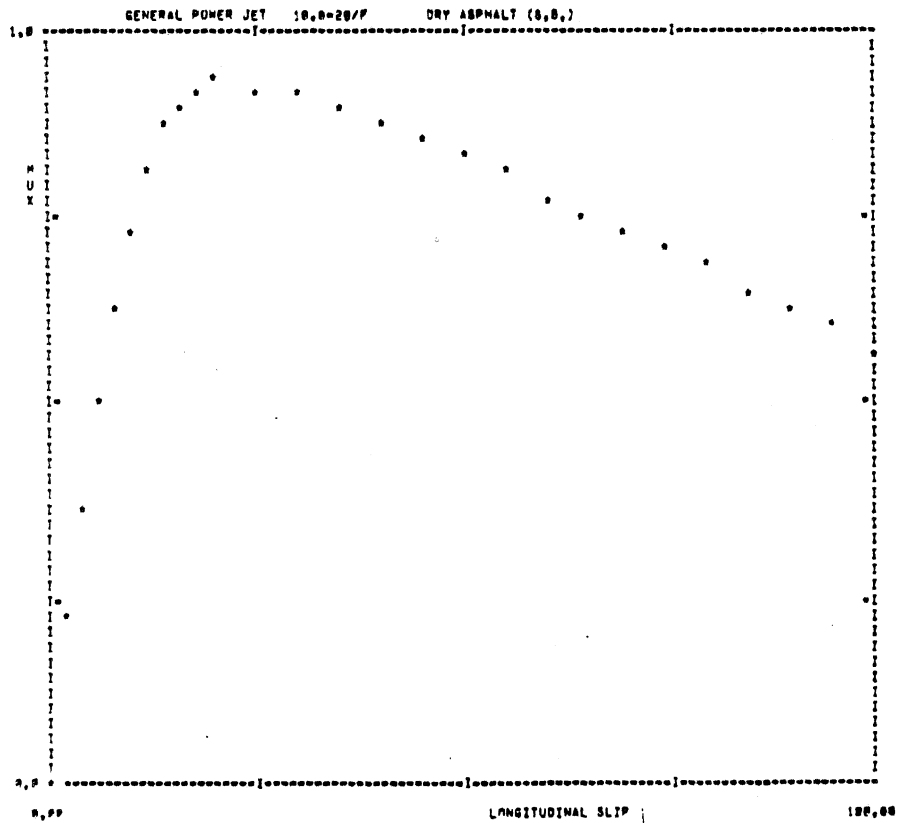
** A=D FILE 174 NEW FILE 69 TEST SAMPLE383 **

| AVERAGE OF FILE 174 FOR 5 RECORDS. | | GENERAL POWER JET | 18.0=20/F | DRY ASPHALT (S.B.) |
|------------------------------------|------|-------------------|-----------|----------------------------------------------------|
| SLIP | MUX | TORQUE | FZ | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.26 | 25706.8 | 1435.5 | |
| 0.04 | 0.42 | 45309.4 | 2349.3 | |
| 0.06 | 0.56 | 61141.5 | 3100.4 | |
| 0.08 | 0.66 | 73226.2 | 3605.2 | |
| 0.10 | 0.76 | 83022.2 | 4159.3 | |
| 0.12 | 0.83 | 91468.3 | 4549.4 | |
| 0.14 | 0.89 | 97078.2 | 4844.3 | |
| 0.16 | 0.92 | 102770.6 | 5032.0 | |
| 0.18 | 0.94 | 106426.9 | 5136.1 | TQAV = 64000.0 LOAD = 5582.3 VEL = 20.0 MPH. |
| 0.20 | 0.95 | 108141.0 | 5167.1 | |
| 0.25 | 0.94 | 111017.7 | 5187.4 | MUPEAK = 0.95 MULOCK = 0.60 RATIO = 1.57 |
| 0.30 | 0.93 | 113306.2 | 5086.6 | |
| 0.35 | 0.92 | 115320.2 | 5000.2 | |
| 0.40 | 0.90 | 116914.3 | 4895.9 | |
| 0.45 | 0.88 | 118480.8 | 4784.1 | |
| 0.50 | 0.86 | 119984.5 | 4676.2 | |
| 0.55 | 0.84 | 121317.7 | 4566.4 | |
| 0.60 | 0.82 | 121601.9 | 4456.8 | |
| 0.65 | 0.80 | 120858.5 | 4345.2 | |
| 0.70 | 0.78 | 119002.3 | 4225.0 | |
| 0.75 | 0.75 | 117228.3 | 4097.7 | |
| 0.80 | 0.72 | 115047.0 | 3941.3 | |
| 0.85 | 0.69 | 92803.9 | 3786.0 | |
| 0.90 | 0.66 | 83120.9 | 3620.5 | |
| 0.95 | 0.63 | 73815.0 | 3460.7 | |
| 1.00 | 0.60 | 64000.0 | 3292.5 | |



FZ = 5582.3 VEL = 20.0 MULOCK = 0.60 MUPEAK = 0.95 RATIO = 1.57 A=D FILE 174 NEWFILE 69 SAMPLE 383

| ** A=D FILE 175 | | | NEW FILE 70 | TEST SAMPLE300 ** |
|------------------------------------|------|----------|-------------------|----------------------------------------------|
| AVERAGE OF FILE 175 FOR 5 RECORDS, | | | GENERAL POWER JET | 10.0-20/F DRY ASPHALT (2.0.) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.22 | 23500.0 | 1235.4 | |
| 0.04 | 0.30 | 42767.0 | 2115.4 | |
| 0.06 | 0.52 | 50333.0 | 2074.3 | |
| 0.08 | 0.64 | 71334.6 | 3531.4 | |
| 0.10 | 0.75 | 81970.9 | 4054.7 | |
| 0.12 | 0.82 | 89990.9 | 4885.1 | |
| 0.14 | 0.87 | 96549.5 | 4719.3 | |
| 0.16 | 0.91 | 102297.5 | 4007.3 | |
| 0.18 | 0.93 | 106479.0 | 4982.1 | TDAY = 61375.0 LOAD = 5577.3 VEL = 30.0 MPH, |
| 0.20 | 0.94 | 100529.6 | 5005.4 | |
| 0.25 | 0.93 | 112076.5 | 4955.6 | MUPEAK = 0.94 MULOCK = 0.50 RATIO = 1.61 |
| 0.30 | 0.91 | 114027.0 | 4000.2 | |
| 0.35 | 0.89 | 116927.6 | 4763.0 | |
| 0.40 | 0.87 | 110472.3 | 4656.3 | |
| 0.45 | 0.85 | 119511.1 | 4545.9 | |
| 0.50 | 0.83 | 120000.2 | 4432.7 | |
| 0.55 | 0.81 | 120437.2 | 4323.1 | |
| 0.60 | 0.79 | 120094.6 | 4212.2 | |
| 0.65 | 0.76 | 119635.7 | 4101.4 | |
| 0.70 | 0.74 | 117506.7 | 3984.7 | |
| 0.75 | 0.72 | 112344.3 | 3861.1 | |
| 0.80 | 0.69 | 103753.7 | 3725.1 | |
| 0.85 | 0.66 | 93955.9 | 3509.0 | |
| 0.90 | 0.64 | 83706.0 | 3452.1 | |
| 0.95 | 0.61 | 72920.7 | 3313.6 | |
| 1.00 | 0.50 | 61375.0 | 3172.5 | |



FX = 5577.3 VEL = 30.0 MULOCK = 0.50 MUPEAK = 0.94 RATIO = 1.61 A=D FILE 175 NEWFILE 70 SAMPLE 300

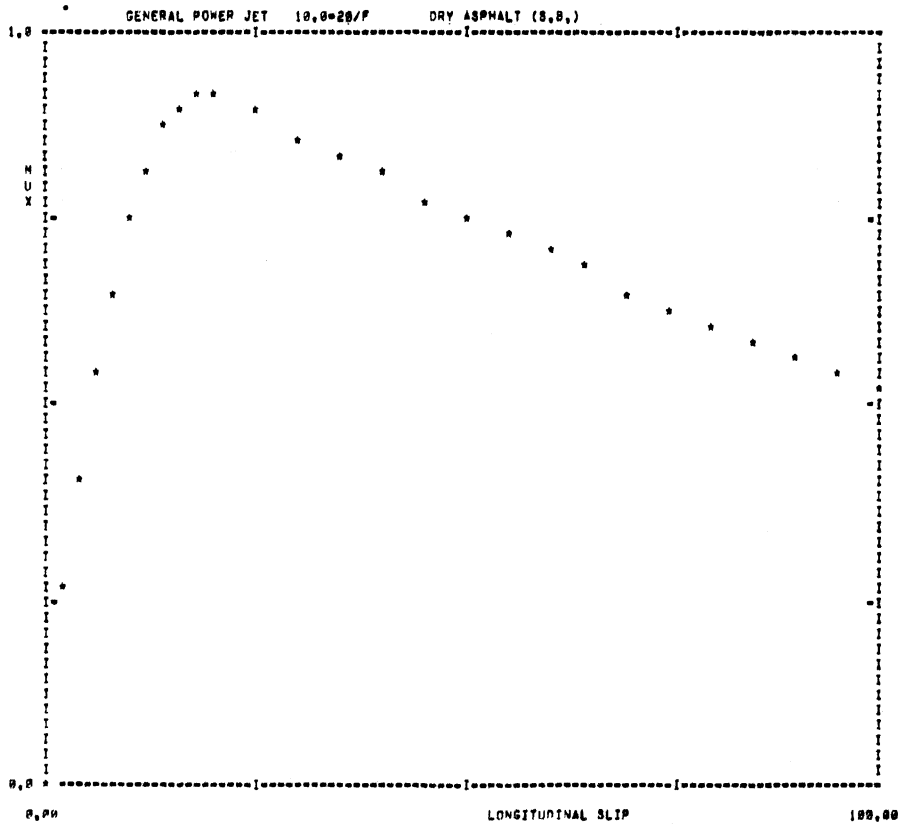
** A=D FILE 179 NEW FILE 71' TEST SAMPLE305 **

AVERAGE OF FILE 179 FOR 4 RECORDS. GENERAL POWER JET 10.0=20/F DRY ASPHALT (8.8,)

| SLIP | MUX | TORQUE | Fx |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.26 | 31731.7 | 1451.5 |
| 0.04 | 0.41 | 47746.1 | 2207.9 |
| 0.06 | 0.55 | 63074.7 | 3040.9 |
| 0.08 | 0.66 | 76240.6 | 3676.7 |
| 0.10 | 0.76 | 86916.4 | 4184.0 |
| 0.12 | 0.83 | 94969.5 | 4547.9 |
| 0.14 | 0.88 | 100274.4 | 4792.3 |
| 0.16 | 0.90 | 104605.0 | 4929.8 |
| 0.18 | 0.92 | 108034.2 | 4983.3 |
| 0.20 | 0.92 | 110139.5 | 4962.0 |
| 0.25 | 0.89 | 114075.9 | 4831.0 |
| 0.30 | 0.86 | 117015.9 | 4679.0 |
| 0.35 | 0.84 | 118907.6 | 4522.9 |
| 0.40 | 0.81 | 119747.6 | 4372.3 |
| 0.45 | 0.78 | 119941.1 | 4230.0 |
| 0.50 | 0.76 | 119786.4 | 4091.1 |
| 0.55 | 0.73 | 119730.5 | 3956.4 |
| 0.60 | 0.71 | 119947.2 | 3832.0 |
| 0.65 | 0.69 | 120020.9 | 3711.0 |
| 0.70 | 0.67 | 118977.4 | 3593.4 |
| 0.75 | 0.64 | 114726.3 | 3474.0 |
| 0.80 | 0.62 | 107460.0 | 3353.1 |
| 0.85 | 0.60 | 96205.7 | 3238.9 |
| 0.90 | 0.58 | 83059.2 | 3129.3 |
| 0.95 | 0.56 | 70440.6 | 3020.9 |
| 1.00 | 0.54 | 57437.5 | 2913.7 |

TOAV = 57437.5 LOAD = 9626.7 VEL = 40.0 MPH.

MUPEAK = 0.92 MULLOCK = 0.54 RATIO = 1.71



FZ = 5626.7 VEL = 40.0 MULLOCK = 0.54 MUPEAK = 0.92 RATIO = 1.71 A=D FILE 179 NEWFILE 71 SAMPLE 305

** A-D FILE 18R

NEW FILE 72

TEST SAMPLE 306 **

AVERAGE OF FILE 18R FOR 6 RECORDS.

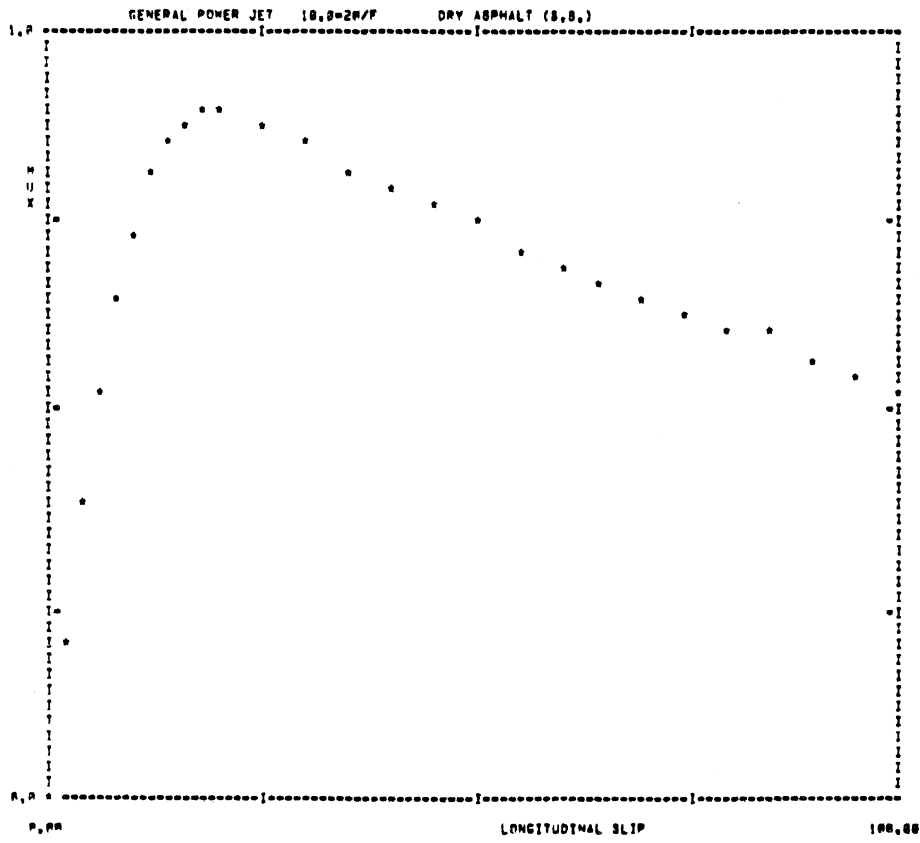
GENERAL POWER JET 18.0=20/F

DRY ASPHALT (8.0.)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 22517.5 | 1153.3 |
| 0.04 | 0.39 | 43020.9 | 2130.9 |
| 0.06 | 0.53 | 60707.6 | 2920.4 |
| 0.08 | 0.65 | 74320.8 | 3566.9 |
| 0.10 | 0.75 | 85309.8 | 4070.3 |
| 0.12 | 0.81 | 93940.8 | 4431.0 |
| 0.14 | 0.86 | 99557.7 | 4667.8 |
| 0.16 | 0.88 | 104132.4 | 4793.0 |
| 0.18 | 0.90 | 107492.4 | 4840.0 |
| 0.20 | 0.89 | 109441.2 | 4831.9 |
| 0.25 | 0.87 | 112770.1 | 4711.1 |
| 0.30 | 0.85 | 115260.4 | 4574.3 |
| 0.35 | 0.83 | 117060.2 | 4436.2 |
| 0.40 | 0.80 | 118412.2 | 4299.6 |
| 0.45 | 0.78 | 119701.6 | 4159.8 |
| 0.50 | 0.75 | 121090.9 | 4025.1 |
| 0.55 | 0.73 | 122750.6 | 3893.5 |
| 0.60 | 0.70 | 124631.0 | 3762.3 |
| 0.65 | 0.68 | 126376.5 | 3644.0 |
| 0.70 | 0.66 | 127114.9 | 3530.2 |
| 0.75 | 0.64 | 128076.0 | 3447.1 |
| 0.80 | 0.62 | 117552.0 | 3360.2 |
| 0.85 | 0.61 | 108720.2 | 3263.4 |
| 0.90 | 0.58 | 89335.2 | 3150.2 |
| 0.95 | 0.56 | 73041.0 | 3030.0 |
| 1.00 | 0.53 | 57950.3 | 2902.5 |

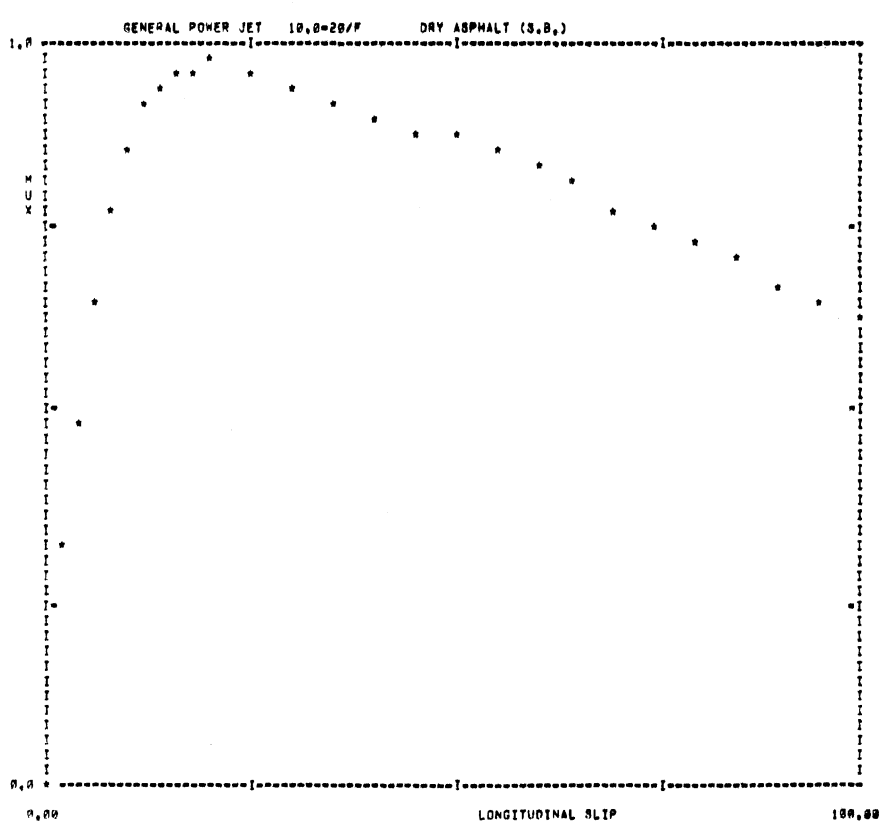
TOAV = 57950.3 LOAD = 5590.0 VEL = 55.0 MPH.

MUPEAK = 0.90 MULOCK = 0.53 RATIO = 1.60



FZ = 5590.0 VEL = 55.0 MULOCK = 0.53 MUPEAK = 0.90 RATIO = 1.60 A-D FILE 18R NEWFILE 72 SAMPLE 306

| ** A=D FILE 185 | | | NEW FILE 74 | TEST SAMPLE308 ** |
|------------------------------------|------|---------|-------------------|----------------------------------------------|
| AVERAGE OF FILE 185 FOR 4 RECORDS, | | | GENERAL POWER JET | 10,0=20/F DRY ASPHALT (S,B,) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.33 | 13439.9 | 767.1 | |
| 0.04 | 0.50 | 22894.3 | 1144.8 | |
| 0.06 | 0.65 | 30293.3 | 1467.5 | |
| 0.08 | 0.77 | 36869.9 | 1747.6 | |
| 0.10 | 0.86 | 40994.9 | 1955.1 | |
| 0.12 | 0.91 | 44811.2 | 2050.3 | |
| 0.14 | 0.94 | 48251.3 | 2102.3 | |
| 0.16 | 0.95 | 50941.0 | 2121.7 | |
| 0.18 | 0.97 | 52802.3 | 2131.7 | TOAV = 27750.0 LOAD = 2284.8 VEL = 40.0 MPH, |
| 0.20 | 0.97 | 53700.0 | 2131.6 | |
| 0.25 | 0.97 | 54913.9 | 2106.2 | MUPEAK = 0.97 MULLOCK = 0.63 RATIO = 1.54 |
| 0.30 | 0.95 | 56573.9 | 2065.0 | |
| 0.35 | 0.92 | 58608.0 | 2014.3 | |
| 0.40 | 0.90 | 60576.2 | 1969.5 | |
| 0.45 | 0.89 | 62249.8 | 1932.1 | |
| 0.50 | 0.87 | 63761.9 | 1894.9 | |
| 0.55 | 0.86 | 65108.2 | 1858.9 | |
| 0.60 | 0.84 | 66913.4 | 1812.1 | |
| 0.65 | 0.81 | 69035.1 | 1763.3 | |
| 0.70 | 0.78 | 71145.8 | 1712.6 | |
| 0.75 | 0.76 | 72812.6 | 1660.0 | |
| 0.80 | 0.73 | 68695.6 | 1611.4 | |
| 0.85 | 0.71 | 60587.0 | 1567.2 | |
| 0.90 | 0.68 | 58461.4 | 1519.1 | |
| 0.95 | 0.66 | 30556.0 | 1470.7 | |
| 1.00 | 0.63 | 27750.0 | 1423.1 | |



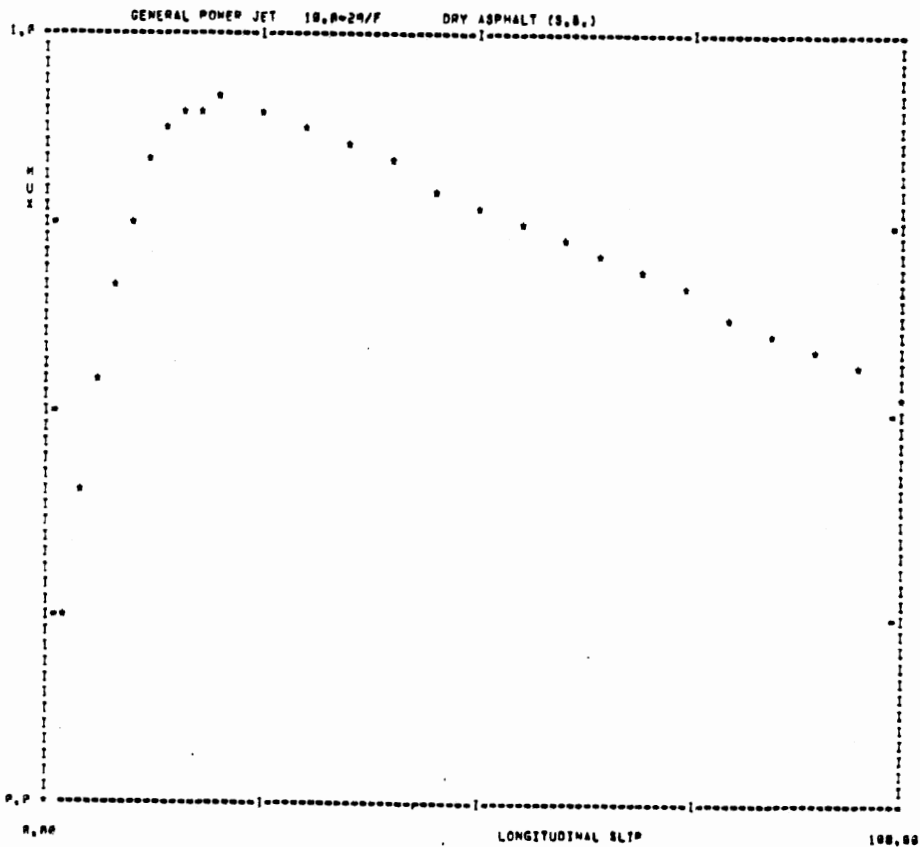
FZ = 2284.8 VEL = 40.0 MULLOCK = 0.63 MUPEAK = 0.97 RATIO = 1.54 A=D FILE 185 NEWFILE 74 SAMPLE 308

** A=D FILE 106 NEW FILE 75 TEST SAMPLES00 **
 AVERAGE OF FILE 106 FOR 5 RECORDS, GENERAL POWER JET 10,0=20/F DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | Fx |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.25 | 25626.7 | 1309.5 |
| 0.04 | 0.42 | 48968.5 | 2314.2 |
| 0.06 | 0.56 | 61036.3 | 3071.1 |
| 0.08 | 0.67 | 73058.4 | 3660.5 |
| 0.10 | 0.76 | 83529.7 | 4129.2 |
| 0.12 | 0.83 | 91853.9 | 4662.0 |
| 0.14 | 0.87 | 97826.5 | 4676.2 |
| 0.16 | 0.90 | 101598.3 | 4006.0 |
| 0.18 | 0.91 | 104708.0 | 4072.3 |
| 0.20 | 0.91 | 106866.8 | 4000.0 |
| 0.25 | 0.90 | 108606.3 | 4024.0 |
| 0.30 | 0.88 | 111066.7 | 4721.0 |
| 0.35 | 0.86 | 115058.5 | 4597.0 |
| 0.40 | 0.83 | 118047.5 | 4466.4 |
| 0.45 | 0.80 | 120468.7 | 4335.1 |
| 0.50 | 0.78 | 122568.7 | 4287.1 |
| 0.55 | 0.76 | 123874.3 | 4086.0 |
| 0.60 | 0.74 | 125053.9 | 3972.9 |
| 0.65 | 0.71 | 125522.0 | 3865.1 |
| 0.70 | 0.69 | 123979.4 | 3760.0 |
| 0.75 | 0.67 | 118382.8 | 3646.3 |
| 0.80 | 0.64 | 109374.4 | 3517.4 |
| 0.85 | 0.62 | 97259.8 | 3379.8 |
| 0.90 | 0.59 | 83808.7 | 3237.0 |
| 0.95 | 0.57 | 70214.8 | 3090.1 |
| 1.00 | 0.54 | 56675.0 | 2952.0 |

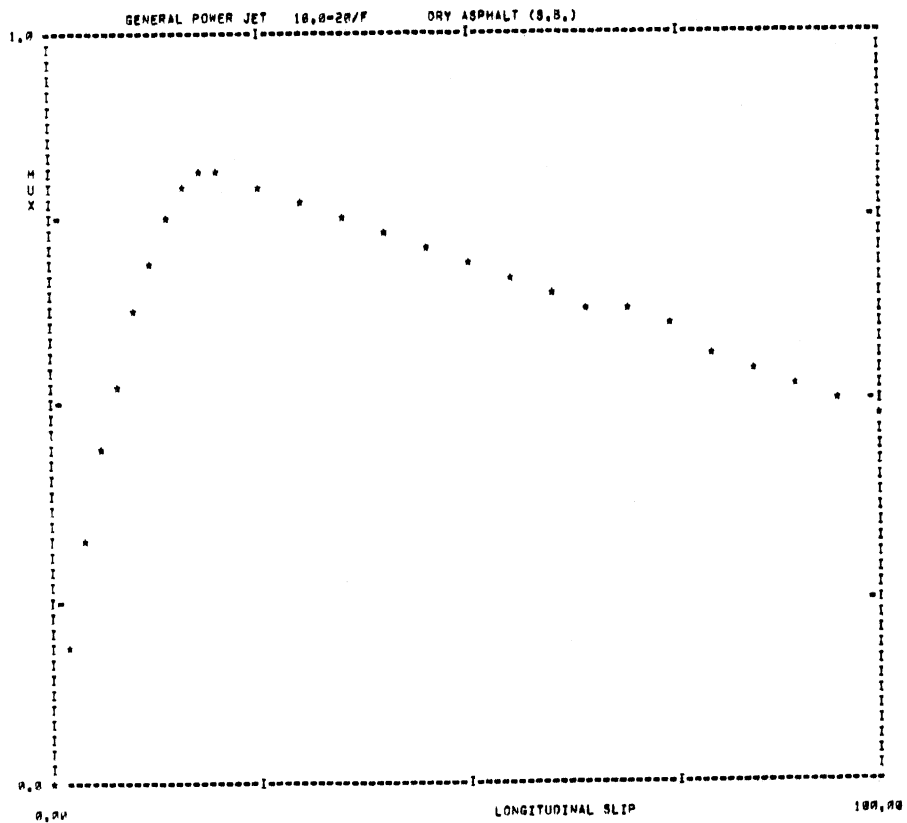
TOAV = 56675.0 LOAD = 5536.7 VEL = 40.0 MPH.

MUPEAK = 0.91 MULOCK = 0.54 RATIO = 1.66



FZ = 5536.7 VEL = 40.0 MULOCK = 0.54 MUPEAK = 0.91 RATIO = 1.66 A=D FILE 106 NEWFILE 75 SAMPLE 300.

| ** A=0 FILE 187 | | NEW FILE 76 | | TEST SAMPLE 310 ** | |
|------------------------------------|------|-------------------|--------|--------------------|-------------------------------|
| AVERAGE OF FILE 187 FOR 5 RECORDS, | | GENERAL POWER JET | | 18.0=20/F | DRY ASPHALT (S.S.) |
| SLIP | MIX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.16 | 30503.2 | 1662.7 | | |
| 0.04 | 0.32 | 54766.7 | 2861.9 | | |
| 0.06 | 0.48 | 76153.7 | 3922.5 | | |
| 0.08 | 0.64 | 94009.5 | 4889.3 | | |
| 0.10 | 0.80 | 108673.6 | 5533.0 | | |
| 0.12 | 0.96 | 121215.9 | 6121.9 | | |
| 0.14 | 1.12 | 131267.2 | 6565.9 | | |
| 0.16 | 1.28 | 138363.2 | 6866.2 | | |
| 0.18 | 1.44 | 142162.3 | 7041.7 | TQAV = 80925.0 | LOAD = 9083.7 VEL = 40.0 MPH. |
| 0.20 | 1.60 | 144590.5 | 7055.4 | | |
| 0.25 | 2.00 | 148390.7 | 6933.1 | MUPEAK = 0.82 | MULOCK = 0.49 RATIO = 1.67 |
| 0.30 | 2.40 | 151126.7 | 6767.2 | | |
| 0.35 | 2.80 | 153000.9 | 6589.5 | | |
| 0.40 | 3.20 | 154227.5 | 6412.8 | | |
| 0.45 | 3.60 | 154883.8 | 6201.1 | | |
| 0.50 | 4.00 | 155296.4 | 6071.9 | | |
| 0.55 | 4.40 | 155602.4 | 5986.7 | | |
| 0.60 | 4.80 | 155800.8 | 5744.8 | | |
| 0.65 | 5.20 | 155667.7 | 5583.7 | | |
| 0.70 | 5.60 | 153814.2 | 5424.3 | | |
| 0.75 | 6.00 | 148910.8 | 5259.3 | | |
| 0.80 | 6.40 | 139577.9 | 5085.7 | | |
| 0.85 | 6.80 | 126545.8 | 4897.8 | | |
| 0.90 | 7.20 | 111872.7 | 4702.1 | | |
| 0.95 | 7.60 | 96672.1 | 4501.9 | | |
| 1.00 | 8.00 | 80925.0 | 4296.0 | | |



F7 = 9083.7 VEL = 40.0 MULOCK = 0.49 MUPEAK = 0.82 RATIO = 1.67 A=0 FILE 187 NEWFILE 76 SAMPLE 310

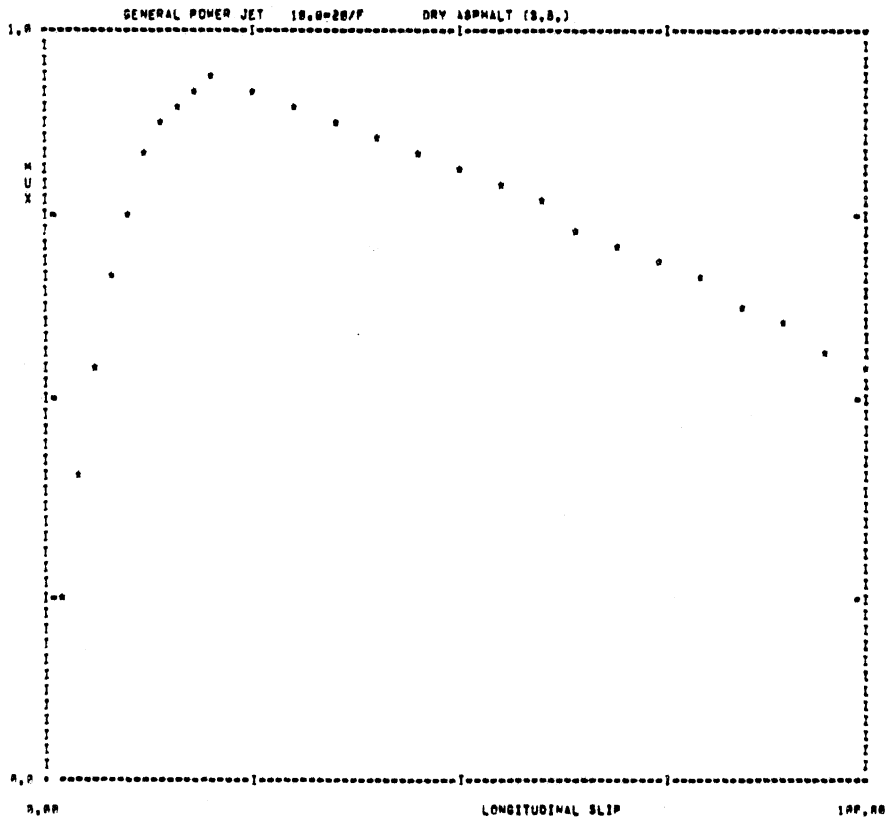
** A=D FILE 171 GEN FILE 66 TEST SAMPLE300 **
 AVERAGE OF FILE 171 FOR 6 RECORDS, GENERAL POWER JET 18.0=20/F DRY ASPHALT (S.S.)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.25 | 27500.5 | 1433.2 |
| 0.04 | 0.42 | 45630.0 | 2371.0 |
| 0.06 | 0.55 | 61100.0 | 3140.7 |
| 0.08 | 0.67 | 76195.2 | 3770.7 |
| 0.10 | 0.77 | 84200.3 | 4250.5 |
| 0.12 | 0.83 | 92132.0 | 4904.4 |
| 0.14 | 0.88 | 98114.5 | 4830.5 |
| 0.16 | 0.91 | 103205.0 | 4993.2 |
| 0.18 | 0.93 | 107017.3 | 5094.9 |
| 0.20 | 0.93 | 100414.5 | 5125.9 |
| 0.25 | 0.92 | 111299.5 | 5085.0 |
| 0.30 | 0.91 | 113609.2 | 4997.0 |
| 0.35 | 0.89 | 115395.0 | 4890.0 |
| 0.40 | 0.87 | 116627.6 | 4774.0 |
| 0.45 | 0.85 | 117993.1 | 4656.4 |
| 0.50 | 0.82 | 118672.6 | 4527.4 |
| 0.55 | 0.79 | 119006.7 | 4380.5 |
| 0.60 | 0.77 | 121307.4 | 4246.7 |
| 0.65 | 0.74 | 122603.8 | 4105.9 |
| 0.70 | 0.71 | 122902.9 | 3964.4 |
| 0.75 | 0.69 | 119216.4 | 3830.0 |
| 0.80 | 0.67 | 110912.3 | 3697.0 |
| 0.85 | 0.64 | 99236.6 | 3553.1 |
| 0.90 | 0.61 | 85990.1 | 3401.5 |
| 0.95 | 0.58 | 72535.3 | 3245.1 |
| 1.00 | 0.55 | 59020.0 | 3082.5 |

TOAV = 59020.0 LOAD = 5710.6 VEL = 40.0 MPH.

MUPEAK = 0.93 MULLOCK = 0.55 RATIO = 1.69

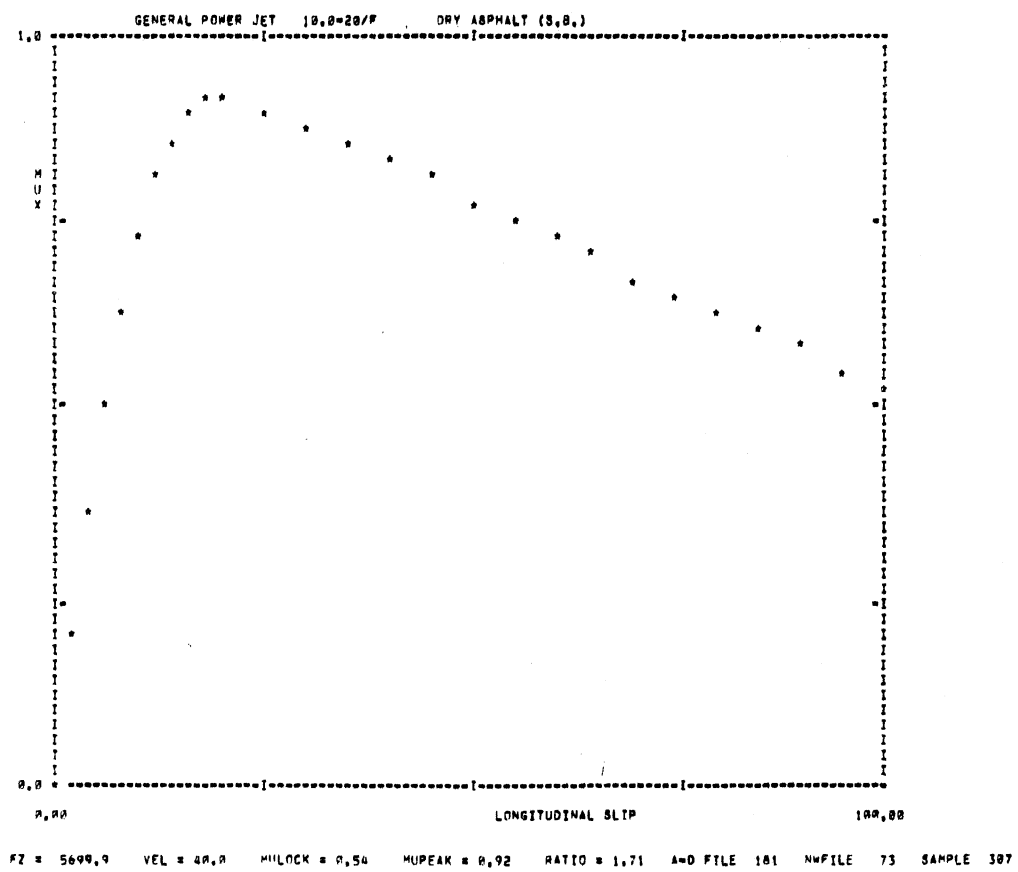
Check Run #1



PZ = 5710.6 VEL = 40.0 MULLOCK = 0.55 MUPEAK = 0.93 RATIO = 1.69 A=D FILE 171 GENFILE 66 SAMPLE 300

| ** A=D FILE 181 | | NEW FILE 73 | TEST SAMPLE 307 ** | |
|------------------------------------|------|-------------------|--------------------|----------------------------------------------|
| AVERAGE OF FILE 181 FOR 6 RECORDS, | | GENERAL POWER JET | 10.0=20/F | DRY ASPHALT (S.B.) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.21 | 25750.8 | 1192.0 | |
| 0.04 | 0.37 | 43330.3 | 2103.7 | |
| 0.06 | 0.52 | 60002.7 | 2926.1 | |
| 0.08 | 0.64 | 74077.4 | 3594.5 | |
| 0.10 | 0.74 | 85712.8 | 4123.0 | |
| 0.12 | 0.81 | 94395.7 | 4520.5 | |
| 0.14 | 0.86 | 101375.4 | 4794.0 | |
| 0.16 | 0.90 | 106595.9 | 4971.0 | |
| 0.18 | 0.92 | 110200.5 | 5067.6 | TOAV = 50666.7 LOAD = 5699.9 VEL = 40.0 MPH. |
| 0.20 | 0.92 | 112616.9 | 5076.5 | MUPEAK = 0.92 MULOCK = 0.54 RATIO = 1.71 |
| 0.25 | 0.90 | 116940.3 | 4991.6 | |
| 0.30 | 0.88 | 120175.6 | 4876.1 | |
| 0.35 | 0.86 | 122531.0 | 4751.4 | |
| 0.40 | 0.84 | 124557.9 | 4616.6 | |
| 0.45 | 0.81 | 126303.5 | 4473.4 | |
| 0.50 | 0.79 | 128173.4 | 4322.4 | |
| 0.55 | 0.76 | 130007.5 | 4172.3 | |
| 0.60 | 0.73 | 131637.2 | 4022.4 | |
| 0.65 | 0.71 | 131972.4 | 3880.8 | |
| 0.70 | 0.68 | 129020.9 | 3745.0 | |
| 0.75 | 0.66 | 123813.5 | 3615.0 | |
| 0.80 | 0.64 | 112527.5 | 3401.2 | |
| 0.85 | 0.61 | 99275.9 | 3304.9 | |
| 0.90 | 0.59 | 85001.4 | 3207.4 | |
| 0.95 | 0.56 | 71071.9 | 3060.5 | |
| 1.00 | 0.54 | 50666.7 | 2927.5 | |

Check Run #3



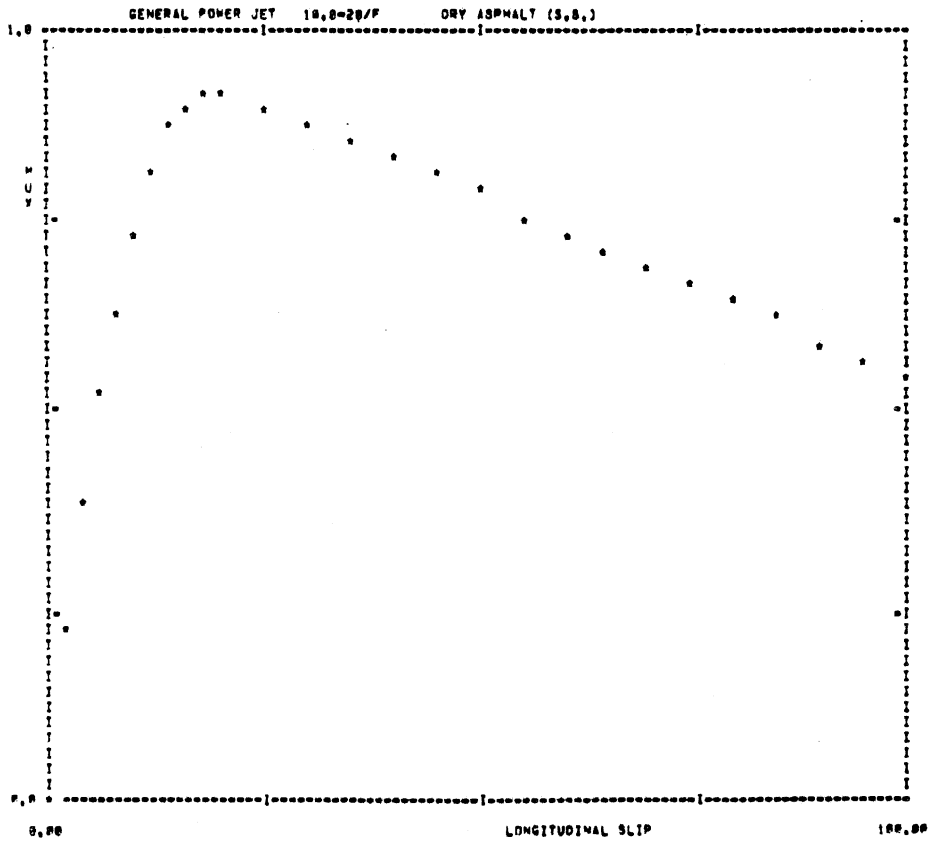
** A-D FILE 100 NEW FILE 77 TEST SAMPLES11 **
 AVERAGE OF FILE 100 FOR 4 RECORDS, GENERAL POWER JET 10.0-20/P DRY ASPHALT (S.B.)

| SLIP | MUX | TORQUE | PK |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.23 | 26189.4 | 1287.4 |
| 0.04 | 0.39 | 44663.1 | 2205.5 |
| 0.06 | 0.53 | 60564.3 | 2985.5 |
| 0.08 | 0.64 | 73697.8 | 3683.4 |
| 0.10 | 0.74 | 84223.7 | 4124.9 |
| 0.12 | 0.82 | 92953.5 | 4524.9 |
| 0.14 | 0.87 | 99825.8 | 4798.6 |
| 0.16 | 0.90 | 103467.8 | 4949.4 |
| 0.18 | 0.91 | 106985.8 | 5088.2 |
| 0.20 | 0.91 | 109164.8 | 4986.1 |
| 0.25 | 0.90 | 112718.3 | 4881.6 |
| 0.30 | 0.88 | 115638.3 | 4883.8 |
| 0.35 | 0.86 | 118262.4 | 4688.3 |
| 0.40 | 0.83 | 120422.4 | 4568.2 |
| 0.45 | 0.81 | 122189.5 | 4445.6 |
| 0.50 | 0.79 | 123498.9 | 4321.8 |
| 0.55 | 0.77 | 124651.9 | 4197.6 |
| 0.60 | 0.74 | 125314.8 | 4075.1 |
| 0.65 | 0.72 | 125473.9 | 3951.6 |
| 0.70 | 0.70 | 124837.2 | 3827.9 |
| 0.75 | 0.67 | 119189.5 | 3704.3 |
| 0.80 | 0.65 | 109668.3 | 3577.6 |
| 0.85 | 0.63 | 97988.8 | 3458.8 |
| 0.90 | 0.60 | 85819.1 | 3315.8 |
| 0.95 | 0.58 | 71678.7 | 3179.4 |
| 1.00 | 0.55 | 58888.8 | 3041.2 |

TQAV = 58888.8 LOAD = 9597.8 VEL = 46.8 MPH.

MUPEAK = 0.91 MULOCK = 0.55 RATIO = 1.65

Check Run #5

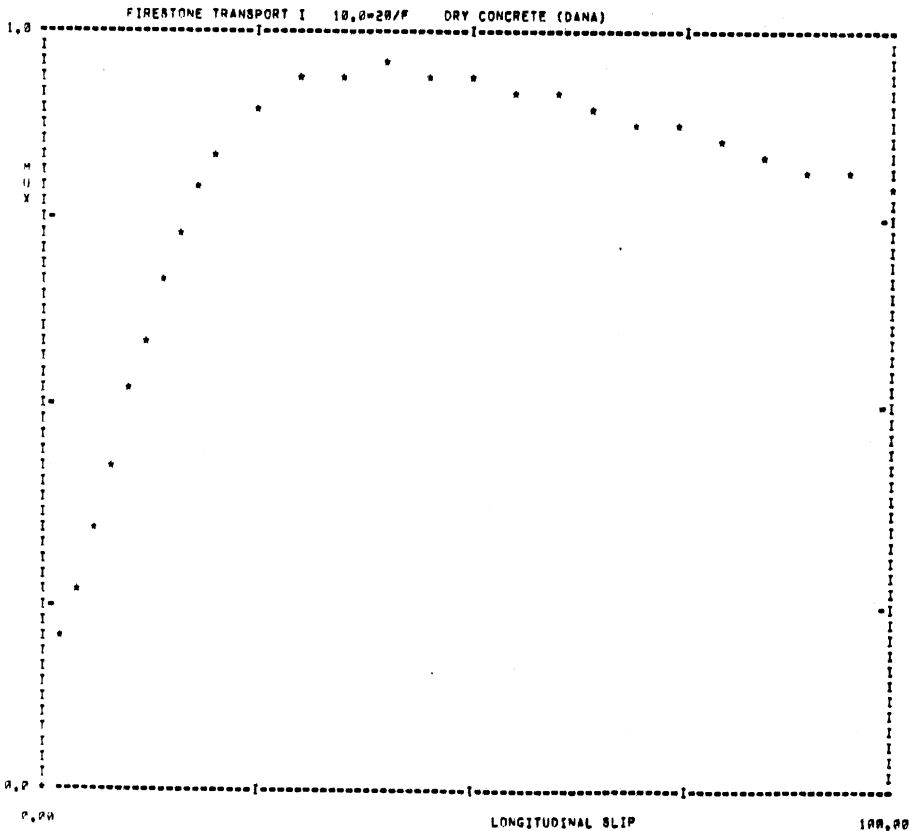


PZ = 5597.8 VEL = 46.8 MULOCK = 0.55 MUPEAK = 0.91 RATIO = 1.65 A-D FILE 100 NEWFILE 77 SAMPLE 311

FIRESTONE TRANSPORT 1, 10.00 x 20/F, DANA CONCRETE

** A=0 FILE 90 NEW FILE 33 TEST SAMPLE119 **
 AVERAGE OF FILE 90 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10.0=20/F DRY CONCRETE (DANA)

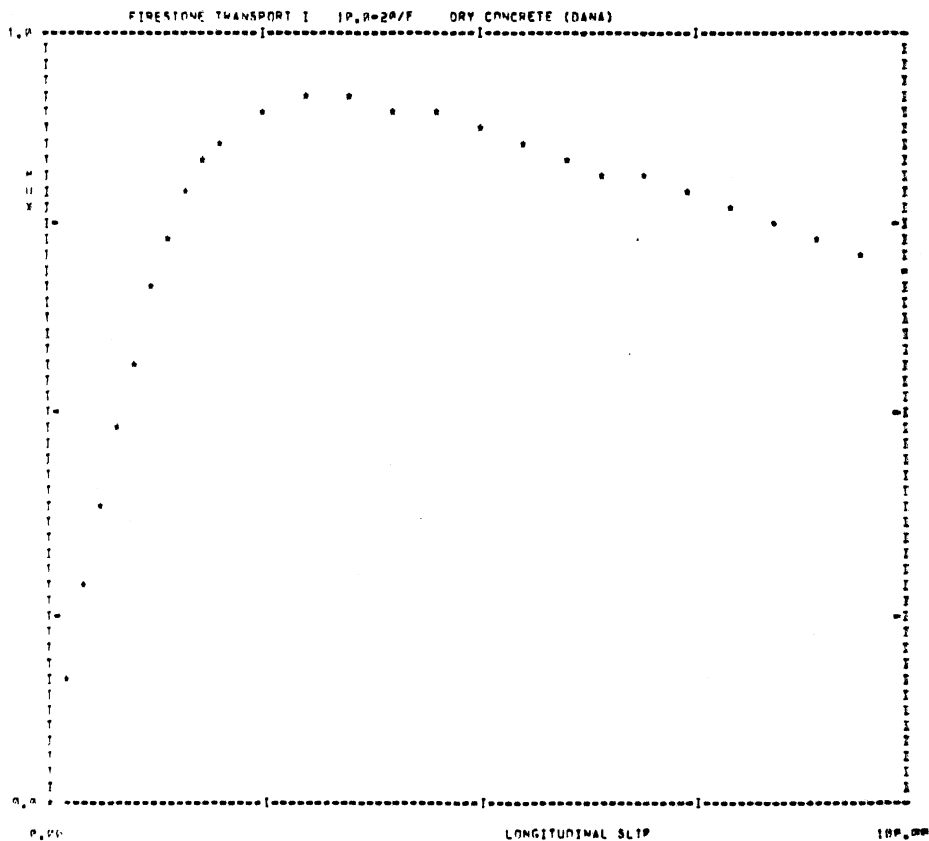
| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|---------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 21920.1 | 1110.1 | |
| 0.04 | 0.27 | 30790.6 | 1551.1 | |
| 0.06 | 0.35 | 39012.4 | 1963.5 | |
| 0.08 | 0.44 | 49037.6 | 2434.2 | |
| 0.10 | 0.52 | 57976.6 | 2901.2 | |
| 0.12 | 0.60 | 65780.5 | 3315.5 | |
| 0.14 | 0.67 | 73062.6 | 3680.5 | |
| 0.16 | 0.74 | 79836.8 | 4013.4 | |
| 0.18 | 0.79 | 85505.4 | 4270.2 | TQAV = 84645.8 LOAD = 5560.7 VEL = 3.0 MPH, |
| 0.20 | 0.83 | 88594.5 | 4450.0 | |
| 0.25 | 0.89 | 95263.0 | 4740.0 | MUPEAK = 0.95 MULOCK = 0.80 RATIO = 1.19 |
| 0.30 | 0.93 | 99650.0 | 4924.3 | |
| 0.35 | 0.95 | 101561.0 | 4990.3 | |
| 0.40 | 0.95 | 101600.1 | 4986.7 | |
| 0.45 | 0.95 | 100006.3 | 4947.9 | |
| 0.50 | 0.90 | 99747.2 | 4891.0 | |
| 0.55 | 0.92 | 98021.4 | 4827.2 | |
| 0.60 | 0.91 | 97002.5 | 4750.2 | |
| 0.65 | 0.90 | 95537.3 | 4687.2 | |
| 0.70 | 0.88 | 94040.7 | 4615.0 | |
| 0.75 | 0.87 | 92540.7 | 4542.3 | |
| 0.80 | 0.86 | 91042.8 | 4469.4 | |
| 0.85 | 0.84 | 89533.9 | 4396.3 | |
| 0.90 | 0.83 | 87986.1 | 4322.6 | |
| 0.95 | 0.81 | 86370.5 | 4247.8 | |
| 1.00 | 0.80 | 84645.8 | 4171.2 | |



FZ = 5560.7 VEL = 3.0 MULOCK = 0.80 MUPEAK = 0.95 RATIO = 1.19 A=0 FILE 90 NEW FILE 33 SAMPLE 119

AVERAGE OF FILE 91 FOR 7 RECORDS, FIRESTONE TRANSPORT I 10, R-20/F DRY CONCRETE (DANA)

| SLIP | MIX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------|
| P,00 | P,00 | P,00 | P,00 | |
| P,02 | P,16 | 17084,3 | 989,2 | |
| P,04 | P,20 | 29937,3 | 1554,0 | |
| P,06 | P,30 | 42336,0 | 2181,7 | |
| P,08 | P,40 | 53196,0 | 2789,9 | |
| P,10 | P,50 | 63846,9 | 3206,3 | |
| P,12 | P,67 | 71565,0 | 3601,5 | |
| P,14 | P,73 | 78387,0 | 3989,4 | |
| P,16 | P,79 | 83798,3 | 4255,0 | |
| P,18 | P,83 | 88225,0 | 4462,1 | TQAV = 73696,4 LOAD = 5598,0 VEL = 10,0 MPH. |
| P,20 | P,86 | 91676,0 | 4596,8 | MUPEAK = 0,92 MULOCK = 0,70 RATIO = 1,30 |
| P,25 | P,90 | 96336,2 | 4761,4 | |
| P,30 | P,91 | 99190,0 | 4793,5 | |
| P,35 | P,92 | 101186,0 | 4783,4 | |
| P,40 | P,91 | 102602,1 | 4737,0 | |
| P,45 | P,89 | 103136,0 | 4660,2 | |
| P,50 | P,88 | 101828,1 | 4589,0 | |
| P,55 | P,86 | 99265,0 | 4501,0 | |
| P,60 | P,84 | 96540,0 | 4411,2 | |
| P,65 | P,83 | 93869,9 | 4319,7 | |
| P,70 | P,81 | 91239,6 | 4227,7 | |
| P,75 | P,79 | 88630,9 | 4135,5 | |
| P,80 | P,77 | 86033,2 | 4043,2 | |
| P,85 | P,76 | 83441,0 | 3950,9 | |
| P,90 | P,74 | 80853,7 | 3858,4 | |
| P,95 | P,72 | 77471,0 | 3765,4 | |
| 1,00 | P,70 | 73696,4 | 3671,0 | |



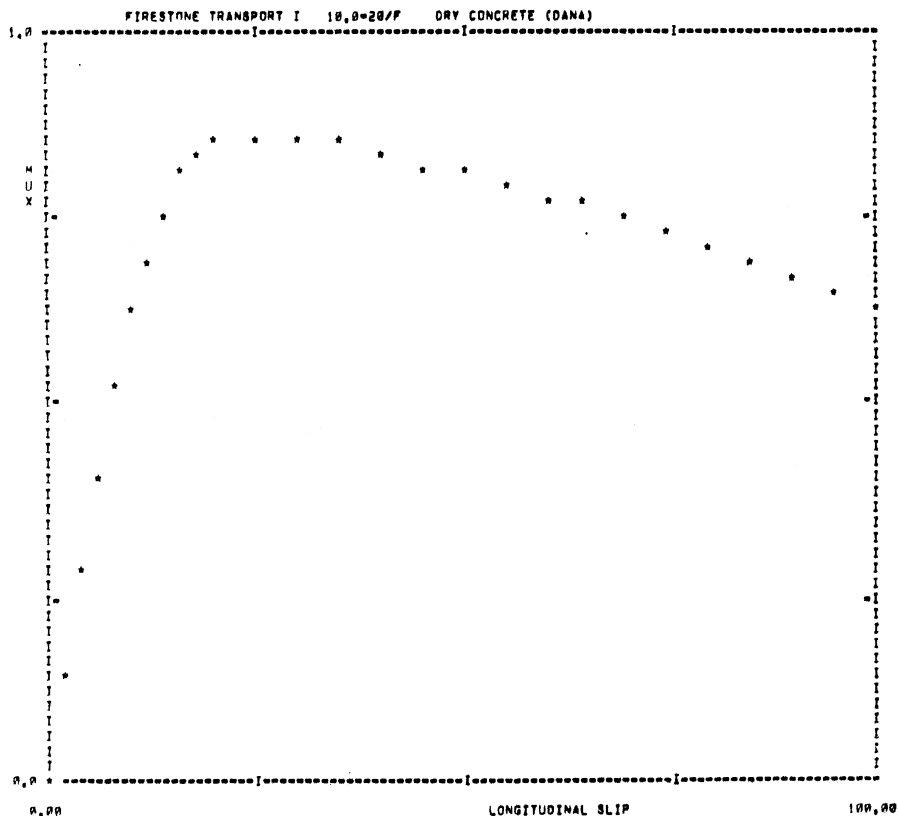
P2 = 5598,0 VEL = 10,0 MULOCK = 0,70 MUPEAK = 0,92 RATIO = 1,30 A-D FILE 91 N-FILE 34 SAMPLE 12P

** A=0 FILE 92 NEW FILE 35 TEST SAMPLE121 **
 AVERAGE OF FILE 92 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10.0-20/P DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | Fx |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.14 | 16711.5 | 797.4 |
| 0.04 | 0.29 | 31070.6 | 1606.0 |
| 0.06 | 0.42 | 45724.6 | 2311.2 |
| 0.08 | 0.53 | 57725.7 | 2909.4 |
| 0.10 | 0.63 | 68487.6 | 3439.8 |
| 0.12 | 0.70 | 76691.9 | 3861.5 |
| 0.14 | 0.76 | 83603.5 | 4155.4 |
| 0.16 | 0.81 | 88496.9 | 4388.2 |
| 0.18 | 0.85 | 92085.4 | 4522.4 |
| 0.20 | 0.86 | 94368.8 | 4597.8 |
| 0.25 | 0.87 | 98287.8 | 4681.5 |
| 0.30 | 0.86 | 101315.8 | 4561.5 |
| 0.35 | 0.85 | 103553.9 | 4499.2 |
| 0.40 | 0.84 | 105304.4 | 4423.8 |
| 0.45 | 0.83 | 106661.4 | 4342.5 |
| 0.50 | 0.82 | 107662.9 | 4268.4 |
| 0.55 | 0.80 | 108613.5 | 4179.8 |
| 0.60 | 0.79 | 109369.2 | 4096.9 |
| 0.65 | 0.77 | 109225.8 | 4016.8 |
| 0.70 | 0.75 | 106955.2 | 3934.7 |
| 0.75 | 0.74 | 102852.1 | 3849.6 |
| 0.80 | 0.72 | 95725.3 | 3756.5 |
| 0.85 | 0.70 | 89238.5 | 3662.3 |
| 0.90 | 0.68 | 82465.4 | 3567.4 |
| 0.95 | 0.66 | 75816.9 | 3478.0 |
| 1.00 | 0.64 | 66541.7 | 3388.8 |

TQAV = 66541.7 LOAD = 5646.9 VEL = 20.0 MPH.

MUPEAK = 0.87 MULLOCK = 0.64 RATIO = 1.35



FZ = 5646.9 VEL = 20.0 MULLOCK = 0.64 MUPEAK = 0.87 RATIO = 1.35 A=0 FILE 92 NWFILE 35 SAMPLE 121

== A=0 FILE 93

NEW FILE 36

TEST SAMPLE122 ==

AVERAGE OF FILE 93 FOR 6 RECORDS,

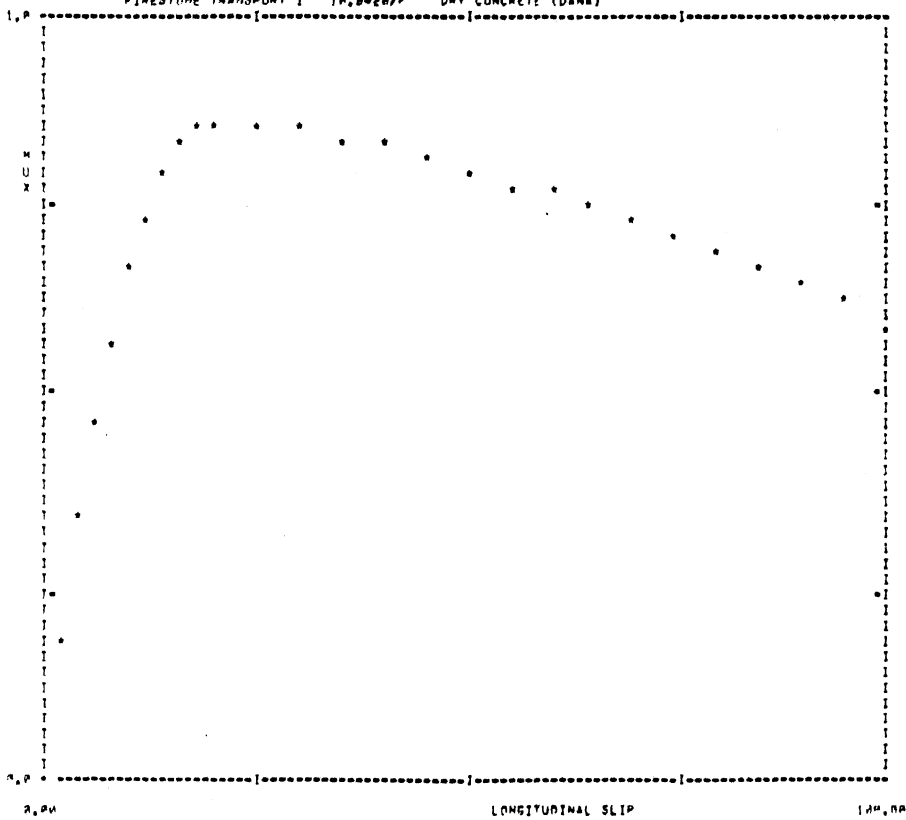
FIRESTONE TRANSPORT I 1R,0=20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| R,0R | R,0R | R,R | 0,0 |
| R,02 | R,19 | 19370,2 | 1083,9 |
| R,04 | R,34 | 36026,9 | 1998,9 |
| R,06 | R,47 | 50398,7 | 2609,9 |
| R,08 | R,58 | 63254,4 | 3244,4 |
| R,10 | R,68 | 73144,0 | 3747,7 |
| R,12 | R,74 | 80476,9 | 4096,7 |
| R,14 | R,79 | 86448,9 | 4332,9 |
| R,16 | R,83 | 91063,6 | 4526,2 |
| R,18 | R,86 | 94816,1 | 4669,5 |
| R,20 | R,86 | 96715,4 | 4722,1 |
| R,25 | R,86 | 100783,5 | 4717,0 |
| R,30 | R,85 | 103713,6 | 4678,5 |
| R,35 | R,84 | 105425,1 | 4611,0 |
| R,40 | R,83 | 106538,9 | 4546,5 |
| R,45 | R,82 | 107521,0 | 4477,4 |
| R,50 | R,80 | 108068,4 | 4399,7 |
| R,55 | R,79 | 110270,4 | 4311,3 |
| R,60 | R,77 | 112190,1 | 4218,8 |
| R,65 | R,75 | 114000,4 | 4122,6 |
| R,70 | R,73 | 114600,9 | 4031,5 |
| R,75 | R,72 | 111973,6 | 3948,8 |
| R,80 | R,70 | 105971,9 | 3838,6 |
| R,85 | R,68 | 97308,4 | 3705,7 |
| R,90 | R,65 | 87563,9 | 3573,9 |
| R,95 | R,62 | 76928,9 | 3434,9 |
| 1,0R | R,59 | 65008,8 | 3285,8 |

TQAV = 65000,0 LOAD = 5626,3 VEL = 30,0 MPH.

MUPEAK = 0,86 MULOCK = 0,59 RATIO = 1,45

FIRESTONE TRANSPORT I 1R,0=20/F DRY CONCRETE (DANA)

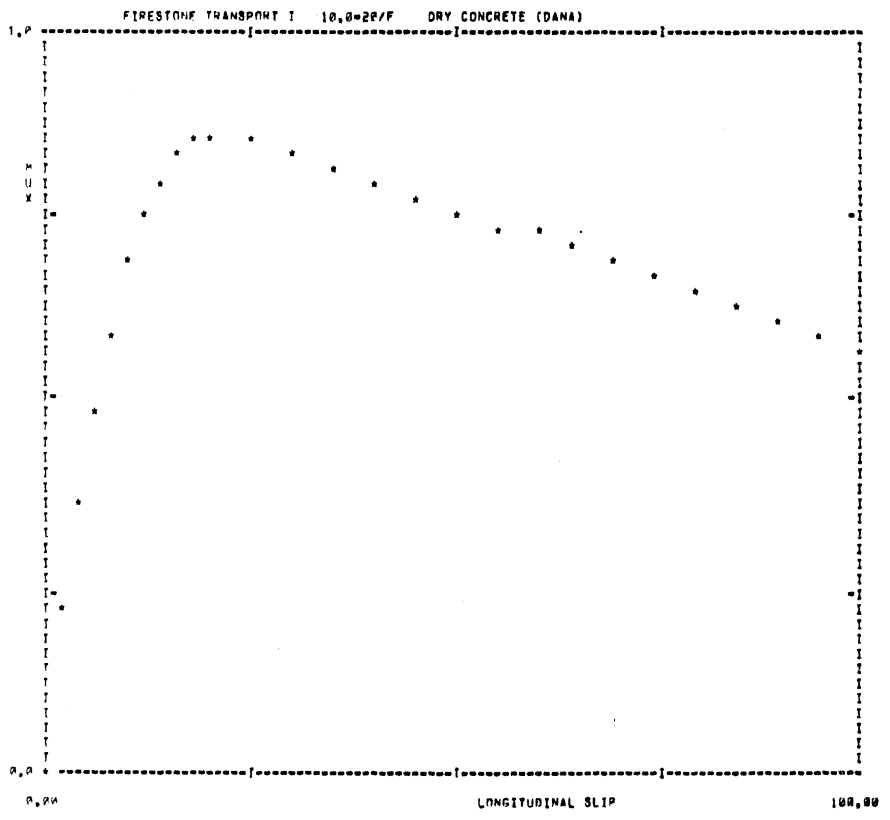


FZ = 5626,3 VFL = 30,0 MULOCK = 0,59 MUPEAK = 0,86 RATIO = 1,45 A=0 FILE 93 NEWFILE 36 SAMPLE 122

** A=0 FILE 94 NEW FILE 37 TEST SAMPLE123 **

AVERAGE OF FILE 94 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10,0=20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.22 | 21326.9 | 1196.4 | |
| 0.04 | 0.37 | 37766.2 | 2041.7 | |
| 0.06 | 0.49 | 51734.3 | 2727.9 | |
| 0.08 | 0.64 | 63561.8 | 3272.9 | |
| 0.10 | 0.69 | 72987.8 | 3788.6 | |
| 0.12 | 0.76 | 80945.7 | 4062.1 | |
| 0.14 | 0.81 | 87569.5 | 4337.6 | |
| 0.16 | 0.84 | 92283.9 | 4532.2 | |
| 0.18 | 0.86 | 9554.4 | 4641.7 | TQAV = 59958.3 LOAD = 5552.2 VEL = 40.0 MPH. |
| 0.20 | 0.87 | 96807.1 | 4668.2 | |
| 0.25 | 0.86 | 99716.4 | 4635.9 | MUPEAK = 0.87 MULOCK = 0.57 RATIO = 1.51 |
| 0.30 | 0.84 | 102495.5 | 4567.3 | |
| 0.35 | 0.83 | 104815.8 | 4482.0 | |
| 0.40 | 0.81 | 106737.8 | 4387.6 | |
| 0.45 | 0.79 | 108536.5 | 4289.5 | |
| 0.50 | 0.77 | 110288.8 | 4189.9 | |
| 0.55 | 0.75 | 112069.6 | 4088.5 | |
| 0.60 | 0.73 | 113861.5 | 3988.1 | |
| 0.65 | 0.71 | 115438.8 | 3894.9 | |
| 0.70 | 0.69 | 116419.0 | 3805.4 | |
| 0.75 | 0.68 | 115579.8 | 3715.6 | |
| 0.80 | 0.66 | 110559.7 | 3617.8 | |
| 0.85 | 0.64 | 100668.3 | 3500.6 | |
| 0.90 | 0.62 | 88156.5 | 3368.3 | |
| 0.95 | 0.60 | 70623.4 | 3228.2 | |
| 1.00 | 0.57 | 59958.3 | 3078.7 | |



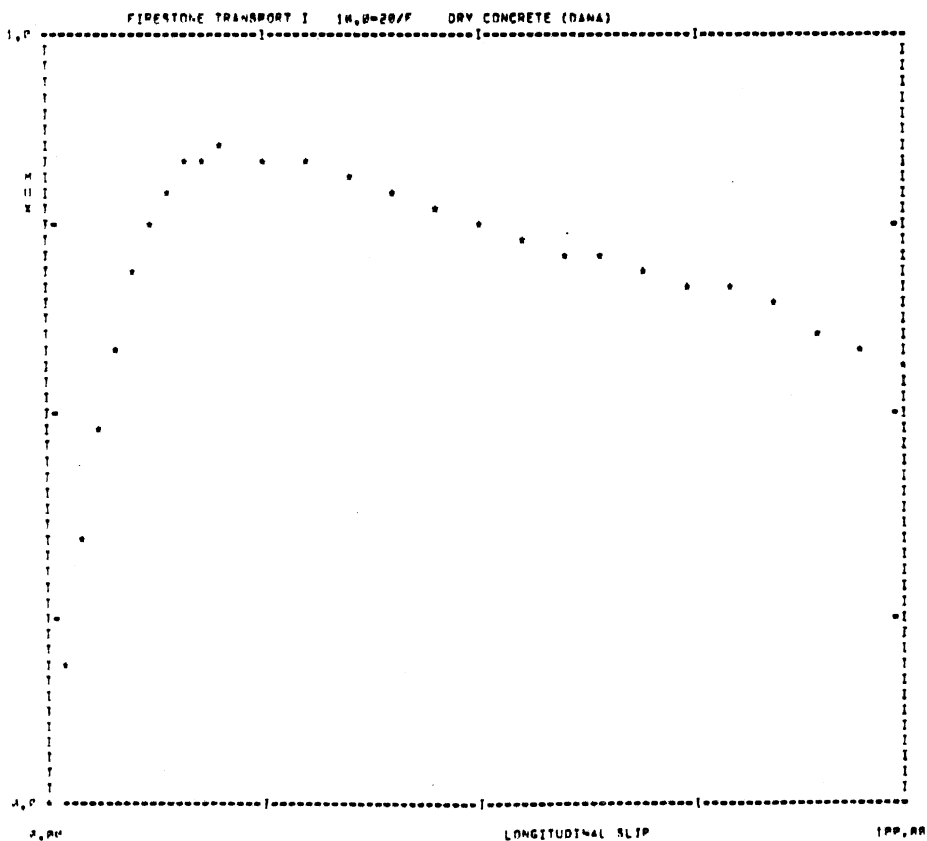
FZ = 5552.2 VFL = 40.0 MULOCK = 0.57 MUPEAK = 0.87 RATIO = 1.51 A=0 FILE 94 NEWFILE 37 SAMPLE 123

** AWD FILE 95 NEW FILE 3A' TEST SAMPLE128 **
 AVERAGE OF FILE 95 FOR 5 RECORDS. FIRESTONE TRANSPORT I 18,8-20/F DRY CONCRETE (DANA)

| SLIP | MIX | TORQUE | FV |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 10067.8 | 1021.6 |
| 0.04 | 0.35 | 16313.9 | 1906.9 |
| 0.06 | 0.49 | 51377.1 | 2661.6 |
| 0.08 | 0.60 | 63593.8 | 3279.8 |
| 0.10 | 0.69 | 73420.3 | 3782.5 |
| 0.12 | 0.76 | 81015.5 | 4162.8 |
| 0.14 | 0.80 | 88101.6 | 4409.7 |
| 0.16 | 0.83 | 92550.6 | 4549.1 |
| 0.18 | 0.85 | 95687.9 | 4611.8 |
| 0.20 | 0.85 | 97610.9 | 4686.7 |
| 0.25 | 0.85 | 100610.7 | 4546.8 |
| 0.30 | 0.83 | 102354.9 | 4465.5 |
| 0.35 | 0.82 | 103513.2 | 4378.9 |
| 0.40 | 0.80 | 105007.3 | 4290.2 |
| 0.45 | 0.78 | 107193.8 | 4190.8 |
| 0.50 | 0.76 | 109026.2 | 4085.4 |
| 0.55 | 0.74 | 112656.7 | 3982.2 |
| 0.60 | 0.72 | 114693.5 | 3889.0 |
| 0.65 | 0.71 | 115956.2 | 3806.2 |
| 0.70 | 0.70 | 116779.3 | 3729.6 |
| 0.75 | 0.68 | 116799.6 | 3653.5 |
| 0.80 | 0.67 | 113756.9 | 3571.0 |
| 0.85 | 0.65 | 105715.0 | 3468.4 |
| 0.90 | 0.62 | 92243.8 | 3338.6 |
| 0.95 | 0.60 | 76400.4 | 3199.3 |
| 1.00 | 0.57 | 59025.8 | 3089.5 |

TQAV = 59425.8 LOAD = 5585.9 VEL = 55.8 MPH.

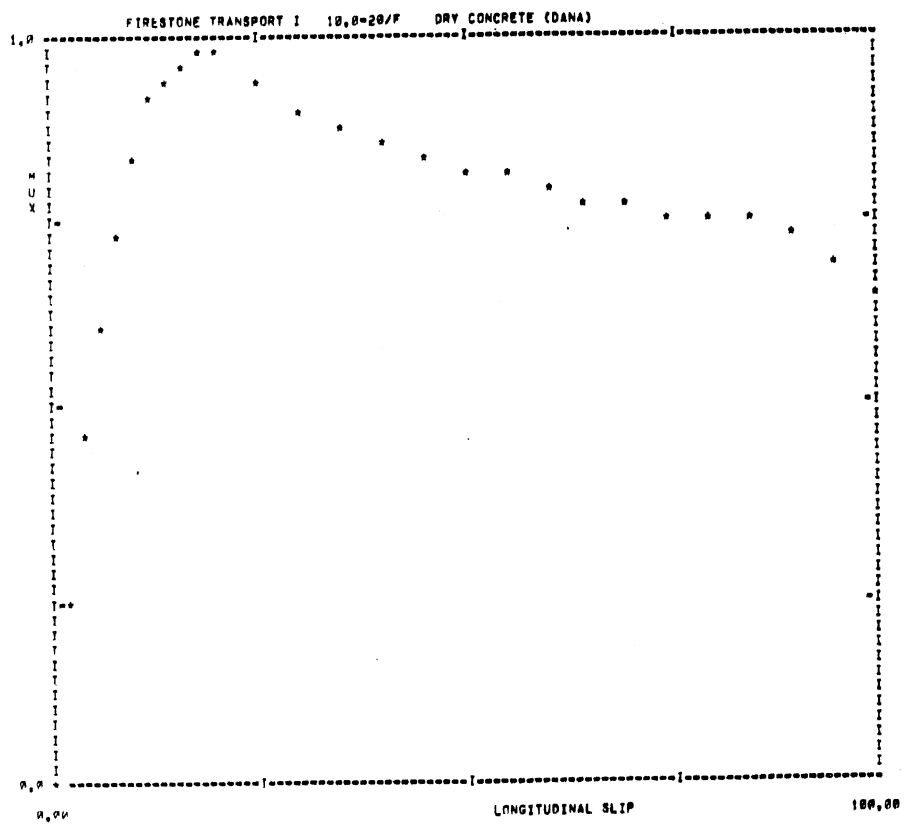
MUPEAK = 0.85 MULOCK = 0.57 RATIO = 1.50



F2 = 5585.9 VFI = 55.8 MULOCK = 0.57 MUPEAK = 0.85 RATIO = 1.50 AWD FILE 95 NEWFILE 3A SAMPLE 128

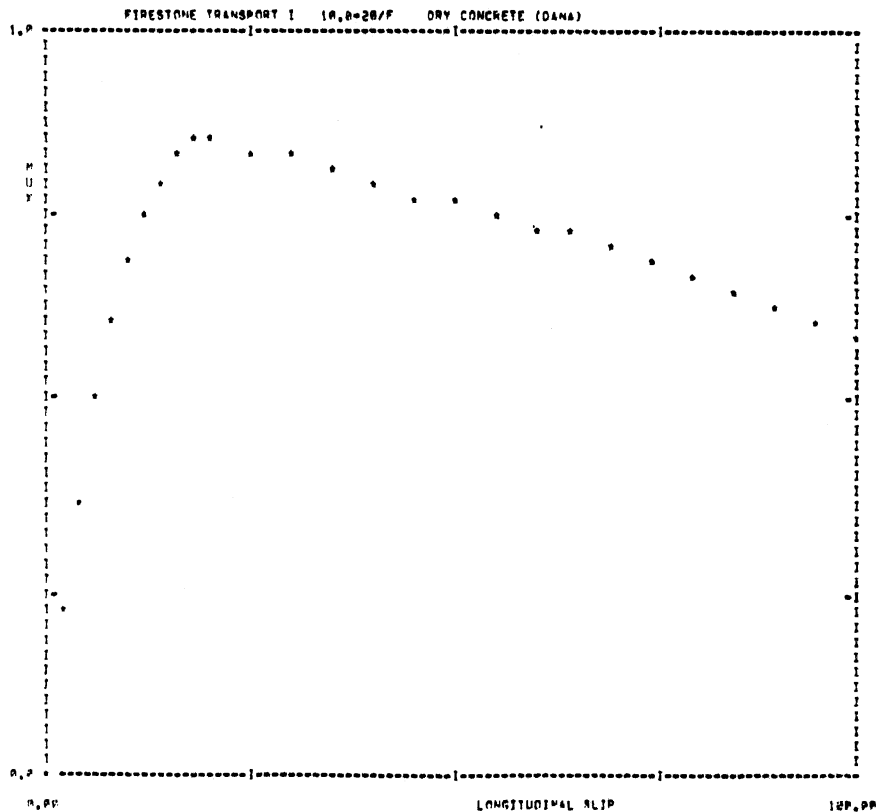
| ** A=D FILE 83 | | NEW FILE 29 / | TEST SAMPLE115 ** |
|-----------------------------------|------|-----------------------|-------------------------------|
| AVERAGE OF FILE 83 FOR 6 RECORDS, | | FIRESTONE TRANSPORT I | 10.0=20/F DRY CONCRETE (DANA) |
| SLIP | MUX | TORQUE | FX |
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.25 | 11914.6 | 561.9 |
| 0.04 | 0.46 | 20960.7 | 1015.4 |
| 0.06 | 0.62 | 26582.3 | 1356.0 |
| 0.08 | 0.74 | 34463.5 | 1616.9 |
| 0.10 | 0.84 | 39889.6 | 1839.7 |
| 0.12 | 0.91 | 43571.5 | 2025.7 |
| 0.14 | 0.95 | 47576.7 | 2140.2 |
| 0.16 | 0.97 | 50466.5 | 2196.6 |
| 0.18 | 0.98 | 52010.1 | 2216.0 |
| 0.20 | 0.98 | 52612.2 | 2200.3 |
| 0.25 | 0.94 | 54621.8 | 2108.6 |
| 0.30 | 0.90 | 56375.3 | 2013.4 |
| 0.35 | 0.86 | 57669.2 | 1929.2 |
| 0.40 | 0.86 | 58637.6 | 1860.4 |
| 0.45 | 0.84 | 59588.3 | 1802.1 |
| 0.50 | 0.83 | 60655.0 | 1749.9 |
| 0.55 | 0.81 | 61829.7 | 1701.9 |
| 0.60 | 0.80 | 63258.2 | 1655.9 |
| 0.65 | 0.78 | 64729.6 | 1614.1 |
| 0.70 | 0.77 | 66151.2 | 1580.1 |
| 0.75 | 0.76 | 67074.0 | 1550.1 |
| 0.80 | 0.76 | 65773.6 | 1544.2 |
| 0.85 | 0.75 | 59931.1 | 1523.0 |
| 0.90 | 0.73 | 50490.8 | 1480.8 |
| 0.95 | 0.70 | 39728.6 | 1429.5 |
| 1.00 | 0.67 | 27625.8 | 1368.7 |

TBAV = 27625.8 LOAD = 2221.2 VEL = 40.0 MPH.
 MUPEAK = 0.98 MULOCK = 0.67 RATIO = 1.08



FZ = 2221.2 VEL = 40.0 MULOCK = 0.67 MUPEAK = 0.98 RATIO = 1.08 A=D FILE 83 NHFILE 29 SAMPLE 115

| ** A=D FILE 84 | | NEW FILE 38 | | TEST SAMPLE 116 ** | |
|-----------------------------------|------|-----------------------|--------|--------------------|-------------------------------|
| AVERAGE OF FILE 84 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | | IR, R=20/F | DRY CONCRETE (DANA) |
| SLIP | MIX | TORQUE | FZ | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.22 | 23161.1 | 1224.3 | | |
| 0.04 | 0.37 | 30664.3 | 2035.9 | | |
| 0.06 | 0.50 | 53691.8 | 2741.9 | | |
| 0.08 | 0.61 | 66740.9 | 3323.8 | | |
| 0.10 | 0.69 | 76140.2 | 3774.3 | | |
| 0.12 | 0.76 | 81555.3 | 4000.2 | | |
| 0.14 | 0.80 | 87030.7 | 4313.6 | | |
| 0.16 | 0.83 | 91106.0 | 4456.5 | | |
| 0.18 | 0.85 | 94800.7 | 4530.6 | TRAV = 62166.7 | LOAD = 5500.0 VFL = 00.0 MPH. |
| 0.20 | 0.85 | 95406.6 | 4544.9 | | |
| 0.25 | 0.85 | 98243.9 | 4685.1 | MUPEAK = 0.85 | MULOCK = 0.50 RATIO = 1.45 |
| 0.30 | 0.83 | 100020.7 | 4395.2 | | |
| 0.35 | 0.82 | 102050.9 | 4296.7 | | |
| 0.40 | 0.80 | 104003.8 | 4199.9 | | |
| 0.45 | 0.79 | 105911.4 | 4109.6 | | |
| 0.50 | 0.77 | 106927.3 | 4026.2 | | |
| 0.55 | 0.76 | 107904.0 | 3942.9 | | |
| 0.60 | 0.74 | 109035.1 | 3861.6 | | |
| 0.65 | 0.73 | 110146.5 | 3782.9 | | |
| 0.70 | 0.71 | 111200.8 | 3705.1 | | |
| 0.75 | 0.70 | 111604.7 | 3620.1 | | |
| 0.80 | 0.68 | 108581.1 | 3540.6 | | |
| 0.85 | 0.66 | 100375.9 | 3453.9 | | |
| 0.90 | 0.64 | 88043.1 | 3300.9 | | |
| 0.95 | 0.62 | 76110.2 | 3230.1 | | |
| 1.00 | 0.59 | 62166.7 | 3120.0 | | |



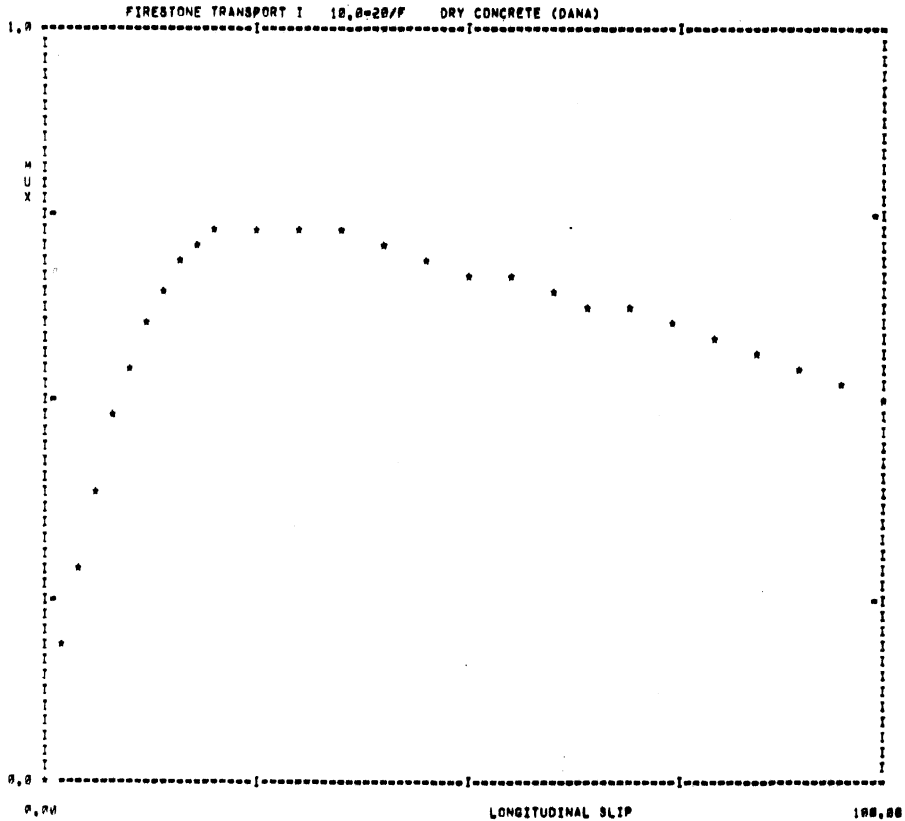
FZ = 5500.0 VFL = 00.0 MULOCK = 0.50 MUPEAK = 0.85 RATIO = 1.45 A=D FILE 84 NEW FILE 38 SAMPLE 116

** A=D FILE 85 NEW FILE 31 / TEST SAMPLE117 **
 AVERAGE OF FILE 85 FOR 3 RECORDS, FIRESTONE TRANSPORT I 18,0=20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 30917.5 | 1755.3 |
| 0.04 | 0.30 | 50460.0 | 2663.9 |
| 0.06 | 0.39 | 66572.0 | 3495.9 |
| 0.08 | 0.48 | 80931.0 | 4255.5 |
| 0.10 | 0.56 | 93733.4 | 4863.1 |
| 0.12 | 0.62 | 103852.0 | 5389.4 |
| 0.14 | 0.66 | 111590.2 | 5787.4 |
| 0.16 | 0.70 | 117491.2 | 6069.2 |
| 0.18 | 0.73 | 121567.6 | 6276.2 |
| 0.20 | 0.73 | 124212.0 | 6325.2 |
| 0.25 | 0.74 | 128215.3 | 6356.2 |
| 0.30 | 0.70 | 131280.7 | 6330.3 |
| 0.35 | 0.73 | 133191.6 | 6260.7 |
| 0.40 | 0.72 | 135063.9 | 6155.1 |
| 0.45 | 0.70 | 137075.7 | 6010.7 |
| 0.50 | 0.68 | 138717.0 | 5882.0 |
| 0.55 | 0.67 | 139660.1 | 5752.2 |
| 0.60 | 0.66 | 140560.7 | 5629.1 |
| 0.65 | 0.64 | 141320.1 | 5507.3 |
| 0.70 | 0.63 | 142280.7 | 5370.2 |
| 0.75 | 0.61 | 142383.1 | 5230.1 |
| 0.80 | 0.59 | 137863.0 | 5072.1 |
| 0.85 | 0.57 | 127930.3 | 4890.4 |
| 0.90 | 0.55 | 114995.0 | 4716.9 |
| 0.95 | 0.53 | 100750.4 | 4539.8 |
| 1.00 | 0.51 | 85000.0 | 4362.5 |

TQAV = 85000.0 LOAD = 9000.3 VEL = 40.0 MPH.

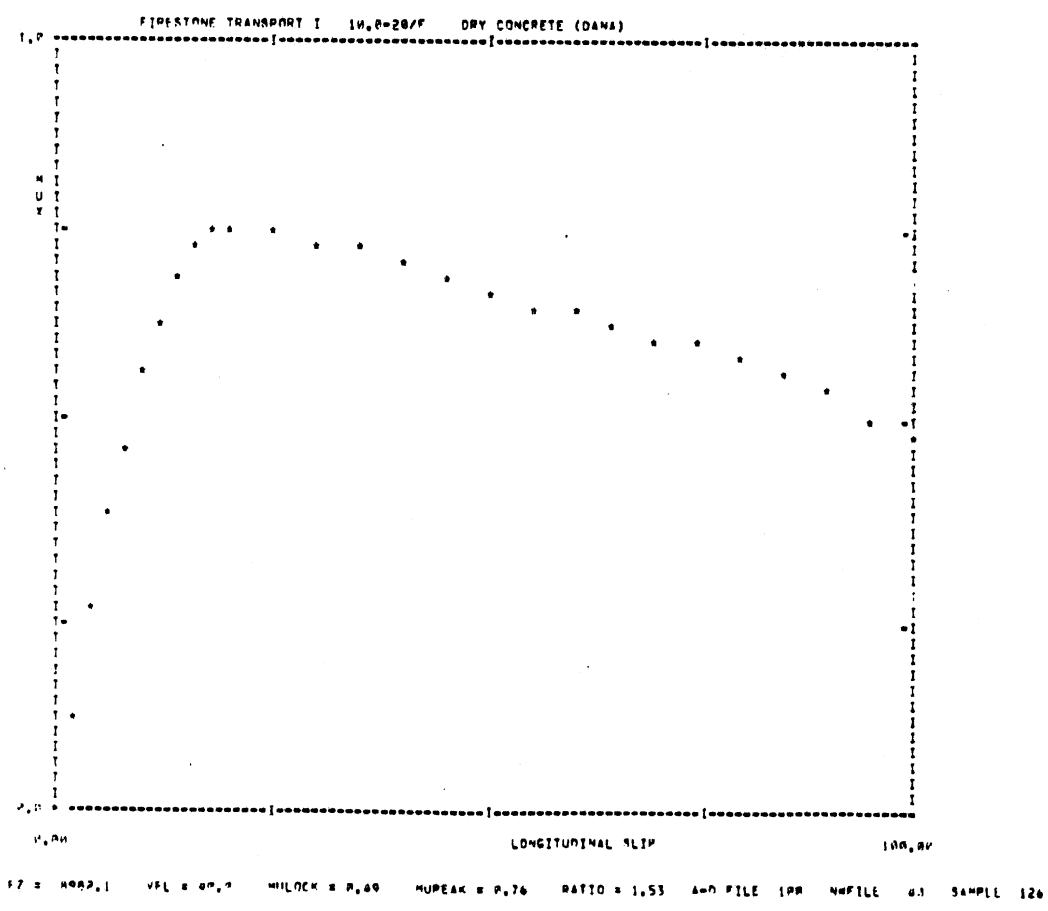
MUPEAK = 0.74 MULOCK = 0.51 RATIO = 1.46



FZ = 9000.3 VFL = 40.0 MULOCK = 0.51 MUPEAK = 0.74 RATIO = 1.46 A=D FILE 85 NHFILE 31 SAMPLE 117

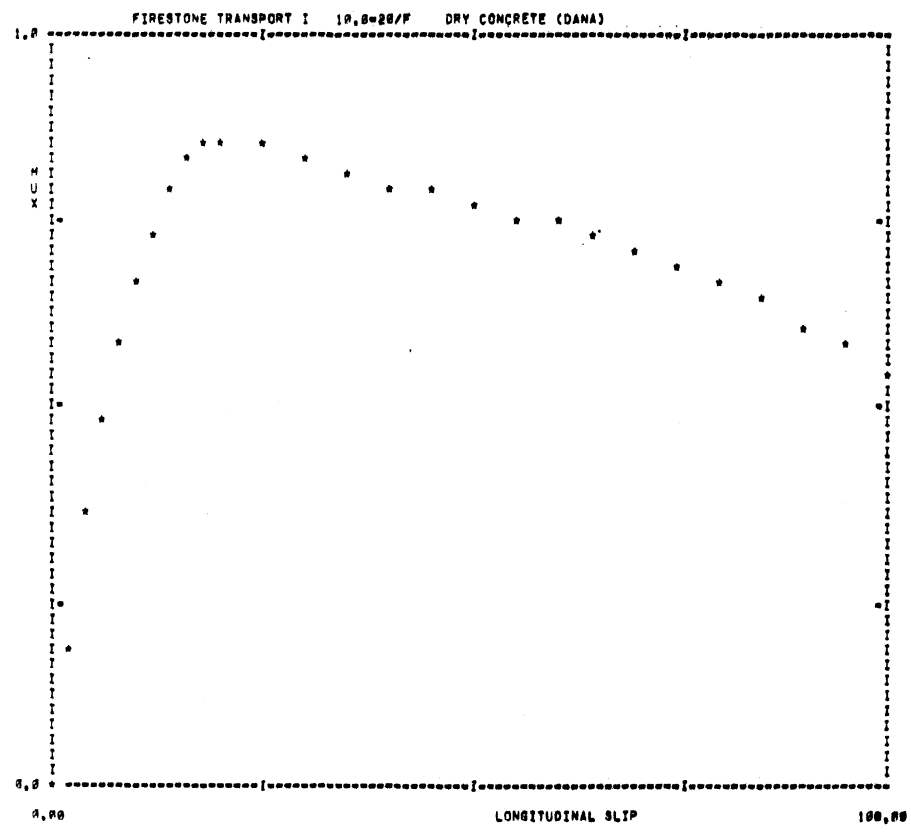
| ** A-D FILE 100 | | NEW FILE 04 | | TEST SAMPLE 126 ** | |
|------------------------------------|------|-----------------------|--------|-------------------------------|-------------------------------|
| AVERAGE OF FILE 100 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | | 14.0-20/P DRY CONCRETE (DANA) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.13 | 22944.4 | 1106.0 | | |
| 0.04 | 0.26 | 45400.2 | 2342.2 | | |
| 0.06 | 0.38 | 66232.0 | 3364.3 | | |
| 0.08 | 0.48 | 83201.7 | 4199.3 | | |
| 0.10 | 0.57 | 97869.4 | 4927.0 | | |
| 0.12 | 0.64 | 109396.4 | 5517.9 | | |
| 0.14 | 0.69 | 117771.0 | 5951.9 | | |
| 0.16 | 0.73 | 124000.6 | 6238.2 | | |
| 0.18 | 0.75 | 129522.3 | 6412.2 | TOAV = 62854.2 | LOAD = 4982.1 VEL = 40.0 MPH. |
| 0.20 | 0.76 | 133061.7 | 6458.9 | | |
| 0.25 | 0.76 | 137510.0 | 6413.6 | MUPEAK = 0.76 | MULOCK = 0.69 RATIO = 1.53 |
| 0.30 | 0.75 | 140705.9 | 6316.5 | | |
| 0.35 | 0.73 | 143003.2 | 6104.0 | | |
| 0.40 | 0.71 | 146700.1 | 6036.2 | | |
| 0.45 | 0.69 | 149553.4 | 5804.3 | | |
| 0.50 | 0.68 | 151906.9 | 5735.6 | | |
| 0.55 | 0.66 | 153946.8 | 5600.3 | | |
| 0.60 | 0.65 | 155430.6 | 5482.3 | | |
| 0.65 | 0.64 | 156209.0 | 5371.1 | | |
| 0.70 | 0.62 | 154850.1 | 5261.3 | | |
| 0.75 | 0.61 | 150326.6 | 5107.5 | | |
| 0.80 | 0.59 | 142222.4 | 5015.0 | | |
| 0.85 | 0.57 | 129400.4 | 4809.0 | | |
| 0.90 | 0.55 | 110303.0 | 4655.0 | | |
| 0.95 | 0.52 | 98607.1 | 4449.6 | | |
| 1.00 | 0.49 | 82854.2 | 4233.0 | | |

*Repeat of Load Sweep
Run # 117*



** A=D FILE 89 NEW FILE 32 TEST SAMPLE118 **

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 19470.1 | 1097.6 | |
| 0.04 | 0.36 | 37300.1 | 1990.0 | |
| 0.06 | 0.49 | 52394.2 | 2702.0 | |
| 0.08 | 0.59 | 64632.3 | 3251.0 | |
| 0.10 | 0.66 | 73702.1 | 3600.7 | |
| 0.12 | 0.74 | 80905.0 | 4015.7 | |
| 0.14 | 0.80 | 86301.7 | 4270.2 | |
| 0.16 | 0.83 | 90004.6 | 4453.0 | |
| 0.18 | 0.85 | 94505.7 | 4553.9 | TQAV = 60291.7 LOAD = 5602.0 VEL = 40.0 MPH. |
| 0.20 | 0.86 | 96667.5 | 4573.0 | |
| 0.25 | 0.85 | 99299.0 | 4542.1 | MUPEAK = 0.86 MULLOCK = 0.56 RATIO = 1.53 |
| 0.30 | 0.84 | 101570.3 | 4470.9 | <i>Check Run #3</i> |
| 0.35 | 0.82 | 103924.6 | 4390.1 | |
| 0.40 | 0.81 | 106019.9 | 4316.2 | |
| 0.45 | 0.79 | 107694.3 | 4240.3 | |
| 0.50 | 0.78 | 109166.3 | 4167.5 | |
| 0.55 | 0.76 | 110610.5 | 4094.2 | |
| 0.60 | 0.75 | 112137.5 | 4017.7 | |
| 0.65 | 0.73 | 113700.0 | 3930.7 | |
| 0.70 | 0.71 | 115133.0 | 3856.3 | |
| 0.75 | 0.69 | 115290.5 | 3769.0 | |
| 0.80 | 0.67 | 111295.0 | 3672.4 | |
| 0.85 | 0.65 | 102171.0 | 3549.7 | |
| 0.90 | 0.62 | 89504.2 | 3397.0 | |
| 0.95 | 0.59 | 75552.4 | 3231.0 | |
| 1.00 | 0.56 | 60291.7 | 3040.0 | |



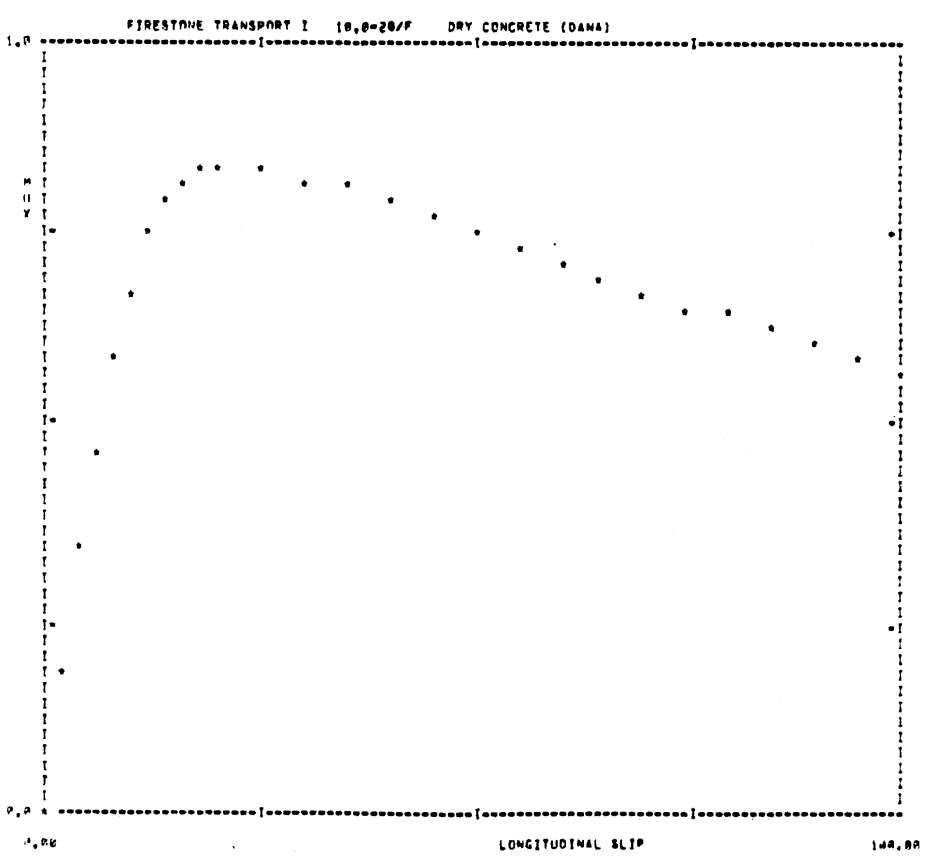
FZ = 5602.0 VEL = 40.0 MULLOCK = 0.56 MUPEAK = 0.86 RATIO = 1.53 A=D FILE 89 NEWFILE 32 SAMPLE 118

** A-D FILE ** NEW FILE 34 TEST SAMPLE125 **
 AVERAGE OF FILE 99 FOR 6 RECORDS. FIRESTONE TRANSPORT I 10.0-20/F DRY CONCRETE (DANA)

| SLIP | MUY | TORQUE | PK |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 10081.9 | 979.0 |
| 0.04 | 0.35 | 37710.9 | 1926.8 |
| 0.06 | 0.40 | 51990.6 | 2032.4 |
| 0.08 | 0.59 | 66647.3 | 3220.3 |
| 0.10 | 0.60 | 75195.3 | 3710.7 |
| 0.12 | 0.75 | 82900.2 | 4073.1 |
| 0.14 | 0.80 | 87725.4 | 4313.4 |
| 0.16 | 0.83 | 91846.3 | 4459.3 |
| 0.18 | 0.84 | 95130.4 | 4537.1 |
| 0.20 | 0.84 | 97733.4 | 4547.5 |
| 0.25 | 0.84 | 101900.5 | 4500.4 |
| 0.30 | 0.83 | 104370.4 | 4420.0 |
| 0.35 | 0.81 | 105022.2 | 4342.1 |
| 0.40 | 0.79 | 107055.4 | 4206.0 |
| 0.45 | 0.77 | 108560.9 | 4100.6 |
| 0.50 | 0.75 | 110257.5 | 4034.0 |
| 0.55 | 0.73 | 111946.5 | 3931.3 |
| 0.60 | 0.71 | 113557.1 | 3829.7 |
| 0.65 | 0.69 | 115023.4 | 3733.4 |
| 0.70 | 0.68 | 115024.4 | 3651.7 |
| 0.75 | 0.66 | 114210.4 | 3575.3 |
| 0.80 | 0.65 | 108600.6 | 3401.9 |
| 0.85 | 0.63 | 99225.4 | 3300.5 |
| 0.90 | 0.61 | 87500.4 | 3277.1 |
| 0.95 | 0.59 | 74570.2 | 3156.0 |
| 1.00 | 0.56 | 60200.3 | 3025.0 |

TDIV = 60200.3 LOAD = 5500.4 VFL = 40.0 MPH,
 MUPEAK = 0.84 MULOCK = 0.56 RATIO = 1.50

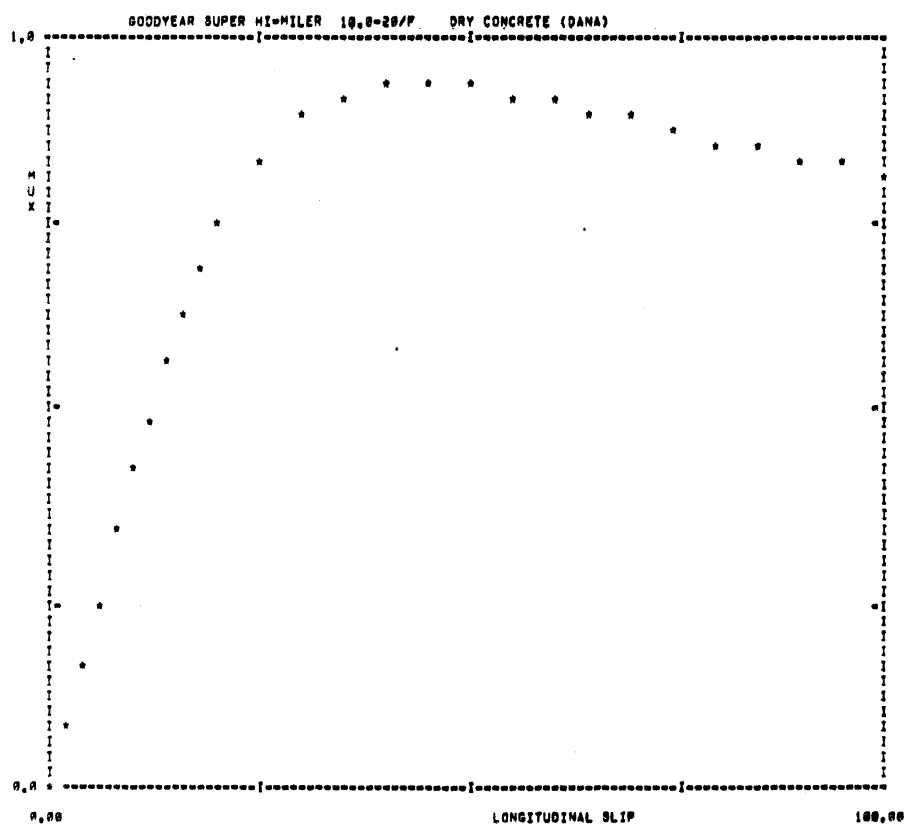
Check Run #5



FZ = 5500.4 VFL = 40.0 MULOCK = 0.56 MUPEAK = 0.84 RATIO = 1.50 A-D FILE 99 NEW FILE 34 SAMPLE 125

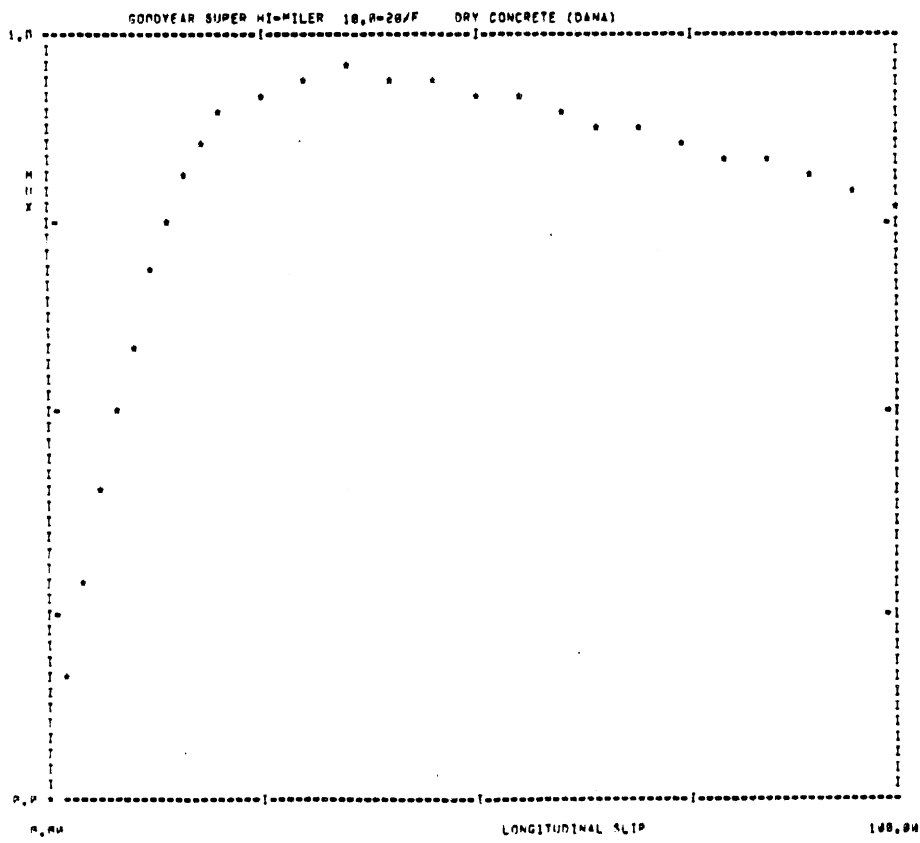
GOODYEAR SUPER HI MILER, 10.00 x 20/F, DANA CONCRETE

| ** A=0 FILE 64 | | | NEW FILE 22 | TEST SAMPLE 187 ** |
|--------------------|----------------|-------------------------|-------------|---------------------------------------------|
| AVERAGE OF FILE 64 | FOR 6 RECORDS, | GOODYEAR SUPER MI-MILER | 10.0-20/P | DRY CONCRETE (DANA) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.08 | 6881.4 | 432.6 | |
| 0.04 | 0.16 | 15842.4 | 880.8 | |
| 0.06 | 0.24 | 25143.7 | 1352.0 | |
| 0.08 | 0.30 | 35898.3 | 1870.2 | |
| 0.10 | 0.43 | 43953.6 | 2341.7 | |
| 0.12 | 0.50 | 52050.3 | 2742.2 | |
| 0.14 | 0.57 | 59898.2 | 3121.0 | |
| 0.16 | 0.64 | 67812.8 | 3482.1 | |
| 0.18 | 0.70 | 72727.8 | 3755.8 | TQAV = 83145.8 LOAD = 5514.2 VEL = 3.0 MPH. |
| 0.20 | 0.75 | 77327.7 | 3984.0 | |
| 0.25 | 0.84 | 85513.5 | 4397.9 | MUPEAK = 0.94 MULOCK = 0.82 RATIO = 1.15 |
| 0.30 | 0.90 | 91897.4 | 4668.2 | |
| 0.35 | 0.93 | 93873.5 | 4789.4 | |
| 0.40 | 0.94 | 94699.7 | 4828.4 | |
| 0.45 | 0.94 | 94589.4 | 4804.4 | |
| 0.50 | 0.93 | 93915.7 | 4766.7 | |
| 0.55 | 0.92 | 93049.3 | 4718.2 | |
| 0.60 | 0.91 | 92064.7 | 4664.4 | |
| 0.65 | 0.90 | 91021.2 | 4608.0 | |
| 0.70 | 0.89 | 89948.1 | 4550.2 | |
| 0.75 | 0.88 | 88868.3 | 4491.8 | |
| 0.80 | 0.87 | 87765.1 | 4433.8 | |
| 0.85 | 0.86 | 86668.2 | 4374.1 | |
| 0.90 | 0.84 | 85543.9 | 4314.3 | |
| 0.95 | 0.83 | 84377.5 | 4252.7 | |
| 1.00 | 0.82 | 83145.8 | 4188.8 | |



FX = 5514.2 VEL = 3.0 MULOCK = 0.82 MUPEAK = 0.94 RATIO = 1.15 A=0 FILE 64 N=FILE 22 SAMPLE 187

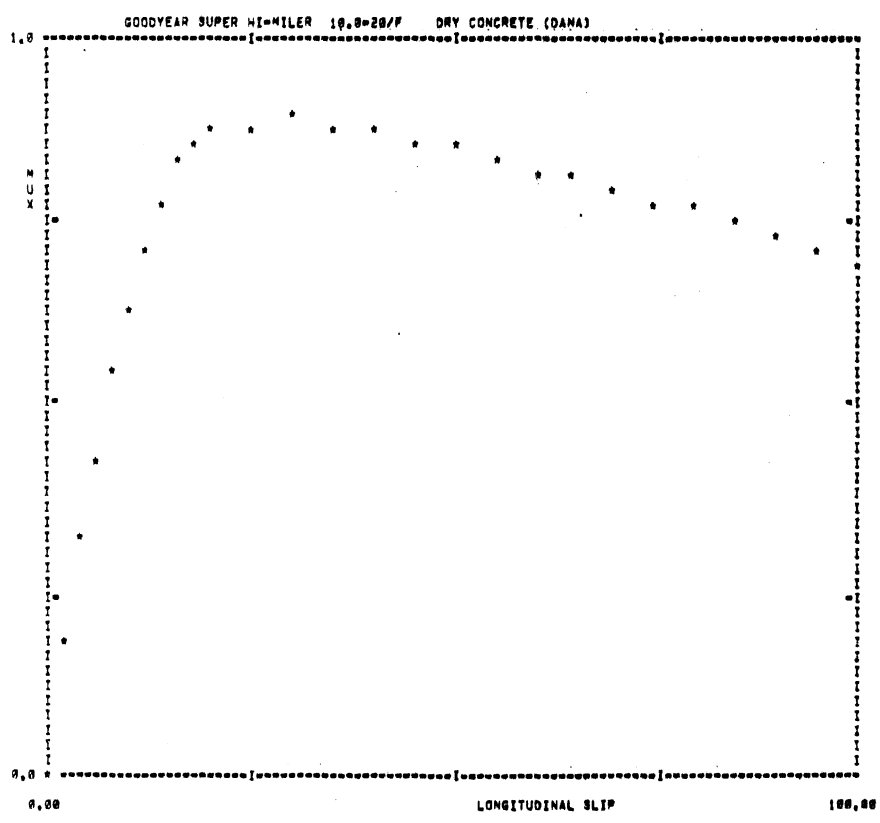
| ** A=0 FILE 65 | | NEW FILE 23 | | TEST SAMPLE 148 ** | |
|-----------------------------------|------|-----------------------------------|--------|---------------------|---------------|
| AVERAGE OF FILE 65 FOR 6 RECORDS, | | GOODYEAR SUPER MI-MILER 10,0-20/F | | DRY CONCRETE (DANA) | |
| SLIP | MIX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.16 | 16700.5 | 880.2 | | |
| 0.04 | 0.28 | 28676.5 | 1582.2 | | |
| 0.06 | 0.40 | 41962.4 | 2160.3 | | |
| 0.08 | 0.51 | 53179.8 | 2714.1 | | |
| 0.10 | 0.60 | 62955.6 | 3175.4 | | |
| 0.12 | 0.69 | 69993.6 | 3603.5 | | |
| 0.14 | 0.76 | 76497.8 | 3980.2 | | |
| 0.16 | 0.82 | 82193.3 | 4215.2 | | |
| 0.18 | 0.86 | 86612.8 | 4433.3 | TRAV = 79145.6 | LOAD = 5061.0 |
| 0.20 | 0.89 | 90800.9 | 4570.8 | VEL = 10.0 MPH. | |
| 0.25 | 0.93 | 95127.9 | 4739.2 | MUPEAK = 0.95 | MULOCK = 0.78 |
| 0.30 | 0.95 | 98634.5 | 4813.6 | RATIO = 1.21 | |
| 0.35 | 0.95 | 100522.3 | 4826.7 | | |
| 0.40 | 0.95 | 101796.2 | 4802.3 | | |
| 0.45 | 0.90 | 102211.2 | 4750.3 | | |
| 0.50 | 0.93 | 101511.7 | 4702.4 | | |
| 0.55 | 0.92 | 99800.5 | 4634.1 | | |
| 0.60 | 0.90 | 97125.3 | 4562.5 | | |
| 0.65 | 0.89 | 94955.8 | 4490.3 | | |
| 0.70 | 0.87 | 92855.7 | 4416.8 | | |
| 0.75 | 0.86 | 90793.8 | 4345.6 | | |
| 0.80 | 0.84 | 88750.8 | 4273.1 | | |
| 0.85 | 0.83 | 86717.3 | 4200.6 | | |
| 0.90 | 0.81 | 84539.6 | 4127.0 | | |
| 0.95 | 0.80 | 82405.3 | 4053.4 | | |
| 1.00 | 0.78 | 79145.8 | 3977.5 | | |



FX = 5061.0 VFL = 10.0 MULOCK = 0.78 MUPEAK = 0.95 RATIO = 1.21 A=0 FILE 65 NEW FILE 23 SAMPLE 148

** A=D FILE 66 NEW FILE 24 TEST SAMPLE109 **

| SLIP | MUX | TORQUE | FX | GOODYEAR SUPER HI-MILER 10.0=20/F | DRY CONCRETE (DANA) |
|------|------|----------|--------|-----------------------------------|----------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.19 | 19102.0 | 1051.1 | | |
| 0.04 | 0.32 | 33149.5 | 1756.8 | | |
| 0.06 | 0.44 | 46390.1 | 2807.2 | | |
| 0.08 | 0.55 | 57703.6 | 2907.7 | | |
| 0.10 | 0.64 | 67190.7 | 3427.7 | | |
| 0.12 | 0.72 | 75666.3 | 3827.5 | | |
| 0.14 | 0.78 | 83599.8 | 4206.8 | | |
| 0.16 | 0.83 | 89265.7 | 4485.6 | | |
| 0.18 | 0.86 | 93272.4 | 4607.2 | TCAV = 71910.7 | LOAD = 5476.1 VEL = 20.0 MPH, |
| 0.20 | 0.87 | 95470.5 | 4699.6 | | |
| 0.25 | 0.89 | 98558.7 | 4710.9 | MUPEAK = 0.89 | MULOCK = 0.78 RATIO = 1.27 |
| 0.30 | 0.89 | 101160.0 | 4607.0 | | |
| 0.35 | 0.88 | 103464.3 | 4625.3 | | |
| 0.40 | 0.88 | 105305.2 | 4552.2 | | |
| 0.45 | 0.86 | 106705.1 | 4473.1 | | |
| 0.50 | 0.85 | 107950.4 | 4390.5 | | |
| 0.55 | 0.84 | 108951.0 | 4317.1 | | |
| 0.60 | 0.83 | 109670.9 | 4243.3 | | |
| 0.65 | 0.81 | 109620.6 | 4172.7 | | |
| 0.70 | 0.80 | 107764.6 | 4102.2 | | |
| 0.75 | 0.79 | 103133.9 | 4026.0 | | |
| 0.80 | 0.77 | 97661.4 | 3949.3 | | |
| 0.85 | 0.75 | 91800.7 | 3870.0 | | |
| 0.90 | 0.74 | 85821.6 | 3789.5 | | |
| 0.95 | 0.72 | 79200.0 | 3707.6 | | |
| 1.00 | 0.70 | 71910.7 | 3623.6 | | |

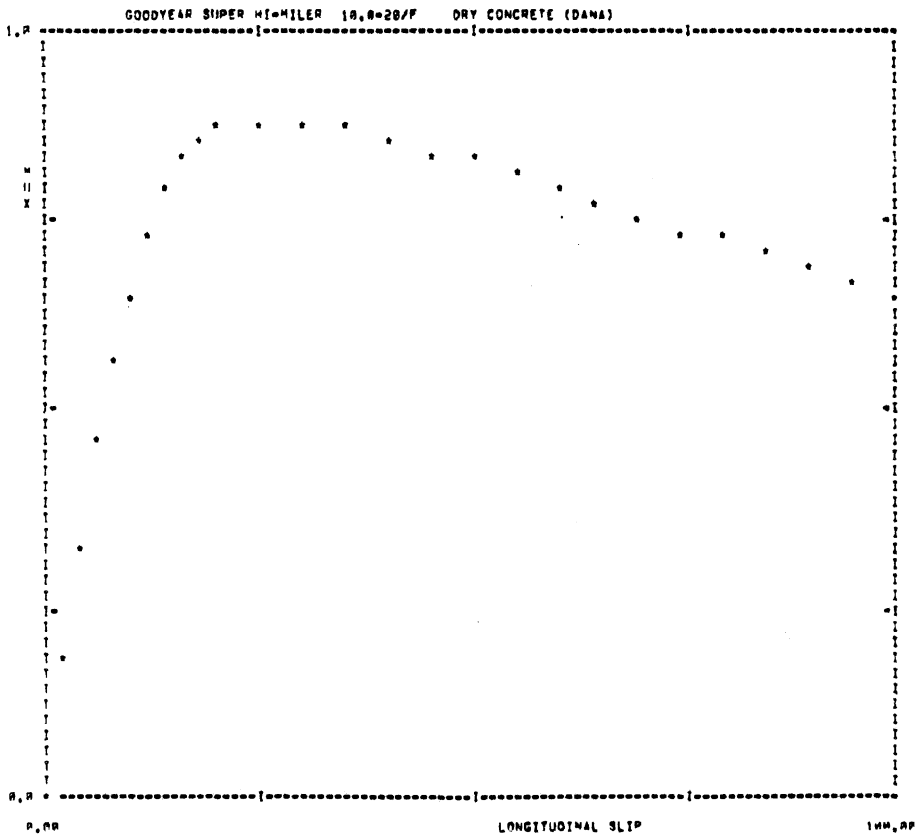


FZ = 5476.1 VEL = 20.0 MULOCK = 0.78 MUPEAK = 0.89 RATIO = 1.27 A=D FILE 66 NHFILE 24 SAMPLE 109

| ** A=O FILE 67 | | NEW FILE 25 | TEST SAMPLE 11R ** |
|-----------------------------------|------|-------------------------|-------------------------------|
| AVERAGE OF FILE 67 FOR 6 RECORDS, | | GOODYEAR SUPER MI-MILER | 10.0=20/P DRY CONCRETE (DANA) |
| SLIP | MIX | TORQUE | PY |
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 21713.4 | 1052.3 |
| 0.04 | 0.36 | 36319.7 | 1823.4 |
| 0.06 | 0.46 | 49466.6 | 2408.5 |
| 0.08 | 0.57 | 60694.8 | 3046.6 |
| 0.10 | 0.66 | 70261.1 | 3509.3 |
| 0.12 | 0.73 | 78169.0 | 3806.1 |
| 0.14 | 0.79 | 83730.7 | 4171.9 |
| 0.16 | 0.84 | 88335.9 | 4375.3 |
| 0.18 | 0.87 | 91794.0 | 4580.8 |
| 0.20 | 0.88 | 94061.3 | 4573.4 |
| 0.25 | 0.90 | 98096.4 | 4626.4 |
| 0.30 | 0.88 | 101253.3 | 4622.9 |
| 0.34 | 0.87 | 103467.4 | 4579.6 |
| 0.40 | 0.86 | 108883.9 | 4517.6 |
| 0.45 | 0.85 | 105025.0 | 4448.1 |
| 0.50 | 0.83 | 106774.5 | 4378.4 |
| 0.55 | 0.81 | 107926.0 | 4294.1 |
| 0.60 | 0.79 | 109252.4 | 4193.7 |
| 0.65 | 0.78 | 110755.2 | 4099.9 |
| 0.70 | 0.76 | 111813.2 | 4007.8 |
| 0.75 | 0.74 | 110469.3 | 3926.3 |
| 0.80 | 0.73 | 105859.6 | 3847.8 |
| 0.85 | 0.71 | 97996.9 | 3753.0 |
| 0.90 | 0.70 | 88023.9 | 3652.5 |
| 0.95 | 0.67 | 78073.9 | 3545.0 |
| 1.00 | 0.65 | 68250.0 | 3428.7 |

TQAV = 68250.0 LOAD = 5442.3 VEL = 30.0 MPH.

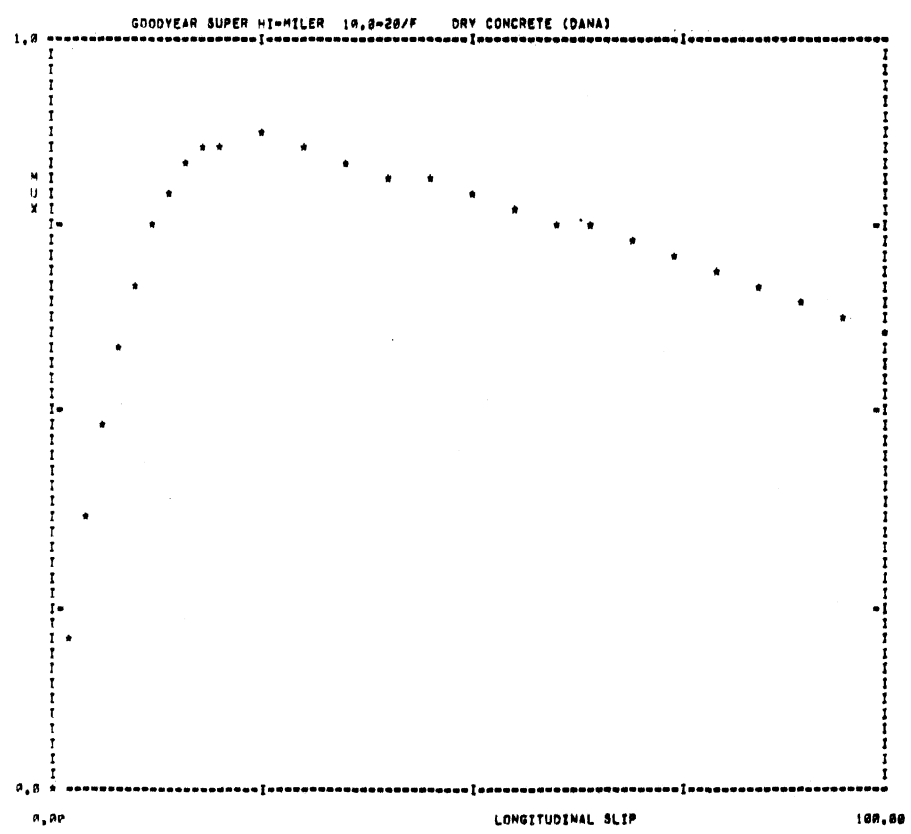
MUPEAK = 0.89 MULOCK = 0.65 RATIO = 1.37



FZ = 5442.3 VFL = 30.0 MULOCK = 0.65 MUPEAK = 0.89 RATIO = 1.37 A=O FILE 67 N=FILE 25 SAMPLE 11R

** A=0 FILE 71 NEW FILE 26 TEST SAMPLE111 **

| AVERAGE OF FILE 71 FOR 7 RECORDS. | | | GOODYEAR SUPER HI-MILER | 10.0-20/F | DRY CONCRETE (DANA) |
|-----------------------------------|------|----------|-------------------------|----------------|----------------------------------|
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.21 | 22953.5 | 1153.6 | | |
| 0.04 | 0.36 | 38453.8 | 1973.6 | | |
| 0.06 | 0.49 | 51855.4 | 2647.7 | | |
| 0.08 | 0.59 | 63586.5 | 3176.7 | | |
| 0.10 | 0.68 | 73190.7 | 3684.8 | | |
| 0.12 | 0.75 | 80316.3 | 3954.3 | | |
| 0.14 | 0.80 | 86187.0 | 4230.4 | | |
| 0.16 | 0.84 | 90840.0 | 4419.0 | | |
| 0.18 | 0.85 | 94490.9 | 4539.7 | TQAV = 64375.0 | LOAD = 5427.0 VEL = 40.0 MPH. |
| 0.20 | 0.86 | 97878.5 | 4581.4 | | |
| 0.25 | 0.87 | 100242.2 | 4680.5 | MUPEAK = 0.87 | MULOCK = 0.62 RATIO = 1.41 |
| 0.30 | 0.86 | 102624.5 | 4553.4 | | |
| 0.35 | 0.85 | 105008.9 | 4460.7 | | |
| 0.40 | 0.83 | 107159.1 | 4349.4 | | |
| 0.45 | 0.81 | 108665.4 | 4241.9 | | |
| 0.50 | 0.79 | 109450.2 | 4140.3 | | |
| 0.55 | 0.78 | 109894.7 | 4063.1 | | |
| 0.60 | 0.77 | 110265.3 | 3981.7 | | |
| 0.65 | 0.75 | 110461.6 | 3895.7 | | |
| 0.70 | 0.73 | 111001.1 | 3806.3 | | |
| 0.75 | 0.72 | 112174.6 | 3713.1 | | |
| 0.80 | 0.70 | 109381.3 | 3620.5 | | |
| 0.85 | 0.68 | 101748.1 | 3529.2 | | |
| 0.90 | 0.66 | 98531.4 | 3420.1 | | |
| 0.95 | 0.64 | 76868.1 | 3323.3 | | |
| 1.00 | 0.62 | 64375.0 | 3215.4 | | |



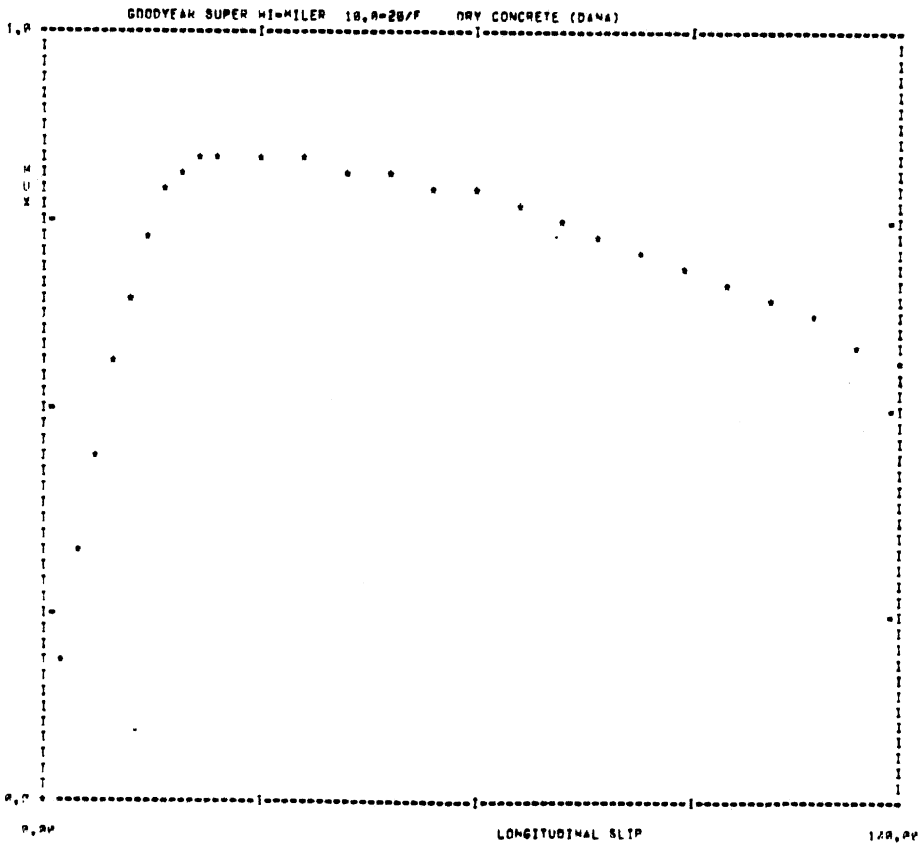
FZ = 5427.0 VEL = 40.0 MULOCK = 0.62 MUPEAK = 0.87 RATIO = 1.41 A=0 FILE 71 NEWFILE 26 SAMPLE 111

** A=0 FILE 72 ME= FILE 27 TEST SAMPLE 112 **
 AVERAGE OF FILE 72 FOR A RECORDS. GOODYEAR SUPER MI-MILER 18.0-20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 19651.7 | 970.4 |
| 0.04 | 0.33 | 35063.2 | 1702.5 |
| 0.06 | 0.46 | 50238.7 | 2405.9 |
| 0.08 | 0.57 | 61962.4 | 3065.0 |
| 0.10 | 0.66 | 71400.2 | 3544.0 |
| 0.12 | 0.73 | 79077.2 | 3927.0 |
| 0.14 | 0.79 | 84743.6 | 4210.0 |
| 0.16 | 0.82 | 89000.1 | 4412.3 |
| 0.18 | 0.84 | 92022.0 | 4534.1 |
| 0.20 | 0.85 | 94030.2 | 4550.0 |
| 0.25 | 0.85 | 97732.3 | 4507.6 |
| 0.30 | 0.84 | 100000.2 | 4425.6 |
| 0.35 | 0.83 | 101952.3 | 4332.5 |
| 0.40 | 0.81 | 103233.0 | 4252.2 |
| 0.45 | 0.80 | 104167.6 | 4167.6 |
| 0.50 | 0.79 | 105123.5 | 4123.0 |
| 0.55 | 0.77 | 106311.4 | 4009.4 |
| 0.60 | 0.75 | 107730.9 | 3967.1 |
| 0.65 | 0.73 | 109053.6 | 3880.0 |
| 0.70 | 0.71 | 110007.0 | 3793.6 |
| 0.75 | 0.70 | 110304.7 | 3707.2 |
| 0.80 | 0.68 | 110000.1 | 3612.2 |
| 0.85 | 0.66 | 102122.0 | 3500.0 |
| 0.90 | 0.63 | 90214.0 | 3363.7 |
| 0.95 | 0.60 | 76432.5 | 3210.0 |
| 1.00 | 0.57 | 60770.0 | 3050.0 |

TQAV = 60770.0 LOAD = 5436.6 VEL = 55.0 MPH.

MUPEAK = 0.85 MULLOCK = 0.57 RATIO = 1.48



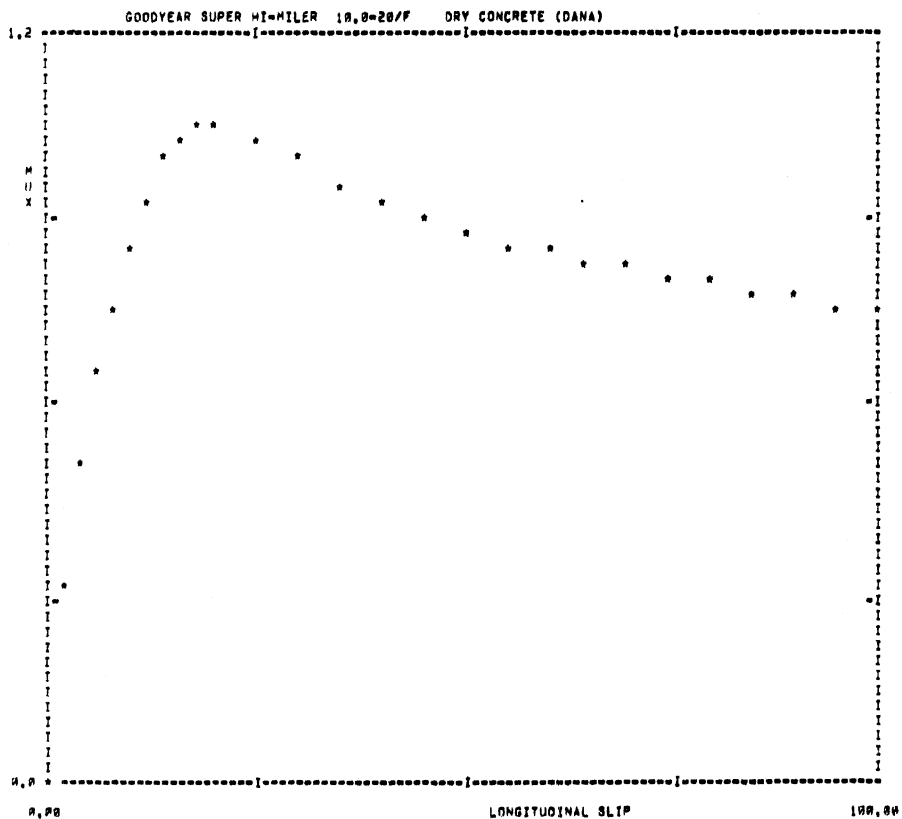
FZ = 5436.6 VFL = 55.0 MULLOCK = 0.57 MUPEAK = 0.85 RATIO = 1.48 A=0 FILE 72 ME=FILE 27 SAMPLE 112

** A=D FILE 57 NEW FILE 10 TEST SAMPLE103 **
 AVERAGE OF FILE 57 FOR 7 RECORDS, GOODYEAR SUPER HI-MILER 10.0=20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.33 | 13515.5 | 710.7 |
| 0.04 | 0.51 | 21000.0 | 1110.0 |
| 0.06 | 0.65 | 20037.1 | 1429.0 |
| 0.08 | 0.76 | 34475.4 | 1647.8 |
| 0.10 | 0.86 | 30693.0 | 1013.1 |
| 0.12 | 0.94 | 41012.2 | 1955.0 |
| 0.14 | 1.00 | 44702.1 | 2002.2 |
| 0.16 | 1.04 | 47474.1 | 2196.3 |
| 0.18 | 1.06 | 49590.4 | 2267.3 |
| 0.20 | 1.05 | 51441.4 | 2204.1 |
| 0.25 | 1.02 | 50649.5 | 2279.2 |
| 0.30 | 1.00 | 57233.0 | 2245.7 |
| 0.35 | 0.96 | 59562.5 | 2190.7 |
| 0.40 | 0.93 | 61764.9 | 2129.4 |
| 0.45 | 0.91 | 63606.3 | 2071.0 |
| 0.50 | 0.89 | 65301.0 | 2020.4 |
| 0.55 | 0.87 | 67090.3 | 1971.7 |
| 0.60 | 0.86 | 68750.4 | 1920.9 |
| 0.65 | 0.84 | 70669.1 | 1877.5 |
| 0.70 | 0.83 | 72781.3 | 1833.7 |
| 0.75 | 0.81 | 73852.6 | 1797.5 |
| 0.80 | 0.81 | 72233.7 | 1760.3 |
| 0.85 | 0.80 | 65741.4 | 1734.0 |
| 0.90 | 0.78 | 55063.6 | 1691.0 |
| 0.95 | 0.77 | 43101.7 | 1642.0 |
| 1.00 | 0.76 | 30017.9 | 1587.9 |

TQAV = 30017.9 LOAD = 2196.0 VEL = 40.0 MPH.

MUPEAK = 1.06 MULLOCK = 0.76 RATIO = 1.40



FZ = 2196.0 VEL = 40.0 MULLOCK = 0.76 MUPEAK = 1.06 RATIO = 1.40 A=D FILE 57 NEWFILE 10 SAMPLE 193

== A-D FILE 5A

MEM FILE 10

TEST SAMPLE104 ==

AVERAGE OF FILE 5A FOR 7 RECORDS,

GOODYEAR SUPER MI-MILER

14.0=2R/F

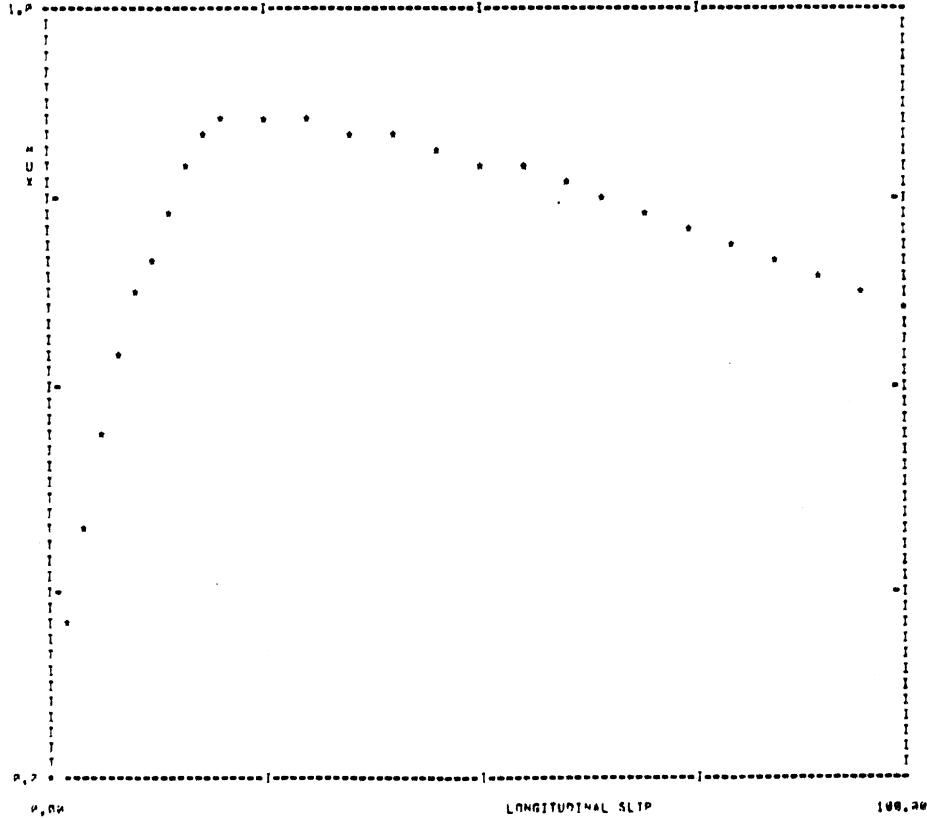
DRY CONCRETE (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 21204.3 | 1121.6 |
| 0.04 | 0.34 | 35839.9 | 1809.4 |
| 0.06 | 0.45 | 48108.3 | 2453.8 |
| 0.08 | 0.55 | 58356.5 | 2965.1 |
| 0.10 | 0.63 | 67820.4 | 3383.9 |
| 0.12 | 0.68 | 73854.3 | 3714.0 |
| 0.14 | 0.73 | 80564.4 | 3962.8 |
| 0.16 | 0.80 | 88771.9 | 4310.8 |
| 0.18 | 0.84 | 94141.2 | 4531.2 |
| 0.20 | 0.86 | 96760.3 | 4596.9 |
| 0.25 | 0.87 | 108001.7 | 4683.5 |
| 0.30 | 0.86 | 103135.6 | 4551.8 |
| 0.35 | 0.84 | 105277.7 | 4472.1 |
| 0.40 | 0.83 | 106405.1 | 4388.5 |
| 0.45 | 0.82 | 107770.3 | 4311.6 |
| 0.50 | 0.80 | 108305.8 | 4240.2 |
| 0.55 | 0.79 | 108991.6 | 4167.9 |
| 0.60 | 0.77 | 109027.3 | 4087.6 |
| 0.65 | 0.75 | 111020.8 | 4001.1 |
| 0.70 | 0.74 | 112470.4 | 3911.9 |
| 0.75 | 0.72 | 112923.4 | 3824.1 |
| 0.80 | 0.70 | 109944.7 | 3736.6 |
| 0.85 | 0.68 | 102380.6 | 3639.7 |
| 0.90 | 0.66 | 91142.9 | 3529.7 |
| 0.95 | 0.64 | 78680.3 | 3412.3 |
| 1.00 | 0.61 | 60892.9 | 3286.1 |

TQAV = 60892.9 LOAD = 5526.9 VEL = 49.2 MPH.

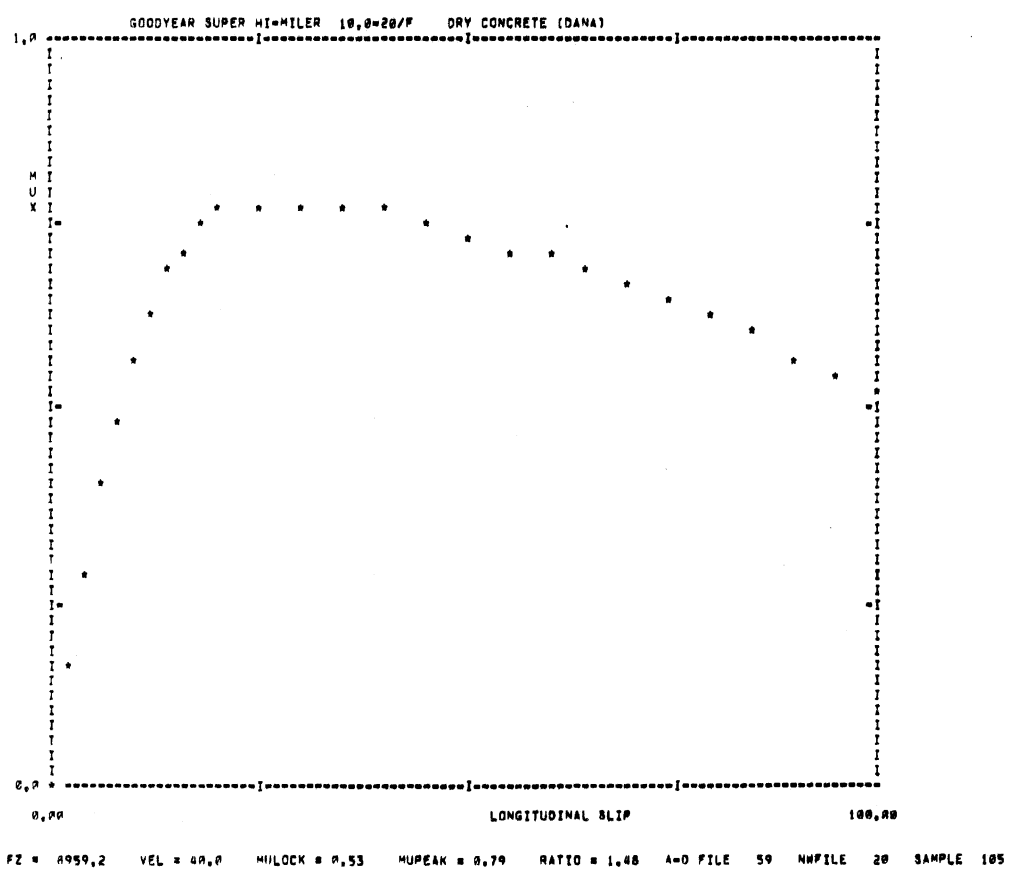
MUPEAK = 0.87 MULOCK = 0.61 RATIO = 1.41

GOODYEAR SUPER MI-MILER 14.0=2R/F DRY CONCRETE (DANA)



FZ = 5526.9 VEL = 49.2 MULOCK = 0.61 MUPEAK = 0.87 RATIO = 1.41 A-D FILE 5A MEM FILE 10 SAMPLE 104

| ** A=D FILE 59 | | NEW FILE 20 | | TEST SAMPLE 105 ** | |
|-----------------------------------|------|-------------------------|--------|--------------------|-------------------------------|
| AVERAGE OF FILE 59 FOR 4 RECORDS, | | GOODYEAR SUPER HI-MILER | | 10.0=20/F | DRY CONCRETE (DANA) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.16 | 25057.9 | 1472.2 | | |
| 0.04 | 0.29 | 40230.2 | 2562.2 | | |
| 0.06 | 0.40 | 67765.9 | 3929.6 | | |
| 0.08 | 0.49 | 83796.1 | 4299.1 | | |
| 0.10 | 0.57 | 96145.0 | 4927.1 | | |
| 0.12 | 0.63 | 105535.0 | 5061.1 | | |
| 0.14 | 0.69 | 113029.3 | 5090.9 | | |
| 0.16 | 0.73 | 121090.1 | 6227.7 | | |
| 0.18 | 0.75 | 126201.0 | 6065.1 | TDAV = 87250.0 | LOAD = 8959.2 VEL = 40.0 MPH. |
| 0.20 | 0.77 | 129750.9 | 6561.6 | | |
| 0.25 | 0.78 | 133603.4 | 6635.4 | MUPEAK = 0.79 | MULOCK = 0.53 RATIO = 1.48 |
| 0.30 | 0.79 | 136401.3 | 6605.7 | | |
| 0.35 | 0.78 | 138092.2 | 6521.9 | | |
| 0.40 | 0.77 | 139027.8 | 6412.1 | | |
| 0.45 | 0.76 | 139590.7 | 6290.1 | | |
| 0.50 | 0.74 | 139029.7 | 6163.1 | | |
| 0.55 | 0.72 | 140003.2 | 6031.9 | | |
| 0.60 | 0.71 | 140540.7 | 5891.0 | | |
| 0.65 | 0.69 | 141430.2 | 5743.1 | | |
| 0.70 | 0.67 | 142021.5 | 5589.7 | | |
| 0.75 | 0.65 | 142720.6 | 5426.7 | | |
| 0.80 | 0.63 | 138975.5 | 5256.6 | | |
| 0.85 | 0.61 | 129252.1 | 5072.1 | | |
| 0.90 | 0.58 | 116506.7 | 4872.2 | | |
| 0.95 | 0.56 | 102662.0 | 4663.9 | | |
| 1.00 | 0.53 | 87250.0 | 4445.6 | | |



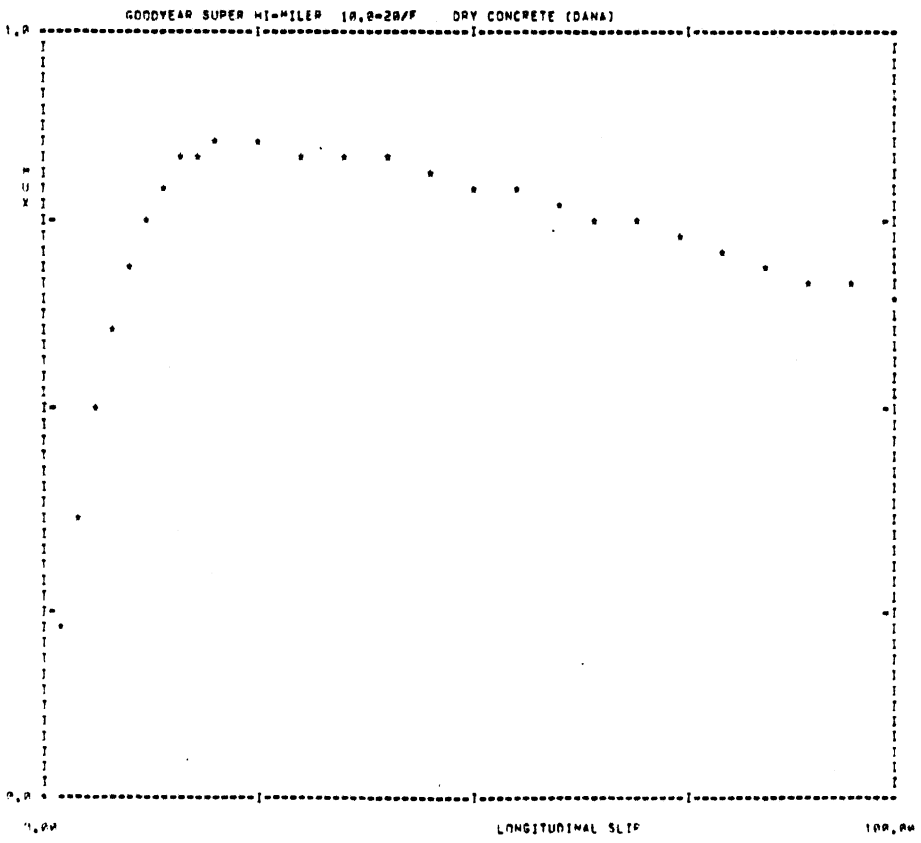
** A=D FILE 47 NEW FILE 15' TEST SAMPLE 1PP **
 AVERAGE OF FILE 47 FOR 7 RECORDS. GOODYEAR SUPER MI-MILER 18.0=20/F DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.23 | 21707.5 | 1192.1 |
| 0.04 | 0.30 | 30003.0 | 1906.1 |
| 0.06 | 0.50 | 51310.5 | 2612.3 |
| 0.08 | 0.61 | 62303.2 | 3139.0 |
| 0.10 | 0.69 | 71396.0 | 3504.0 |
| 0.12 | 0.75 | 78774.0 | 3922.0 |
| 0.14 | 0.84 | 83553.3 | 4163.3 |
| 0.16 | 0.83 | 87000.0 | 4326.4 |
| 0.18 | 0.85 | 90906.7 | 4483.0 |
| 0.20 | 0.85 | 92904.3 | 4481.3 |
| 0.25 | 0.85 | 96073.6 | 4333.7 |
| 0.30 | 0.85 | 98030.7 | 4263.7 |
| 0.35 | 0.84 | 99035.6 | 4193.5 |
| 0.40 | 0.84 | 100251.0 | 4119.9 |
| 0.45 | 0.82 | 101340.4 | 4041.1 |
| 0.50 | 0.81 | 102601.0 | 3950.3 |
| 0.55 | 0.79 | 103072.4 | 3800.3 |
| 0.60 | 0.78 | 104764.6 | 3800.1 |
| 0.65 | 0.77 | 105200.8 | 3701.3 |
| 0.70 | 0.75 | 105507.5 | 3670.6 |
| 0.75 | 0.74 | 105175.5 | 3615.9 |
| 0.80 | 0.72 | 102202.0 | 3547.5 |
| 0.85 | 0.70 | 95106.5 | 3466.7 |
| 0.90 | 0.69 | 85633.0 | 3370.6 |
| 0.95 | 0.67 | 70950.4 | 3207.4 |
| 1.00 | 0.65 | 63000.0 | 3192.9 |

TOAV = 63000.0 LOAD = 5206.3 VEL = 40.0 MPH

MUPEAK = 0.85 MULOCK = 0.65 RATIO = 1.32

Check Run #1



FZ = 5206.3 VFL = 40.0 MULOCK = 0.65 MUPEAK = 0.85 RATIO = 1.32 A=D FILE 47 NEW FILE 15 SAMPLE 1PP

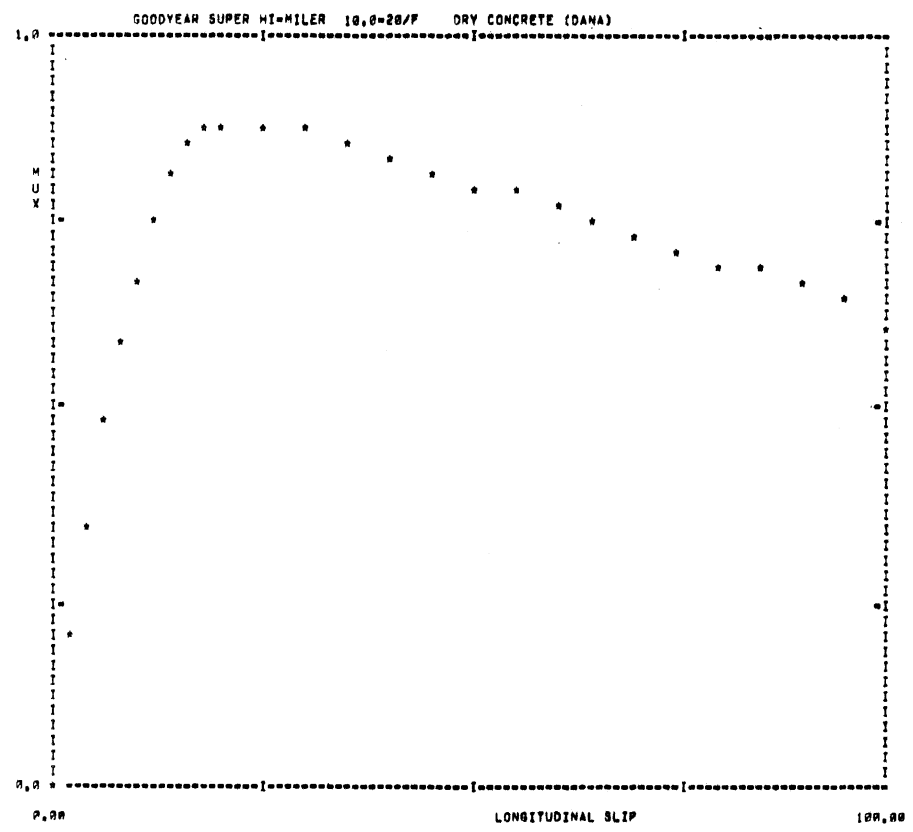
** A=0 FILE 63 NEW FILE 21' TEST SAMPLE106 **

AVERAGE OF FILE 63 FOR 7 RECORDS. GOODYEAR SUPER HI-MILER 10.0-20/P DRY CONCRETE (DANA)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.20 | 21379.1 | 1062.4 |
| 0.04 | 0.36 | 38188.8 | 1901.7 |
| 0.06 | 0.49 | 52474.5 | 2606.1 |
| 0.08 | 0.59 | 64434.2 | 3186.8 |
| 0.10 | 0.69 | 74002.1 | 3662.9 |
| 0.12 | 0.76 | 81138.9 | 4024.5 |
| 0.14 | 0.82 | 86688.4 | 4288.1 |
| 0.16 | 0.85 | 91162.4 | 4454.7 |
| 0.18 | 0.87 | 94789.2 | 4561.8 |
| 0.20 | 0.88 | 96855.4 | 4611.5 |
| 0.25 | 0.88 | 100809.6 | 4699.0 |
| 0.30 | 0.87 | 103692.6 | 4561.6 |
| 0.35 | 0.86 | 105799.6 | 4467.8 |
| 0.40 | 0.84 | 107504.5 | 4399.4 |
| 0.45 | 0.82 | 108893.0 | 4388.3 |
| 0.50 | 0.81 | 110066.5 | 4219.5 |
| 0.55 | 0.79 | 111135.8 | 4138.5 |
| 0.60 | 0.77 | 112141.7 | 4088.9 |
| 0.65 | 0.76 | 113098.2 | 3987.8 |
| 0.70 | 0.74 | 113825.7 | 3892.5 |
| 0.75 | 0.72 | 113478.8 | 3757.2 |
| 0.80 | 0.70 | 109595.9 | 3665.3 |
| 0.85 | 0.69 | 100939.3 | 3568.2 |
| 0.90 | 0.67 | 89618.4 | 3468.7 |
| 0.95 | 0.65 | 77371.8 | 3347.6 |
| 1.00 | 0.62 | 64196.4 | 3228.2 |

TQAV = 64196.0 LOAD = 5431.9 VEL = 40.0 MPH,
 MUPEAK = 0.88 MULOCK = 0.62 RATIO = 1.41

Check Run #3



FZ = 5431.9 VEL = 40.0 MULOCK = 0.62 MUPEAK = 0.88 RATIO = 1.41 A=0 FILE 63 N=FILE 21 SAMPLE 106

** A=D FILE 73

NEW FILE 2R

TEST SAMPLE 113 **

AVERAGE OF FILE 73 FOR 6 RECORDS.

GOODYEAR SUPER MI-MILER

10.0-20/F

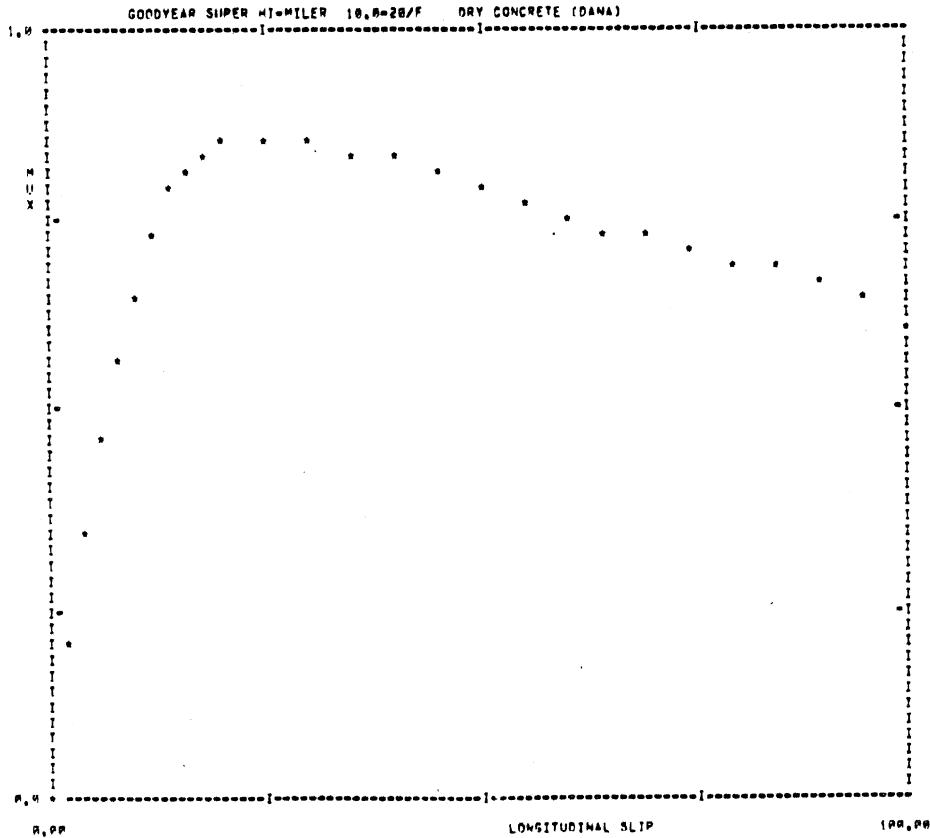
DRY CONCRETE (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 22500.6 | 1119.6 |
| 0.04 | 0.35 | 30329.7 | 1917.3 |
| 0.06 | 0.48 | 51400.9 | 2585.7 |
| 0.08 | 0.58 | 62500.7 | 3122.0 |
| 0.10 | 0.66 | 71707.0 | 3561.0 |
| 0.12 | 0.74 | 79167.2 | 3954.9 |
| 0.14 | 0.79 | 85115.3 | 4259.1 |
| 0.16 | 0.83 | 89873.3 | 4473.0 |
| 0.18 | 0.85 | 93652.0 | 4590.5 |
| 0.20 | 0.86 | 95204.5 | 4633.0 |
| 0.25 | 0.86 | 98416.0 | 4615.4 |
| 0.30 | 0.85 | 101120.6 | 4551.3 |
| 0.35 | 0.84 | 103275.9 | 4466.6 |
| 0.40 | 0.83 | 104561.1 | 4381.4 |
| 0.45 | 0.82 | 105253.0 | 4297.0 |
| 0.50 | 0.80 | 105990.7 | 4200.2 |
| 0.55 | 0.79 | 107096.0 | 4100.4 |
| 0.60 | 0.77 | 108456.0 | 4004.2 |
| 0.65 | 0.75 | 109785.0 | 3900.4 |
| 0.70 | 0.73 | 110722.0 | 3800.4 |
| 0.75 | 0.72 | 110056.1 | 3721.0 |
| 0.80 | 0.70 | 106302.0 | 3646.9 |
| 0.85 | 0.69 | 98617.0 | 3562.3 |
| 0.90 | 0.67 | 88830.0 | 3463.7 |
| 0.95 | 0.65 | 76404.0 | 3357.9 |
| 1.00 | 0.62 | 64000.0 | 3243.7 |

TQAV = 64000.0 LOAD = 5455.0 VEL = 40.0 MPH.

MUPEAK = 0.86 MULOCK = 0.62 RATIO = 1.39

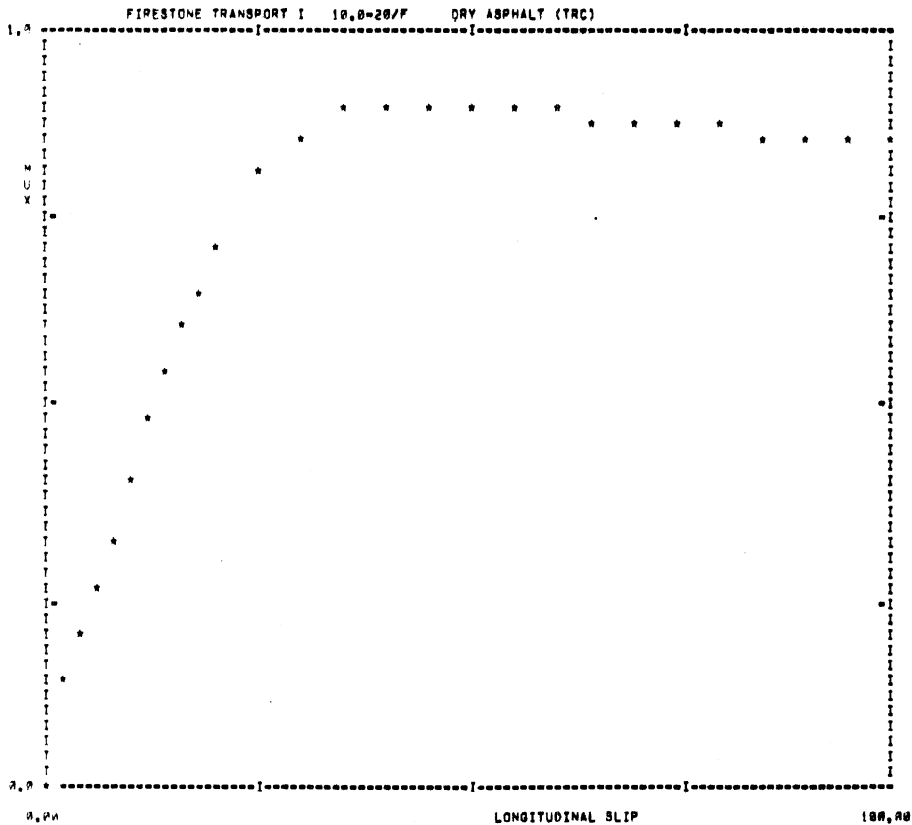
Check Run #5



FZ = 5455.0 VFL = 40.0 MULOCK = 0.62 MUPEAK = 0.86 RATIO = 1.39 A=D FILE 73 NEW FILE 2R SAMPLE 113

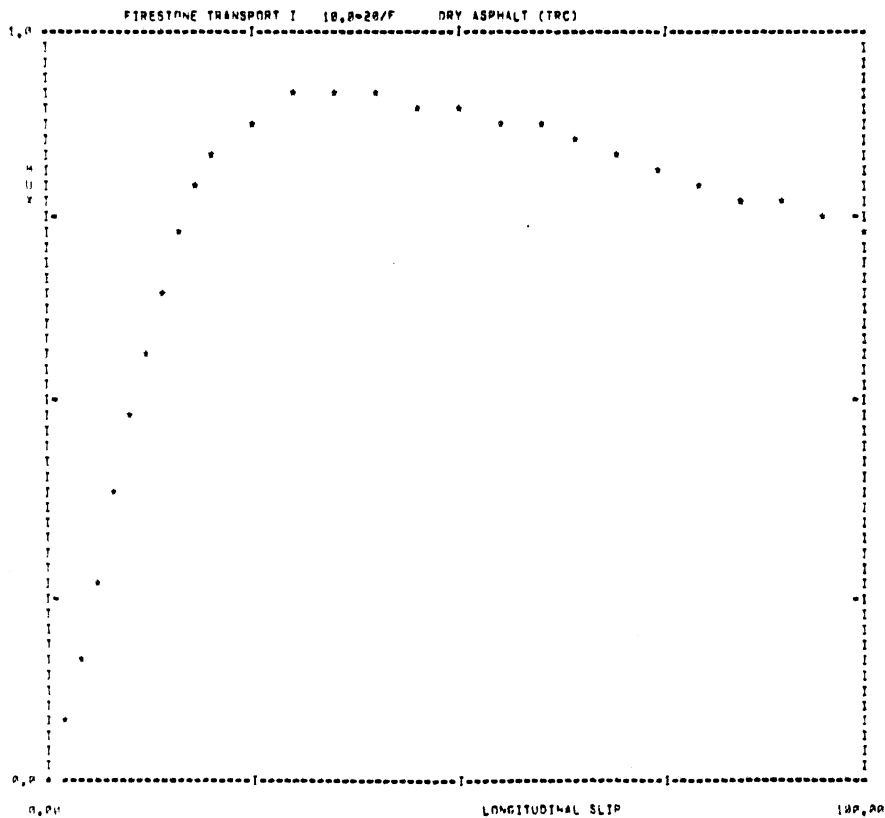
FIRESTONE TRANSPORT 1, 10.00 x 20/F, TRC ASPHALT

| ** A=D FILE 72 | | | NEW FILE 139 | TEST SAMPLE 103 ** |
|-----------------------------------|------|---------|-----------------------|---------------------------------------------|
| AVERAGE OF FILE 72 FOR 6 RECORDS, | | | FIRESTONE TRANSPORT I | 10.0-20/F DRY ASPHALT (TRC) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.14 | 15922.3 | 796.8 | |
| 0.04 | 0.22 | 23930.7 | 1191.0 | |
| 0.06 | 0.27 | 30001.6 | 1486.3 | |
| 0.08 | 0.33 | 36963.3 | 1819.7 | |
| 0.10 | 0.41 | 45921.4 | 2256.6 | |
| 0.12 | 0.49 | 53716.6 | 2697.7 | |
| 0.14 | 0.56 | 60307.5 | 2993.7 | |
| 0.16 | 0.61 | 65630.9 | 3259.9 | |
| 0.18 | 0.65 | 71001.8 | 3493.3 | TQAV = 91562.5 LOAD = 5473.8 VEL = 3.0 MPH. |
| 0.20 | 0.72 | 77632.4 | 3819.8 | |
| 0.25 | 0.81 | 87262.3 | 4285.8 | MUPEAK = 0.90 MULOCK = 0.85 RATIO = 1.06 |
| 0.30 | 0.87 | 93468.9 | 4552.2 | |
| 0.35 | 0.89 | 96901.1 | 4682.4 | |
| 0.40 | 0.90 | 97810.9 | 4724.7 | |
| 0.45 | 0.90 | 97835.6 | 4726.0 | |
| 0.50 | 0.90 | 97500.0 | 4713.9 | |
| 0.55 | 0.90 | 97122.8 | 4691.2 | |
| 0.60 | 0.89 | 96630.3 | 4664.4 | |
| 0.65 | 0.89 | 96100.3 | 4635.4 | |
| 0.70 | 0.88 | 95561.7 | 4605.4 | |
| 0.75 | 0.88 | 95010.6 | 4574.9 | |
| 0.80 | 0.87 | 94455.4 | 4544.1 | |
| 0.85 | 0.86 | 93890.0 | 4513.1 | |
| 0.90 | 0.86 | 93273.7 | 4481.3 | |
| 0.95 | 0.85 | 92517.1 | 4447.6 | |
| 1.00 | 0.85 | 91562.5 | 4411.2 | |



FZ = 5473.8 VFL = 3.0 MULOCK = 0.85 MUPEAK = 0.90 RATIO = 1.06 A=D FILE 72 NEWFILE 139 SAMPLE 103

| ** A=0 FILE 73 | | M# FILE 16R | | TEST SAMPLE 10R ** | |
|-----------------------------------|------|-----------------------|--------|------------------------------|-------------------------------|
| AVERAGE OF FILE 73 FOR 6 RECORDS, | | FIRESTONE TRANSPORT I | | 1R, R=2R/F DRY ASPHALT (TRC) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.09 | 10201.1 | 401.1 | | |
| 0.04 | 0.17 | 20250.5 | 900.3 | | |
| 0.06 | 0.27 | 32003.0 | 1513.3 | | |
| 0.08 | 0.39 | 44111.6 | 2110.0 | | |
| 0.10 | 0.00 | 54736.0 | 2657.5 | | |
| 0.12 | 0.57 | 63066.1 | 3117.0 | | |
| 0.14 | 0.65 | 72219.7 | 3524.3 | | |
| 0.16 | 0.73 | 79859.0 | 3900.1 | | |
| 0.18 | 0.00 | 86295.5 | 4227.5 | TOAY = 77666.7 | LOAD = 5567.0 VEL = 10.0 MPH. |
| 0.20 | 0.03 | 90567.5 | 4415.2 | | |
| 0.25 | 0.00 | 96074.1 | 4643.5 | MUPEAK = 0.92 | MULOCK = 0.73 RATIO = 1.26 |
| 0.30 | 0.01 | 100752.2 | 4760.0 | | |
| 0.35 | 0.02 | 103793.0 | 4796.7 | | |
| 0.40 | 0.02 | 106454.2 | 4785.0 | | |
| 0.45 | 0.01 | 100022.2 | 4717.5 | | |
| 0.50 | 0.00 | 111396.0 | 4692.0 | | |
| 0.55 | 0.00 | 112135.7 | 4626.3 | | |
| 0.60 | 0.07 | 100001.6 | 4504.5 | | |
| 0.65 | 0.05 | 105957.0 | 4457.3 | | |
| 0.70 | 0.04 | 102014.6 | 4370.1 | | |
| 0.75 | 0.02 | 98351.0 | 4203.6 | | |
| 0.80 | 0.00 | 94052.0 | 4197.4 | | |
| 0.85 | 0.79 | 91400.1 | 4111.3 | | |
| 0.90 | 0.77 | 87690.0 | 4023.9 | | |
| 0.95 | 0.75 | 83232.0 | 3933.5 | | |
| 1.00 | 0.73 | 77666.7 | 3830.7 | | |

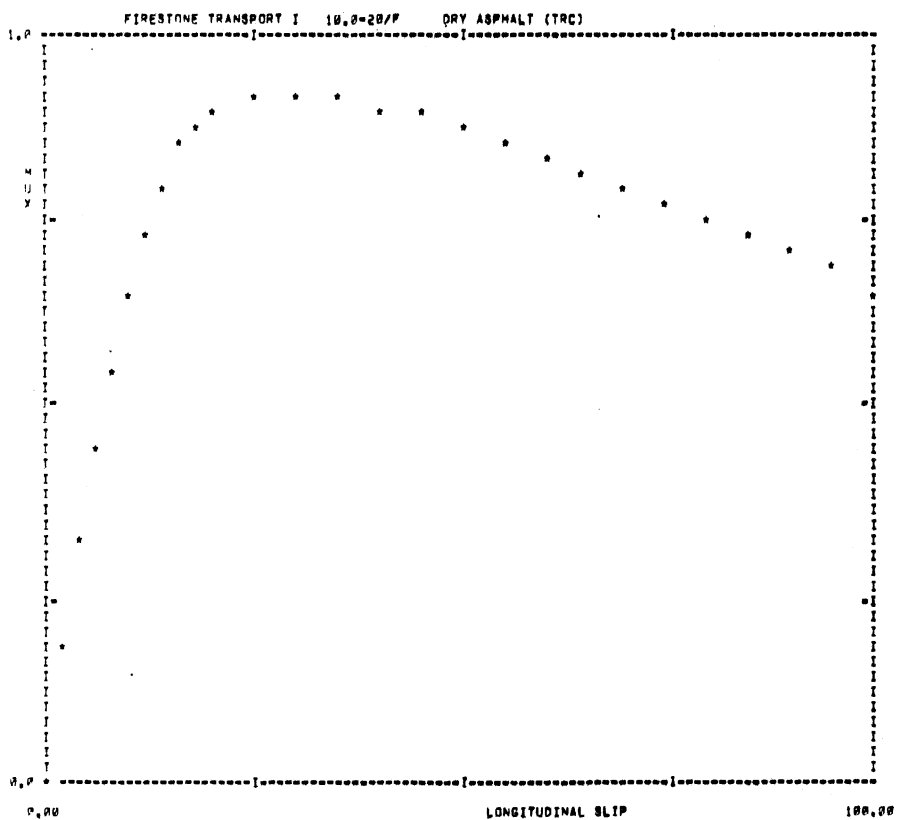


F2 = 5567.0 VEL = 10.0 MULOCK = 0.73 MUPEAK = 0.92 RATIO = 1.26 A=0 FILE 73 M#FILE 16R SAMPLE 10R

** A=0 FILE 74 NEW FILE 141 TEST SAMPLE105 **

AVERAGE OF FILE 74 FOR 6 RECORDS. FIRESTONE TRANSPORT I 10.0-20/P DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.10 | 20606.2 | 1004.2 | |
| 0.04 | 0.33 | 35075.7 | 1002.0 | |
| 0.06 | 0.46 | 49330.6 | 2076.7 | |
| 0.08 | 0.56 | 60467.7 | 3010.2 | |
| 0.10 | 0.65 | 70155.3 | 3067.3 | |
| 0.12 | 0.74 | 78717.4 | 3096.9 | |
| 0.14 | 0.80 | 85592.1 | 4252.1 | |
| 0.16 | 0.85 | 91250.5 | 4515.0 | |
| 0.18 | 0.88 | 95450.5 | 4600.1 | TQAV = 69104.2 LOAD = 5520.0 VEL = 20.0 MPH. |
| 0.20 | 0.90 | 98049.5 | 4765.6 | |
| 0.25 | 0.92 | 101904.2 | 4830.0 | MUPEAK = 0.92 MULOCK = 0.66 RATIO = 1.00 |
| 0.30 | 0.92 | 104715.0 | 4837.0 | |
| 0.35 | 0.92 | 106027.7 | 4805.4 | |
| 0.40 | 0.91 | 100735.7 | 4746.2 | |
| 0.45 | 0.89 | 110690.2 | 4670.3 | |
| 0.50 | 0.88 | 112003.0 | 4506.3 | |
| 0.55 | 0.86 | 115137.2 | 4495.0 | |
| 0.60 | 0.84 | 116059.6 | 4403.7 | |
| 0.65 | 0.82 | 116511.4 | 4310.7 | |
| 0.70 | 0.80 | 113203.4 | 4211.0 | |
| 0.75 | 0.78 | 107570.9 | 4000.0 | |
| 0.80 | 0.76 | 100564.3 | 3970.9 | |
| 0.85 | 0.74 | 93309.0 | 3856.6 | |
| 0.90 | 0.71 | 85961.8 | 3732.3 | |
| 0.95 | 0.69 | 77965.0 | 3603.0 | |
| 1.00 | 0.66 | 69104.2 | 3466.3 | |



PZ = 5520.0 VEL = 20.0 MULOCK = 0.66 MUPEAK = 0.92 RATIO = 1.00 A=0 FILE 74 NEWFILE 141 SAMPLE 105

== A-D FILE 75

NEW FILE 102

TEST SAMPLE 196 ==

AVERAGE OF FILE 75 FOR A RECORDS.

FIRESTONE TRANSPORT I

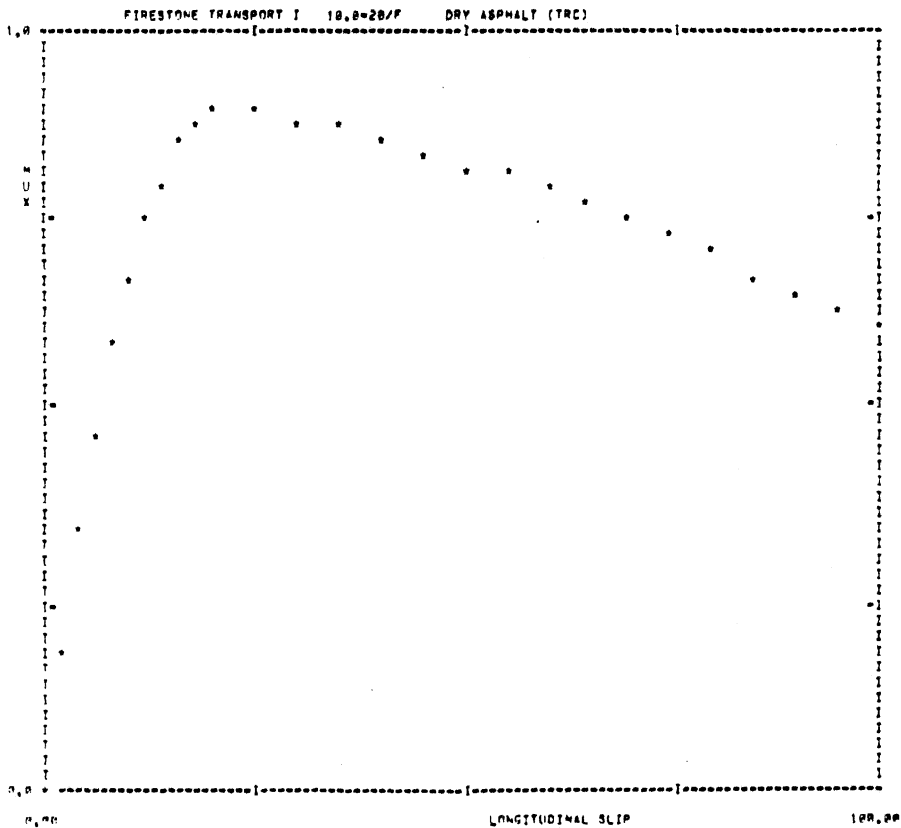
10.8-20/P

DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 20310.0 | 972.0 |
| 0.04 | 0.35 | 30200.5 | 1000.1 |
| 0.06 | 0.46 | 51010.9 | 2573.2 |
| 0.08 | 0.59 | 63332.7 | 3132.9 |
| 0.10 | 0.60 | 72000.2 | 3500.0 |
| 0.12 | 0.75 | 80200.0 | 3992.4 |
| 0.14 | 0.81 | 86023.0 | 4217.9 |
| 0.16 | 0.85 | 90057.1 | 4432.7 |
| 0.18 | 0.88 | 90793.1 | 4500.6 |
| 0.20 | 0.90 | 97205.0 | 4605.1 |
| 0.25 | 0.89 | 101000.9 | 4600.2 |
| 0.30 | 0.80 | 100000.0 | 4500.1 |
| 0.35 | 0.87 | 107300.7 | 4500.1 |
| 0.40 | 0.86 | 100007.2 | 4421.6 |
| 0.45 | 0.80 | 110302.4 | 4333.3 |
| 0.50 | 0.83 | 111007.5 | 4200.5 |
| 0.55 | 0.81 | 113011.9 | 4100.2 |
| 0.60 | 0.79 | 110370.1 | 4053.4 |
| 0.65 | 0.77 | 110000.2 | 3950.6 |
| 0.70 | 0.75 | 113000.7 | 3850.3 |
| 0.75 | 0.73 | 109572.1 | 3750.4 |
| 0.80 | 0.71 | 102210.0 | 3630.2 |
| 0.85 | 0.60 | 93523.7 | 3520.3 |
| 0.90 | 0.60 | 80211.3 | 3407.7 |
| 0.95 | 0.60 | 70301.3 | 3200.5 |
| 1.00 | 0.61 | 63007.5 | 3100.7 |

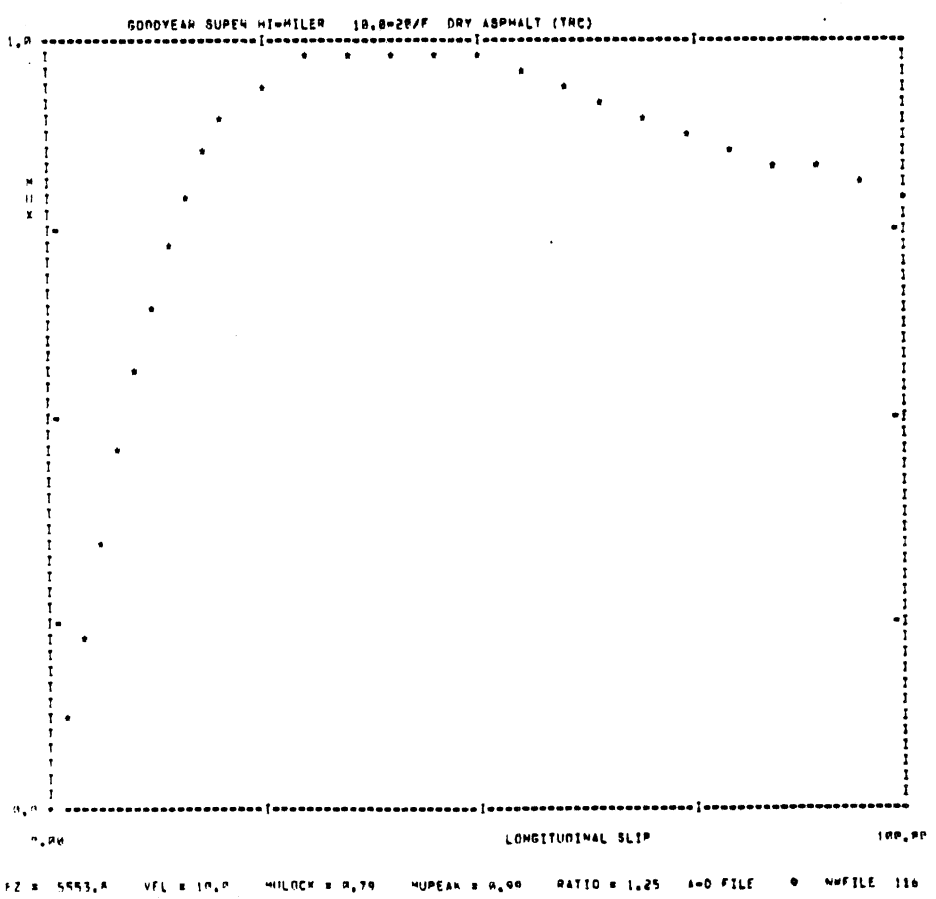
TQAV = 63007.5 LOAD = 5010.0 VEL = 30.0 MPH.

MUPEAK = 0.90 MULLOCK = 0.61 RATIO = 1.07

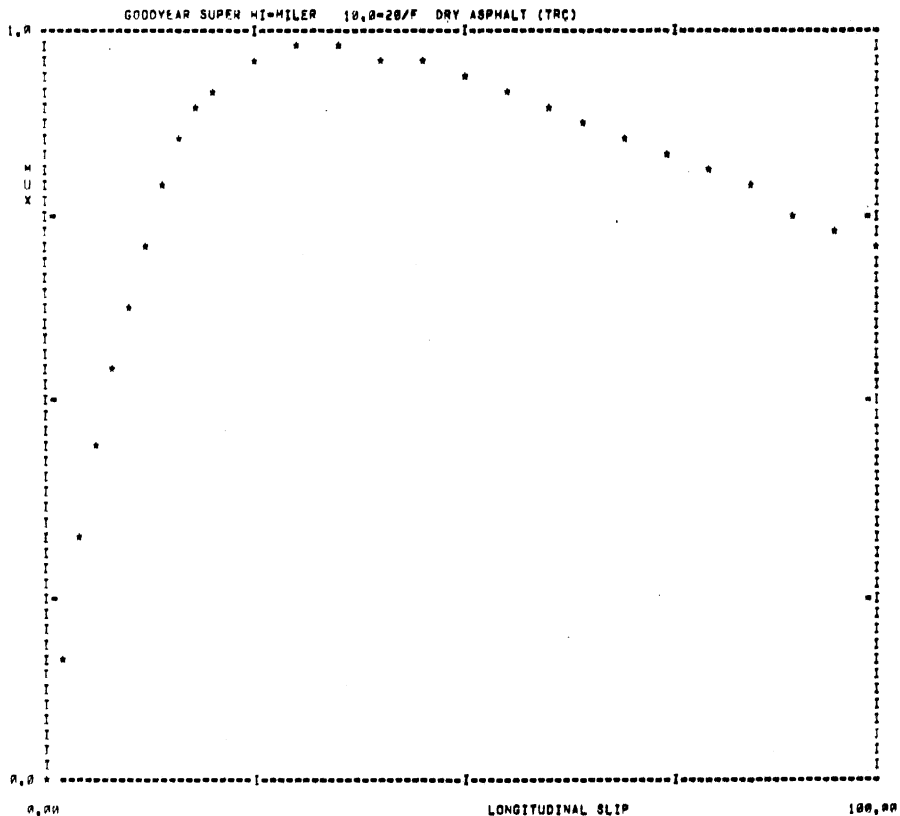


PZ = 5010.0 VEL = 30.0 MULLOCK = 0.61 MUPEAK = 0.90 RATIO = 1.07 A-D FILE 75 NEW FILE 102 SAMPLE 196

| ** A=0 FILE 9 | | NEW FILE 116 | | TEST SAMPLE 8 ** | |
|----------------------------------|------|-------------------------|--------|-----------------------------|-------------------------------|
| AVERAGE OF FILE 9 FOR 8 RECORDS. | | GOODYEAR SUPER HI-MILER | | 18.8-20/F DRY ASPHALT (TRC) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.13 | 12310.8 | 698.5 | | |
| 0.04 | 0.23 | 23553.3 | 1272.1 | | |
| 0.06 | 0.35 | 36251.4 | 1920.3 | | |
| 0.08 | 0.46 | 47867.1 | 2513.0 | | |
| 0.10 | 0.56 | 58109.8 | 3032.0 | | |
| 0.12 | 0.65 | 67200.4 | 3492.5 | | |
| 0.14 | 0.73 | 75502.9 | 3890.6 | | |
| 0.16 | 0.80 | 82979.9 | 4263.3 | | |
| 0.18 | 0.86 | 89807.5 | 4553.5 | TRAV = 70750.8 | LOAD = 5553.8 VEL = 10.0 MPH. |
| 0.20 | 0.90 | 93088.7 | 4736.4 | | |
| 0.25 | 0.95 | 99013.2 | 4961.9 | MUPEAK = 0.99 | MULOCK = 2.79 RATIO = 1.25 |
| 0.30 | 0.98 | 103674.0 | 5076.8 | | |
| 0.35 | 0.99 | 106555.8 | 5114.8 | | |
| 0.40 | 0.99 | 108770.8 | 5100.3 | | |
| 0.45 | 0.98 | 110265.7 | 5075.9 | | |
| 0.50 | 0.97 | 110267.5 | 5015.9 | | |
| 0.55 | 0.96 | 108022.0 | 4930.5 | | |
| 0.60 | 0.94 | 106020.5 | 4850.2 | | |
| 0.65 | 0.92 | 102015.3 | 4757.4 | | |
| 0.70 | 0.90 | 99000.1 | 4663.9 | | |
| 0.75 | 0.88 | 96000.0 | 4570.2 | | |
| 0.80 | 0.87 | 94000.1 | 4476.4 | | |
| 0.85 | 0.85 | 91100.7 | 4382.5 | | |
| 0.90 | 0.83 | 88020.5 | 4287.1 | | |
| 0.95 | 0.81 | 84310.9 | 4188.4 | | |
| 1.00 | 0.79 | 79750.8 | 4085.0 | | |



| ** A=0 FILE 10 | | | NEW FILE 117 | TEST SAMPLE 5 ** |
|--------------------|----------------|-------------------------|--------------|----------------------------------------------|
| AVERAGE OF FILE 10 | FOR 6 RECORDS, | GOODYEAR SUPER MI=MILER | 10.0=20/F | DRY ASPHALT (TRC) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.17 | 16105.0 | 923.0 | |
| 0.04 | 0.32 | 32061.6 | 1757.2 | |
| 0.06 | 0.45 | 46570.6 | 2430.7 | |
| 0.08 | 0.55 | 57067.0 | 2909.3 | |
| 0.10 | 0.64 | 67113.0 | 3454.0 | |
| 0.12 | 0.72 | 75345.0 | 3863.4 | |
| 0.14 | 0.80 | 82019.5 | 4204.0 | |
| 0.16 | 0.85 | 88244.0 | 4467.4 | |
| 0.18 | 0.90 | 93125.3 | 4715.0 | TQAV = 72107.5 LOAD = 5519.9 VEL = 20.0 MPH. |
| 0.20 | 0.93 | 96680.1 | 4850.0 | |
| 0.25 | 0.96 | 102526.0 | 5023.5 | MUPEAK = 0.98 MULOCK = 0.71 RATIO = 1.38 |
| 0.30 | 0.98 | 106486.0 | 5099.3 | |
| 0.35 | 0.98 | 109264.7 | 5111.7 | |
| 0.40 | 0.97 | 111393.4 | 5063.2 | |
| 0.45 | 0.96 | 113310.0 | 5020.2 | |
| 0.50 | 0.94 | 115202.0 | 4957.1 | |
| 0.55 | 0.93 | 117451.7 | 4876.5 | |
| 0.60 | 0.91 | 119202.0 | 4790.0 | |
| 0.65 | 0.89 | 119490.7 | 4690.9 | |
| 0.70 | 0.87 | 117739.2 | 4602.0 | |
| 0.75 | 0.84 | 112670.4 | 4494.0 | |
| 0.80 | 0.82 | 105451.3 | 4365.4 | |
| 0.85 | 0.79 | 97986.4 | 4233.4 | |
| 0.90 | 0.77 | 90244.1 | 4099.2 | |
| 0.95 | 0.74 | 81773.4 | 3959.9 | |
| 1.00 | 0.71 | 72107.5 | 3812.5 | |



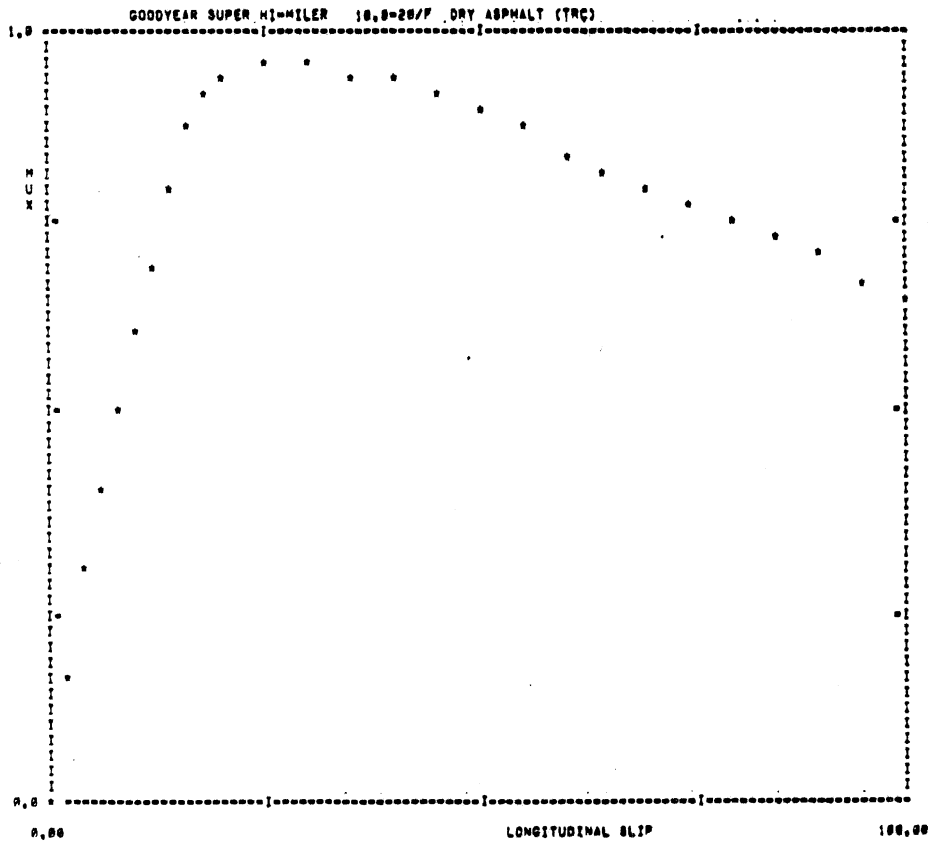
FZ = 5519.9 VEL = 20.0 MULOCK = 0.71 MUPEAK = 0.98 RATIO = 1.38 A=0 FILE 10 N=FILE 117 SAMPLE 5

** A=0 FILE 11 NEW FILE 110 TEST SAMPLE 6 **
 AVERAGE OF FILE 11 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10,0-20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 15745.0 | 856.0 |
| 0.04 | 0.31 | 31185.3 | 1699.4 |
| 0.06 | 0.42 | 43537.4 | 2385.0 |
| 0.08 | 0.52 | 53961.5 | 2886.2 |
| 0.10 | 0.61 | 63386.3 | 3262.4 |
| 0.12 | 0.70 | 72007.2 | 3785.1 |
| 0.14 | 0.80 | 82986.4 | 4240.6 |
| 0.16 | 0.88 | 91675.3 | 4640.7 |
| 0.18 | 0.93 | 97908.4 | 4896.7 |
| 0.20 | 0.95 | 101107.7 | 4999.7 |
| 0.25 | 0.96 | 105962.3 | 5061.1 |
| 0.30 | 0.96 | 109526.6 | 5051.9 |
| 0.35 | 0.95 | 112116.4 | 4991.1 |
| 0.40 | 0.93 | 113918.1 | 4900.0 |
| 0.45 | 0.91 | 115245.2 | 4812.4 |
| 0.50 | 0.89 | 116444.8 | 4704.2 |
| 0.55 | 0.87 | 117703.3 | 4591.1 |
| 0.60 | 0.85 | 118998.0 | 4477.7 |
| 0.65 | 0.83 | 119951.4 | 4365.0 |
| 0.70 | 0.80 | 119475.1 | 4255.2 |
| 0.75 | 0.78 | 118775.3 | 4161.4 |
| 0.80 | 0.76 | 107850.6 | 4012.2 |
| 0.85 | 0.73 | 98139.3 | 3876.6 |
| 0.90 | 0.71 | 87652.6 | 3737.7 |
| 0.95 | 0.68 | 76636.4 | 3594.5 |
| 1.00 | 0.65 | 64916.7 | 3445.0 |

TRAY = 64916.7 LOAD = 5043.3 VEL = 30.0 MPH

MUPEAK = 0.96 MULLOCK = 0.65 RATIO = 1.48

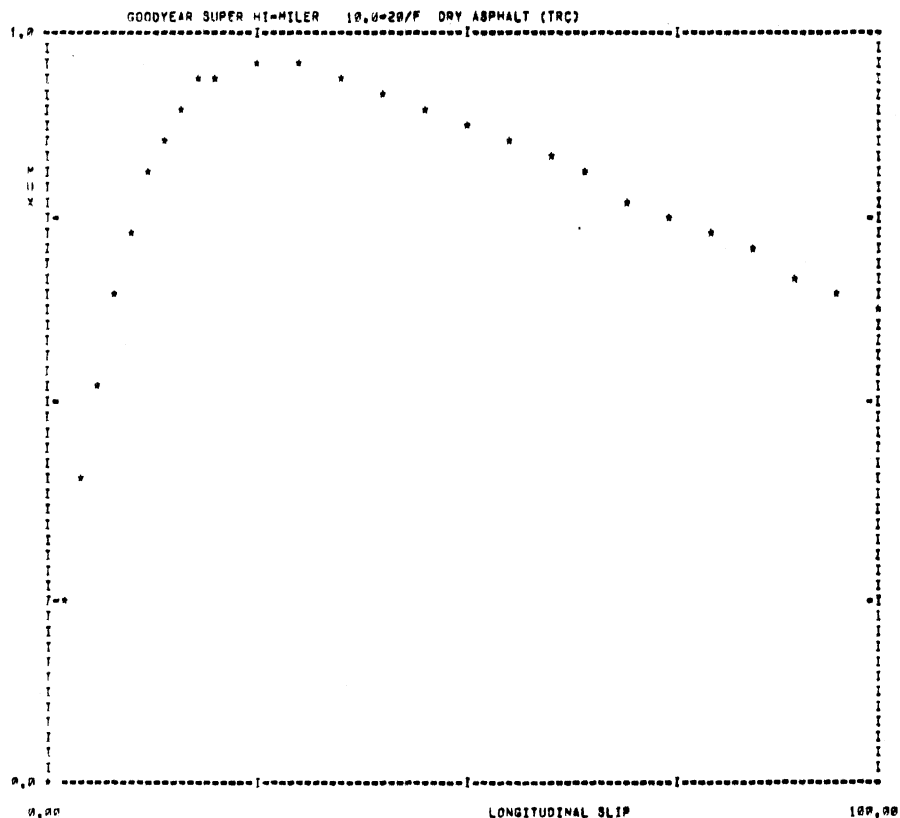


FZ = 5043.3 VEL = 30.0 MULLOCK = 0.65 MUPEAK = 0.96 RATIO = 1.48 A=0 FILE 11 NEWFILE 110 SAMPLE 6

| ** A=0 FILE 12 | | NEW FILE 119 / TEST SAMPLE 7 ** | |
|-----------------------------------|------|-----------------------------------------------------|--------|
| AVERAGE OF FILE 12 FOR 5 RECORDS, | | GOODYEAR SUPER MI-MILER 10.0-20/F DRY ASPHALT (TRC) | |
| SLIP | MUX | TORQUE | FX |
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.25 | 24283.5 | 1332.1 |
| 0.04 | 0.40 | 39926.6 | 2105.9 |
| 0.06 | 0.53 | 53602.8 | 2791.1 |
| 0.08 | 0.65 | 66227.4 | 3409.6 |
| 0.10 | 0.74 | 76753.7 | 3914.2 |
| 0.12 | 0.81 | 84570.1 | 4299.9 |
| 0.14 | 0.86 | 91061.5 | 4577.3 |
| 0.16 | 0.90 | 95650.1 | 4775.4 |
| 0.18 | 0.93 | 98980.1 | 4898.0 |
| 0.20 | 0.95 | 101050.1 | 4942.9 |
| 0.25 | 0.96 | 104454.2 | 4953.2 |
| 0.30 | 0.95 | 107507.2 | 4984.1 |
| 0.35 | 0.94 | 110166.9 | 4817.3 |
| 0.40 | 0.92 | 112243.6 | 4712.6 |
| 0.45 | 0.90 | 113719.4 | 4602.8 |
| 0.50 | 0.88 | 114634.2 | 4496.1 |
| 0.55 | 0.86 | 115197.2 | 4392.0 |
| 0.60 | 0.83 | 115741.0 | 4284.2 |
| 0.65 | 0.81 | 116323.2 | 4174.8 |
| 0.70 | 0.78 | 116539.0 | 4062.5 |
| 0.75 | 0.76 | 115404.4 | 3949.1 |
| 0.80 | 0.73 | 109701.9 | 3831.2 |
| 0.85 | 0.71 | 100292.3 | 3704.8 |
| 0.90 | 0.68 | 88701.9 | 3573.4 |
| 0.95 | 0.66 | 75945.4 | 3438.4 |
| 1.00 | 0.63 | 61725.0 | 3298.5 |

TQAV = 61725.0 LOAD = 5324.1 VEL = 40.0 MPH.

MUPEAK = 0.96 MULOCK = 0.63 RATIO = 1.52

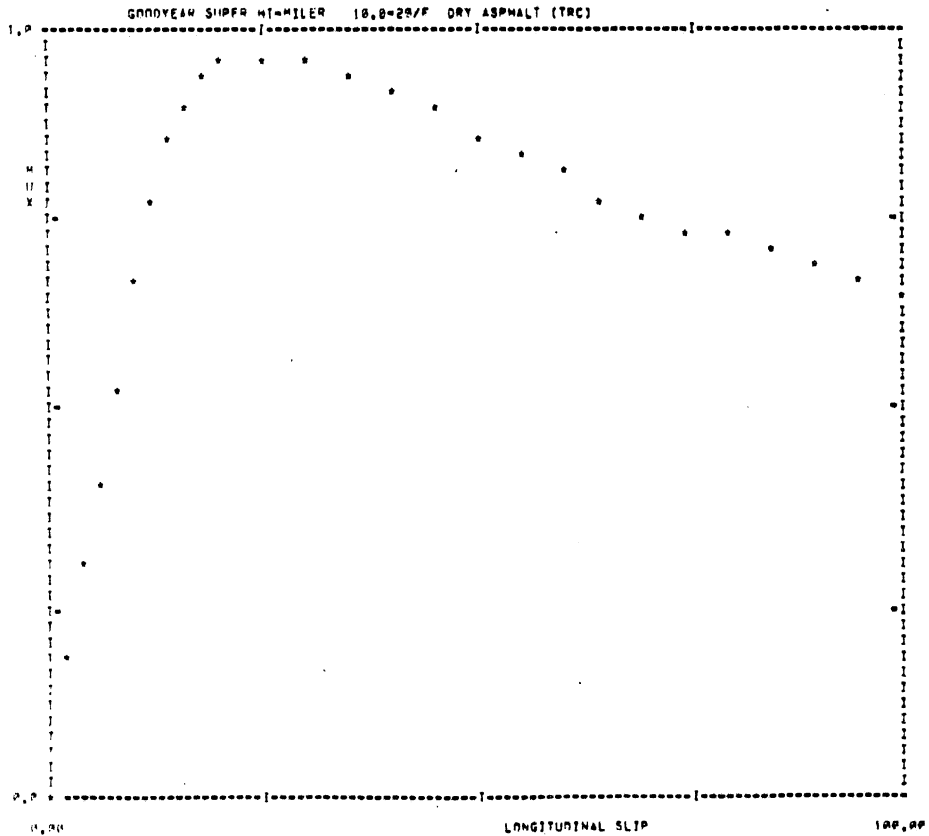


FZ = 5324.1 VEL = 40.0 MULOCK = 0.63 MUPEAK = 0.96 RATIO = 1.52 A=0 FILE 12 NHFILE 119 SAMPLE 7.

| SLIP | MUM | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 17495.3 | 989.9 |
| 0.04 | 0.31 | 30569.0 | 1595.8 |
| 0.06 | 0.42 | 42534.7 | 2168.6 |
| 0.08 | 0.53 | 54263.1 | 2742.9 |
| 0.10 | 0.67 | 67953.0 | 3424.9 |
| 0.12 | 0.77 | 79286.0 | 3952.5 |
| 0.14 | 0.85 | 86921.0 | 4331.3 |
| 0.16 | 0.91 | 92430.1 | 4610.1 |
| 0.18 | 0.94 | 96594.4 | 4792.0 |
| 0.20 | 0.96 | 99810.5 | 4856.9 |
| 0.25 | 0.97 | 102710.9 | 4884.9 |
| 0.30 | 0.96 | 105304.8 | 4841.8 |
| 0.35 | 0.94 | 106859.2 | 4752.8 |
| 0.40 | 0.92 | 107953.5 | 4642.5 |
| 0.45 | 0.89 | 108784.5 | 4523.5 |
| 0.50 | 0.86 | 109336.0 | 4399.5 |
| 0.55 | 0.84 | 111071.7 | 4276.4 |
| 0.60 | 0.81 | 112361.1 | 4153.1 |
| 0.65 | 0.79 | 113556.7 | 4030.9 |
| 0.70 | 0.77 | 114368.9 | 3922.3 |
| 0.75 | 0.75 | 114274.7 | 3822.0 |
| 0.80 | 0.73 | 111045.6 | 3725.9 |
| 0.85 | 0.71 | 105006.0 | 3626.9 |
| 0.90 | 0.69 | 91019.5 | 3527.1 |
| 0.95 | 0.67 | 76893.1 | 3426.7 |
| 1.00 | 0.65 | 60925.0 | 3325.5 |

TQAV = 60925.0 LOAD = 5238.6 VEL = 55.0 MPH.

MUPEAK = 0.97 MULOCK = 0.65 RATIO = 1.48

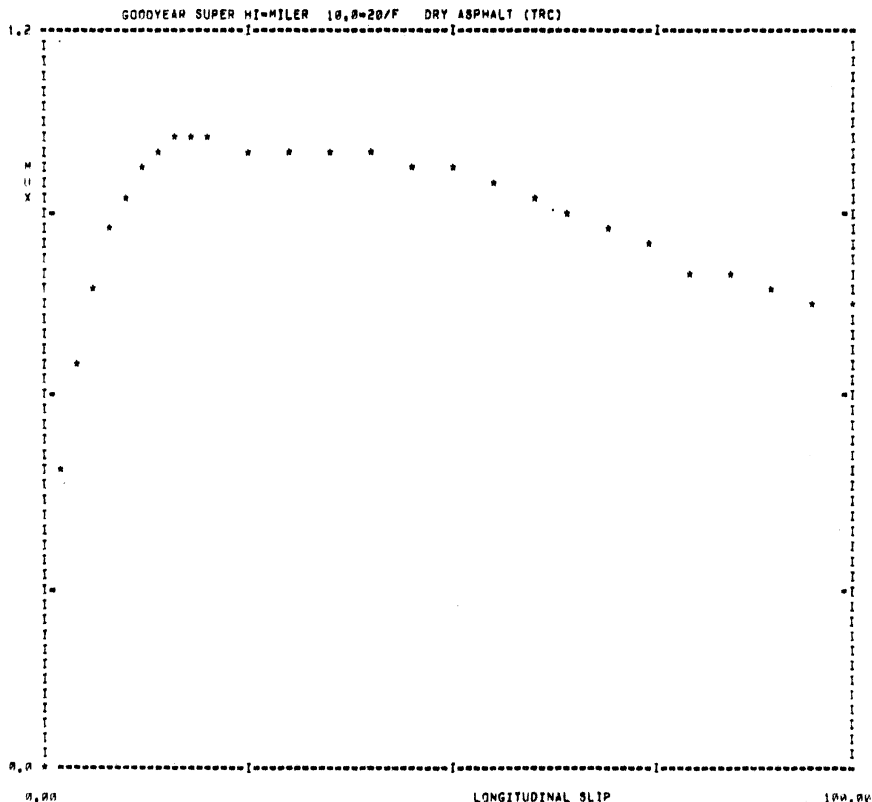


F7 = 5238.6 VEL = 55.0 MULOCK = 0.65 MUPEAK = 0.97 RATIO = 1.48 A=0 FILE 13 N=FILE 120 SAMPLE 8

** A=0 FILE 5 NEW FILE 163 TEST SAMPLE 10 **

AVERAGE OF FILE 5 FOR 5 RECORDS, GOODYEAR SUPER MI-MILER 10,0-20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX | |
|------|------|---------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.40 | 22612.0 | 1005.9 | |
| 0.04 | 0.67 | 33151.4 | 1406.2 | |
| 0.06 | 0.70 | 38806.2 | 1727.7 | |
| 0.08 | 0.87 | 43978.6 | 1917.1 | |
| 0.10 | 0.93 | 47269.5 | 2017.8 | |
| 0.12 | 0.97 | 49208.2 | 2065.3 | |
| 0.14 | 1.01 | 51305.9 | 2104.3 | |
| 0.16 | 1.03 | 53433.5 | 2130.4 | |
| 0.18 | 1.04 | 55011.9 | 2155.7 | TQAV = 32450.0 LOAD = 2235.5 VEL = 40.0 MPH. |
| 0.20 | 1.03 | 57327.9 | 2152.9 | |
| 0.25 | 1.02 | 59306.6 | 2087.2 | MUPEAK = 1.04 MULOCK = 0.76 RATIO = 1.38 |
| 0.30 | 1.01 | 61156.2 | 2018.8 | |
| 0.35 | 1.00 | 62999.4 | 1969.6 | |
| 0.40 | 1.00 | 65063.9 | 1942.9 | |
| 0.45 | 0.99 | 67515.2 | 1941.5 | |
| 0.50 | 0.98 | 70124.8 | 1954.1 | |
| 0.55 | 0.96 | 72547.9 | 1956.1 | |
| 0.60 | 0.93 | 74014.1 | 1935.3 | |
| 0.65 | 0.90 | 75562.8 | 1893.6 | |
| 0.70 | 0.87 | 76227.4 | 1836.3 | |
| 0.75 | 0.85 | 76700.6 | 1778.4 | |
| 0.80 | 0.82 | 76926.8 | 1702.9 | |
| 0.85 | 0.80 | 74424.9 | 1644.8 | |
| 0.90 | 0.78 | 64040.4 | 1607.9 | |
| 0.95 | 0.77 | 50095.5 | 1568.2 | |
| 1.00 | 0.76 | 32450.0 | 1510.0 | |



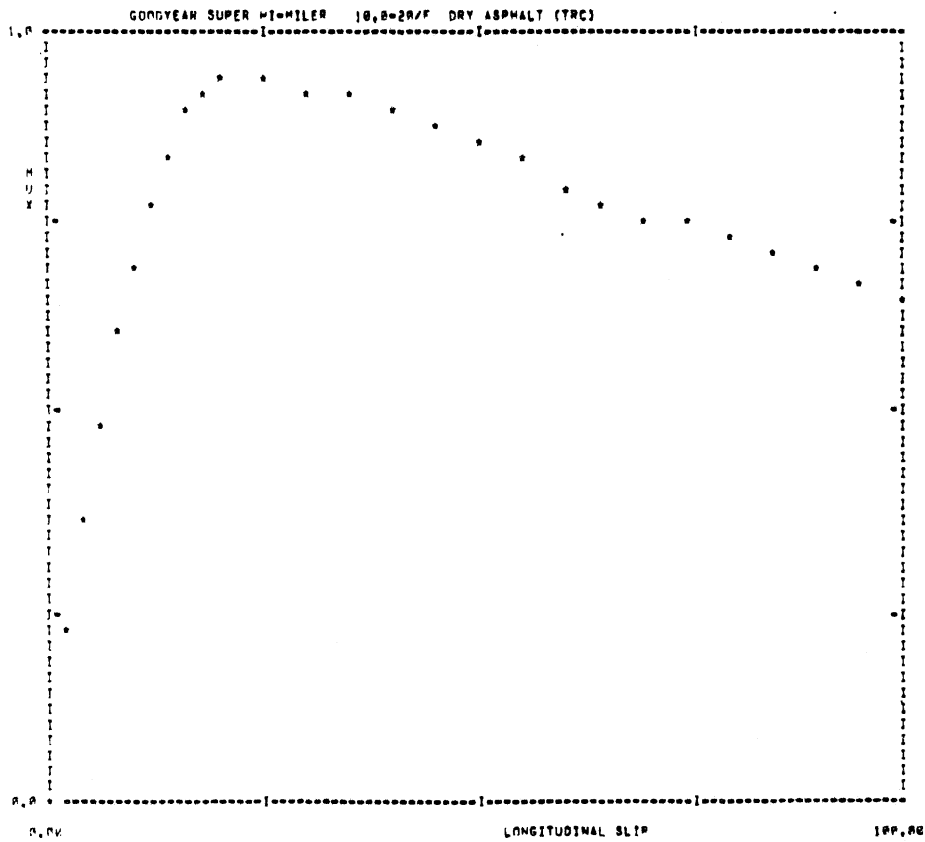
FZ = 2235.5 VEL = 40.0 MULOCK = 0.76 MUPEAK = 1.04 RATIO = 1.38 A=0 FILE 5 NEWFILE 163 SAMPLE 10

** A=0 FILE 1A NEW FILE 122 TEST SAMPLE 11 **
 AVERAGE OF FILE 1A FOR 6 RECORDS GOODYEAR SUPER MI-MILER 18,9-28/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| P.00 | 0.20 | 0.0 | 0.0 |
| V.02 | 0.22 | 22500.3 | 1184.3 |
| M.04 | 0.37 | 39265.2 | 1959.7 |
| U.06 | 0.49 | 52926.2 | 2622.7 |
| R.08 | 0.61 | 65020.8 | 3241.4 |
| A.10 | 0.70 | 75687.5 | 3733.6 |
| P.12 | 0.77 | 83600.0 | 4098.6 |
| R.14 | 0.80 | 90441.0 | 4482.9 |
| U.16 | 0.89 | 96191.5 | 4652.5 |
| R.18 | 0.93 | 100164.0 | 4821.3 |
| V.20 | 0.94 | 103291.2 | 4875.1 |
| R.25 | 0.94 | 107750.5 | 4850.4 |
| V.30 | 0.93 | 110869.5 | 4786.6 |
| V.35 | 0.91 | 113045.1 | 4686.8 |
| P.40 | 0.89 | 114626.2 | 4572.0 |
| R.45 | 0.87 | 115843.1 | 4453.9 |
| Z.50 | 0.85 | 116971.6 | 4333.2 |
| R.55 | 0.83 | 118039.7 | 4210.6 |
| R.60 | 0.81 | 119102.6 | 4087.8 |
| R.65 | 0.79 | 119861.8 | 3972.6 |
| R.70 | 0.77 | 119504.8 | 3866.5 |
| R.75 | 0.75 | 117141.2 | 3769.0 |
| R.80 | 0.73 | 110704.3 | 3603.8 |
| V.85 | 0.72 | 100760.0 | 3600.4 |
| R.90 | 0.70 | 89005.6 | 3510.7 |
| R.95 | 0.68 | 76702.9 | 3437.3 |
| 1.00 | 0.66 | 63770.8 | 3356.2 |

TOAY = 63770.8 LOAD = 5375.9 VEL = 48.9 MPH.

MUPEAK = 0.94 MULOCK = 0.66 RATIO = 1.42



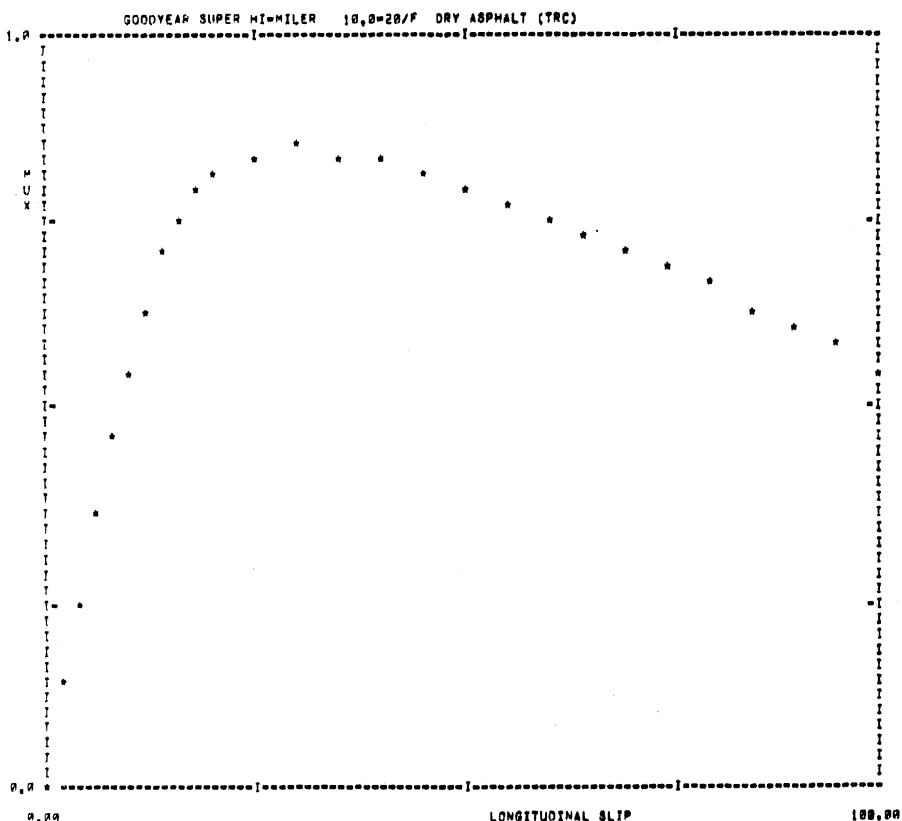
FZ = 5375.9 VFL = 48.9 MULOCK = 0.66 MUPEAK = 0.94 RATIO = 1.42 A=0 FILE 1A A=FILE 122 SAMPLE 11

** A=0 FILE 19 NEW FILE 123 TEST SAMPLE 12 **
 AVERAGE OF FILE 19 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10.0=20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.14 | 20730.3 | 1259.7 |
| 0.04 | 0.26 | 44009.1 | 2276.4 |
| 0.06 | 0.37 | 63430.0 | 3240.4 |
| 0.08 | 0.47 | 80015.9 | 4094.3 |
| 0.10 | 0.56 | 96966.2 | 4892.5 |
| 0.12 | 0.64 | 110502.5 | 5514.9 |
| 0.14 | 0.71 | 122028.5 | 6070.7 |
| 0.16 | 0.77 | 131008.6 | 6499.3 |
| 0.18 | 0.80 | 137929.0 | 6790.5 |
| 0.20 | 0.83 | 142205.0 | 6932.7 |
| 0.25 | 0.85 | 148703.3 | 7085.5 |
| 0.30 | 0.85 | 153200.9 | 7046.9 |
| 0.35 | 0.85 | 156370.2 | 6974.1 |
| 0.40 | 0.83 | 158576.6 | 6896.6 |
| 0.45 | 0.82 | 160270.2 | 6719.2 |
| 0.50 | 0.80 | 161096.6 | 6561.4 |
| 0.55 | 0.78 | 163401.9 | 6397.7 |
| 0.60 | 0.76 | 165000.0 | 6232.7 |
| 0.65 | 0.73 | 165954.2 | 6068.5 |
| 0.70 | 0.71 | 164790.5 | 5904.3 |
| 0.75 | 0.69 | 159572.3 | 5737.1 |
| 0.80 | 0.67 | 149445.5 | 5590.7 |
| 0.85 | 0.64 | 135631.6 | 5365.7 |
| 0.90 | 0.62 | 120391.4 | 5164.3 |
| 0.95 | 0.59 | 100011.5 | 4957.9 |
| 1.00 | 0.56 | 88937.5 | 4745.0 |

TOAV = 88937.5 LOAD = 8920.0 VEL = 40.0 MPH,

MUPEAK = 0.85 MULOCK = 0.56 RATIO = 1.52



FZ = 8920.0 VFL = 40.0 MULOCK = 0.56 MUPEAK = 0.85 RATIO = 1.52 A=0 FILE 19 N=FILE 123 SAMPLE 12

AVERAGE OF FILE 17 FOR 6 RECORDS.

GOODYEAR SUPER MI-MILER

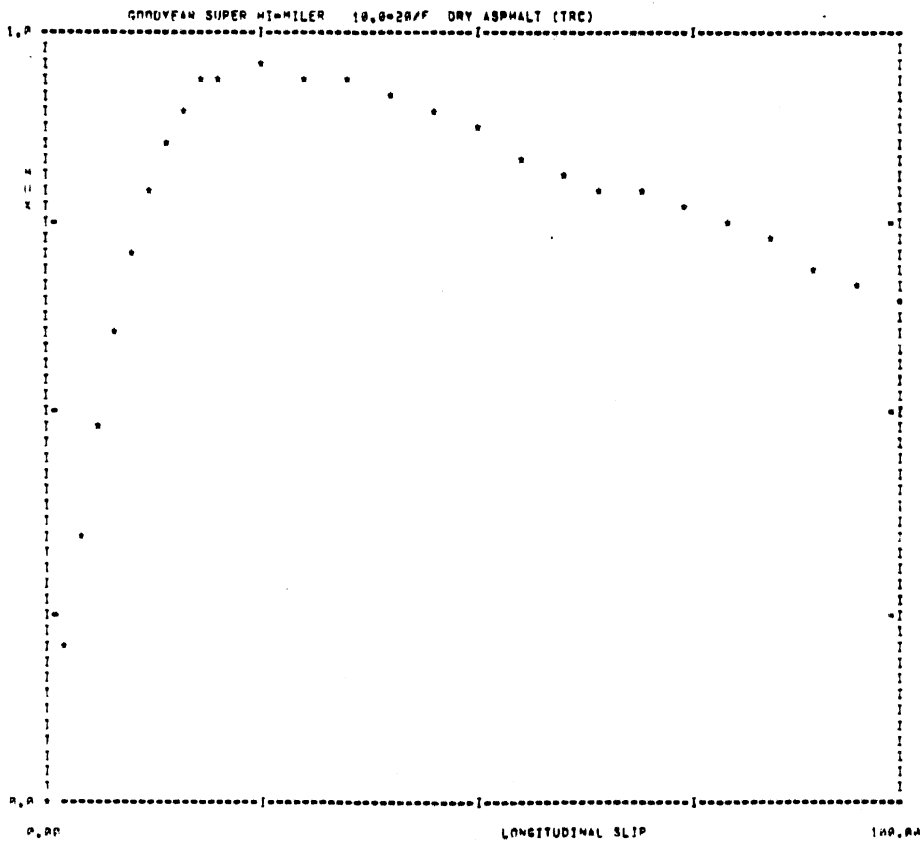
10.0-20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 19052.0 | 1007.7 |
| 0.04 | 0.35 | 35930.5 | 1853.5 |
| 0.06 | 0.49 | 50981.0 | 2571.2 |
| 0.08 | 0.61 | 63706.0 | 3186.5 |
| 0.10 | 0.71 | 74049.0 | 3676.5 |
| 0.12 | 0.79 | 82160.9 | 4055.6 |
| 0.14 | 0.86 | 88785.9 | 4361.2 |
| 0.16 | 0.90 | 94144.0 | 4590.2 |
| 0.18 | 0.93 | 98140.5 | 4751.0 |
| 0.20 | 0.95 | 100670.1 | 4803.0 |
| 0.25 | 0.95 | 104075.7 | 4812.0 |
| 0.30 | 0.95 | 107061.9 | 4769.6 |
| 0.35 | 0.90 | 110210.7 | 4690.1 |
| 0.40 | 0.92 | 112200.5 | 4589.5 |
| 0.45 | 0.89 | 113075.1 | 4479.4 |
| 0.50 | 0.87 | 115270.0 | 4366.9 |
| 0.55 | 0.85 | 116300.2 | 4256.2 |
| 0.60 | 0.83 | 117001.0 | 4146.6 |
| 0.65 | 0.81 | 117435.1 | 4047.9 |
| 0.70 | 0.79 | 117803.9 | 3954.0 |
| 0.75 | 0.77 | 114731.5 | 3862.4 |
| 0.80 | 0.75 | 109306.9 | 3768.2 |
| 0.85 | 0.73 | 100101.1 | 3666.0 |
| 0.90 | 0.70 | 88470.0 | 3562.3 |
| 0.95 | 0.68 | 76306.7 | 3457.9 |
| 1.00 | 0.66 | 63125.0 | 3352.5 |

TQAV = 63125.0 LOAD = 5200.1 VEL = 40.0 MPH.

MUPEAK = 0.95 MULOCK = 0.66 RATIO = 1.05

check Run #3



FZ = 5200.1 VEL = 40.0 MULOCK = 0.66 MUPEAK = 0.95 RATIO = 1.05 A=0 FILE 17 N=FILE 121 SAMPLE 9

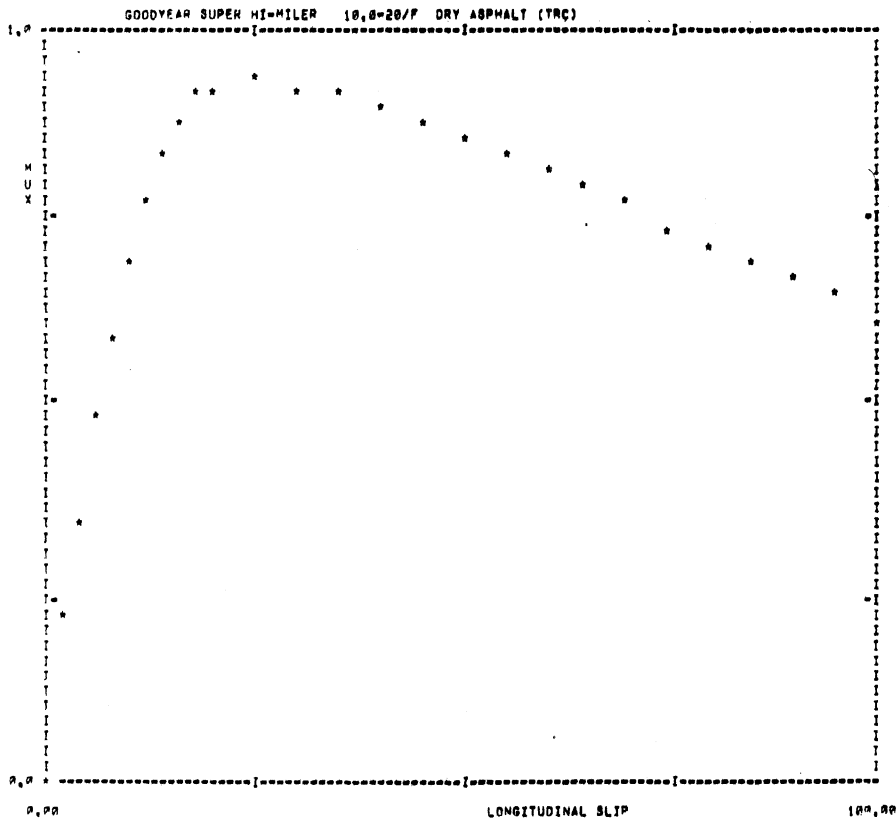
** A-D FILE 20 NEW FILE 124 TEST SAMPLE 13 **
 AVERAGE OF FILE 20 FOR 6 RECORDS, GOODYEAR SUPER MI-MILER 10.0=20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.22 | 23020.2 | 1166.6 |
| 0.04 | 0.36 | 38014.6 | 1903.8 |
| 0.06 | 0.48 | 52303.8 | 2554.6 |
| 0.08 | 0.60 | 66647.7 | 3154.7 |
| 0.10 | 0.70 | 75306.0 | 3687.4 |
| 0.12 | 0.77 | 84596.3 | 4182.9 |
| 0.14 | 0.83 | 91021.7 | 4482.3 |
| 0.16 | 0.88 | 96461.7 | 4617.5 |
| 0.18 | 0.91 | 100504.1 | 4770.4 |
| 0.20 | 0.93 | 103599.1 | 4861.2 |
| 0.25 | 0.93 | 108355.4 | 4882.8 |
| 0.30 | 0.93 | 111989.7 | 4827.3 |
| 0.35 | 0.91 | 114651.6 | 4735.8 |
| 0.40 | 0.90 | 116540.4 | 4631.5 |
| 0.45 | 0.88 | 118024.9 | 4522.8 |
| 0.50 | 0.86 | 119333.0 | 4415.1 |
| 0.55 | 0.84 | 120614.8 | 4300.1 |
| 0.60 | 0.82 | 121975.6 | 4191.1 |
| 0.65 | 0.79 | 123243.7 | 4077.2 |
| 0.70 | 0.77 | 123622.9 | 3962.6 |
| 0.75 | 0.74 | 121071.4 | 3849.3 |
| 0.80 | 0.72 | 114658.9 | 3735.7 |
| 0.85 | 0.70 | 103836.2 | 3617.3 |
| 0.90 | 0.67 | 98594.8 | 3493.1 |
| 0.95 | 0.65 | 76748.8 | 3366.6 |
| 1.00 | 0.62 | 62416.7 | 3237.5 |

TQAV = 62416.7 LOAD = 5373.9 VEL = 40.0 MPH.

MUPEAK = 0.93 MULLOCK = 0.62 RATIO = 1.51

Check Run #5

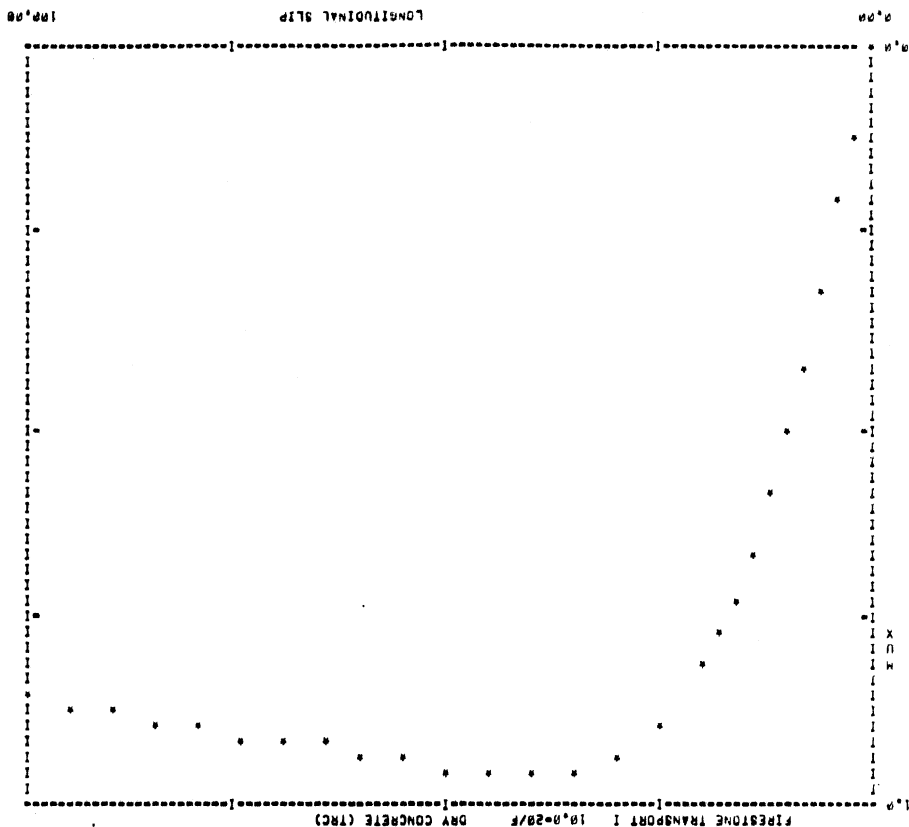


FZ = 5373.9 VEL = 40.0 MULLOCK = 0.62 MUPEAK = 0.93 RATIO = 1.51 A-D FILE 20 NEWFILE 124 SAMPLE 13



FIRESTONE TRANSPORT 1, 10.00 x 20/F, TRC CONCRETE

22 = 5594.8 VFL = 3.0 MULLOCK = 0.47 NUPEAK = 0.96 RATIO = 1.11 A=0 FILE 94 NEWFILE 151 SAMPLE 152



| SLIP | NUX | TONQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.11 | 11220.0 | 640.6 |
| 0.04 | 0.21 | 20841.6 | 1160.4 |
| 0.06 | 0.32 | 33209.6 | 1783.6 |
| 0.08 | 0.42 | 44650.6 | 2350.4 |
| 0.10 | 0.52 | 54617.2 | 2850.9 |
| 0.12 | 0.60 | 62935.2 | 3276.2 |
| 0.14 | 0.67 | 69807.3 | 3632.6 |
| 0.16 | 0.73 | 76259.3 | 3934.1 |
| 0.18 | 0.78 | 82057.1 | 4206.3 |
| 0.20 | 0.83 | 86600.2 | 4417.9 |
| 0.25 | 0.90 | 93877.5 | 4739.5 |
| 0.30 | 0.94 | 98500.6 | 4929.6 |
| 0.35 | 0.96 | 100353.9 | 5004.5 |
| 0.40 | 0.96 | 100729.8 | 5010.6 |
| 0.45 | 0.96 | 100440.3 | 5003.3 |
| 0.50 | 0.95 | 99840.2 | 4973.3 |
| 0.55 | 0.95 | 99079.4 | 4936.0 |
| 0.60 | 0.94 | 98230.3 | 4895.1 |
| 0.65 | 0.93 | 97349.1 | 4852.3 |
| 0.70 | 0.92 | 96443.8 | 4808.6 |
| 0.75 | 0.91 | 95520.5 | 4764.5 |
| 0.80 | 0.90 | 94600.2 | 4720.1 |
| 0.85 | 0.90 | 93685.4 | 4675.6 |
| 0.90 | 0.89 | 92711.8 | 4629.6 |
| 0.95 | 0.88 | 91630.6 | 4580.7 |
| 1.00 | 0.87 | 90416.7 | 4527.5 |

TOAV = 90416.7 LOAD = 5594.8 VFL = 3.0 MPH.
 NUPEAK = 0.96 MULLOCK = 0.47 RATIO = 1.11

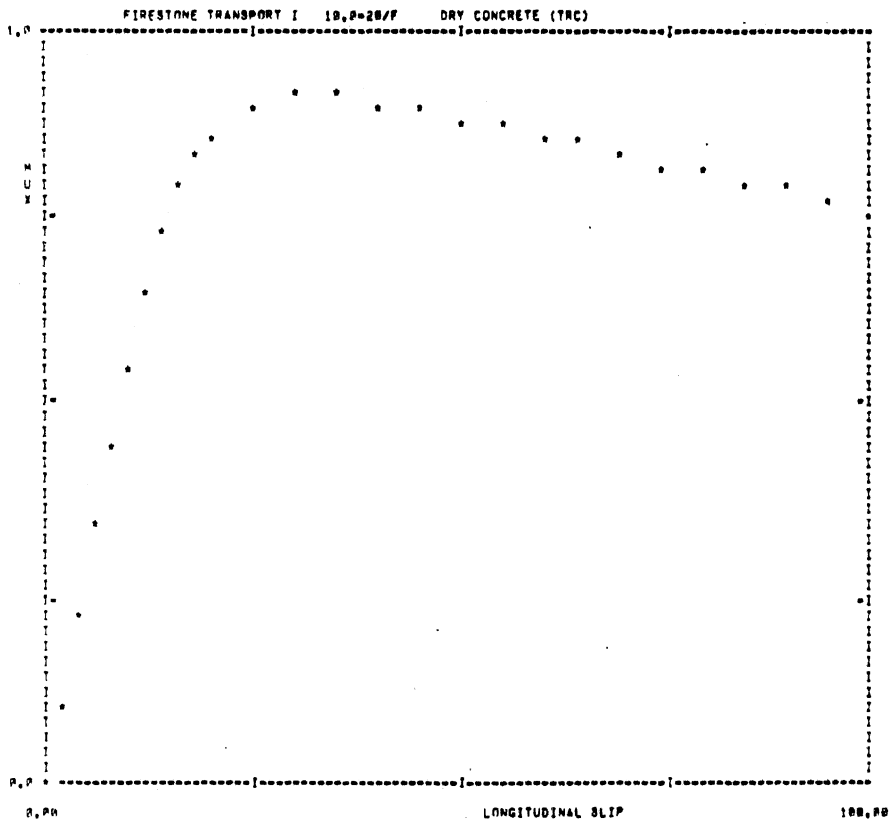
** A=0 FILE 94 NEW FILE 151 TEST SAMPLE 152 **
 AVERAGE OF FILE 94 FOR 6 RECORDS.
 FIRESTONE TRANSPORT I 10.0-20/F DRY CONCRETE (TRC)

AVERAGE OF FILE 95 FOR 5 RECORDS. FIRESTONE TRANSPORT I 10,P=20/F DRY CONCRETE (TRC)

| SLIP | MUX | TORQUE | FZ |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.09 | 9231.3 | 524.2 |
| 0.04 | 0.23 | 23060.4 | 1295.7 |
| 0.06 | 0.35 | 36670.0 | 1934.6 |
| 0.08 | 0.46 | 46105.1 | 2523.4 |
| 0.10 | 0.56 | 50495.7 | 3035.2 |
| 0.12 | 0.65 | 60519.3 | 3526.5 |
| 0.14 | 0.74 | 77314.3 | 3949.2 |
| 0.16 | 0.80 | 83064.5 | 4262.5 |
| 0.18 | 0.84 | 88376.2 | 4478.0 |
| 0.20 | 0.87 | 90939.7 | 4589.0 |
| 0.25 | 0.90 | 95286.9 | 4727.2 |
| 0.30 | 0.91 | 97637.4 | 4787.6 |
| 0.35 | 0.91 | 98260.7 | 4782.7 |
| 0.40 | 0.90 | 97525.7 | 4742.9 |
| 0.45 | 0.90 | 96306.8 | 4690.7 |
| 0.50 | 0.88 | 95123.5 | 4633.5 |
| 0.55 | 0.87 | 93804.1 | 4574.1 |
| 0.60 | 0.86 | 92457.4 | 4513.5 |
| 0.65 | 0.85 | 91097.2 | 4452.3 |
| 0.70 | 0.84 | 89730.1 | 4390.9 |
| 0.75 | 0.83 | 88359.6 | 4329.3 |
| 0.80 | 0.82 | 86987.5 | 4267.6 |
| 0.85 | 0.80 | 85614.5 | 4205.9 |
| 0.90 | 0.79 | 84151.7 | 4142.4 |
| 0.95 | 0.78 | 82509.9 | 4075.6 |
| 1.00 | 0.77 | 80600.0 | 4003.5 |

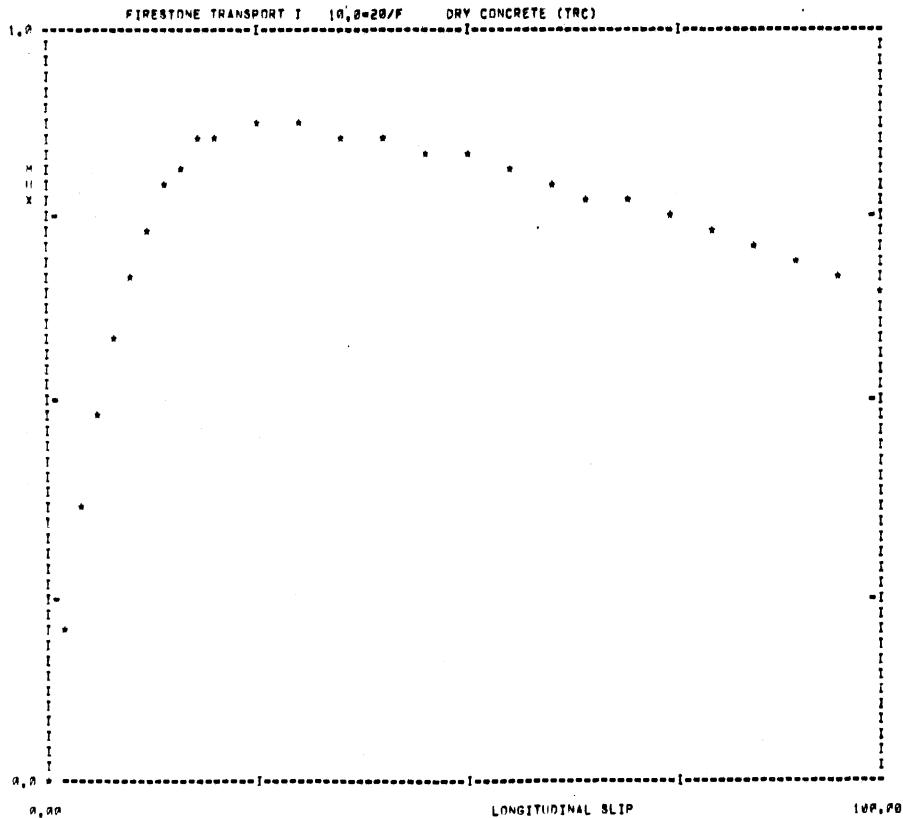
TOAV = 88600.0 LOAD = 5505.6 VEL = 10.0 MPH.

MUPEAK = 0.91 MULLOCK = 0.77 RATIO = 1.19



FZ = 5505.6 VFL = 10.0 MULLOCK = 0.77 MUPEAK = 0.91 RATIO = 1.19 A=0 FILE 95 N=FILE 152 SAMPLE 153

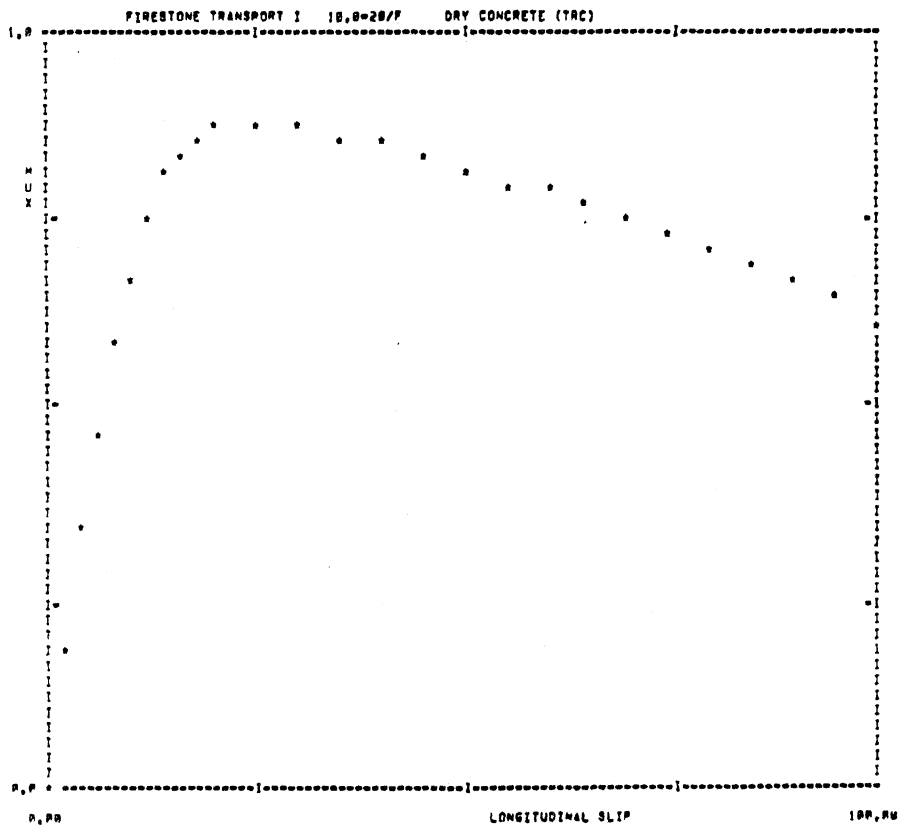
| ** A=D FILE 96 | | | NEW FILE 153 | TEST SAMPLE154 ** |
|-----------------------------------|------|----------|-----------------------|----------------------------------------------|
| AVERAGE OF FILE 96 FOR 6 RECORDS. | | | FIRESTONE TRANSPORT I | 10,0=20/F DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.21 | 22469.1 | 1177.6 | |
| 0.04 | 0.36 | 38854.0 | 1975.9 | |
| 0.06 | 0.49 | 51460.6 | 2662.7 | |
| 0.08 | 0.60 | 63081.9 | 3233.3 | |
| 0.10 | 0.68 | 72243.5 | 3666.4 | |
| 0.12 | 0.74 | 78939.1 | 3990.9 | |
| 0.14 | 0.79 | 83698.5 | 4233.4 | |
| 0.16 | 0.83 | 87709.4 | 4405.3 | |
| 0.18 | 0.85 | 91145.9 | 4522.6 | TQAV = 68208.3 LOAD = 5552.2 VEL = 20.0 MPH. |
| 0.20 | 0.86 | 93348.5 | 4579.5 | |
| 0.25 | 0.87 | 97457.2 | 4617.4 | MUPEAK = 0.87 MULLOCK = 0.66 RATIO = 1.31 |
| 0.30 | 0.87 | 100759.4 | 4688.8 | |
| 0.35 | 0.87 | 103444.2 | 4572.2 | |
| 0.40 | 0.86 | 105800.0 | 4514.4 | |
| 0.45 | 0.84 | 108067.0 | 4447.1 | |
| 0.50 | 0.83 | 110460.5 | 4374.0 | |
| 0.55 | 0.82 | 112659.9 | 4298.8 | |
| 0.60 | 0.80 | 113765.5 | 4219.5 | |
| 0.65 | 0.78 | 113824.1 | 4139.6 | |
| 0.70 | 0.77 | 109781.8 | 4055.8 | |
| 0.75 | 0.75 | 104804.8 | 3965.8 | |
| 0.80 | 0.73 | 97242.8 | 3873.1 | |
| 0.85 | 0.72 | 90498.7 | 3780.9 | |
| 0.90 | 0.70 | 83624.4 | 3688.2 | |
| 0.95 | 0.68 | 76280.4 | 3594.4 | |
| 1.00 | 0.66 | 68208.3 | 3498.7 | |



FZ = 5552.2 VEL = 20.0 MULLOCK = 0.66 MUPEAK = 0.87 RATIO = 1.31 A=D FILE 96 NEWFILE 153 SAMPLE 154

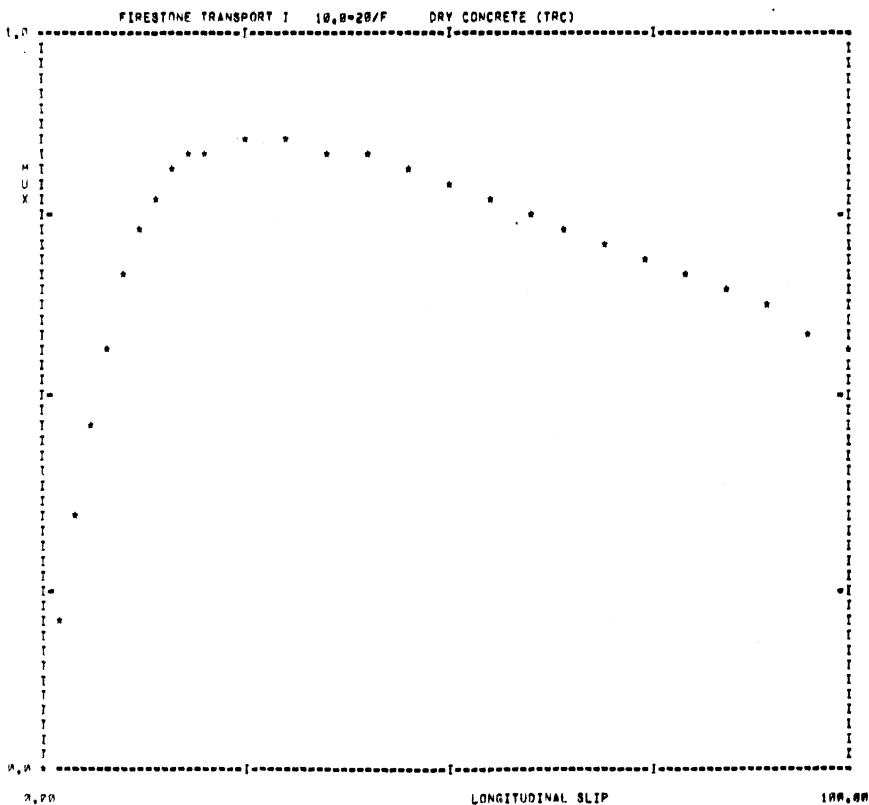
** A=0 FILE 97 NEW FILE 154 TEST SAMPLE 155 **
 AVERAGE OF FILE 97 FOR 6 RECORDS. FIRESTONE TRANSPORT 1 1R,0=20/P DRY CONCRETE (TRC)

| SLIP | MUX | TORQUE | PX | |
|------|------|----------|--------|----------------------------------------------------|
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.18 | 17565.7 | 991.8 | |
| 0.04 | 0.34 | 34913.9 | 1841.6 | |
| 0.06 | 0.47 | 49106.4 | 2508.0 | |
| 0.08 | 0.59 | 61577.5 | 3168.4 | |
| 0.10 | 0.69 | 71860.2 | 3679.8 | |
| 0.12 | 0.76 | 80347.6 | 4066.2 | |
| 0.14 | 0.81 | 86616.1 | 4334.7 | |
| 0.16 | 0.85 | 91234.7 | 4522.8 | |
| 0.18 | 0.87 | 94784.2 | 4644.3 | TOAV = 63883.3 LOAD = 5515.7 VEL = 38.8 MPH. |
| 0.20 | 0.88 | 97116.3 | 4693.6 | |
| 0.25 | 0.88 | 101209.8 | 4714.5 | MUPEAK = 0.88 MULLOCK = 0.62 RATIO = 1.43 |
| 0.30 | 0.88 | 100379.6 | 4691.3 | |
| 0.35 | 0.87 | 100037.6 | 4640.3 | |
| 0.40 | 0.86 | 100797.5 | 4574.2 | |
| 0.45 | 0.84 | 110504.4 | 4493.9 | |
| 0.50 | 0.82 | 112441.1 | 4401.1 | |
| 0.55 | 0.81 | 114376.7 | 4309.0 | |
| 0.60 | 0.79 | 116329.8 | 4217.5 | |
| 0.65 | 0.77 | 117659.9 | 4124.1 | |
| 0.70 | 0.75 | 116756.5 | 4032.1 | |
| 0.75 | 0.74 | 113141.7 | 3939.6 | |
| 0.80 | 0.72 | 105209.7 | 3828.8 | |
| 0.85 | 0.70 | 95321.3 | 3700.4 | |
| 0.90 | 0.67 | 84796.3 | 3565.6 | |
| 0.95 | 0.65 | 74056.3 | 3425.1 | |
| 1.00 | 0.62 | 63883.3 | 3276.2 | |



F7 = 5515.7 VEL = 38.8 MULLOCK = 0.62 MUPEAK = 0.88 RATIO = 1.43 A=0 FILE 97 NEWFILE 154 SAMPLE 155

| ** A=0 FILE 98 | | NEW FILE 155 | TEST SAMPLE 156 ** | |
|-----------------------------------|------|-----------------------|--------------------|----------------------------------------------|
| AVERAGE OF FILE 98 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | 10.0=20/F | DRY CONCRETE (TRC) |
| SLIP | MIX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 20142.7 | 1109.5 | |
| 0.04 | 0.35 | 36439.1 | 1914.7 | |
| 0.06 | 0.48 | 50203.4 | 2582.3 | |
| 0.08 | 0.58 | 61662.6 | 3130.3 | |
| 0.10 | 0.67 | 71150.0 | 3576.7 | |
| 0.12 | 0.73 | 79050.0 | 3898.6 | |
| 0.14 | 0.78 | 84677.1 | 4124.7 | |
| 0.16 | 0.81 | 88497.0 | 4281.3 | |
| 0.18 | 0.83 | 91563.6 | 4388.5 | TQAV = 59270.8 LOAD = 5510.9 VEL = 40.0 MPH. |
| 0.20 | 0.84 | 94300.0 | 4417.1 | MUPEAK = 0.85 MULLOCK = 0.57 RATIO = 1.50 |
| 0.25 | 0.85 | 99092.6 | 4444.7 | |
| 0.30 | 0.85 | 102532.6 | 4430.6 | |
| 0.35 | 0.84 | 105250.8 | 4402.8 | |
| 0.40 | 0.83 | 107609.0 | 4346.3 | |
| 0.45 | 0.82 | 109947.1 | 4275.6 | |
| 0.50 | 0.80 | 112000.5 | 4194.5 | |
| 0.55 | 0.78 | 113921.5 | 4102.3 | |
| 0.60 | 0.76 | 115754.2 | 4007.7 | |
| 0.65 | 0.74 | 117106.1 | 3915.5 | |
| 0.70 | 0.72 | 117110.2 | 3824.7 | |
| 0.75 | 0.70 | 114626.3 | 3734.2 | |
| 0.80 | 0.68 | 108026.0 | 3634.9 | |
| 0.85 | 0.66 | 97340.5 | 3512.9 | |
| 0.90 | 0.63 | 85107.3 | 3377.8 | |
| 0.95 | 0.60 | 72510.6 | 3235.4 | |
| 1.00 | 0.57 | 59270.8 | 3003.7 | |

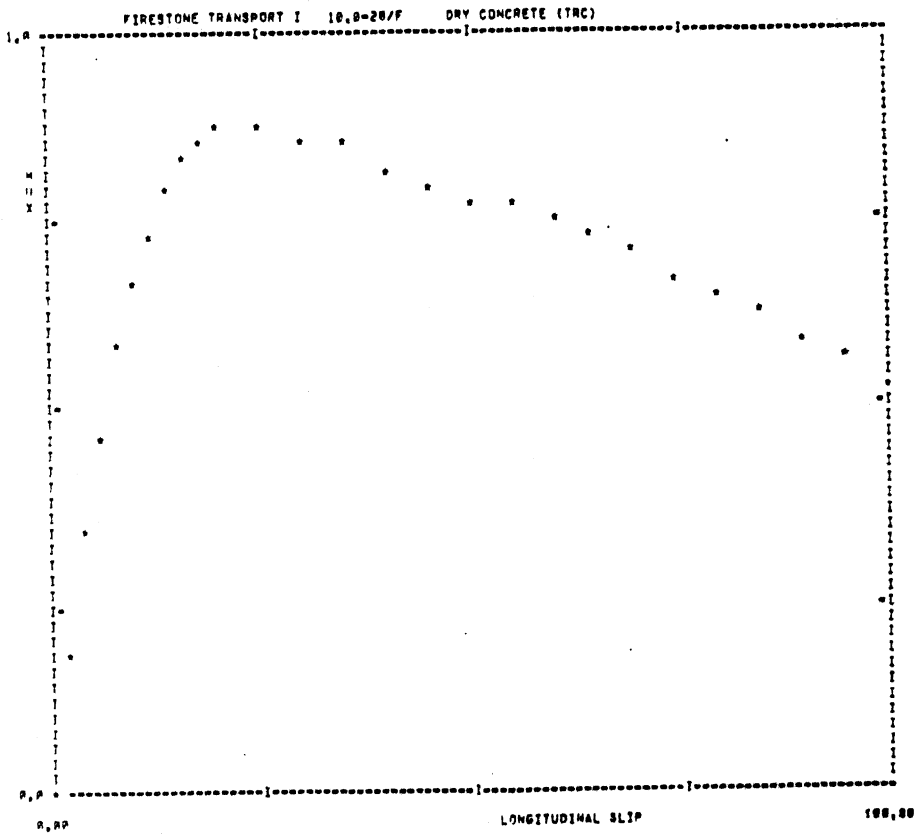


FZ = 5510.9 VEL = 40.0 MULLOCK = 0.57 MUPEAK = 0.85 RATIO = 1.50 A=0 FILE 98 N=FILE 155 SAMPLE 156

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 20107.3 | 1020.0 |
| 0.04 | 0.35 | 37504.0 | 1896.7 |
| 0.06 | 0.40 | 52004.5 | 2600.6 |
| 0.08 | 0.50 | 63042.9 | 3174.7 |
| 0.10 | 0.60 | 73347.4 | 3617.2 |
| 0.12 | 0.74 | 81411.9 | 3941.9 |
| 0.14 | 0.79 | 87674.5 | 4194.5 |
| 0.16 | 0.84 | 92513.4 | 4399.6 |
| 0.18 | 0.86 | 96007.3 | 4544.6 |
| 0.20 | 0.88 | 100119.0 | 4611.9 |
| 0.25 | 0.88 | 104565.0 | 4647.6 |
| 0.30 | 0.87 | 107723.4 | 4617.7 |
| 0.35 | 0.85 | 110005.0 | 4539.7 |
| 0.40 | 0.83 | 113943.3 | 4436.0 |
| 0.45 | 0.81 | 116670.3 | 4325.0 |
| 0.50 | 0.79 | 118696.9 | 4210.6 |
| 0.55 | 0.77 | 120221.1 | 4112.6 |
| 0.60 | 0.75 | 121526.1 | 4001.0 |
| 0.65 | 0.73 | 122730.6 | 3890.5 |
| 0.70 | 0.71 | 123709.6 | 3775.0 |
| 0.75 | 0.68 | 122957.2 | 3655.0 |
| 0.80 | 0.66 | 117552.0 | 3532.2 |
| 0.85 | 0.63 | 105079.0 | 3309.3 |
| 0.90 | 0.60 | 89960.1 | 3215.6 |
| 0.95 | 0.57 | 72054.1 | 3020.0 |
| 1.00 | 0.53 | 54750.0 | 2020.0 |

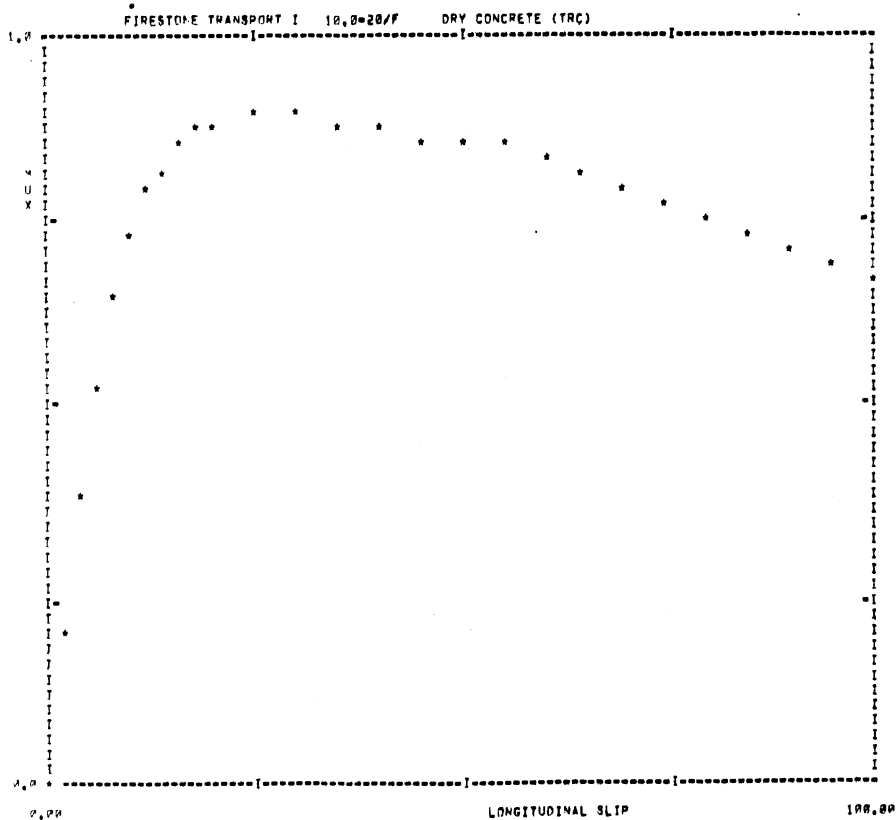
TOAV = 54750.0 LOAD = 5070.7 VEL = 55.0 MPH.

MUPEAK = 0.88 MULLOCK = 0.53 RATIO = 1.67



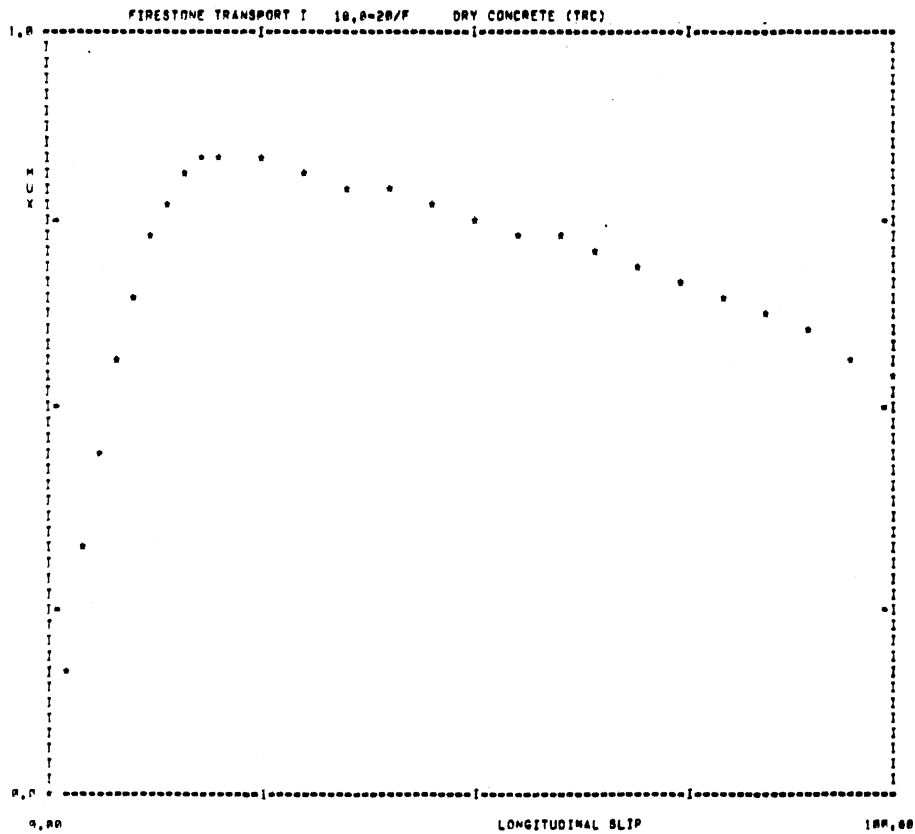
FZ = 5470.7 VEL = 55.0 MULLOCK = 0.53 MUPEAK = 0.88 RATIO = 1.67 A=0 FILE 99 NEW FILE 156 SAMPLE 157

| ** A=D FILE 104 | | NEW FILE 158 | | TEST SAMPLE 159 ** | |
|------------------------------------|------|-----------------------|--------|--------------------|-------------------------------|
| AVERAGE OF FILE 104 FOR 5 RECORDS, | | FIRESTONE TRANSPORT I | | 10,0=20/F | DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.21 | 10334.3 | 456.7 | | |
| 0.04 | 0.38 | 18041.3 | 804.6 | | |
| 0.06 | 0.53 | 25040.3 | 1160.6 | | |
| 0.08 | 0.65 | 31096.4 | 1431.3 | | |
| 0.10 | 0.74 | 36730.1 | 1630.4 | | |
| 0.12 | 0.79 | 41130.0 | 1767.0 | | |
| 0.14 | 0.83 | 44812.6 | 1804.3 | | |
| 0.16 | 0.85 | 47079.5 | 1892.4 | | |
| 0.18 | 0.87 | 49360.1 | 1923.2 | TQAV = 30100.0 | LOAD = 2147.4 VFL = 40.0 MPH. |
| 0.20 | 0.89 | 50551.0 | 1940.5 | | |
| 0.25 | 0.90 | 53730.7 | 1944.9 | MUPEAK = 0.90 | MULOCK = 0.68 RATIO = 1.33 |
| 0.30 | 0.90 | 57031.1 | 1923.5 | | |
| 0.35 | 0.89 | 60132.3 | 1880.0 | | |
| 0.40 | 0.87 | 62010.7 | 1851.3 | | |
| 0.45 | 0.87 | 64910.0 | 1821.0 | | |
| 0.50 | 0.86 | 66659.6 | 1796.4 | | |
| 0.55 | 0.85 | 68259.5 | 1769.9 | | |
| 0.60 | 0.84 | 70030.8 | 1739.1 | | |
| 0.65 | 0.82 | 72130.4 | 1706.4 | | |
| 0.70 | 0.80 | 73930.6 | 1671.9 | | |
| 0.75 | 0.78 | 75500.1 | 1635.7 | | |
| 0.80 | 0.76 | 76045.6 | 1598.7 | | |
| 0.85 | 0.74 | 83122.1 | 1560.7 | | |
| 0.90 | 0.72 | 53106.9 | 1520.4 | | |
| 0.95 | 0.70 | 42070.4 | 1479.6 | | |
| 1.00 | 0.68 | 30100.0 | 1430.5 | | |



F7 = 2147.4 VFL = 40.0 MULOCK = 0.68 MUPEAK = 0.90 RATIO = 1.33 A=D FILE 104 NEW FILE 158 SAMPLE 159

| ** A=0 FILE 105 | | NEW FILE 159 | | TEST SAMPLE160 ** | |
|------------------------------------|------|-----------------------|--------|-------------------|-------------------------------|
| AVERAGE OF FILE 105 FOR 6 RECORDS, | | FIRESTONE TRANSPORT I | | 10,0-20/F | DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | Fx | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.17 | 18453.0 | 951.8 | | |
| 0.04 | 0.32 | 34999.1 | 1734.3 | | |
| 0.06 | 0.45 | 49340.3 | 2448.5 | | |
| 0.08 | 0.57 | 61594.2 | 3050.4 | | |
| 0.10 | 0.66 | 71963.5 | 3583.4 | | |
| 0.12 | 0.73 | 80424.6 | 3939.4 | | |
| 0.14 | 0.78 | 87444.8 | 4236.3 | | |
| 0.16 | 0.81 | 92402.1 | 4434.5 | | |
| 0.18 | 0.83 | 96442.6 | 4567.8 | TOAV = 56895.0 | LOAD = 5496.0 VEL = 48.0 MPH. |
| 0.20 | 0.84 | 98987.6 | 4573.5 | | |
| 0.25 | 0.83 | 102925.0 | 4541.8 | MUPEAK = 0.84 | MULOCK = 0.55 RATIO = 1.53 |
| 0.30 | 0.82 | 106364.6 | 4467.2 | | |
| 0.35 | 0.81 | 109385.4 | 4371.7 | | |
| 0.40 | 0.79 | 111836.5 | 4269.2 | | |
| 0.45 | 0.78 | 113874.6 | 4167.1 | | |
| 0.50 | 0.76 | 115592.5 | 4065.8 | | |
| 0.55 | 0.74 | 117093.9 | 3966.7 | | |
| 0.60 | 0.73 | 118424.3 | 3878.4 | | |
| 0.65 | 0.71 | 119381.4 | 3774.6 | | |
| 0.70 | 0.70 | 119881.9 | 3680.5 | | |
| 0.75 | 0.68 | 115588.1 | 3585.4 | | |
| 0.80 | 0.66 | 106227.8 | 3477.4 | | |
| 0.85 | 0.63 | 97315.4 | 3343.2 | | |
| 0.90 | 0.61 | 84588.0 | 3198.8 | | |
| 0.95 | 0.58 | 71144.9 | 3044.3 | | |
| 1.00 | 0.55 | 56895.0 | 2878.7 | | |

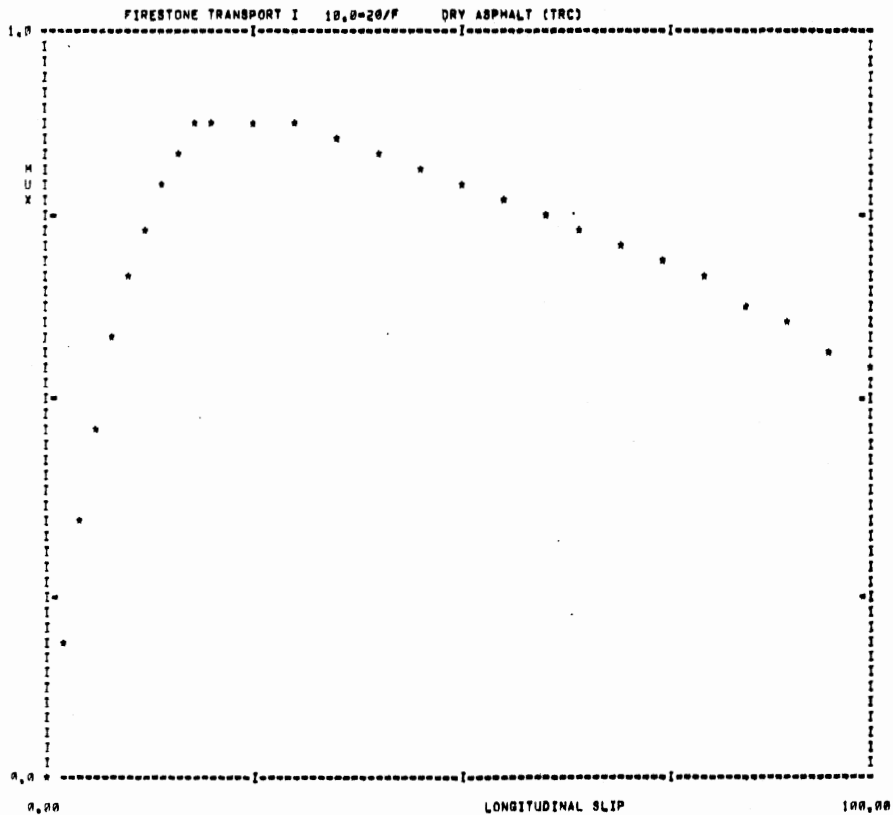


F2 = 56895.0 VFL = 84.0 MULOCK = 0.55 MUPEAK = 0.84 RATIO = 1.53 A=0 FILE 105 NEW FILE 159 SAMPLE 160

| AVERAGE OF FILE 76 FOR 6 RECORDS, | | NEW FILE 143 | TEST SAMPLE 107 ** |
|-----------------------------------|------|--------------|--------------------|
| SLIP | MUX | TORQUE | FX |
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 21634.8 | 1050.1 |
| 0.04 | 0.35 | 36641.5 | 1690.9 |
| 0.06 | 0.48 | 52769.9 | 2599.8 |
| 0.08 | 0.59 | 64892.7 | 3197.6 |
| 0.10 | 0.67 | 74924.7 | 3662.4 |
| 0.12 | 0.74 | 82529.9 | 3996.8 |
| 0.14 | 0.79 | 88156.4 | 4263.1 |
| 0.16 | 0.84 | 92982.1 | 4475.0 |
| 0.18 | 0.87 | 97419.1 | 4617.4 |
| 0.20 | 0.89 | 100533.8 | 4665.8 |
| 0.25 | 0.88 | 104444.1 | 4663.7 |
| 0.30 | 0.87 | 107666.3 | 4689.1 |
| 0.35 | 0.86 | 110446.4 | 4925.7 |
| 0.40 | 0.84 | 112767.2 | 4430.7 |
| 0.45 | 0.82 | 114561.0 | 4331.6 |
| 0.50 | 0.80 | 115886.4 | 4231.6 |
| 0.55 | 0.78 | 116951.1 | 4129.6 |
| 0.60 | 0.76 | 117931.1 | 4024.0 |
| 0.65 | 0.74 | 118769.0 | 3917.7 |
| 0.70 | 0.72 | 118560.1 | 3811.4 |
| 0.75 | 0.70 | 116111.7 | 3701.0 |
| 0.80 | 0.67 | 109618.1 | 3576.1 |
| 0.85 | 0.64 | 98750.9 | 3427.4 |
| 0.90 | 0.61 | 86113.6 | 3260.2 |
| 0.95 | 0.58 | 72814.4 | 3103.4 |
| 1.00 | 0.55 | 58750.0 | 2931.2 |

TOAV = 50750.0 LOAD = 5452.0 VEL = 40.0 MPH.

MUPEAK = 0.89 MULLOCK = 0.55 RATIO = 1.61



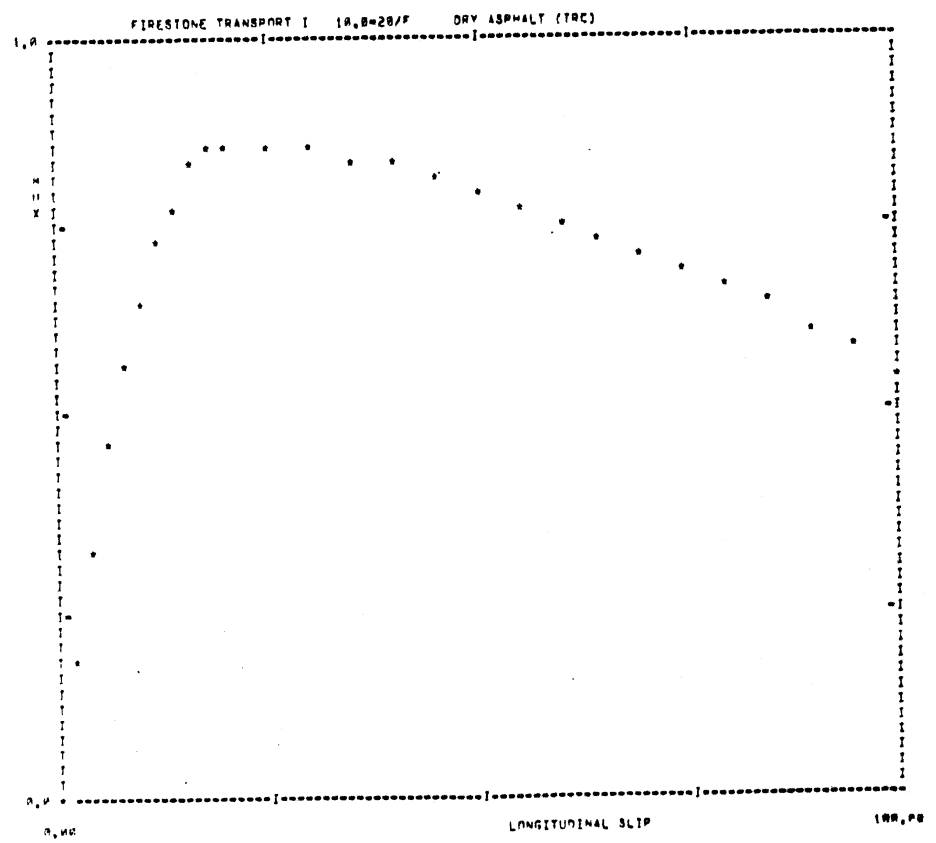
FZ = 5452.0 VEL = 40.0 MULLOCK = 0.55 MUPEAK = 0.89 RATIO = 1.61 A=0 FILE 76 NHFILE 143 SAMPLE 107

** A=0 FILE 77 NEW FILE 144 TEST SAMPLE148 **

AVERAGE OF FILE 77 FOR 6 RECORDS, FIRESTONE TRANSPORT I 18.0=28/F DRY ASPHALT (TRC)

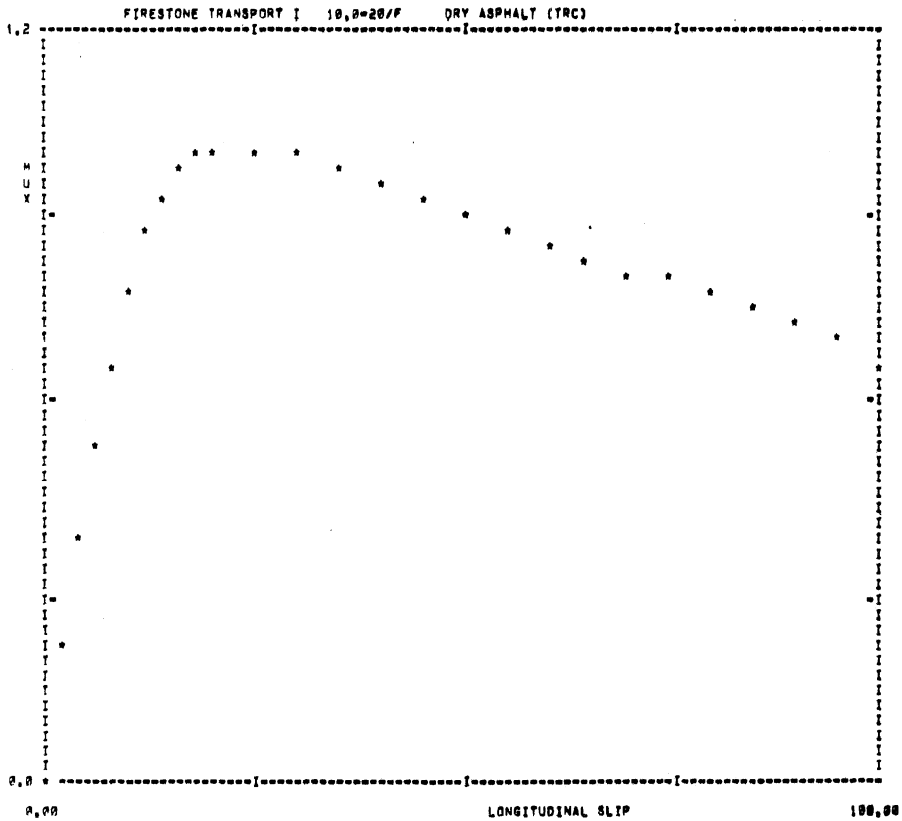
| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 21003.3 | 1026.4 |
| 0.04 | 0.34 | 37216.4 | 1841.2 |
| 0.06 | 0.46 | 51350.8 | 2502.1 |
| 0.08 | 0.57 | 63956.4 | 3115.4 |
| 0.10 | 0.66 | 73162.5 | 3583.2 |
| 0.12 | 0.73 | 81296.2 | 3952.5 |
| 0.14 | 0.79 | 87670.4 | 4220.5 |
| 0.16 | 0.83 | 92901.7 | 4419.4 |
| 0.18 | 0.86 | 96941.0 | 4551.0 |
| 0.20 | 0.86 | 99535.6 | 4583.4 |
| 0.25 | 0.87 | 103201.0 | 4576.3 |
| 0.30 | 0.86 | 106914.3 | 4519.6 |
| 0.35 | 0.85 | 108420.9 | 4427.0 |
| 0.40 | 0.83 | 110593.9 | 4322.3 |
| 0.45 | 0.81 | 112410.9 | 4215.0 |
| 0.50 | 0.79 | 113911.5 | 4110.1 |
| 0.55 | 0.76 | 115199.5 | 4000.1 |
| 0.60 | 0.76 | 116380.6 | 3904.6 |
| 0.65 | 0.74 | 117747.8 | 3792.7 |
| 0.70 | 0.71 | 118792.2 | 3679.3 |
| 0.75 | 0.69 | 117640.9 | 3569.6 |
| 0.80 | 0.67 | 112060.2 | 3461.1 |
| 0.85 | 0.65 | 101540.2 | 3306.7 |
| 0.90 | 0.62 | 87876.9 | 3222.9 |
| 0.95 | 0.59 | 73152.2 | 3004.2 |
| 1.00 | 0.56 | 57395.0 | 2960.0 |

TQAV = 57395.0 LOAD = 5001.5 VEL = 55.0 MPH.
 MUPEAK = 0.87 MULOCK = 0.56 RATIO = 1.50



LOAD = 5001.5 VEL = 55.0 MULOCK = 0.56 MUPEAK = 0.87 RATIO = 1.50 A=0 FILE 77 NEW FILE 144 SAMPLE 148

| AVERAGE OF FILE 02 FOR 6 RECORDS, | | FIRESTONE TRANSPORT I | 10,0-20/F | DRY ASPHALT (TRC) |
|-----------------------------------|------|-----------------------|-----------|----------------------------------------------|
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.23 | 11700.0 | 525.3 | |
| 0.04 | 0.40 | 20025.6 | 899.2 | |
| 0.06 | 0.55 | 26932.1 | 1217.3 | |
| 0.08 | 0.67 | 33230.5 | 1490.3 | |
| 0.10 | 0.70 | 38115.2 | 1714.6 | |
| 0.12 | 0.87 | 42075.2 | 1886.8 | |
| 0.14 | 0.93 | 45690.7 | 2080.6 | |
| 0.16 | 0.98 | 49415.5 | 2094.5 | |
| 0.18 | 1.01 | 52300.6 | 2152.4 | TQAV = 29333.3 LOAD = 2239.9 VEL = 40.0 MPH, |
| 0.20 | 1.02 | 50400.9 | 2176.7 | |
| 0.25 | 1.01 | 50151.7 | 2179.3 | MUPEAK = 1.02 MULOCK = 0.60 RATIO = 1.50 |
| 0.30 | 1.00 | 61106.5 | 2154.5 | |
| 0.35 | 0.97 | 63567.0 | 2111.6 | |
| 0.40 | 0.95 | 65801.3 | 2060.1 | |
| 0.45 | 0.92 | 66088.7 | 2004.5 | |
| 0.50 | 0.90 | 70332.5 | 1900.6 | |
| 0.55 | 0.87 | 72569.5 | 1890.6 | |
| 0.60 | 0.85 | 70030.8 | 1835.6 | |
| 0.65 | 0.84 | 76074.5 | 1790.2 | |
| 0.70 | 0.82 | 77999.0 | 1752.4 | |
| 0.75 | 0.81 | 76716.0 | 1720.1 | |
| 0.80 | 0.79 | 71167.4 | 1686.1 | |
| 0.85 | 0.77 | 62107.8 | 1630.8 | |
| 0.90 | 0.74 | 51716.2 | 1581.3 | |
| 0.95 | 0.71 | 40769.3 | 1510.7 | |
| 1.00 | 0.68 | 29333.3 | 1450.0 | |



FZ = 2239.9 VFL = 40.0 MULOCK = 0.60 MUPEAK = 1.02 RATIO = 1.50 A=0 FILE 02 NWFILE 146 SAMPLE 110

40 FILE 83

NEW FILE 147

TEST SAMPLE111 **

AVERAGE OF FILE 83 FOR 6 RECORDS.

FIRESTONE TRANSPORT I

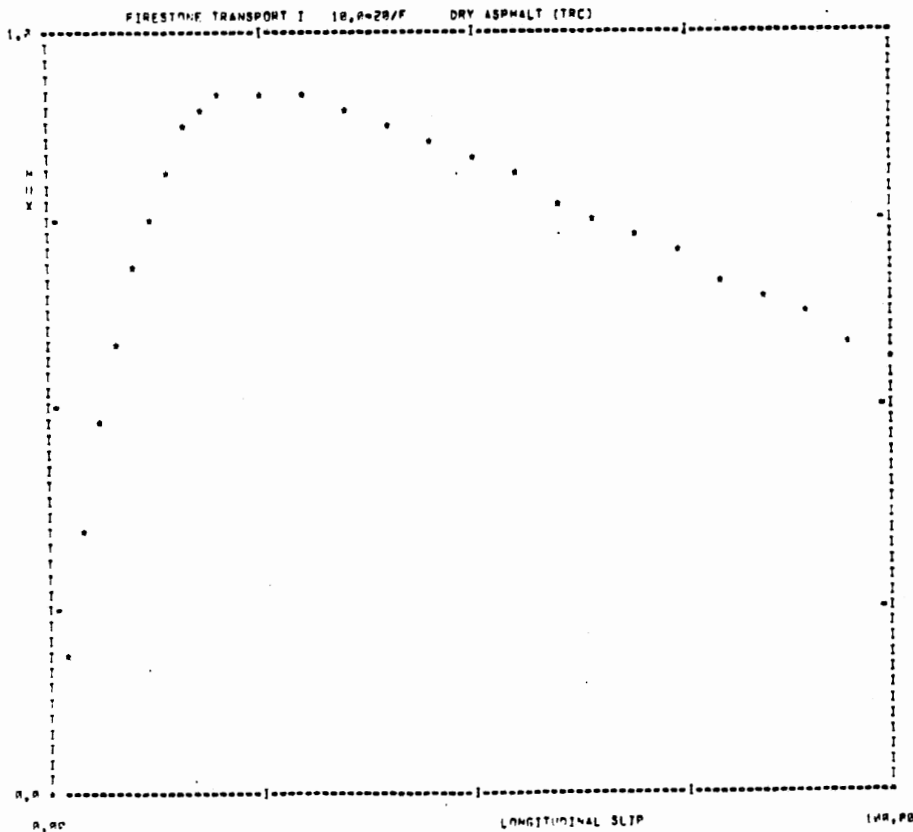
18,P=20/F

DRY ASPHALT (TRC)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 10036.2 | 1002.2 |
| 0.04 | 0.34 | 37454.4 | 1091.4 |
| 0.06 | 0.48 | 52319.3 | 2634.6 |
| 0.08 | 0.60 | 64978.3 | 3254.4 |
| 0.10 | 0.69 | 75312.5 | 3747.2 |
| 0.12 | 0.77 | 83523.6 | 4115.3 |
| 0.14 | 0.82 | 89795.1 | 4394.6 |
| 0.16 | 0.87 | 94777.4 | 4611.5 |
| 0.18 | 0.91 | 98448.4 | 4776.2 |
| 0.20 | 0.92 | 102028.6 | 4853.0 |
| 0.25 | 0.92 | 107525.1 | 4886.9 |
| 0.30 | 0.92 | 111485.9 | 4853.5 |
| 0.35 | 0.90 | 114123.1 | 4779.6 |
| 0.40 | 0.88 | 115932.4 | 4681.9 |
| 0.45 | 0.86 | 117308.5 | 4571.3 |
| 0.50 | 0.84 | 118536.3 | 4452.3 |
| 0.55 | 0.81 | 119931.7 | 4323.2 |
| 0.60 | 0.78 | 121469.3 | 4192.3 |
| 0.65 | 0.76 | 122886.2 | 4059.2 |
| 0.70 | 0.73 | 122668.5 | 3928.5 |
| 0.75 | 0.71 | 119184.9 | 3798.9 |
| 0.80 | 0.68 | 111957.5 | 3664.3 |
| 0.85 | 0.66 | 100123.2 | 3519.8 |
| 0.90 | 0.63 | 86539.7 | 3361.8 |
| 0.95 | 0.60 | 72445.5 | 3199.4 |
| 1.00 | 0.56 | 58541.7 | 3031.3 |

TOAY = 58541.7 LOAD = 5510.4 VEL = 49.8 MPH.

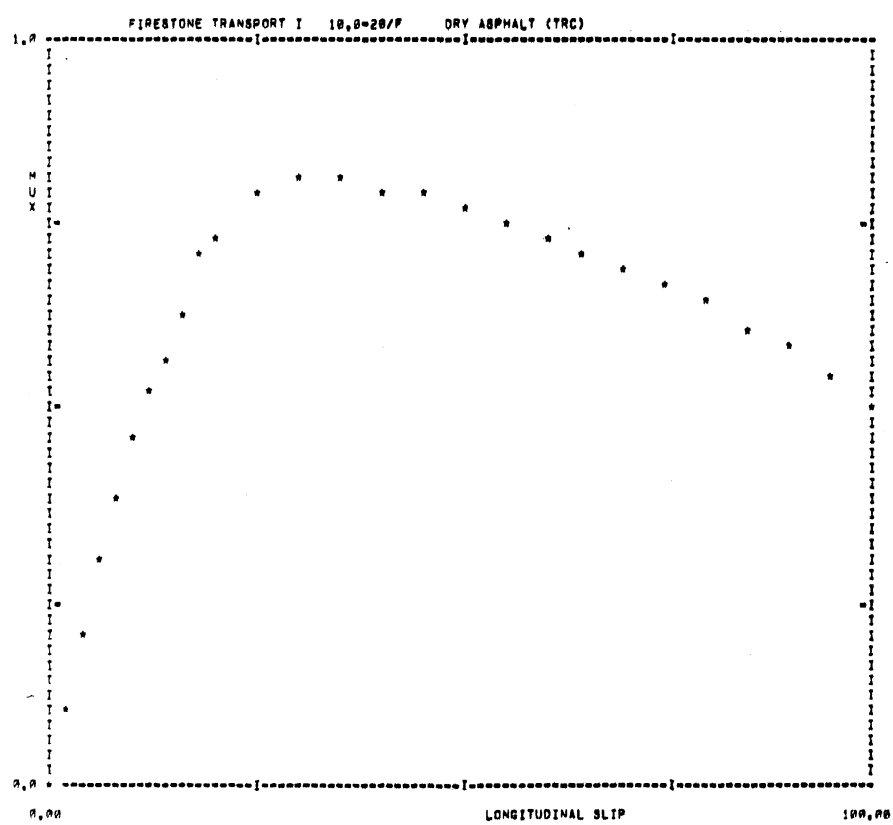
MUFPAK = 0.92 MULLOCK = 0.56 RATIO = 1.64



FZ = 5510.4 VEL = 49.8 MULLOCK = 0.56 MUFPAK = 0.92 RATIO = 1.64 40 FILE 83 NEW FILE 147 SAMPLE 111

** A=D FILE 80 NEW FILE 148 TEST SAMPLE112 **

| AVERAGE OF FILE 80 FOR 6 RECORDS. | | | | FIRESTONE TRANSPORT I 18.0=20/F DRY ASPHALT (TRC) | |
|-----------------------------------|------|----------|--------|---------------------------------------------------|-------------------------------|
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.11 | 14611.2 | 944.0 | | |
| 0.04 | 0.20 | 34139.9 | 1801.6 | | |
| 0.06 | 0.30 | 51941.8 | 2672.9 | | |
| 0.08 | 0.39 | 67977.3 | 3441.1 | | |
| 0.10 | 0.47 | 80800.5 | 4087.1 | | |
| 0.12 | 0.53 | 91193.3 | 4617.0 | | |
| 0.14 | 0.58 | 100274.0 | 5045.0 | | |
| 0.16 | 0.64 | 109978.9 | 5471.7 | | |
| 0.18 | 0.71 | 123190.4 | 6005.7 | TOAV = 84833.3 | LOAD = 9802.8 VEL = 40.0 MPH. |
| 0.20 | 0.75 | 131214.5 | 6291.8 | | |
| 0.25 | 0.79 | 143493.6 | 6599.9 | MUPEAK = 0.81 | MULOCK = 0.52 RATIO = 1.56 |
| 0.30 | 0.81 | 152331.9 | 6723.0 | | |
| 0.35 | 0.81 | 158672.6 | 6728.9 | | |
| 0.40 | 0.80 | 163508.2 | 6663.8 | | |
| 0.45 | 0.79 | 167681.8 | 6557.4 | | |
| 0.50 | 0.78 | 171212.6 | 6426.7 | | |
| 0.55 | 0.76 | 170357.5 | 6282.0 | | |
| 0.60 | 0.74 | 170649.1 | 6126.2 | | |
| 0.65 | 0.72 | 170042.4 | 5965.7 | | |
| 0.70 | 0.70 | 171638.8 | 5795.1 | | |
| 0.75 | 0.67 | 161784.7 | 5608.7 | | |
| 0.80 | 0.65 | 147420.9 | 5404.9 | | |
| 0.85 | 0.62 | 130740.6 | 5183.5 | | |
| 0.90 | 0.59 | 114593.7 | 4944.8 | | |
| 0.95 | 0.56 | 99202.9 | 4608.4 | | |
| 1.00 | 0.52 | 84833.3 | 4443.8 | | |



FZ = 9802.8 VEL = 40.0 MULOCK = 0.52 MUPEAK = 0.81 RATIO = 1.56 A=D FILE 80 NEWFILE 148 SAMPLE 112

== A=0 FILE 71

NEW FILE 138

TEST SAMPLE 102 ==

AVERAGE OF FILE 71 FOR 6 RECORDS.

FIRESTONE TRANSPORT I

10, P=20/F

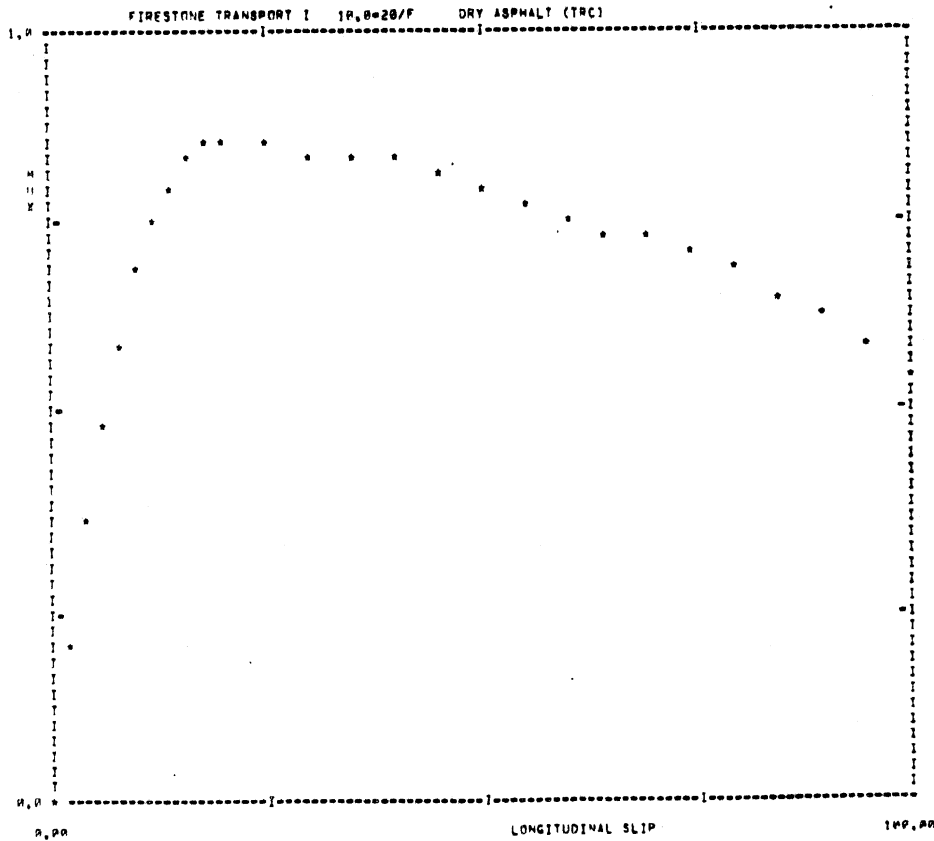
DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.20 | 22597.0 | 1086.1 |
| 0.04 | 0.36 | 39792.0 | 1961.6 |
| 0.06 | 0.50 | 54107.0 | 2782.1 |
| 0.08 | 0.60 | 65940.4 | 3282.2 |
| 0.10 | 0.69 | 75410.5 | 3727.5 |
| 0.12 | 0.75 | 82462.5 | 4078.0 |
| 0.14 | 0.80 | 88389.0 | 4322.9 |
| 0.16 | 0.84 | 93360.0 | 4514.4 |
| 0.18 | 0.86 | 96040.7 | 4628.4 |
| 0.20 | 0.86 | 99040.5 | 4651.7 |
| 0.25 | 0.86 | 102420.3 | 4616.2 |
| 0.30 | 0.85 | 104110.1 | 4558.7 |
| 0.35 | 0.84 | 106070.1 | 4473.7 |
| 0.40 | 0.83 | 107860.9 | 4398.0 |
| 0.45 | 0.82 | 109300.6 | 4300.5 |
| 0.50 | 0.80 | 110920.5 | 4206.0 |
| 0.55 | 0.78 | 112577.8 | 4107.5 |
| 0.60 | 0.76 | 114109.6 | 4003.9 |
| 0.65 | 0.75 | 115500.1 | 3903.1 |
| 0.70 | 0.73 | 116202.9 | 3805.0 |
| 0.75 | 0.71 | 116371.5 | 3714.5 |
| 0.80 | 0.69 | 108330.6 | 3613.4 |
| 0.85 | 0.66 | 98301.9 | 3476.6 |
| 0.90 | 0.63 | 86156.5 | 3319.2 |
| 0.95 | 0.59 | 73132.3 | 3140.0 |
| 1.00 | 0.55 | 59100.2 | 2961.2 |

TGAV = 59100.2 LOAD = 5401.0 VEL = 48.0 MPH.

MUPEAK = 0.86 MULOCK = 0.55 RATIO = 1.56

Check Run #1



F7 = 5401.0 VFL = 48.0 MULOCK = 0.55 MUPEAK = 0.86 RATIO = 1.56 A=0 FILE 71 NEW FILE 138 SAMPLE 102

** A=D FILE 81 NEW FILE 145 TEST SAMPLE 189 **

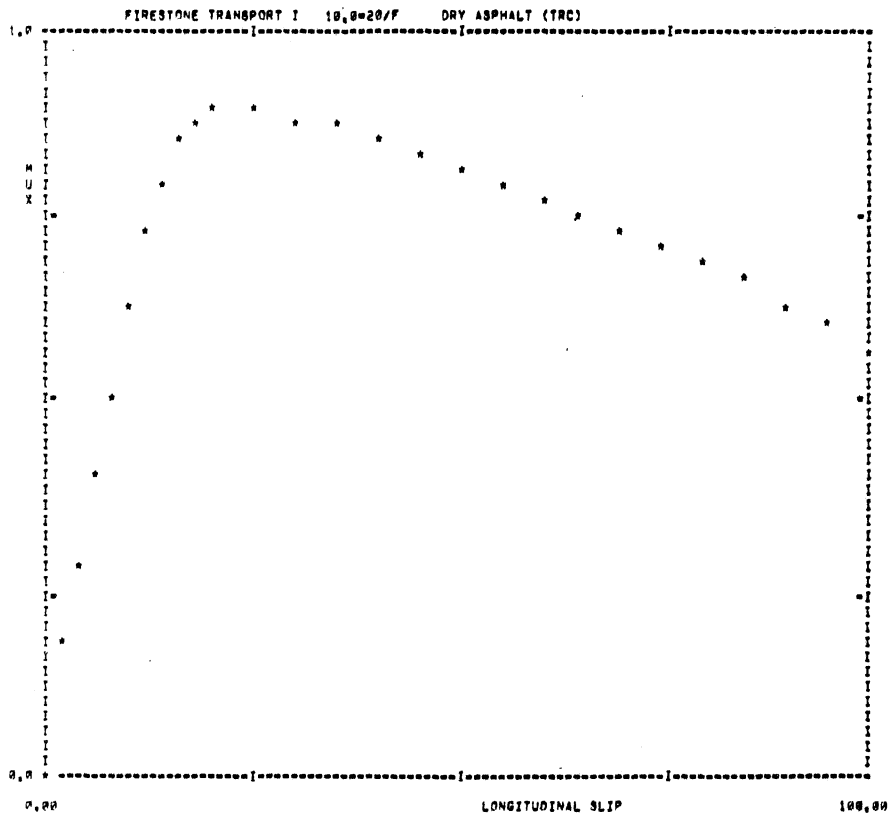
AVERAGE OF FILE 81 FOR 6 RECORDS FIRESTONE TRANSPORT I 10.0=20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.18 | 19266.9 | 979.6 |
| 0.04 | 0.29 | 31898.9 | 1595.6 |
| 0.06 | 0.40 | 43909.5 | 2281.7 |
| 0.08 | 0.51 | 55409.4 | 2775.2 |
| 0.10 | 0.64 | 69131.5 | 3436.1 |
| 0.12 | 0.74 | 80836.9 | 3972.8 |
| 0.14 | 0.81 | 89417.2 | 4343.1 |
| 0.16 | 0.85 | 94880.6 | 4589.9 |
| 0.18 | 0.88 | 98548.5 | 4736.1 |
| 0.20 | 0.89 | 101449.8 | 4778.2 |
| 0.25 | 0.89 | 106607.6 | 4766.3 |
| 0.30 | 0.89 | 110366.1 | 4712.6 |
| 0.35 | 0.88 | 113146.8 | 4628.8 |
| 0.40 | 0.86 | 115506.7 | 4527.2 |
| 0.45 | 0.84 | 117626.4 | 4414.8 |
| 0.50 | 0.82 | 119462.3 | 4292.4 |
| 0.55 | 0.80 | 121184.6 | 4167.3 |
| 0.60 | 0.77 | 122632.5 | 4042.3 |
| 0.65 | 0.75 | 124039.3 | 3918.8 |
| 0.70 | 0.73 | 125668.4 | 3797.4 |
| 0.75 | 0.71 | 119173.0 | 3684.8 |
| 0.80 | 0.69 | 110372.8 | 3566.5 |
| 0.85 | 0.67 | 98405.8 | 3438.5 |
| 0.90 | 0.64 | 85396.5 | 3304.4 |
| 0.95 | 0.61 | 72282.8 | 3166.6 |
| 1.00 | 0.58 | 58875.8 | 3023.7 |

TGAV = 58875.8 LOAD = 5491.9 VEL = 40.0 MPH.

MUPEAK = 0.89 MULOCK = 0.58 RATIO = 1.54

Check Run #3



FZ = 5491.9 VEL = 40.0 MULOCK = 0.58 MUPEAK = 0.89 RATIO = 1.54 A=D FILE 81 NHFILE 145 SAMPLE 189

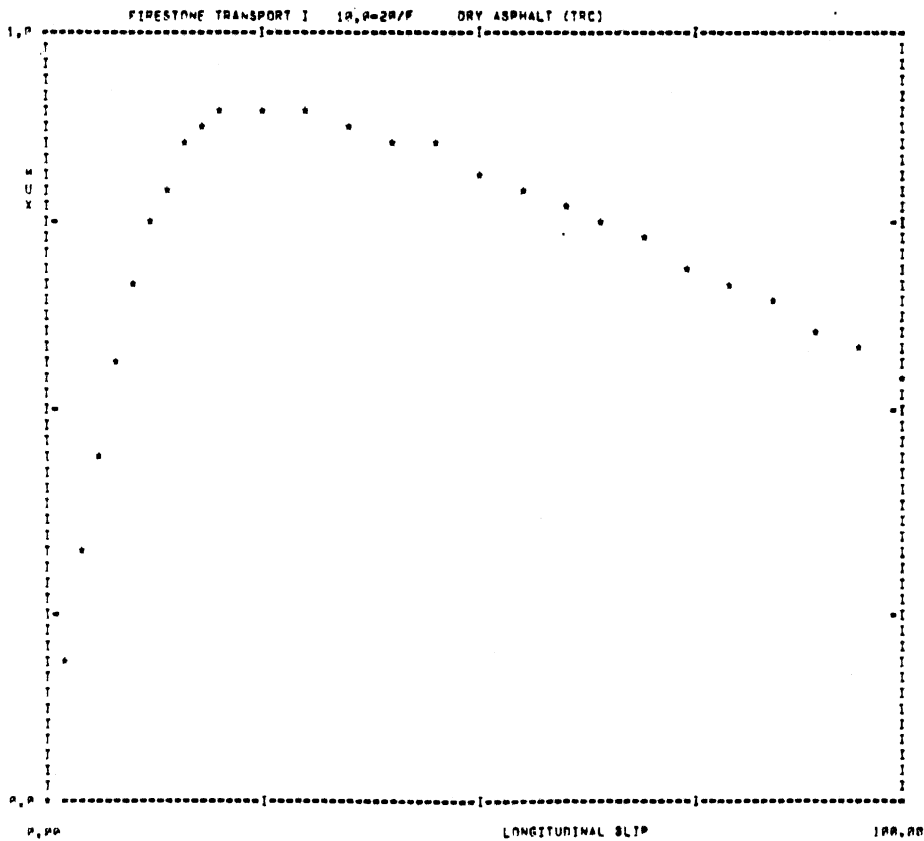
** A-D FILE 85 NEW FILE 149 TEST SAMPLE 113 **
 AVERAGE OF FILE 85 FOR 6 RECORDS. FIRESTONE TRANSPORT I 14,0-20/F DRY ASPHALT (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 28241.7 | 1886.5 |
| 0.04 | 0.33 | 36042.1 | 1757.6 |
| 0.06 | 0.46 | 52230.2 | 2056.2 |
| 0.08 | 0.50 | 62113.2 | 3176.9 |
| 0.10 | 0.67 | 73715.6 | 3575.9 |
| 0.12 | 0.75 | 82115.5 | 3967.8 |
| 0.14 | 0.81 | 88780.3 | 4268.4 |
| 0.16 | 0.85 | 94239.6 | 4467.4 |
| 0.18 | 0.88 | 98390.6 | 4602.8 |
| 0.20 | 0.90 | 101187.0 | 4659.6 |
| 0.25 | 0.90 | 106176.8 | 4671.1 |
| 0.30 | 0.90 | 110180.1 | 4626.9 |
| 0.35 | 0.89 | 113224.8 | 4550.8 |
| 0.40 | 0.87 | 115000.4 | 4457.6 |
| 0.45 | 0.85 | 117357.6 | 4353.8 |
| 0.50 | 0.83 | 118090.8 | 4283.3 |
| 0.55 | 0.80 | 120693.4 | 4126.9 |
| 0.60 | 0.78 | 122015.7 | 4018.9 |
| 0.65 | 0.76 | 123657.2 | 3892.6 |
| 0.70 | 0.73 | 122004.9 | 3771.8 |
| 0.75 | 0.70 | 119286.6 | 3648.6 |
| 0.80 | 0.68 | 111511.0 | 3518.5 |
| 0.85 | 0.65 | 99373.6 | 3370.7 |
| 0.90 | 0.62 | 85911.1 | 3235.8 |
| 0.95 | 0.59 | 72261.7 | 3091.1 |
| 1.00 | 0.56 | 58500.0 | 2903.7 |

TOAV = 50500.0 LOAD = 5003.8 VEL = 80.0 MPH.

MUPEAK = 0.90 MULOCK = 0.56 RATIO = 1.61

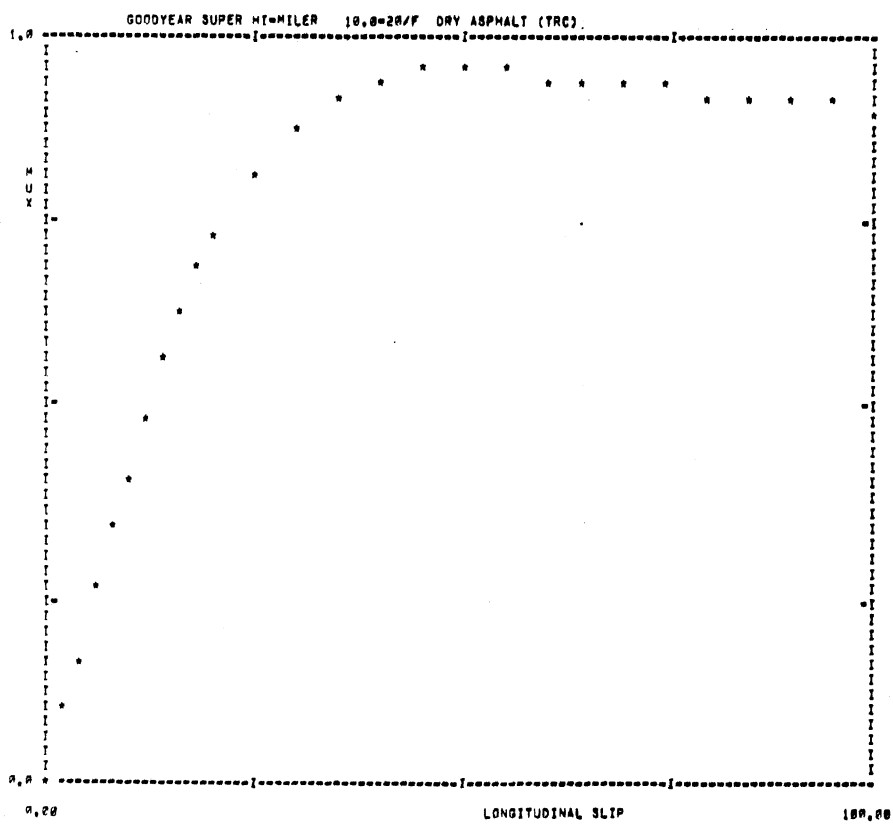
Check Run #5



FZ = 5003.8 VFL = 80.0 MULOCK = 0.56 MUPEAK = 0.90 RATIO = 1.61 A-D FILE 85 NEW FILE 149 SAMPLE 113

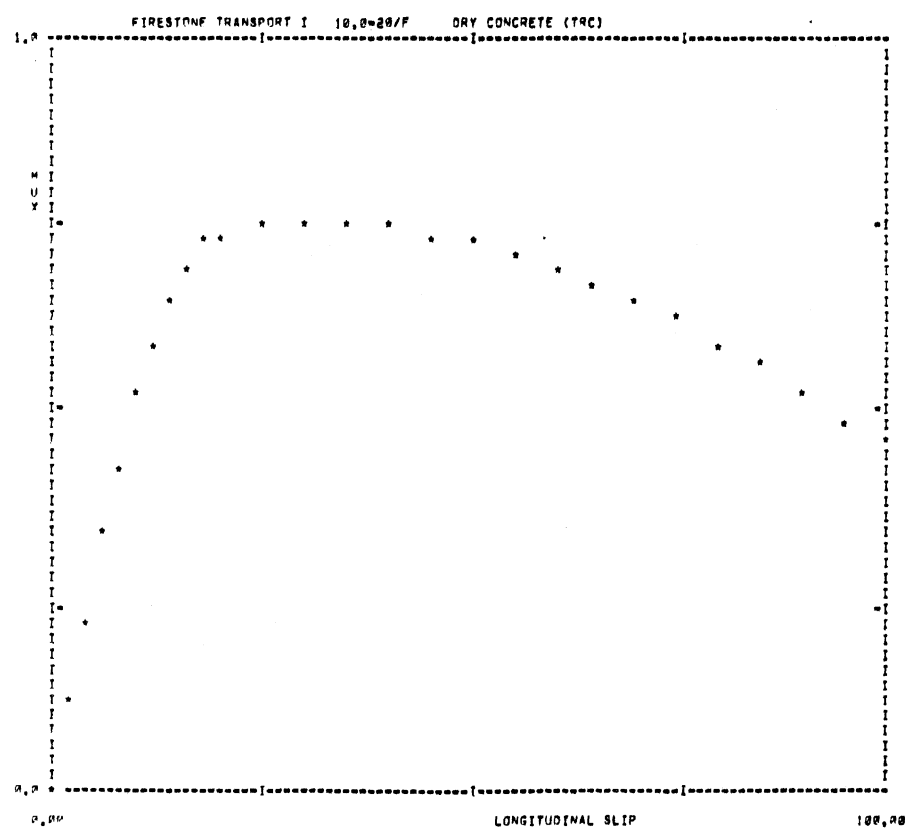
GOODYEAR SUPER HI MILER, 10.00 x 20/F, TRC ASPHALT

| ** A=0 FILE 8 | | | NEW FILE 115 | TEST SAMPLE 3 ** |
|-----------------|------|----------------|-------------------------|--------------------------------------------|
| AVERAGE OF FILE | 8 | FOR 6 RECORDS, | GOODYEAR SUPER MI-MILER | 10.0=20/F DRY ASPHALT (TRC) |
| SLIP | MIX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.10 | 9026.2 | 551.6 | |
| 0.04 | 0.17 | 17062.2 | 950.2 | |
| 0.06 | 0.26 | 26775.1 | 1445.2 | |
| 0.08 | 0.34 | 35615.2 | 1905.1 | |
| 0.10 | 0.41 | 43270.0 | 2314.3 | |
| 0.12 | 0.49 | 51929.6 | 2737.9 | |
| 0.14 | 0.56 | 60512.5 | 3139.7 | |
| 0.16 | 0.63 | 67976.6 | 3506.5 | |
| 0.18 | 0.69 | 74232.0 | 3811.3 | TOAV = 97041.7 LOAD = 5610.5 VEL = 3.0 MPH |
| 0.20 | 0.73 | 78292.0 | 4008.1 | |
| 0.25 | 0.82 | 86841.1 | 4442.1 | MUPEAK = 0.95 MULOCK = 0.91 RATIO = 1.05 |
| 0.30 | 0.89 | 93941.9 | 4761.1 | |
| 0.35 | 0.93 | 98249.1 | 4949.4 | |
| 0.40 | 0.95 | 100225.2 | 5029.4 | |
| 0.45 | 0.95 | 100976.5 | 5054.1 | |
| 0.50 | 0.95 | 101133.9 | 5052.4 | |
| 0.55 | 0.95 | 100901.7 | 5037.6 | |
| 0.60 | 0.95 | 100700.9 | 5016.3 | |
| 0.65 | 0.94 | 100335.7 | 4991.0 | |
| 0.70 | 0.94 | 99933.5 | 4965.6 | |
| 0.75 | 0.93 | 99512.6 | 4938.7 | |
| 0.80 | 0.93 | 99082.5 | 4911.3 | |
| 0.85 | 0.92 | 98647.7 | 4883.7 | |
| 0.90 | 0.92 | 98181.4 | 4855.1 | |
| 0.95 | 0.91 | 97655.7 | 4824.6 | |
| 1.00 | 0.91 | 97041.7 | 4791.3 | |



F7 = 5610.5 VEL = 3.0 MULOCK = 0.91 MUPEAK = 0.95 RATIO = 1.05 A=0 FILE 8 MNFILE 115 SAMPLE 3

| ** A=D FILE 106 | | NEW FILE 106 | | TEST SAMPLE 161 ** | |
|------------------------------------|------|-----------------------|--------|--------------------|-------------------------------|
| AVERAGE OF FILE 106 FOR 6 RECORDS. | | FIRESTONE TRANSPORT I | | 10,0=20/F | DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.12 | 16005.7 | 1062.2 | | |
| 0.04 | 0.23 | 39525.3 | 2046.0 | | |
| 0.06 | 0.34 | 59713.9 | 3021.7 | | |
| 0.08 | 0.44 | 77302.2 | 3876.7 | | |
| 0.10 | 0.53 | 91887.6 | 4575.9 | | |
| 0.12 | 0.60 | 103757.9 | 5121.9 | | |
| 0.14 | 0.65 | 113345.8 | 5546.8 | | |
| 0.16 | 0.70 | 120947.8 | 5868.2 | | |
| 0.18 | 0.73 | 126808.6 | 6095.2 | TQAV = 76250.0 | LOAD = 8932.9 VEL = 40.0 MPH. |
| 0.20 | 0.74 | 131054.8 | 6283.7 | | |
| 0.25 | 0.76 | 138056.7 | 6304.5 | MUPEAK = 0.76 | MULOCK = 0.06 RATIO = 1.65 |
| 0.30 | 0.76 | 145025.5 | 6326.9 | | |
| 0.35 | 0.76 | 149868.4 | 6295.4 | | |
| 0.40 | 0.75 | 153712.1 | 6222.7 | | |
| 0.45 | 0.74 | 157060.4 | 6117.4 | | |
| 0.50 | 0.73 | 160154.8 | 5996.6 | | |
| 0.55 | 0.71 | 163254.6 | 5866.2 | | |
| 0.60 | 0.69 | 165687.9 | 5724.9 | | |
| 0.65 | 0.67 | 165508.1 | 5572.9 | | |
| 0.70 | 0.65 | 162408.6 | 5410.8 | | |
| 0.75 | 0.63 | 154999.8 | 5234.3 | | |
| 0.80 | 0.60 | 141988.9 | 5028.0 | | |
| 0.85 | 0.57 | 125940.0 | 4782.8 | | |
| 0.90 | 0.54 | 109141.7 | 4514.0 | | |
| 0.95 | 0.50 | 92507.4 | 4231.8 | | |
| 1.00 | 0.46 | 76250.0 | 3932.5 | | |



FZ = 8932.9 VEL = 40.0 MULOCK = 0.06 MUPEAK = 0.76 RATIO = 1.65 A=D FILE 106 NEWFILE 106 SAMPLE 161

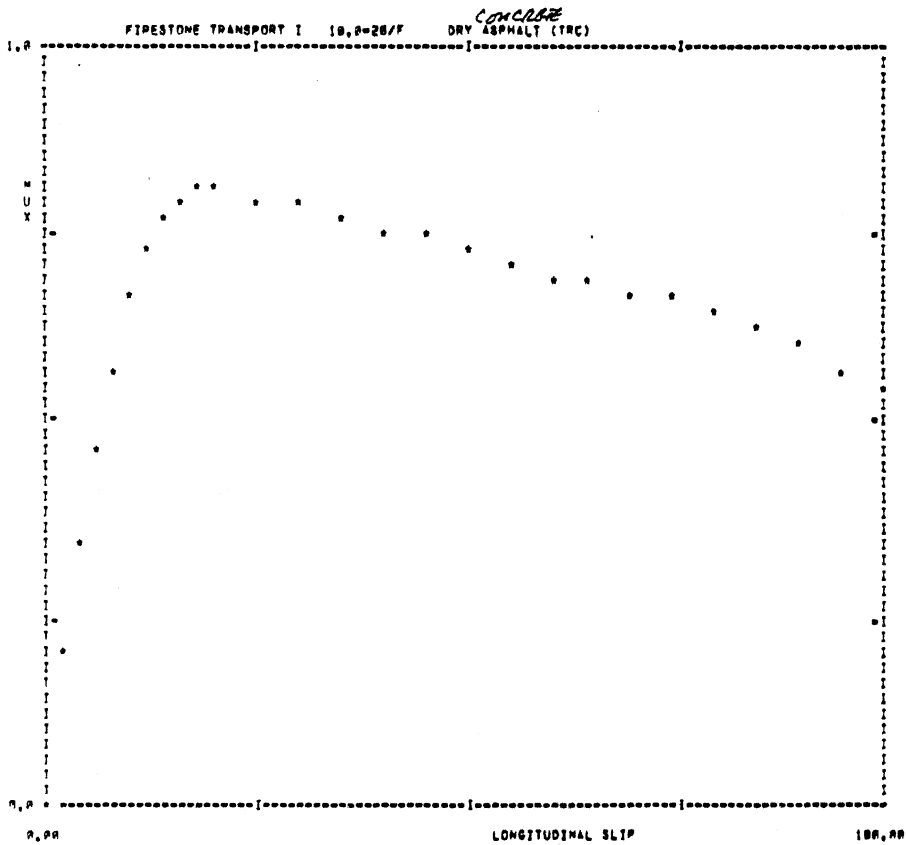
** A-D FILE 78 NEW FILE 137 TEST SAMPLE 101 **
 AVERAGE OF FILE 78 FOR 6 RECORDS, FIRESTONE TRANSPORT I 10,0-20/F DRY ~~ASPHALT~~ ^{CONCRETE} (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 22753.4 | 1147.3 |
| 0.04 | 0.35 | 37746.8 | 1926.2 |
| 0.06 | 0.48 | 50605.3 | 2569.8 |
| 0.08 | 0.58 | 60975.2 | 3074.2 |
| 0.10 | 0.67 | 69952.9 | 3497.7 |
| 0.12 | 0.73 | 77832.1 | 3867.1 |
| 0.14 | 0.78 | 83862.4 | 4129.1 |
| 0.16 | 0.80 | 88538.4 | 4388.3 |
| 0.18 | 0.81 | 91931.4 | 4603.4 |
| 0.20 | 0.81 | 94313.3 | 4807.3 |
| 0.25 | 0.80 | 98124.1 | 4958.8 |
| 0.30 | 0.79 | 100454.6 | 4991.6 |
| 0.35 | 0.78 | 101976.6 | 4812.2 |
| 0.40 | 0.77 | 103224.3 | 4122.9 |
| 0.45 | 0.75 | 104449.7 | 4028.1 |
| 0.50 | 0.74 | 105071.8 | 3931.5 |
| 0.55 | 0.72 | 107352.7 | 3834.8 |
| 0.60 | 0.71 | 108863.8 | 3742.9 |
| 0.65 | 0.69 | 110428.6 | 3655.3 |
| 0.70 | 0.68 | 111244.3 | 3574.2 |
| 0.75 | 0.67 | 109291.2 | 3499.3 |
| 0.80 | 0.65 | 103692.3 | 3417.9 |
| 0.85 | 0.63 | 98863.4 | 3318.4 |
| 0.90 | 0.61 | 82478.1 | 3189.5 |
| 0.95 | 0.58 | 78131.8 | 3059.4 |
| 1.00 | 0.55 | 56958.3 | 2917.5 |

TQAV = 56958.3 LOAD = 5451.3 VEL = 40.8 MPH.

MUPEAK = 0.81 MULOCK = 0.55 RATIO = 1.47

Check Run #1



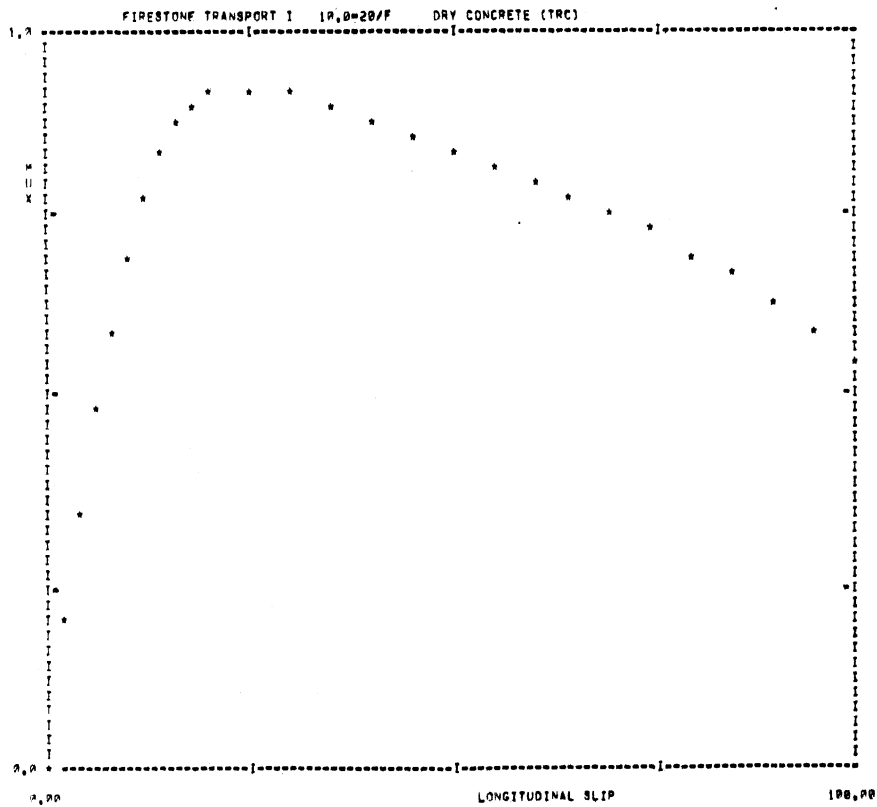
FZ = 5451.3 VEL = 40.8 MULOCK = 0.55 MUPEAK = 0.81 RATIO = 1.47 A-D FILE 78 NEWFILE 137 SAMPLE 101

| ** A=D FILE 93 | | NEW FILE 150 | TEST SAMPLE 151 ** | |
|-----------------------------------|------|-----------------------|--------------------|--------------------|
| AVERAGE OF FILE 93 FOR 6 RECORDS. | | FIRESTONE TRANSPORT 1 | 10.0=20/F | DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 20062.8 | 1000.7 | |
| 0.04 | 0.35 | 36290.7 | 1877.7 | |
| 0.06 | 0.48 | 49645.3 | 2537.1 | |
| 0.08 | 0.59 | 60727.0 | 3072.2 | |
| 0.10 | 0.69 | 69799.3 | 3509.6 | |
| 0.12 | 0.77 | 77829.6 | 3881.1 | |
| 0.14 | 0.84 | 84867.0 | 4204.1 | |
| 0.16 | 0.88 | 90906.6 | 4439.7 | |
| 0.18 | 0.91 | 95399.6 | 4591.9 | |
| 0.20 | 0.92 | 98897.6 | 4664.8 | |
| 0.25 | 0.92 | 102847.9 | 4720.5 | |
| 0.30 | 0.91 | 106594.0 | 4718.3 | |
| 0.35 | 0.90 | 109730.6 | 4678.6 | |
| 0.40 | 0.88 | 112576.3 | 4614.9 | |
| 0.45 | 0.87 | 115137.5 | 4537.8 | |
| 0.50 | 0.85 | 117273.6 | 4454.2 | |
| 0.55 | 0.83 | 119237.1 | 4362.3 | |
| 0.60 | 0.80 | 120928.3 | 4262.7 | |
| 0.65 | 0.78 | 122376.2 | 4155.8 | |
| 0.70 | 0.76 | 122772.6 | 4041.6 | |
| 0.75 | 0.73 | 120099.2 | 3920.8 | |
| 0.80 | 0.70 | 112548.5 | 3781.0 | |
| 0.85 | 0.67 | 100660.4 | 3605.9 | |
| 0.90 | 0.63 | 86667.2 | 3409.2 | |
| 0.95 | 0.59 | 72323.7 | 3199.3 | |
| 1.00 | 0.55 | 56916.7 | 2972.5 | |

TQAV = 56916.7 LOAD = 5376.1 VEL = 40.0 MPH.

MUPEAK = 0.92 MULLOCK = 0.55 RATIO = 1.67

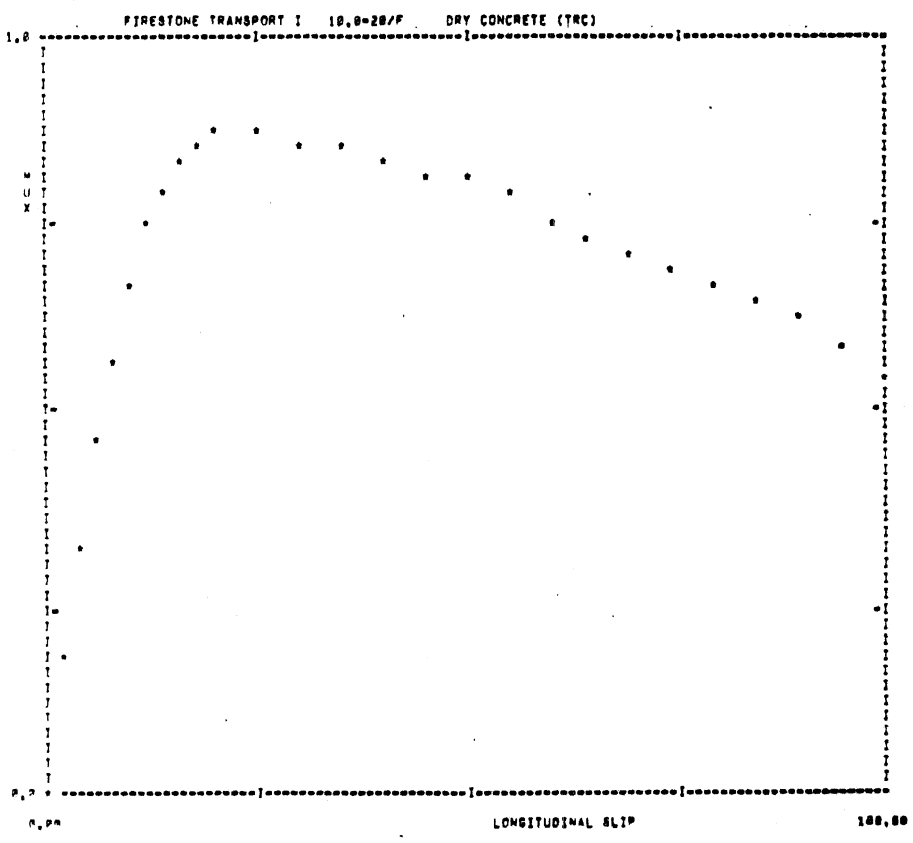
Check Run #2



FZ = 5376.1 VEL = 40.0 MULLOCK = 0.55 MUPEAK = 0.92 RATIO = 1.67 A=D FILE 93 NEW FILE 150 SAMPLE 151

| ** A=D FILE 103 | | | NEW FILE 157 | TEST SAMPLE 150 ** |
|------------------------------------|------|----------|-----------------------|----------------------------------------------|
| AVERAGE OF FILE 103 FOR 6 RECORDS, | | | FIRESTONE TRANSPORT I | 10.0-20/F DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.10 | 10732.1 | 972.5 | |
| 0.04 | 0.34 | 36515.2 | 1039.4 | |
| 0.06 | 0.47 | 50295.4 | 2526.0 | |
| 0.08 | 0.58 | 62204.1 | 3090.4 | |
| 0.10 | 0.68 | 72433.3 | 3504.6 | |
| 0.12 | 0.75 | 80042.2 | 3971.3 | |
| 0.14 | 0.80 | 87502.2 | 4266.7 | |
| 0.16 | 0.80 | 92714.6 | 4472.0 | |
| 0.18 | 0.86 | 96705.6 | 4597.4 | TOAV = 57479.2 LOAD = 5602.0 VEL = 40.0 MPH. |
| 0.20 | 0.87 | 99560.2 | 4632.6 | MUPEAK = 0.87 MULOCH = 0.56 RATIO = 1.56 |
| 0.25 | 0.87 | 104494.1 | 4621.0 | |
| 0.30 | 0.86 | 108240.0 | 4573.0 | |
| 0.35 | 0.86 | 111023.3 | 4509.1 | |
| 0.40 | 0.80 | 113311.3 | 4431.6 | |
| 0.45 | 0.83 | 115440.0 | 4342.3 | |
| 0.50 | 0.81 | 117637.1 | 4240.4 | |
| 0.55 | 0.79 | 119999.5 | 4129.5 | |
| 0.60 | 0.77 | 122306.9 | 4017.6 | |
| 0.65 | 0.74 | 124126.9 | 3900.7 | |
| 0.70 | 0.72 | 124003.0 | 3795.4 | |
| 0.75 | 0.70 | 120561.0 | 3600.0 | |
| 0.80 | 0.68 | 112014.0 | 3577.0 | |
| 0.85 | 0.66 | 99779.0 | 3440.0 | |
| 0.90 | 0.63 | 85941.0 | 3209.7 | |
| 0.95 | 0.59 | 71799.4 | 3117.0 | |
| 1.00 | 0.56 | 57479.2 | 2930.0 | |

Check Run # 4



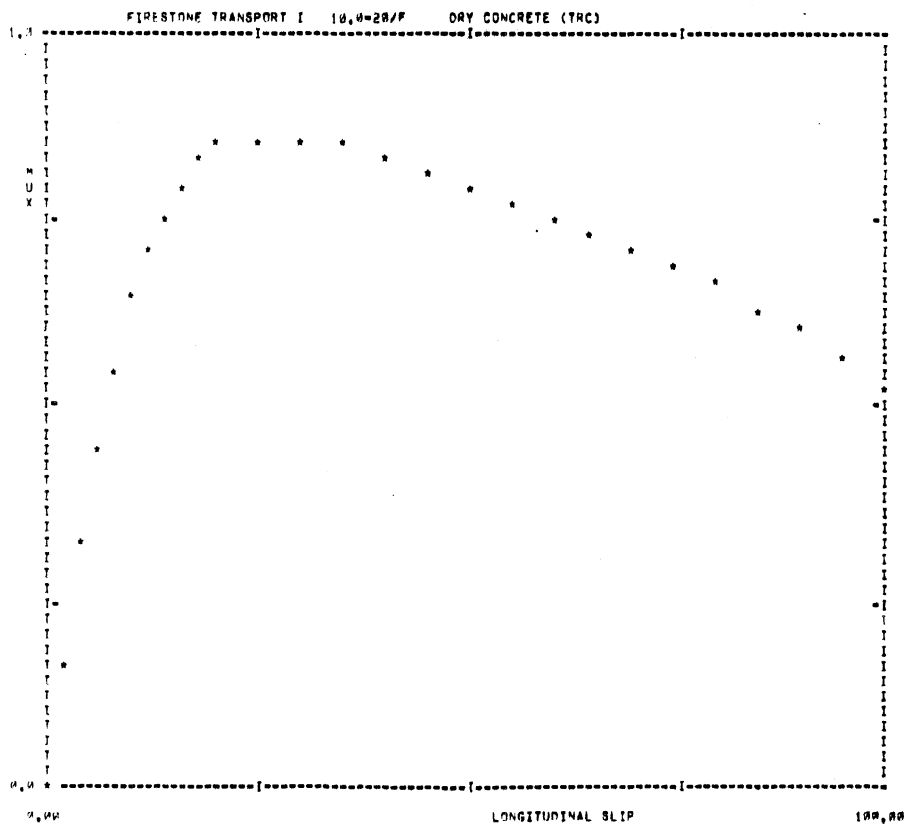
F7 = 56A2.0 VEL = 40.0 MULOCH = 0.56 MUPEAK = 0.87 RATIO = 1.56 A=D FILE 103 NEW FILE 157 SAMPLE 150

| ** A-D FILE 107 | | NEW FILE 161 | | TEST SAMPLE 162 ** | |
|------------------------------------|------|-----------------------|--------|--------------------|--------------------|
| AVERAGE OF FILE 107 FOR 6 RECORDS, | | FIRESTONE TRANSPORT I | | 10,0=20/F | DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.17 | 21220.5 | 973.0 | | |
| 0.04 | 0.32 | 37141.7 | 1703.9 | | |
| 0.06 | 0.46 | 51947.1 | 2516.2 | | |
| 0.08 | 0.56 | 64289.7 | 3111.9 | | |
| 0.10 | 0.65 | 73946.9 | 3581.4 | | |
| 0.12 | 0.71 | 82101.7 | 3927.9 | | |
| 0.14 | 0.77 | 88705.9 | 4162.8 | | |
| 0.16 | 0.81 | 93841.9 | 4370.3 | | |
| 0.18 | 0.84 | 97583.6 | 4495.9 | | |
| 0.20 | 0.85 | 100055.6 | 4540.2 | | |
| 0.25 | 0.86 | 104143.5 | 4570.4 | | |
| 0.30 | 0.86 | 107156.0 | 4550.5 | | |
| 0.35 | 0.86 | 109615.9 | 4503.3 | | |
| 0.40 | 0.84 | 111992.0 | 4435.4 | | |
| 0.45 | 0.83 | 114447.1 | 4351.1 | | |
| 0.50 | 0.80 | 116920.1 | 4254.1 | | |
| 0.55 | 0.78 | 119246.2 | 4149.5 | | |
| 0.60 | 0.76 | 121346.5 | 4044.8 | | |
| 0.65 | 0.74 | 122791.5 | 3940.2 | | |
| 0.70 | 0.72 | 122516.1 | 3837.6 | | |
| 0.75 | 0.70 | 119336.7 | 3734.0 | | |
| 0.80 | 0.67 | 111664.5 | 3612.6 | | |
| 0.85 | 0.64 | 100047.7 | 3455.1 | | |
| 0.90 | 0.61 | 86679.0 | 3277.0 | | |
| 0.95 | 0.57 | 72746.1 | 3087.6 | | |
| 1.00 | 0.53 | 58229.2 | 2883.7 | | |

TGAV = 58229.2 LOAD = 5546.0 VEL = 40.0 MPH.

MUPEAK = 0.86 MULOCK = 0.53 RATIO = 1.62

Check Run # 6



F7 = 5946.0 VEL = 40.0 MULOCK = 0.53 MUPEAK = 0.86 RATIO = 1.62 A-D FILE 107 NEWFILE 161 TEST FILE 162



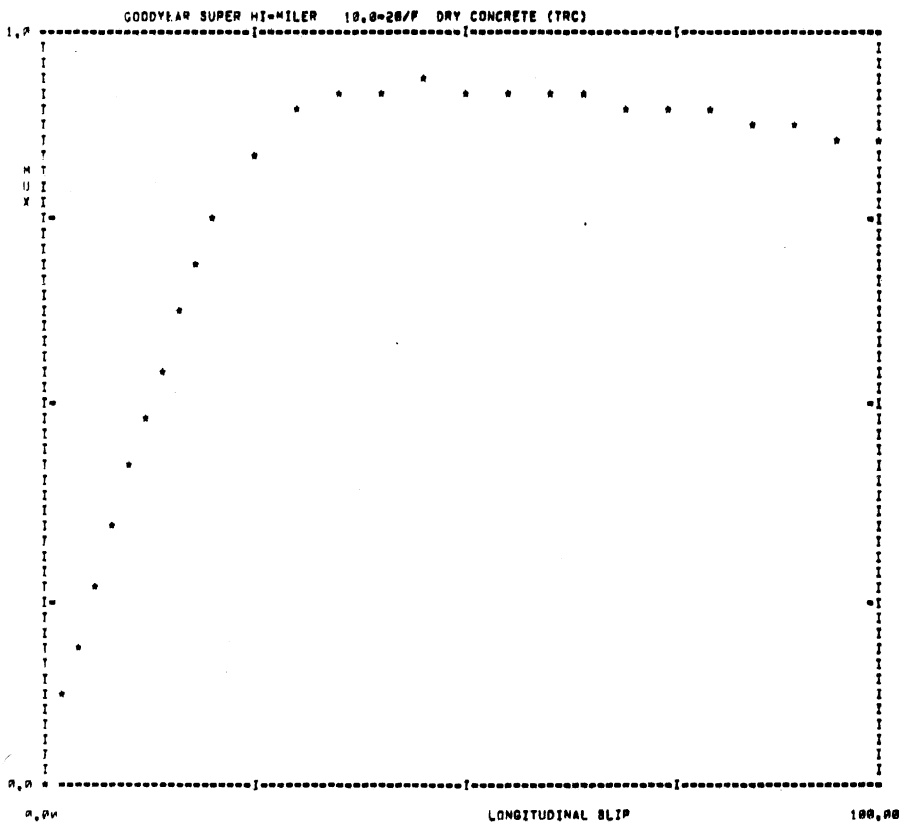
GOODYEAR SUPER HI MILER, 10.00 x 20/F, TRC CONCRETE

** A=0 FILE 50 NEW FILE 126 TEST SAMPLE 52 **
AVERAGE OF FILE 50 FOR 6 RECORDS, GOODYEAR SUPER HI=MILER 10,0=20/F DRY CONCRETE (TRC)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.13 | 13893.7 | 721.0 |
| 0.04 | 0.19 | 20720.2 | 1045.8 |
| 0.06 | 0.26 | 28532.0 | 1443.2 |
| 0.08 | 0.34 | 37433.7 | 1869.9 |
| 0.10 | 0.42 | 46236.9 | 2292.6 |
| 0.12 | 0.49 | 53756.4 | 2650.6 |
| 0.14 | 0.56 | 60921.7 | 3002.1 |
| 0.16 | 0.63 | 68383.9 | 3373.2 |
| 0.18 | 0.70 | 74916.2 | 3703.4 |
| 0.20 | 0.75 | 80233.7 | 3970.2 |
| 0.25 | 0.84 | 89079.4 | 4396.8 |
| 0.30 | 0.89 | 96262.4 | 4660.5 |
| 0.35 | 0.92 | 99186.9 | 4786.4 |
| 0.40 | 0.93 | 100135.2 | 4826.5 |
| 0.45 | 0.93 | 100212.1 | 4827.0 |
| 0.50 | 0.93 | 99884.9 | 4808.9 |
| 0.55 | 0.92 | 99350.8 | 4781.7 |
| 0.60 | 0.92 | 98733.5 | 4749.9 |
| 0.65 | 0.91 | 98050.7 | 4715.9 |
| 0.70 | 0.90 | 97350.1 | 4680.7 |
| 0.75 | 0.90 | 96647.1 | 4645.0 |
| 0.80 | 0.89 | 95920.0 | 4609.0 |
| 0.85 | 0.88 | 95207.7 | 4572.8 |
| 0.90 | 0.88 | 94431.2 | 4535.3 |
| 0.95 | 0.87 | 93546.4 | 4495.2 |
| 1.00 | 0.86 | 92500.0 | 4451.3 |

TQAV = 92500.0 LOAD = 5477.3 VEL = 3.0 MPH.

MUPEAK = 0.93 MULOCK = 0.86 RATIO = 1.00

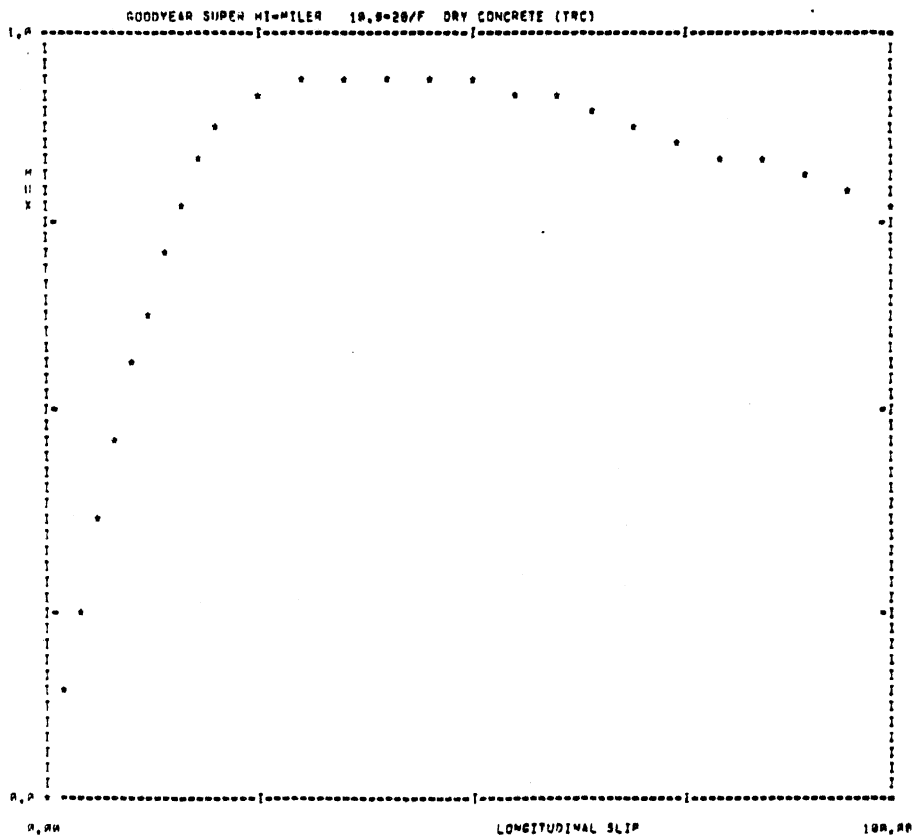


FZ = 5477.3 VFL = 3.0 MULOCK = 0.86 MUPEAK = 0.93 RATIO = 1.00 A=0 FILE 50 NNFILE 126 SAMPLE 02

** A-D FILE 51 NEW FILE 127 TEST SAMPLE 53 **
 AVERAGE OF FILE 51 FOR 4 RECORDS, GODDYEAR SUPER HI-MILER 12.0-20/F DRY CONCRETE (TRC)

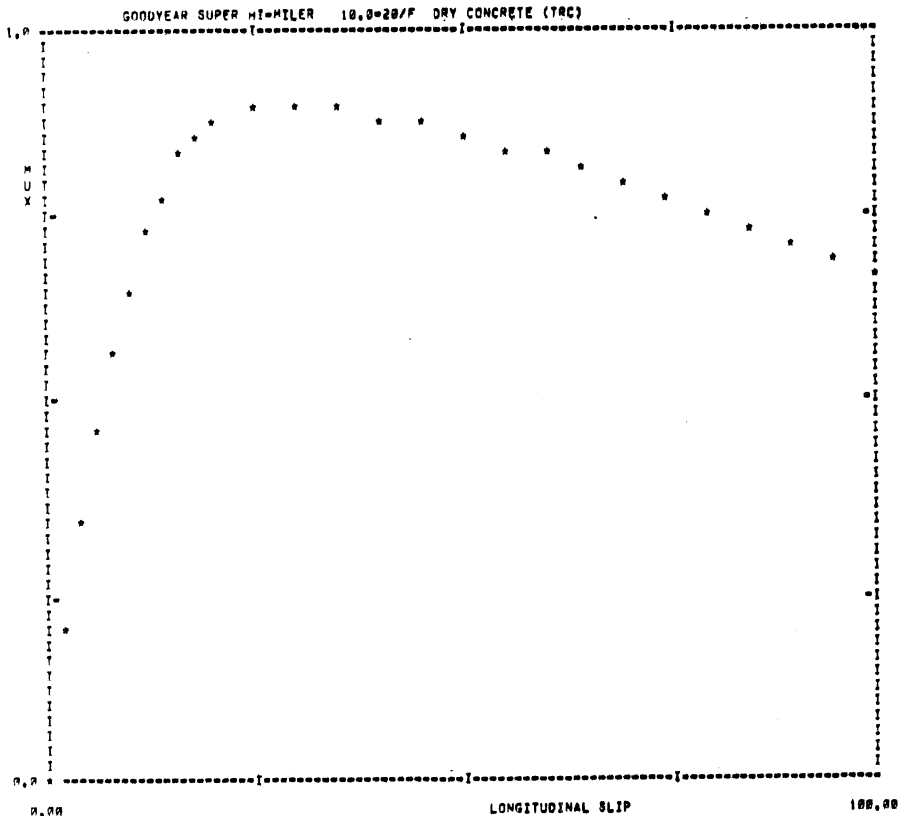
| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.14 | 15176.6 | 751.9 |
| 0.04 | 0.25 | 27507.4 | 1376.5 |
| 0.06 | 0.37 | 39900.1 | 2017.7 |
| 0.08 | 0.47 | 50899.0 | 2561.8 |
| 0.10 | 0.56 | 60721.9 | 3045.8 |
| 0.12 | 0.64 | 69823.5 | 3472.1 |
| 0.14 | 0.72 | 77345.0 | 3855.9 |
| 0.16 | 0.78 | 84419.5 | 4188.9 |
| 0.18 | 0.83 | 90347.3 | 4433.1 |
| 0.20 | 0.87 | 92792.4 | 4592.6 |
| 0.25 | 0.91 | 96682.9 | 4787.6 |
| 0.30 | 0.94 | 103099.2 | 4885.6 |
| 0.35 | 0.95 | 106510.8 | 4918.1 |
| 0.40 | 0.95 | 109292.1 | 4918.4 |
| 0.45 | 0.94 | 111673.8 | 4881.7 |
| 0.50 | 0.94 | 113160.3 | 4839.5 |
| 0.55 | 0.93 | 112342.3 | 4778.8 |
| 0.60 | 0.91 | 109825.3 | 4704.8 |
| 0.65 | 0.90 | 106492.2 | 4622.4 |
| 0.70 | 0.88 | 103152.1 | 4539.6 |
| 0.75 | 0.86 | 99915.9 | 4457.6 |
| 0.80 | 0.85 | 96742.3 | 4376.1 |
| 0.85 | 0.83 | 93601.1 | 4295.8 |
| 0.90 | 0.82 | 90169.7 | 4211.7 |
| 0.95 | 0.80 | 86126.3 | 4124.1 |
| 1.00 | 0.77 | 81166.7 | 4038.0 |

TQAV = 81166.7 LOAD = 5519.8 VEL = 18.8 MPH.
 MUPEAK = 0.95 MULLOCK = 0.77 RATIO = 1.23



F7 = 5519.8 VFL = 18.8 MULLOCK = 0.77 MUPEAK = 0.95 RATIO = 1.23 A-D FILE 51 NEW FILE 127 SAMPLE 53

| ** A=0 FILE 52 | | NEW FILE 120 | | TEST SAMPLE 54 ** | |
|-----------------------------------|------|-------------------------|--------|------------------------------|-------------------------------|
| AVERAGE OF FILE 52 FOR 6 RECORDS. | | GOODYEAR SUPER MI-MILER | | 10,0=20/F DRY CONCRETE (TRC) | |
| SLIP | MUX | TORQUE | FX | | |
| 0.00 | 0.00 | 0.0 | 0.0 | | |
| 0.02 | 0.21 | 22707.0 | 1134.9 | | |
| 0.04 | 0.35 | 38054.3 | 1901.6 | | |
| 0.06 | 0.47 | 51027.0 | 2550.5 | | |
| 0.08 | 0.57 | 63070.4 | 3136.3 | | |
| 0.10 | 0.66 | 72914.0 | 3604.0 | | |
| 0.12 | 0.73 | 80322.1 | 3940.9 | | |
| 0.14 | 0.79 | 85715.2 | 4199.0 | | |
| 0.16 | 0.83 | 89940.0 | 4300.5 | | |
| 0.18 | 0.86 | 93496.6 | 4524.5 | TQAV = 70950.3 | LOAD = 5500.0 VEL = 20.0 MPH. |
| 0.20 | 0.88 | 96020.0 | 4507.6 | | |
| 0.25 | 0.90 | 99598.2 | 4650.5 | MUPEAK = 0.90 | MULOCK = 0.68 RATIO = 1.34 |
| 0.30 | 0.90 | 102269.2 | 4665.0 | | |
| 0.35 | 0.90 | 104631.6 | 4642.0 | | |
| 0.40 | 0.89 | 106909.9 | 4592.0 | | |
| 0.45 | 0.87 | 109370.1 | 4524.4 | | |
| 0.50 | 0.86 | 111010.0 | 4452.0 | | |
| 0.55 | 0.84 | 114312.0 | 4376.0 | | |
| 0.60 | 0.83 | 115951.0 | 4300.1 | | |
| 0.65 | 0.81 | 115765.9 | 4226.0 | | |
| 0.70 | 0.80 | 113072.0 | 4140.9 | | |
| 0.75 | 0.78 | 107900.3 | 4062.6 | | |
| 0.80 | 0.76 | 101132.5 | 3965.2 | | |
| 0.85 | 0.74 | 94025.3 | 3866.1 | | |
| 0.90 | 0.72 | 86726.4 | 3764.7 | | |
| 0.95 | 0.70 | 79092.6 | 3650.1 | | |
| 1.00 | 0.68 | 70950.3 | 3543.7 | | |



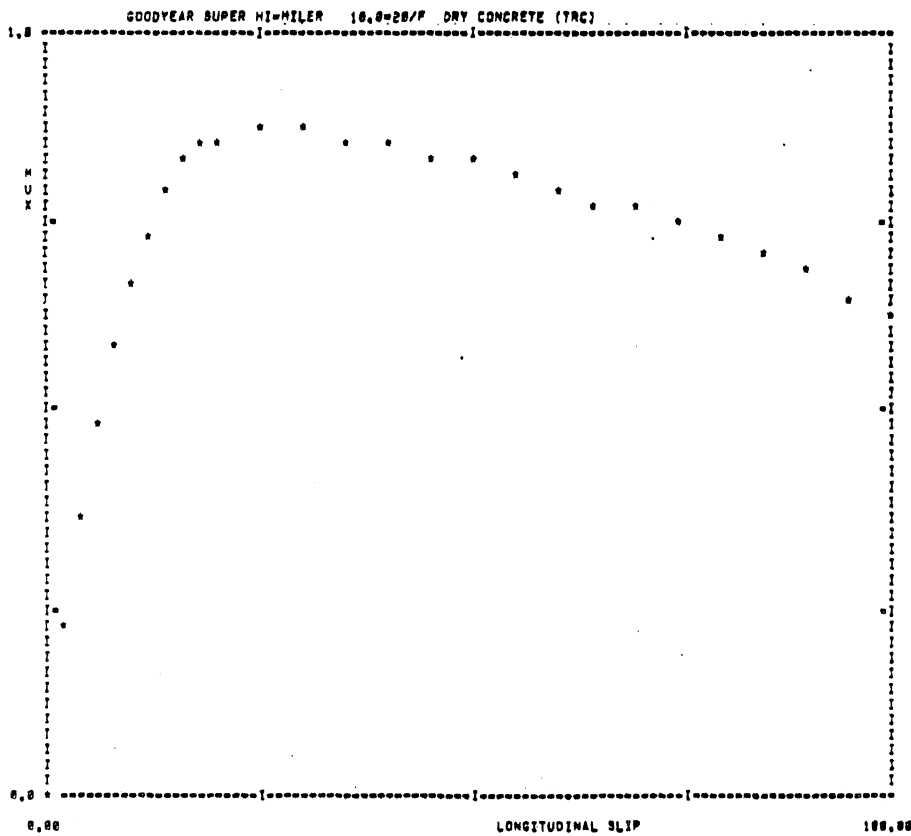
FZ = 5500.0 VFL = 20.0 MULOCK = 0.68 MUPEAK = 0.90 RATIO = 1.34 A=0 FILE 52 NEWFILE 120 SAMPLE 50

** A=0 FILE 53 MEN FILE 129 TEST SAMPLE 55 **
 AVERAGE OF FILE 53 FOR 6 RECORDS, GOODYEAR SUPER MI-MILER 18.0-20/F DRY CONCRETE (TRC)

| SLIP | MUX | TORQUE | PX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.22 | 24031.4 | 1201.0 |
| 0.04 | 0.34 | 39623.7 | 1956.6 |
| 0.06 | 0.48 | 53108.6 | 2601.9 |
| 0.08 | 0.59 | 64009.7 | 3172.3 |
| 0.10 | 0.67 | 74650.9 | 3696.8 |
| 0.12 | 0.75 | 82744.5 | 4094.5 |
| 0.14 | 0.80 | 89019.2 | 4343.1 |
| 0.16 | 0.83 | 93759.0 | 4551.6 |
| 0.18 | 0.86 | 97149.2 | 4645.2 |
| 0.20 | 0.87 | 99340.3 | 4680.0 |
| 0.25 | 0.87 | 103640.6 | 4699.2 |
| 0.30 | 0.87 | 107032.2 | 4675.2 |
| 0.35 | 0.87 | 109512.4 | 4625.5 |
| 0.40 | 0.86 | 111377.9 | 4567.0 |
| 0.45 | 0.85 | 113025.5 | 4490.7 |
| 0.50 | 0.84 | 114606.5 | 4422.9 |
| 0.55 | 0.82 | 116551.1 | 4343.3 |
| 0.60 | 0.80 | 118772.9 | 4256.7 |
| 0.65 | 0.79 | 120464.4 | 4166.9 |
| 0.70 | 0.77 | 119937.1 | 4075.0 |
| 0.75 | 0.75 | 115605.0 | 3970.0 |
| 0.80 | 0.73 | 108421.5 | 3804.2 |
| 0.85 | 0.71 | 99271.5 | 3753.0 |
| 0.90 | 0.69 | 89524.6 | 3635.0 |
| 0.95 | 0.66 | 79290.6 | 3514.9 |
| 1.00 | 0.64 | 68354.2 | 3300.0 |

TGAV = 68354.2 LOAD = 5471.7 VEL = 30.0 MPH

MUPEAK = 0.87 MULOCK = 0.64 RATIO = 1.37

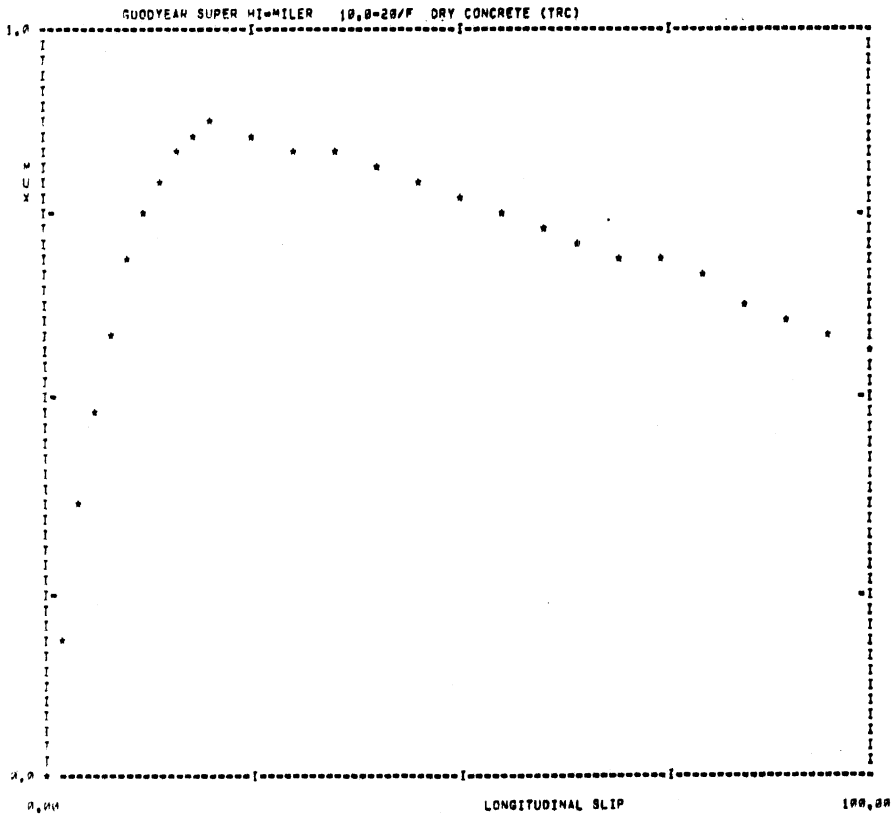


PZ = 5471.7 VEL = 30.0 MULOCK = 0.64 MUPEAK = 0.87 RATIO = 1.37 A=0 FILE 53 MFILE 129 SAMPLE 55

** A=0 FILE 54 NEW FILE 130 TEST SAMPLE 56 **
 AVERAGE OF FILE 54 FOR 6 RECORDS, GOODYEAR SUPER HI-MILER 10.0=20/F DRY CONCRETE (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 21550.8 | 1050.8 |
| 0.04 | 0.36 | 39403.1 | 1934.3 |
| 0.06 | 0.50 | 54385.8 | 2665.3 |
| 0.08 | 0.60 | 66452.9 | 3242.3 |
| 0.10 | 0.69 | 75930.0 | 3697.3 |
| 0.12 | 0.76 | 84101.0 | 4072.0 |
| 0.14 | 0.81 | 91041.8 | 4362.6 |
| 0.16 | 0.84 | 95764.4 | 4562.3 |
| 0.18 | 0.87 | 99203.5 | 4680.5 |
| 0.20 | 0.87 | 101571.2 | 4690.8 |
| 0.25 | 0.86 | 105847.8 | 4648.4 |
| 0.30 | 0.85 | 109096.6 | 4567.1 |
| 0.35 | 0.83 | 111503.0 | 4470.3 |
| 0.40 | 0.81 | 113550.9 | 4367.1 |
| 0.45 | 0.80 | 115136.8 | 4262.4 |
| 0.50 | 0.78 | 116541.6 | 4152.9 |
| 0.55 | 0.76 | 117836.0 | 4041.7 |
| 0.60 | 0.74 | 118981.0 | 3937.2 |
| 0.65 | 0.72 | 119886.0 | 3836.7 |
| 0.70 | 0.70 | 118947.3 | 3738.6 |
| 0.75 | 0.69 | 115340.1 | 3638.4 |
| 0.80 | 0.67 | 107830.3 | 3529.1 |
| 0.85 | 0.64 | 97179.8 | 3406.2 |
| 0.90 | 0.62 | 84956.7 | 3273.5 |
| 0.95 | 0.60 | 72337.7 | 3135.5 |
| 1.00 | 0.57 | 59395.8 | 2991.2 |

TQAV = 99395.8 LOAD = 5424.3 VEL = 40.0 MPH,
 MUPEAK = 0.87 MULOCK = 0.57 RATIO = 1.53



FZ = 5424.3 VEL = 40.0 MULOCK = 0.57 MUPEAK = 0.87 RATIO = 1.53 A=0 FILE 54 NEWFILE 130 SAMPLE 56

** A=D FILE 55

NE= FILE 131

TEST SAMPLE 57 **

AVERAGE OF FILE 55 FOR A RECORDS,

GOODYEAR SUPER MI-MILER

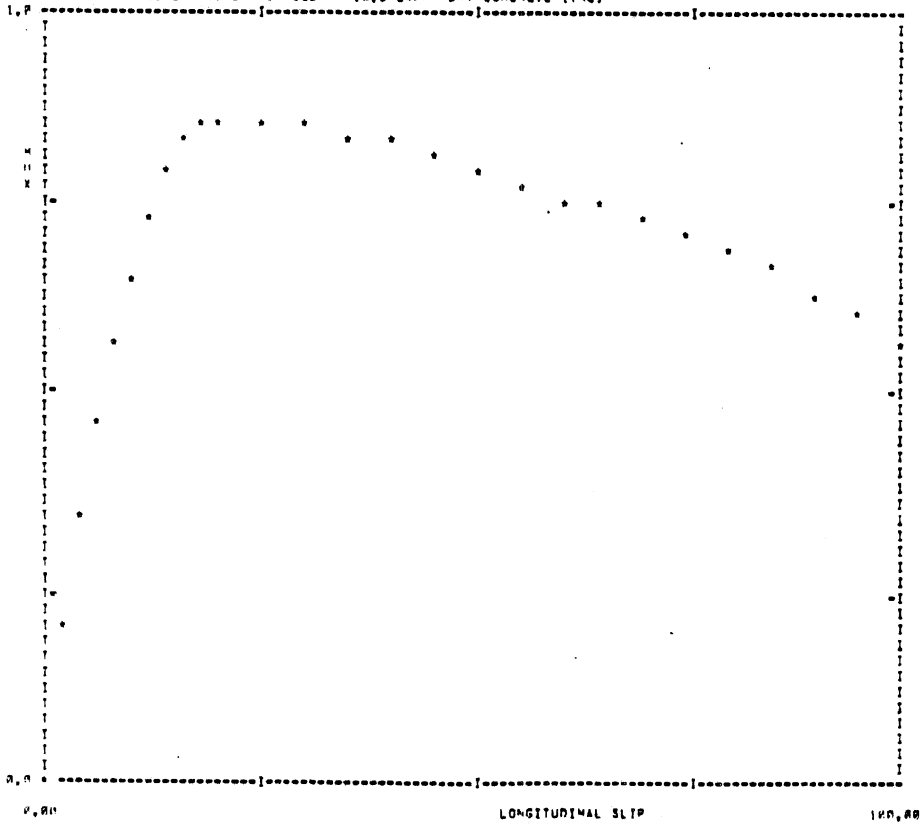
18.0=20/F DRY CONCRETE (TRC)

| SLIP | MIX | TORQUE | Fx |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.21 | 22629.1 | 1137.5 |
| 0.04 | 0.35 | 38166.7 | 1893.8 |
| 0.06 | 0.48 | 51975.6 | 2555.9 |
| 0.08 | 0.58 | 64319.3 | 3135.8 |
| 0.10 | 0.66 | 73999.5 | 3593.6 |
| 0.12 | 0.70 | 81753.2 | 3941.4 |
| 0.14 | 0.82 | 87829.8 | 4223.1 |
| 0.16 | 0.84 | 93187.7 | 4483.5 |
| 0.18 | 0.86 | 96685.5 | 4591.2 |
| 0.20 | 0.87 | 99998.5 | 4629.4 |
| 0.25 | 0.87 | 100596.4 | 4628.9 |
| 0.30 | 0.86 | 107748.8 | 4564.4 |
| 0.35 | 0.84 | 109986.3 | 4479.4 |
| 0.40 | 0.83 | 111402.3 | 4388.0 |
| 0.45 | 0.81 | 113876.6 | 4279.1 |
| 0.50 | 0.80 | 114378.8 | 4183.1 |
| 0.55 | 0.78 | 115629.6 | 4092.4 |
| 0.60 | 0.77 | 116939.5 | 4002.9 |
| 0.65 | 0.75 | 118373.4 | 3911.8 |
| 0.70 | 0.73 | 119938.4 | 3816.1 |
| 0.75 | 0.71 | 120358.7 | 3718.9 |
| 0.80 | 0.69 | 116587.9 | 3618.2 |
| 0.85 | 0.67 | 106909.1 | 3503.3 |
| 0.90 | 0.60 | 92598.1 | 3362.3 |
| 0.95 | 0.61 | 76764.7 | 3218.4 |
| 1.00 | 0.57 | 59687.5 | 3047.5 |

TDAV = 59687.5 LOAD = 5067.8 VFL = 55.8 MPH.

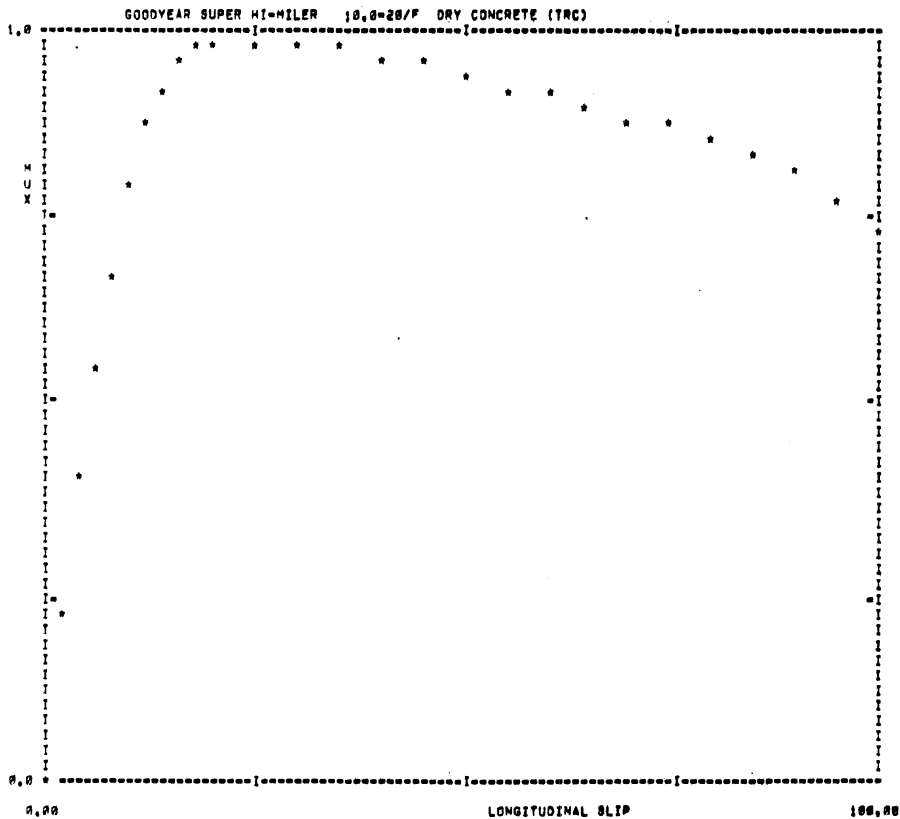
MUPEAK = 0.87 MULOCK = 0.57 RATIO = 1.51

GOODYEAR SUPER MI-MILER 18.0=20/F DRY CONCRETE (TRC)



FZ = 5067.8 VFL = 55.8 MULOCK = 0.57 MUPEAK = 0.87 RATIO = 1.51 A=D FILE 55 N=FILE 131 SAMPLE 57

| ** A=0 FILE 60 | | | NEW FILE 133 | TEST SAMPLE 59 ** |
|-----------------------------------|------|---------|-------------------------|----------------------------------------------|
| AVERAGE OF FILE 60 FOR 5 RECORDS, | | | GOODYEAR SUPER HI-MILER | 18,8=28/F DRY CONCRETE (TRC) |
| SLIP | MIX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.22 | 18872.2 | 458.4 | |
| 0.04 | 0.40 | 18290.9 | 816.1 | |
| 0.06 | 0.55 | 25172.1 | 1127.5 | |
| 0.08 | 0.60 | 30871.4 | 1374.2 | |
| 0.10 | 0.79 | 35346.5 | 1593.0 | |
| 0.12 | 0.80 | 39861.3 | 1775.8 | |
| 0.14 | 0.93 | 44590.8 | 1923.2 | |
| 0.16 | 0.96 | 48330.8 | 2011.0 | |
| 0.18 | 0.96 | 50882.6 | 2057.6 | TQAV = 38625.0 LOAD = 2131.3 VEL = 40.0 MPH. |
| 0.20 | 0.99 | 52420.8 | 2071.7 | |
| 0.25 | 0.99 | 55822.5 | 2061.6 | MUPEAK = 0.99 MULLOCK = 0.74 RATIO = 1.34 |
| 0.30 | 0.98 | 58425.4 | 2037.5 | |
| 0.35 | 0.98 | 60811.0 | 2007.2 | |
| 0.40 | 0.96 | 62894.3 | 1973.1 | |
| 0.45 | 0.95 | 64750.4 | 1939.6 | |
| 0.50 | 0.94 | 66589.8 | 1904.5 | |
| 0.55 | 0.93 | 68532.9 | 1866.2 | |
| 0.60 | 0.91 | 70622.7 | 1826.9 | |
| 0.65 | 0.90 | 72958.4 | 1791.7 | |
| 0.70 | 0.88 | 74800.9 | 1762.8 | |
| 0.75 | 0.87 | 74834.6 | 1739.9 | |
| 0.80 | 0.86 | 71204.7 | 1719.6 | |
| 0.85 | 0.85 | 63519.7 | 1685.8 | |
| 0.90 | 0.82 | 53433.3 | 1632.0 | |
| 0.95 | 0.78 | 42490.8 | 1568.9 | |
| 1.00 | 0.74 | 38625.0 | 1495.5 | |



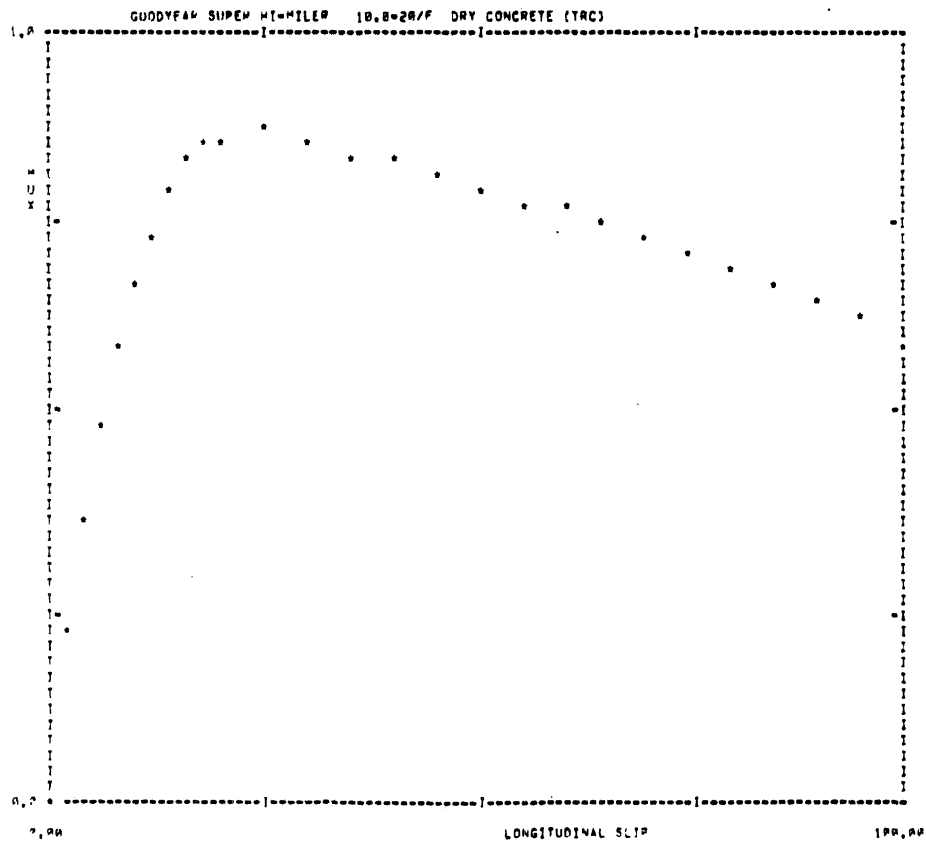
FZ = 2131.3 VEL = 40.0 MULLOCK = 0.74 MUPEAK = 0.99 RATIO = 1.34 A=0 FILE 60 NMFIL 133 SAMPLE 59

** A=0 FILE 01 NEW FILE 134 TEST SAMPLE 00 **
 AVERAGE OF FILE 01 FOR 6 RECORDS. GOODYEAR SUPER MI-MILER 10.0=20/F DRY CONCRETE (TRC)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.22 | 24091.6 | 1187.1 |
| 0.04 | 0.36 | 38649.9 | 1991.5 |
| 0.06 | 0.49 | 51726.1 | 2554.4 |
| 0.08 | 0.60 | 62770.1 | 3110.4 |
| 0.10 | 0.68 | 72061.3 | 3530.6 |
| 0.12 | 0.74 | 79770.2 | 3876.5 |
| 0.14 | 0.80 | 86075.1 | 4166.8 |
| 0.16 | 0.83 | 91390.2 | 4378.3 |
| 0.18 | 0.86 | 95422.4 | 4518.7 |
| 0.20 | 0.87 | 98001.4 | 4575.8 |
| 0.25 | 0.87 | 102360.9 | 4590.3 |
| 0.30 | 0.86 | 106122.1 | 4544.7 |
| 0.35 | 0.85 | 109470.8 | 4461.2 |
| 0.40 | 0.83 | 112313.7 | 4361.2 |
| 0.45 | 0.82 | 114257.7 | 4260.6 |
| 0.50 | 0.80 | 115537.4 | 4162.9 |
| 0.55 | 0.79 | 116422.7 | 4067.9 |
| 0.60 | 0.77 | 117167.2 | 3973.8 |
| 0.65 | 0.76 | 117810.1 | 3880.4 |
| 0.70 | 0.74 | 117700.9 | 3788.3 |
| 0.75 | 0.72 | 115120.4 | 3691.1 |
| 0.80 | 0.70 | 108520.8 | 3581.0 |
| 0.85 | 0.68 | 98160.4 | 3452.5 |
| 0.90 | 0.65 | 86074.8 | 3315.6 |
| 0.95 | 0.63 | 73090.9 | 3173.8 |
| 1.00 | 0.60 | 59000.0 | 3022.5 |

TRAV = 50000.0 LOAD = 5294.0 VEL = 40.0 MPH.

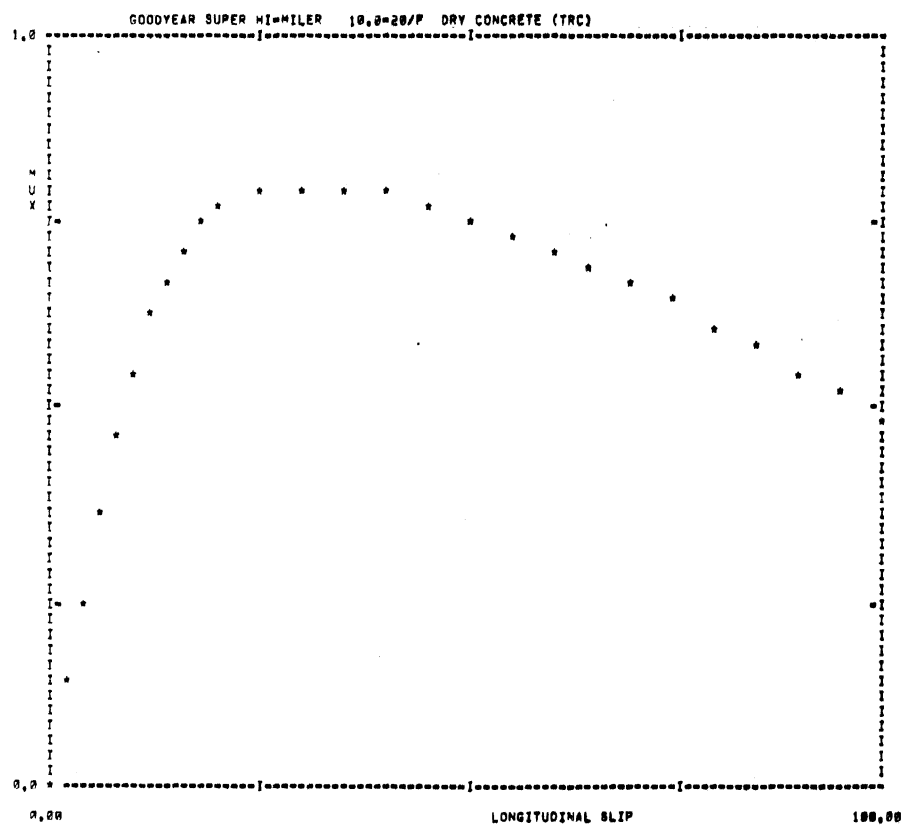
MUPEAK = 0.87 MULOCK = 0.60 RATIO = 1.46



FX = 5294.0 VEL = 40.0 MULOCK = 0.60 MUPEAK = 0.87 RATIO = 1.46 A=0 FILE 01 NEWFILE 134 SAMPLE 00

** A=0 FILE 62 NEW FILE 135 TEST SAMPLE 61 **

| AVERAGE OF FILE 62 FOR 6 RECORDS, | | | GOODYEAR SUPER HI=MILER | 10.0=20/F DRY CONCRETE (TRC) |
|-----------------------------------|------|----------|-------------------------|----------------------------------------------------|
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.14 | 20011.3 | 1216.7 | |
| 0.04 | 0.25 | 43459.5 | 2226.7 | |
| 0.06 | 0.37 | 63928.8 | 3221.6 | |
| 0.08 | 0.47 | 81370.2 | 4101.5 | |
| 0.10 | 0.56 | 96096.6 | 4821.0 | |
| 0.12 | 0.62 | 108211.3 | 5384.8 | |
| 0.14 | 0.68 | 117951.2 | 5819.9 | |
| 0.16 | 0.72 | 125746.9 | 6151.9 | |
| 0.18 | 0.76 | 131988.6 | 6390.1 | TOAV = 77684.2 LOAD = 8891.3 VEL = 40.0 MPH. |
| 0.20 | 0.77 | 136416.8 | 6499.3 | |
| 0.25 | 0.79 | 140296.8 | 6597.7 | MUPEAK = 0.88 MULLOCK = 0.49 RATIO = 1.64 |
| 0.30 | 0.80 | 150154.6 | 6612.9 | |
| 0.35 | 0.80 | 154461.7 | 6572.0 | |
| 0.40 | 0.79 | 157959.9 | 6491.2 | |
| 0.45 | 0.78 | 161033.6 | 6378.5 | |
| 0.50 | 0.76 | 163921.3 | 6243.7 | |
| 0.55 | 0.74 | 166754.4 | 6095.6 | |
| 0.60 | 0.72 | 169016.2 | 5938.7 | |
| 0.65 | 0.70 | 168954.7 | 5758.0 | |
| 0.70 | 0.67 | 165831.1 | 5576.2 | |
| 0.75 | 0.65 | 157026.0 | 5388.3 | |
| 0.80 | 0.62 | 142515.1 | 5167.2 | |
| 0.85 | 0.59 | 125385.5 | 4931.7 | |
| 0.90 | 0.56 | 100657.7 | 4677.4 | |
| 0.95 | 0.52 | 92645.9 | 4412.9 | |
| 1.00 | 0.49 | 77684.2 | 4136.2 | |



FZ = 8891.3 VEL = 40.0 MULLOCK = 0.49 MUPEAK = 0.88 RATIO = 1.64 A=0 FILE 62 NEWFILE 135 SAMPLE 61

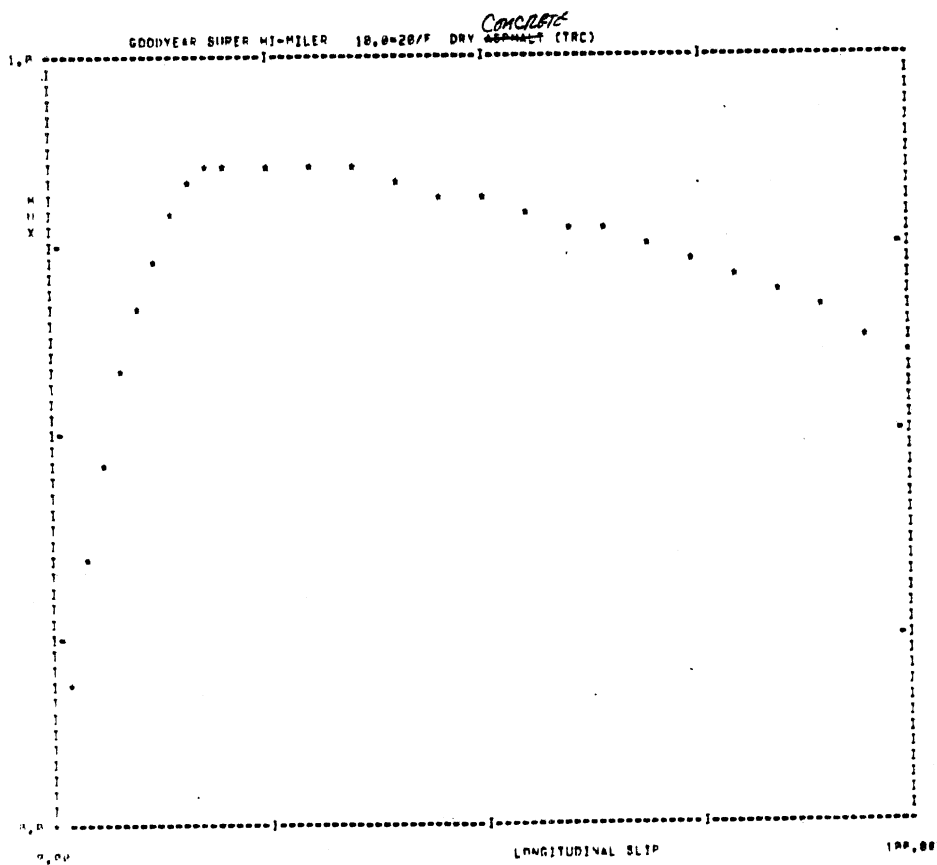
** A-D FILE 4 NEW FILE 110' TEST SAMPLE 1 00
 AVERAGE OF FILE 4 FOR 6 RECORDS, GOODYEAR SUPER MI-MILER 18.0-20/F DRY ~~CONCRETE~~ ^{CONCRETE} (TRC)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| P.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.19 | 20924.5 | 1082.7 |
| 0.04 | 0.35 | 37896.3 | 1919.8 |
| 0.06 | 0.48 | 51412.5 | 2608.2 |
| 0.08 | 0.59 | 62377.4 | 3177.5 |
| 0.10 | 0.67 | 71599.2 | 3636.2 |
| 0.12 | 0.74 | 78867.9 | 3968.8 |
| 0.14 | 0.79 | 84254.5 | 4227.3 |
| 0.16 | 0.84 | 89068.9 | 4452.1 |
| 0.18 | 0.86 | 92831.4 | 4605.0 |
| 0.20 | 0.87 | 95608.9 | 4682.7 |
| 0.25 | 0.87 | 99576.2 | 4827.3 |
| 0.30 | 0.86 | 101856.2 | 4579.0 |
| 0.35 | 0.85 | 103647.2 | 4518.8 |
| 0.40 | 0.84 | 105368.5 | 4425.3 |
| 0.45 | 0.83 | 106958.3 | 4335.2 |
| 0.50 | 0.81 | 108389.2 | 4247.5 |
| 0.55 | 0.80 | 109281.3 | 4166.5 |
| 0.60 | 0.79 | 109899.3 | 4086.5 |
| 0.65 | 0.77 | 110348.8 | 4012.9 |
| 0.70 | 0.76 | 110596.0 | 3937.8 |
| 0.75 | 0.74 | 110959.8 | 3859.4 |
| 0.80 | 0.72 | 111694.7 | 3769.8 |
| 0.85 | 0.70 | 98981.6 | 3662.0 |
| 0.90 | 0.67 | 87611.8 | 3534.9 |
| 0.95 | 0.64 | 74784.3 | 3398.8 |
| 1.00 | 0.61 | 60016.7 | 3253.7 |

TDAY = 60816.7 LOAD = 5503.6 VEL = 40.0 MPH.

MUPEAK = 0.87 MULLOCK = 0.61 RATIO = 1.42

Check Run #1



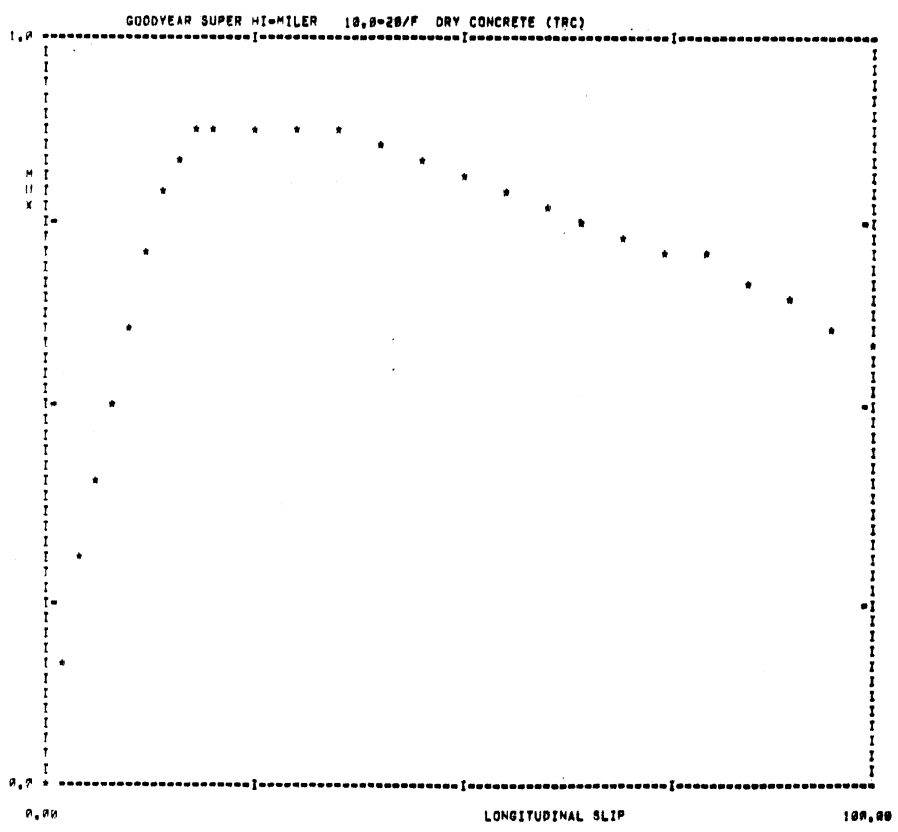
FX = 55.03.6 VEL = 40.0 MULLOCK = 0.61 MUPEAK = 0.87 RATIO = 1.42 A-D FILE 4 NEW FILE 110 SAMPLE 1

| ** A=0 FILE 09 | | NEW FILE 125 | TEST SAMPLE 51 ** |
|-----------------------------------|------|-------------------------|------------------------------|
| AVERAGE OF FILE 09 FOR 6 RECORDS, | | GOODYEAR SUPER HI-MILER | 10.0=20/F DRY CONCRETE (TRC) |
| SLIP | MUX | TORQUE | FX |
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.17 | 18500.2 | 919.6 |
| 0.04 | 0.30 | 33546.8 | 1643.3 |
| 0.06 | 0.41 | 45574.6 | 2219.3 |
| 0.08 | 0.51 | 55608.4 | 2694.3 |
| 0.10 | 0.61 | 64693.3 | 3177.0 |
| 0.12 | 0.71 | 72684.7 | 3752.2 |
| 0.14 | 0.79 | 80009.2 | 4171.9 |
| 0.16 | 0.84 | 93627.9 | 4432.3 |
| 0.18 | 0.87 | 98071.7 | 4585.5 |
| 0.20 | 0.88 | 100530.3 | 4662.4 |
| 0.25 | 0.89 | 104846.3 | 4662.1 |
| 0.30 | 0.88 | 107946.0 | 4636.7 |
| 0.35 | 0.88 | 110278.5 | 4585.1 |
| 0.40 | 0.86 | 112364.7 | 4514.5 |
| 0.45 | 0.84 | 114459.8 | 4438.7 |
| 0.50 | 0.83 | 116511.2 | 4359.1 |
| 0.55 | 0.80 | 118662.1 | 4235.1 |
| 0.60 | 0.78 | 120816.7 | 4129.9 |
| 0.65 | 0.76 | 122786.4 | 4028.8 |
| 0.70 | 0.74 | 123135.5 | 3931.9 |
| 0.75 | 0.73 | 126655.9 | 3838.1 |
| 0.80 | 0.71 | 114520.7 | 3738.6 |
| 0.85 | 0.68 | 103257.7 | 3611.4 |
| 0.90 | 0.65 | 89749.1 | 3499.8 |
| 0.95 | 0.62 | 75839.4 | 3297.3 |
| 1.00 | 0.58 | 61607.5 | 3122.5 |

TOAV = 61607.5 LOAD = 5595.4 VEL = 40.0 MPH.

MUPEAK = 0.89 MULLOCK = 0.58 RATIO = 1.52

Check Run #2



FZ = 5595.4 VEL = 40.0 MULLOCK = 0.58 MUPEAK = 0.89 RATIO = 1.52 A=0 FILE 09 NEWFILE 125 SAMPLE 51

.. A-D FILE 59

NEW FILE 132

TEST SAMPLE 58 ..

AVERAGE OF FILE 59 FOR 5 RECORDS.

GOODYEAR SUPER MI-MILER

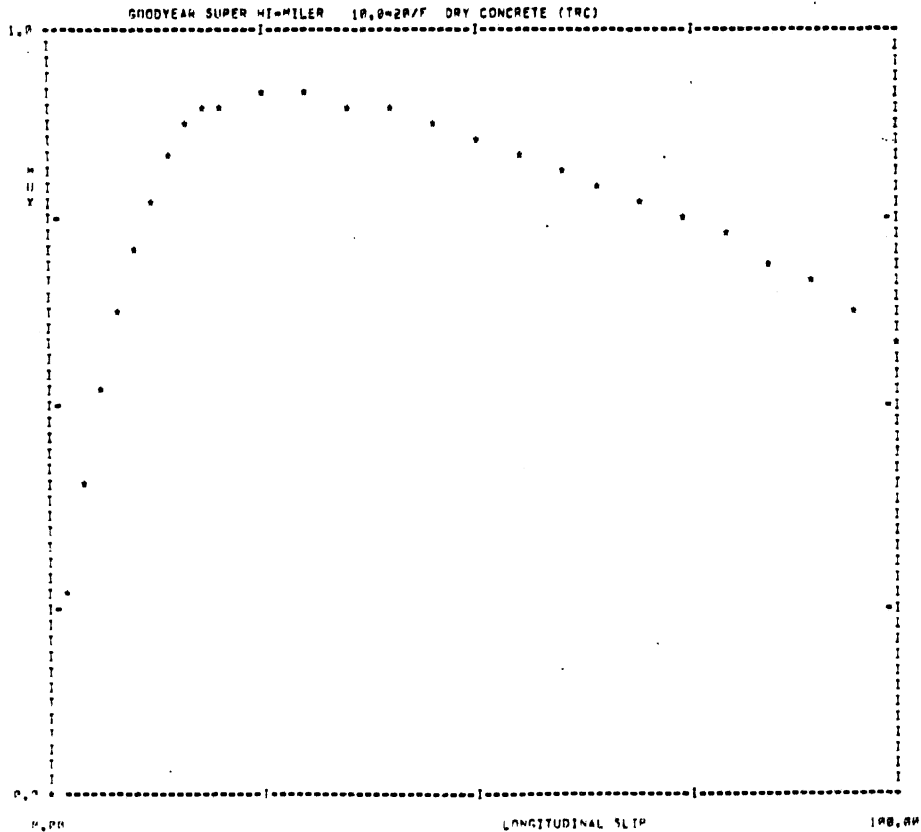
10.0-20/F DRY CONCRETE (TRC)

| SLIP | MIX | TORQUE | PX |
|------|------|----------|--------|
| P.00 | P.00 | P.0 | 0.0 |
| P.02 | P.27 | 26730.4 | 1463.7 |
| P.04 | P.41 | 42752.7 | 2104.9 |
| P.06 | P.53 | 55040.4 | 2700.7 |
| P.08 | P.63 | 67366.8 | 3362.1 |
| P.10 | P.72 | 77563.5 | 3836.4 |
| P.12 | P.78 | 85631.6 | 4200.1 |
| P.14 | P.83 | 91517.5 | 4462.7 |
| P.16 | P.87 | 96350.5 | 4629.0 |
| P.18 | P.89 | 100194.8 | 4720.3 |
| P.20 | P.90 | 102477.9 | 4773.5 |
| P.25 | P.91 | 106509.9 | 4789.1 |
| P.30 | P.91 | 109012.9 | 4761.2 |
| P.35 | P.90 | 112018.1 | 4706.9 |
| P.40 | P.89 | 114607.8 | 4635.6 |
| P.45 | P.88 | 116720.5 | 4553.4 |
| P.50 | P.86 | 118641.4 | 4464.1 |
| P.55 | P.84 | 120570.3 | 4361.7 |
| P.60 | P.82 | 122512.5 | 4256.0 |
| P.65 | P.80 | 124205.9 | 4149.7 |
| P.70 | P.78 | 124316.6 | 4041.4 |
| P.75 | P.75 | 121203.6 | 3931.4 |
| P.80 | P.73 | 114609.7 | 3812.2 |
| P.85 | P.70 | 103696.8 | 3673.0 |
| P.90 | P.67 | 90151.4 | 3500.6 |
| P.95 | P.64 | 75932.5 | 3335.6 |
| 1.00 | P.60 | 61150.0 | 3150.0 |

TOAV = 61150.0 LOAD = 5305.0 VEL = 00.0 MPH.

MUPEAK = 0.91 MULOCK = 0.60 RATIO = 1.52

Check Run #4

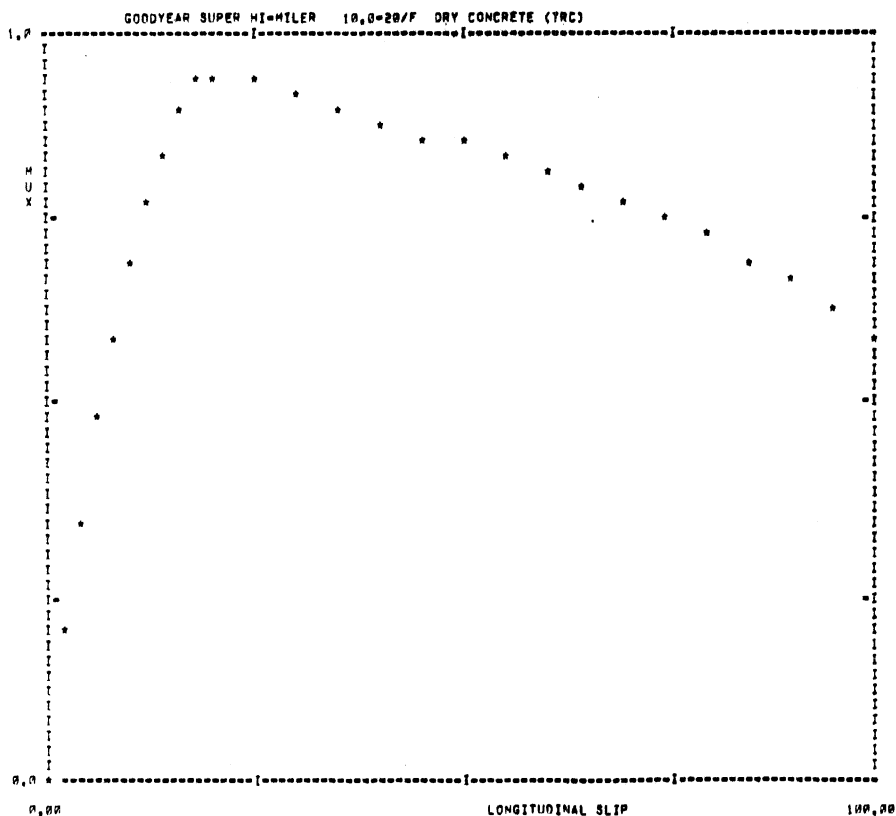


PZ = 5305.0 VFL = 00.0 MULOCK = 0.60 MUPEAK = 0.91 RATIO = 1.52 A-D FILE 59 NEW FILE 132 SAMPLE 58

** A=0 FILE 63 NEW FILE 136 TEST SAMPLE 62 **

| AVERAGE OF FILE 63 FOR 6 RECORDS, | | | GOODYEAR SUPER HI-MILER | 1R,0=20/F DRY CONCRETE (TRC) |
|-----------------------------------|------|----------|-------------------------|----------------------------------------------------|
| SLIP | MUX | TORQUE | FX | |
| 0.00 | 0.00 | 0.0 | 0.0 | |
| 0.02 | 0.20 | 21609.7 | 1898.2 | |
| 0.04 | 0.36 | 38218.5 | 1933.6 | |
| 0.06 | 0.49 | 52025.9 | 2635.0 | |
| 0.08 | 0.60 | 65364.1 | 3218.7 | |
| 0.10 | 0.70 | 74998.8 | 3694.1 | |
| 0.12 | 0.78 | 83173.6 | 4073.1 | |
| 0.14 | 0.85 | 89920.7 | 4404.9 | |
| 0.16 | 0.90 | 95937.4 | 4685.7 | |
| 0.18 | 0.94 | 101186.7 | 4899.2 | TQAV = 62270.8 LOAD = 5403.0 VEL = 40.0 MPH, |
| 0.20 | 0.94 | 104727.4 | 4970.1 | |
| 0.25 | 0.94 | 109997.7 | 4987.9 | MUPEAK = 0.94 MULLOCK = 0.60 RATIO = 1.50 |
| 0.30 | 0.92 | 113785.5 | 4944.6 | |
| 0.35 | 0.91 | 116547.9 | 4863.7 | |
| 0.40 | 0.89 | 118959.1 | 4762.9 | |
| 0.45 | 0.87 | 121021.3 | 4654.6 | |
| 0.50 | 0.85 | 122877.3 | 4540.7 | |
| 0.55 | 0.83 | 124603.8 | 4426.7 | |
| 0.60 | 0.81 | 126269.8 | 4315.7 | |
| 0.65 | 0.79 | 127640.3 | 4207.8 | |
| 0.70 | 0.77 | 127683.9 | 4100.7 | |
| 0.75 | 0.76 | 123851.2 | 3995.8 | |
| 0.80 | 0.73 | 119831.6 | 3877.4 | |
| 0.85 | 0.70 | 104351.7 | 3729.5 | |
| 0.90 | 0.67 | 90897.8 | 3557.6 | |
| 0.95 | 0.64 | 76854.5 | 3373.5 | |
| 1.00 | 0.60 | 62270.8 | 3175.0 | |

Check Run # 6



FZ = 5403.0 VEL = 40.0 MULLOCK = 0.60 MUPEAK = 0.94 RATIO = 1.50 A=0 FILE 63 NEWFILE 136 SAMPLE 62

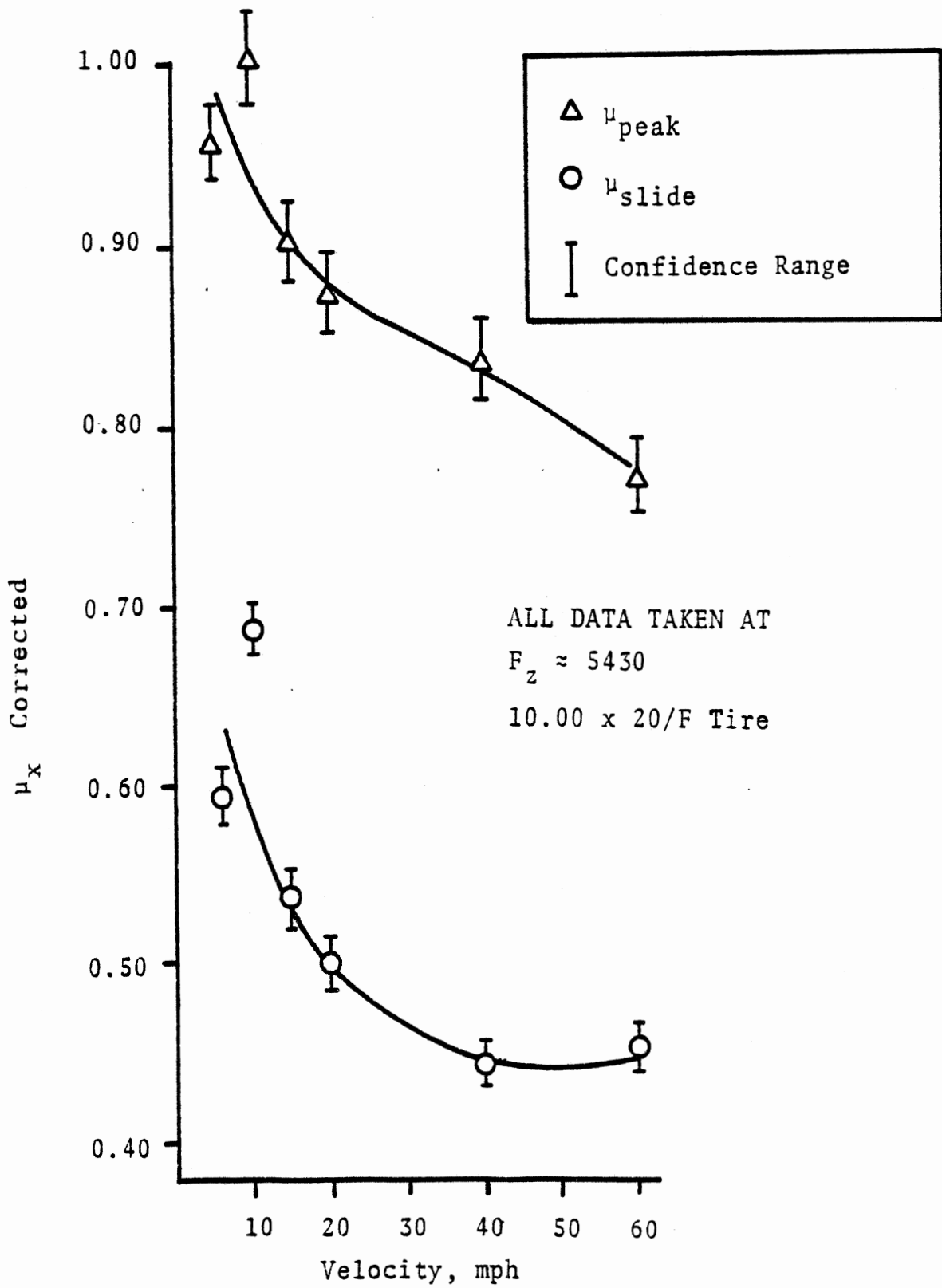
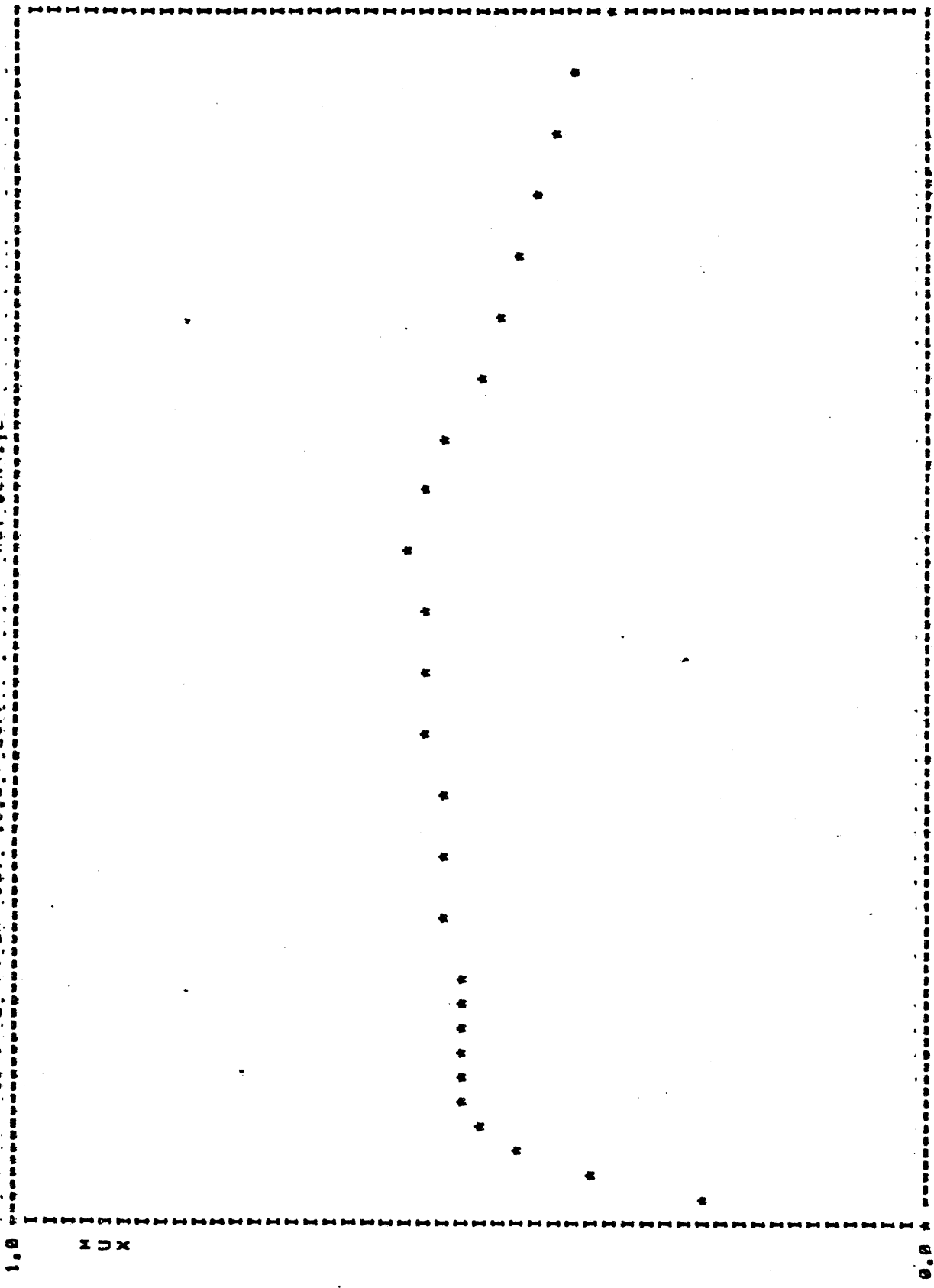


Figure 4. Velocity sensitivity data.

GENERAL POWER JET 10.0 - 20/F MET JENITE



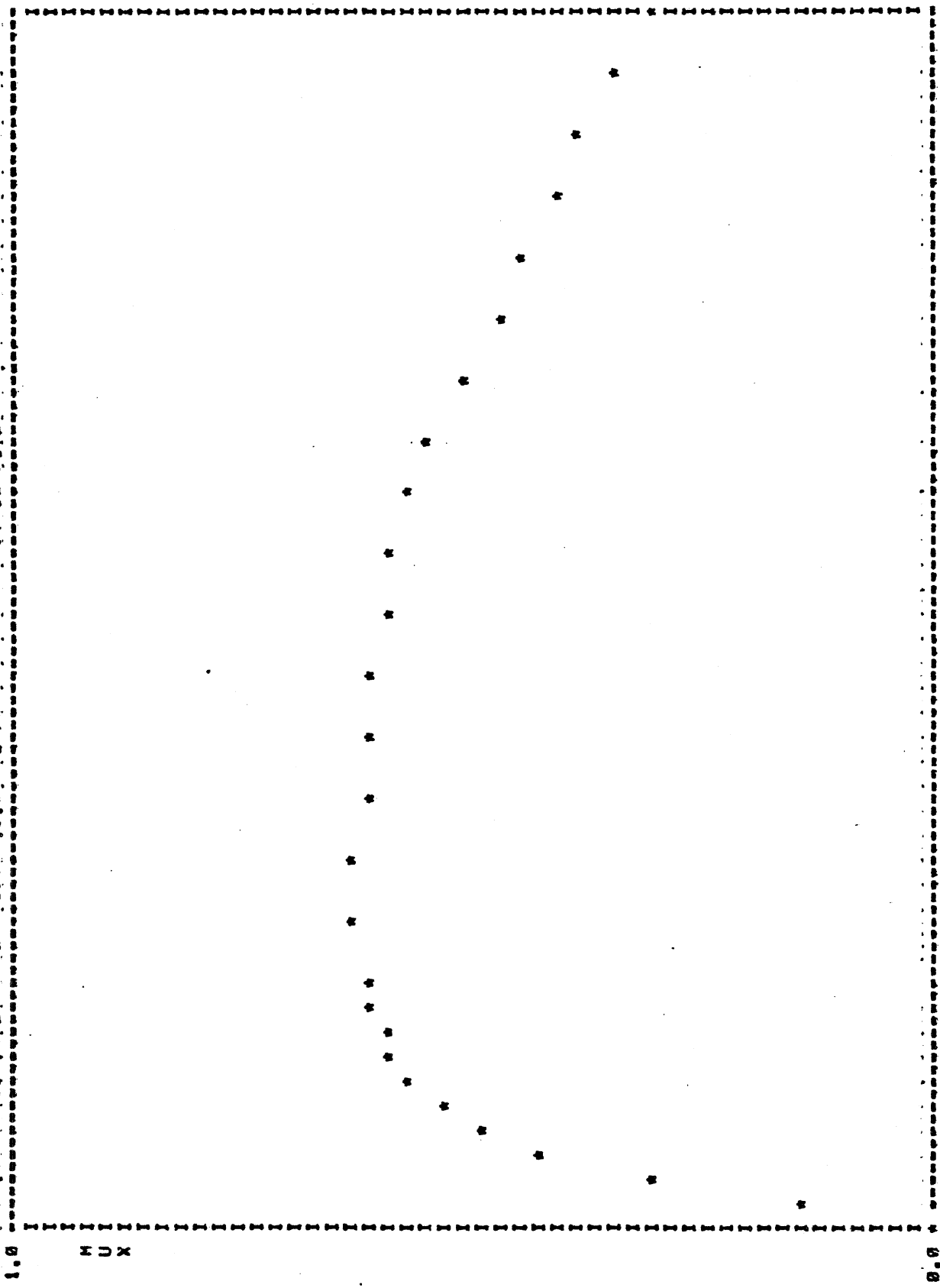
100.00

LONG. SLIP

0.00

FZ = 3079.6 VEL = 20.0 MULLOCK = 0.35 MUPEAK = 0.56 RATIO = 1.59

GENERAL POWER JET 10.0 - 20/F NET JENNITE

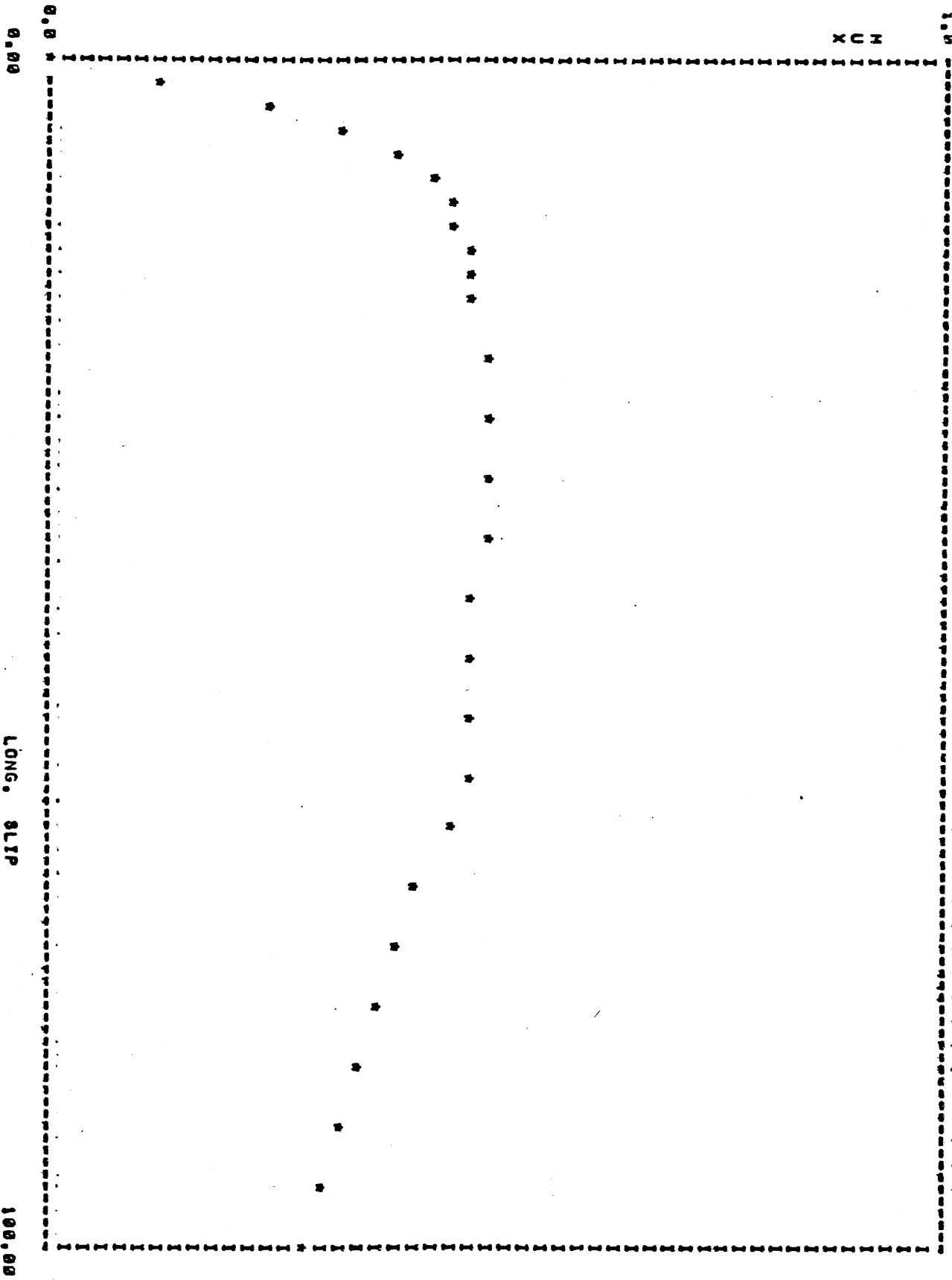


0.00 MUX 100.00 LONG. SLIP

PZ = 5601.0 VEL = 20.0 MULLOCK = 0.31 MUPEAK = 0.63 RATIO = 2.02

GENERAL POWER JET 10.0 - 20/F MET JENNITE

M U I X



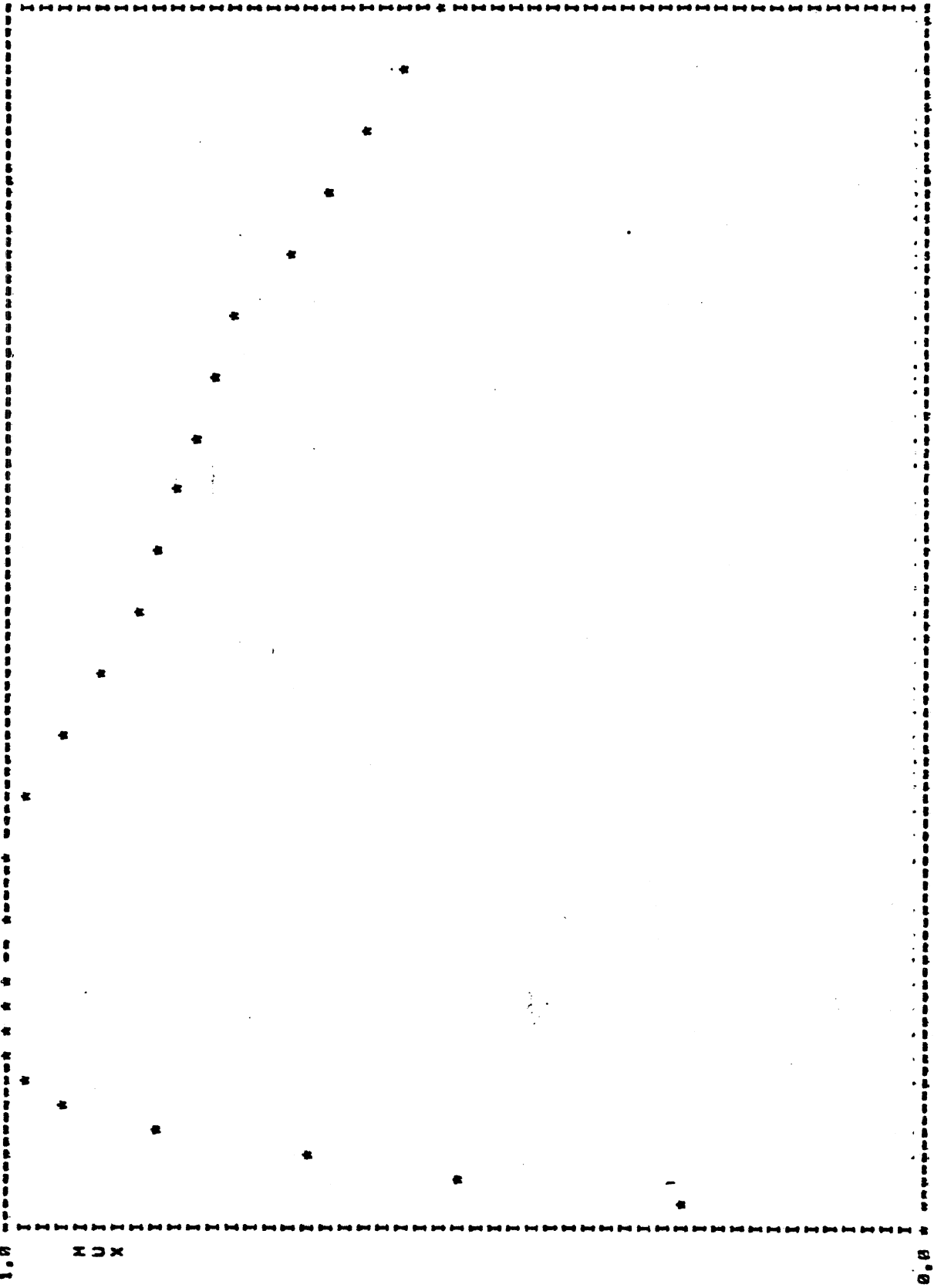
FZ = 8407.9 VEL = 20.0 MULLOCK = 0.29 NUPEAK = 0.49 RATIO = 1.67

LONG. SLIP

GENERAL POWER JET 10'0. - 20/F DRY ASPHALT

1.0

M U X



0.00

LONG. SLIP

100.00

FZ = 3879.0

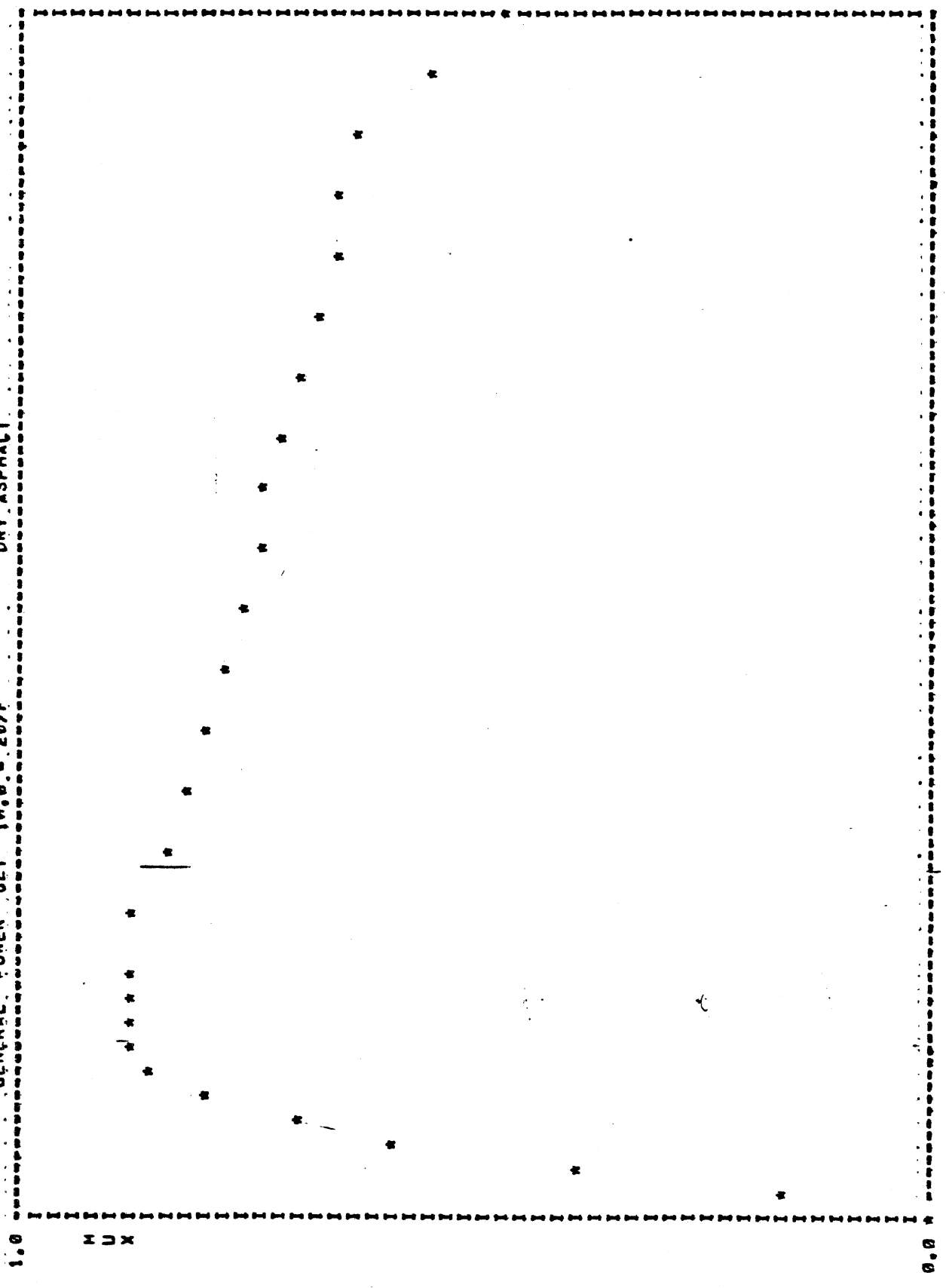
VEL = 40.0

MULOCK = 0.54

MUPEAK = 1.01

RATIO = 1.00

GENERAL POWER JET 14.0 = 20/F DRY ASPHALT



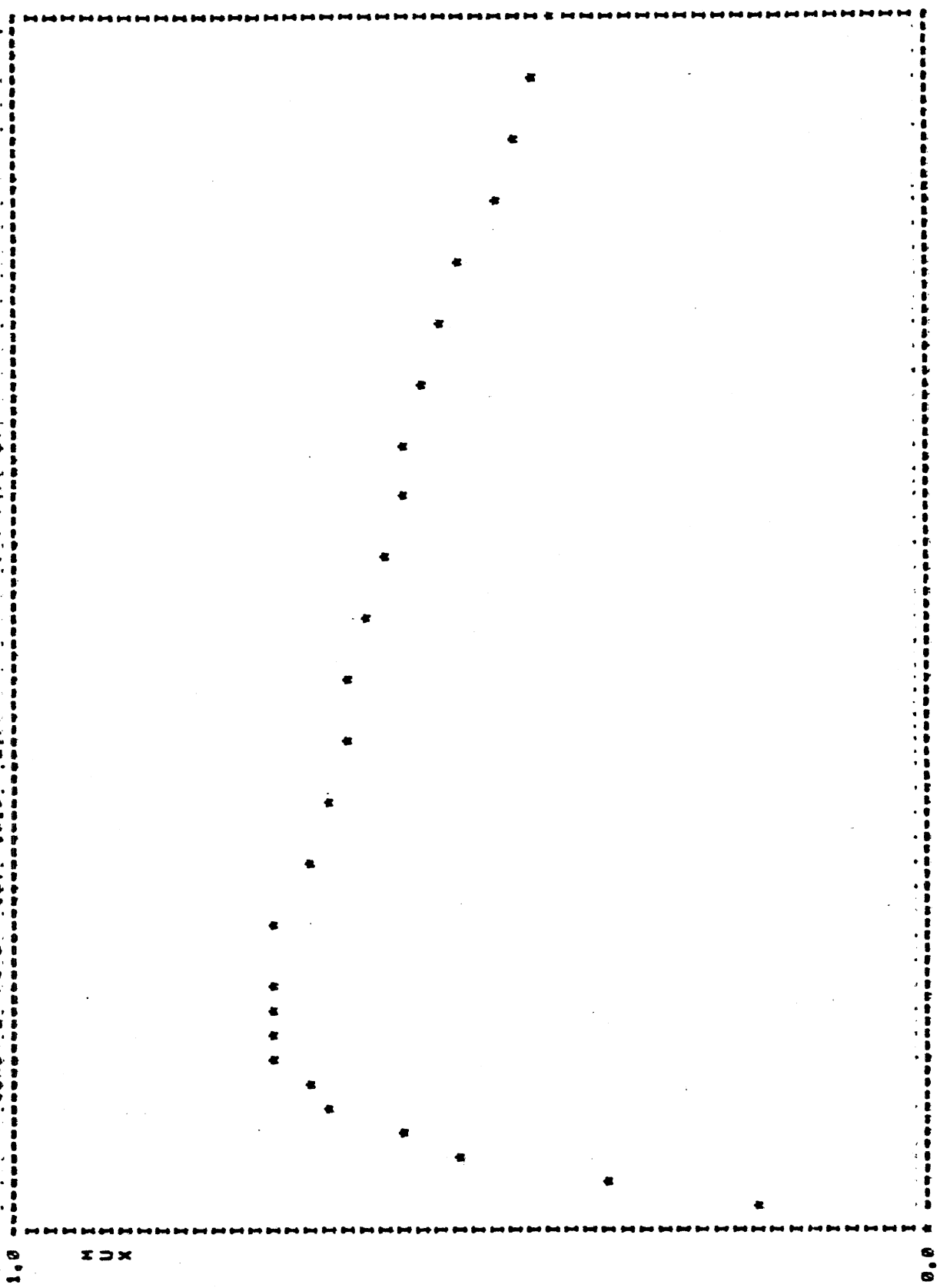
100.00

LONG. SLIP

0.00

FZ = 5550.4 VEL = 40.0 MULLOCK = 0.47 MUPEAK = 0.69 RATIO = 1.91

GENERAL POWER JET 10.0 - 20/F DRY ASPHALT

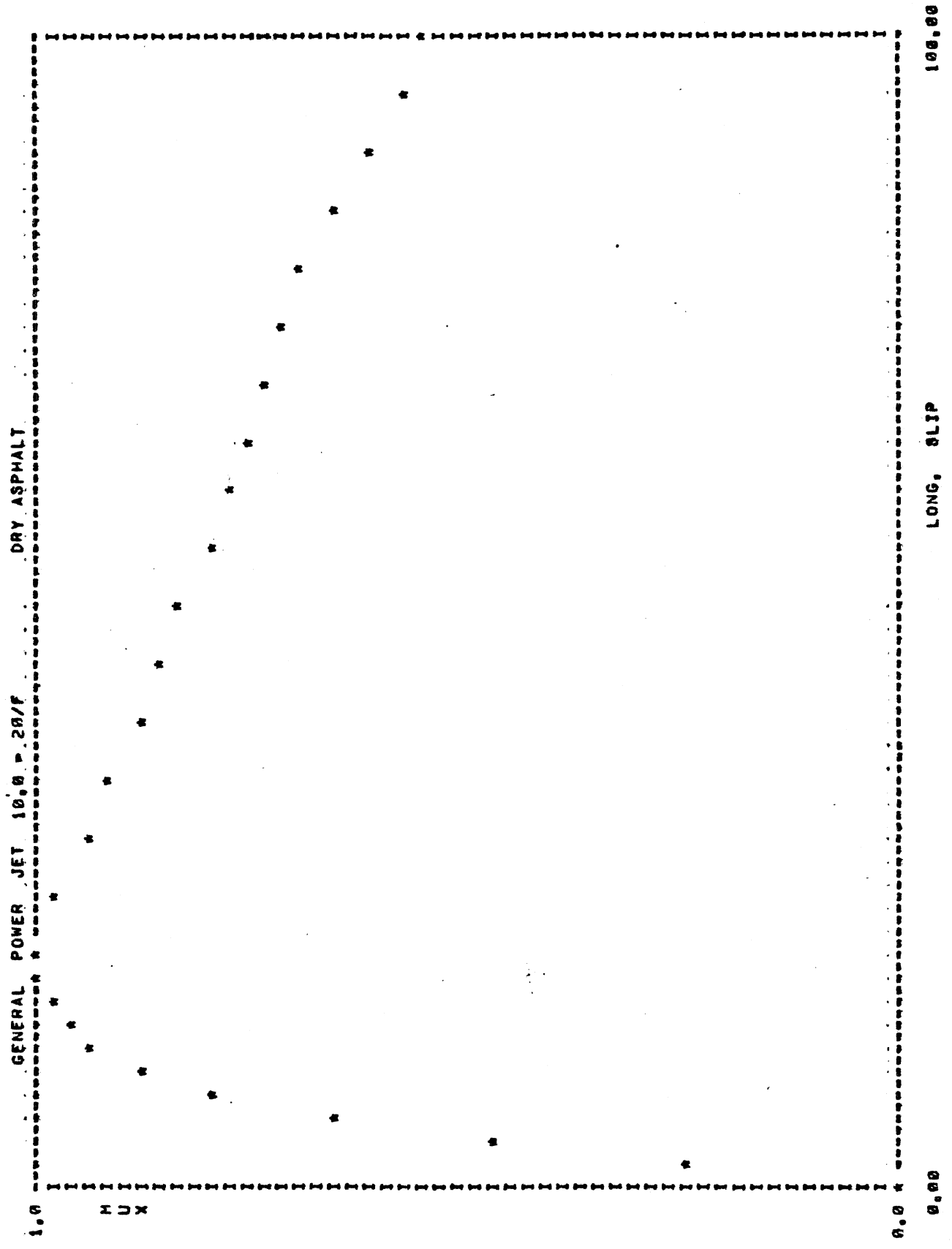


100.00

LONG. SLIP

0.00

FZ = 6600.2 VEL = 40.8 MULLOCK = 0.41 MUPEAK = 0.73 RATIO = 1.76



FZ = 3136.4 VEL = 60.0 MULLOCK = 0.54 MUPEAK = 1.00 RATIO = 1.63

LONG, SLIP

100.00

DRY ASPHALT

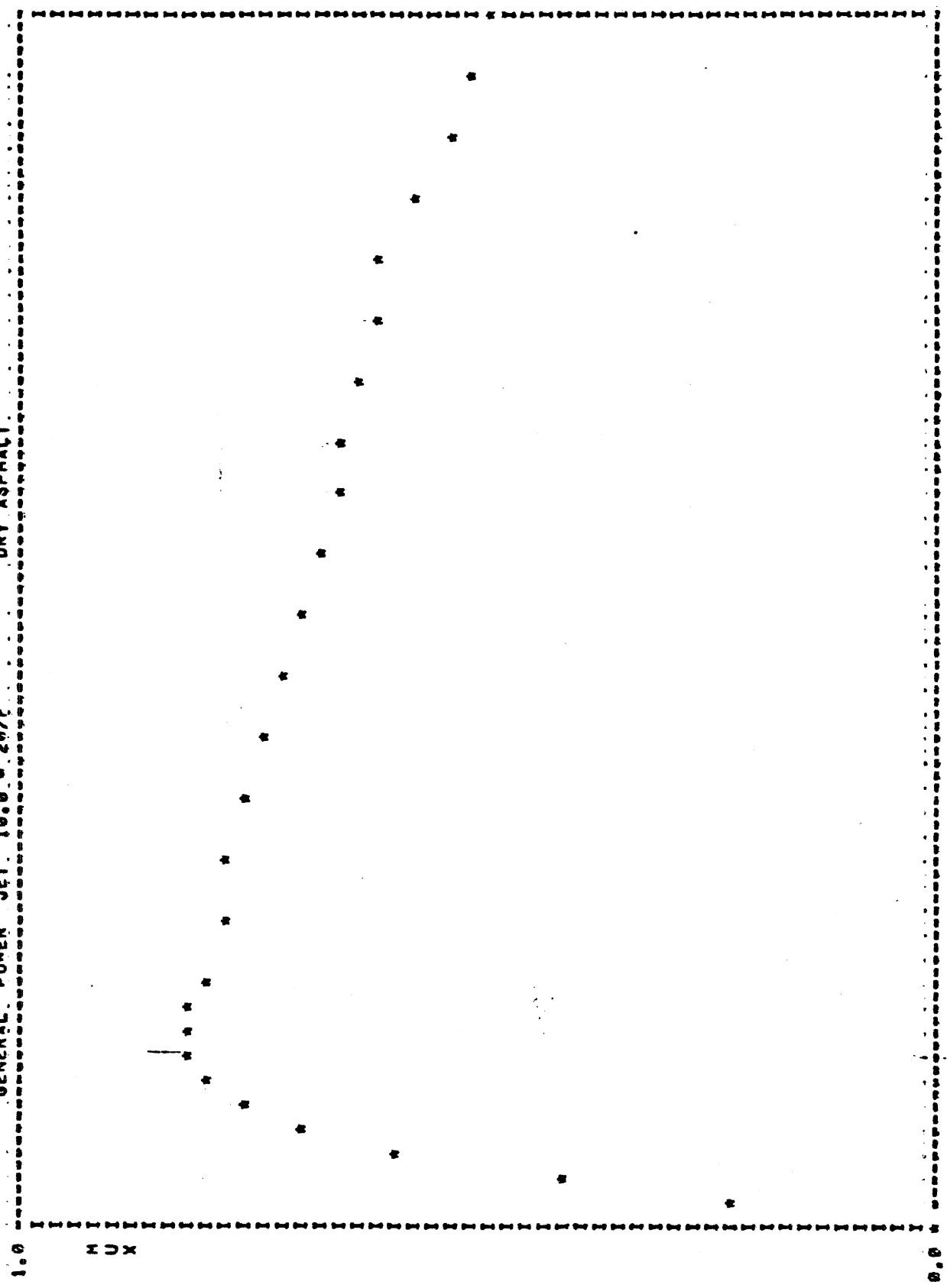
GENERAL POWER JET 10.0 P 20/F

M U X

1.0

0.00

GENERAL POWER JET 10.0 = 20/F DRY ASPHALT



100.00

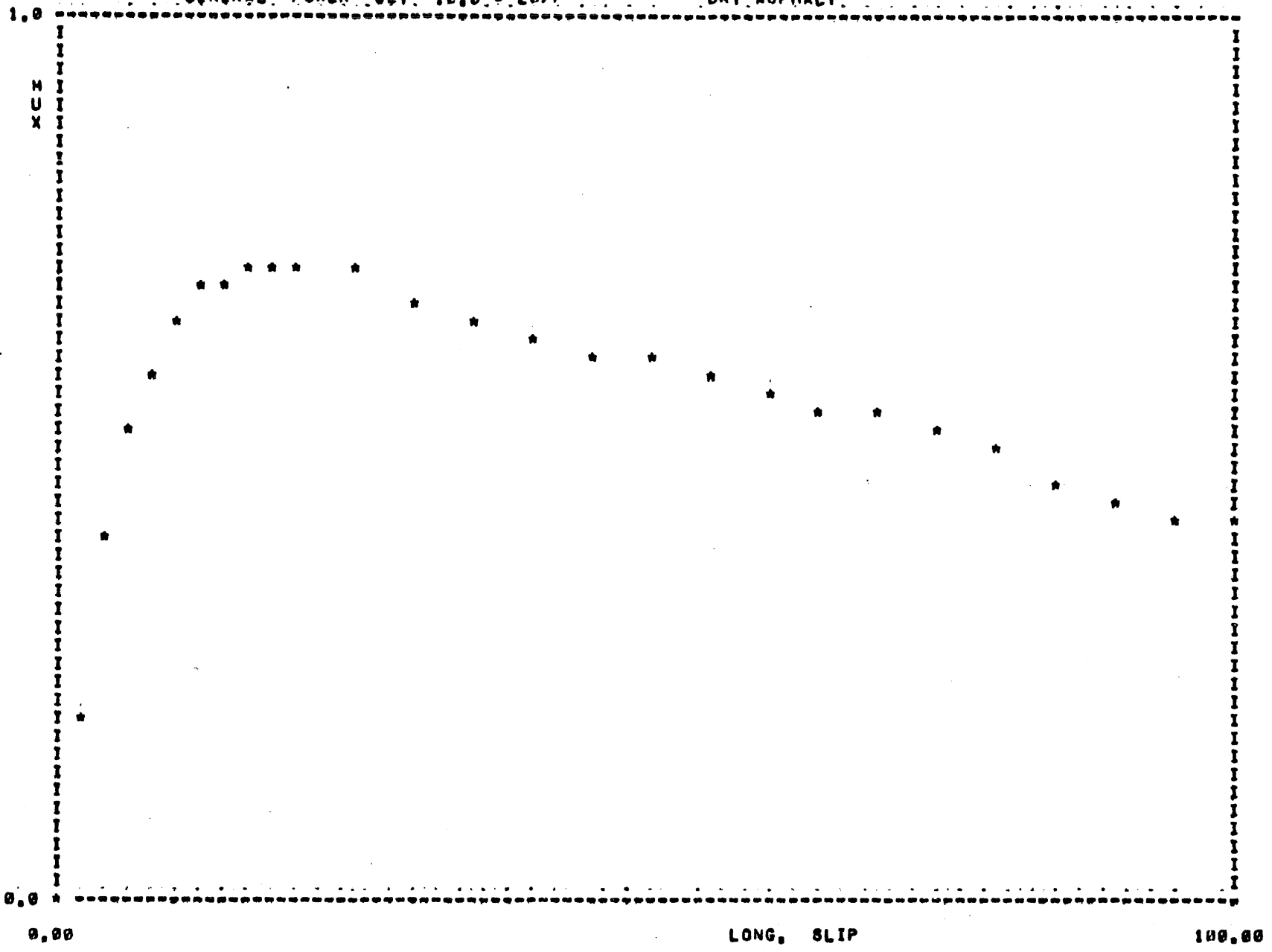
LONG. SLIP

0.00

FZ = 5662.7 VEL = 60.0 MULOCK = 0.48 MUPEAK = 0.82 RATIO = 1.70

GENERAL POWER JET 10.0 = 20/F

DRY ASPHALT



FZ = 8362.9 VEL = 60.0 MULOCK = 0.43 MUPEAK = 0.73 RATIO = 1.70

- Goodyear Custom Cross Rib
- Uniroyal Fleet Master Super Lug
- ▲ Firestone Transport 200
- △ Goodyear Super Hi Miler
- General GTX
- Firestone Transport 1

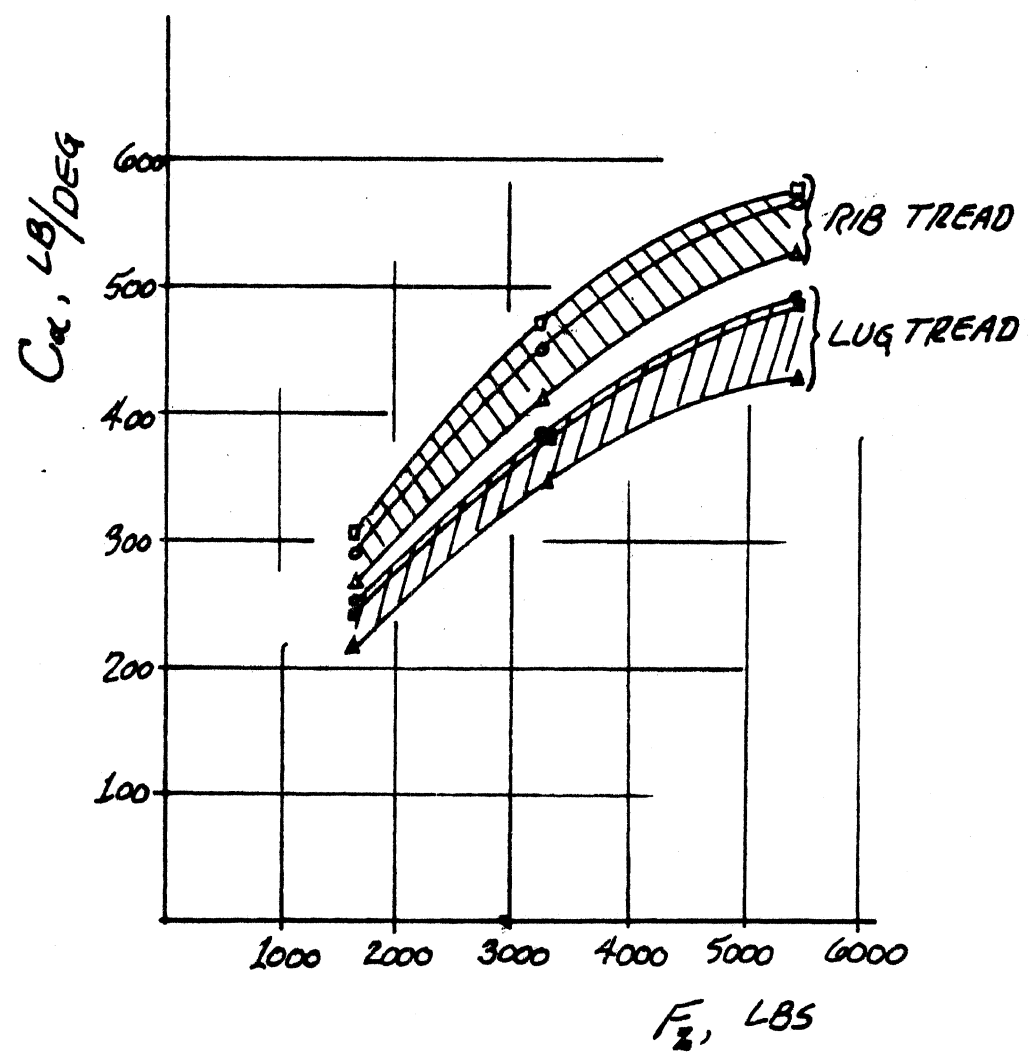


Figure 7. Cornering Stiffness, C_{α} , as Influenced by Vertical Load, F_z , for the Six-Tire Sample.

$$b = l - a$$

C_{α_1} = sum of the cornering stiffnesses of all tires mounted on the front axle

C_{α_2} = sum of the cornering stiffnesses of all tires mounted on the rear axle.

For purposes of evaluating the C_{α} measurements shown in Figure 7, the usage of (a) lug-type tires on the drive axle (only) of a 2-axle truck can be compared with the usage of (b) rib-type tires at both axle positions. The influence of these tire installations can be expressed in terms of the difference in U which derives, considering that:

$$C_{\alpha}(\text{Lug Tire}) \approx 0.8 C_{\alpha}(\text{Rib Tire})$$

Let us consider the installation of lug tires as duals on the rear axle, with single rib tires on the front axle, such that,

$$C_{\alpha_2} = 4C_{\alpha}(\text{Lug Tire}) = 3.2C_{\alpha}(\text{Rib Tire})$$

and

$$C_{\alpha_1} = 2C_{\alpha}(\text{Rib Tire})$$

As a further simplification, let us consider a perturbation in U about a configuration in which $a = 2b$ —a configuration yielding a neutral steer behavior (i.e., $U=0$) for case (b), when tires with the same value of C_{α} are installed at all wheel positions. Evaluating

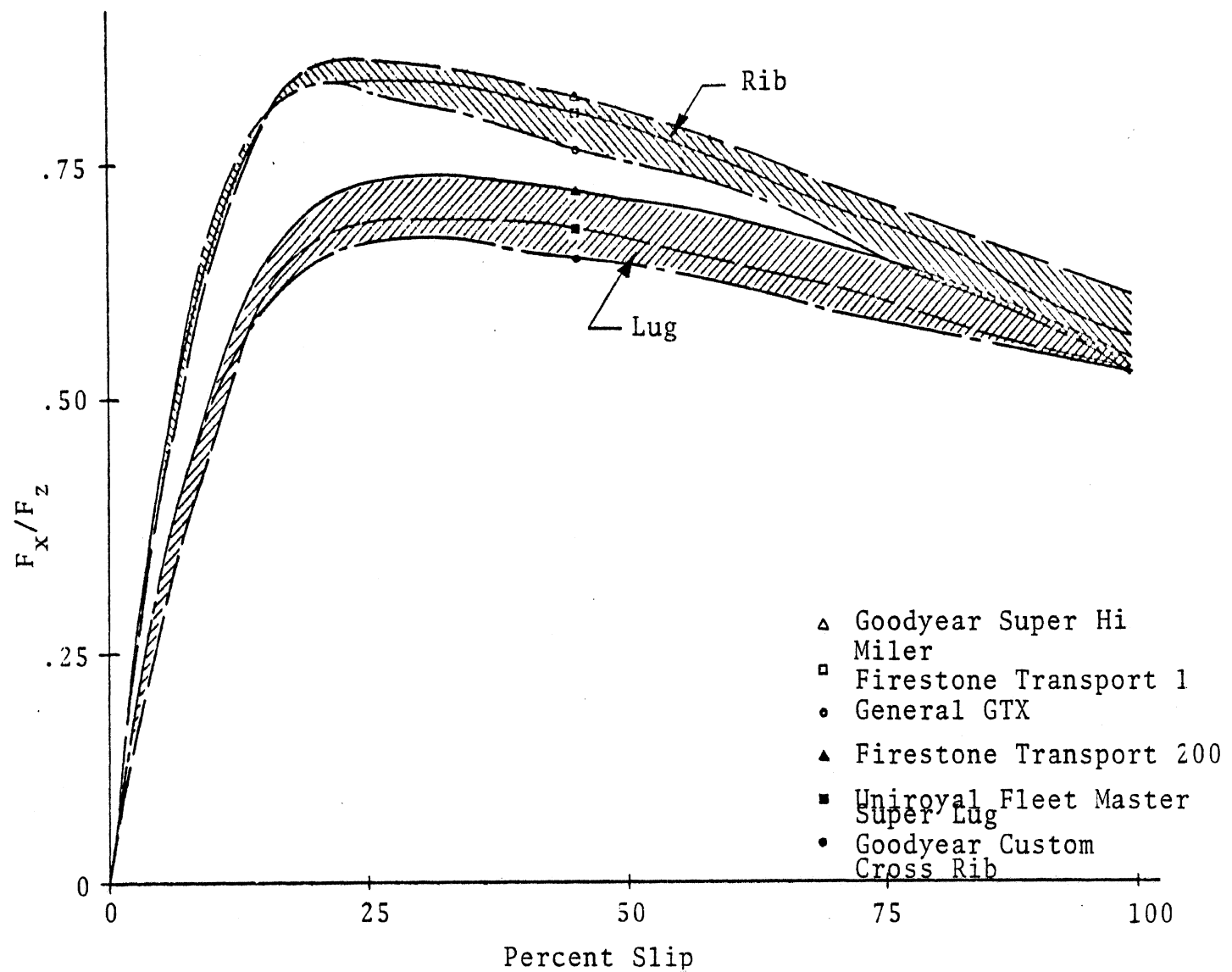


Figure 9. Characteristic μ -slip curve shapes at the reference condition of 40 mph and $1.0 \times$ Rated Load.

The slope of the force/slip relationship through the origin, termed longitudinal stiffness, C_s , is directly analogous to the cornering stiffness property, C_α , which was discussed in relation to lateral forces. It is clear that rib- and lug-type tread patterns are sharply differentiated in their C_s parameter, as is illustrated in Figure 9. This plot, summarizing the μ -slip behavior of the three rib and three lug tires, represents normalized longitudinal force responses as measured under the reference condition of 40 mph and rated load. Referring to initial slopes, these data show the average rib tire as obtaining a $C_s = 49,000$ lb/unit slip while the average for the three lug tires is 30% less, with $C_s = 34,000$ lb/unit slip. Putting this observation into a vehicle control context, C_s values are of primary interest insofar as they influence vehicle response to braking in a curved path. To understand this influence, one must first consider that a vehicle employing lower C_s tires will experience greater excursions in longitudinal slip to effect the same deceleration levels as a comparable vehicle equipped with higher C_s tires. Since as longitudinal slip increases, the tire's ability to generate lateral forces decreases, there exists a mechanism by which the longitudinal properties of tires can influence the cornering response of vehicles to braking inputs. Thus, as a vehicle is negotiating a turn, at a given level of lateral acceleration and thus, tire side forces, it will experience a perturbation in centripetal force and/or yaw moment as a consequence of a braking input. The severity of this disturbance will be determined by:

- a) the initial level of lateral acceleration,
- b) the level of braking force generated at each of the various tire positions,

(F)

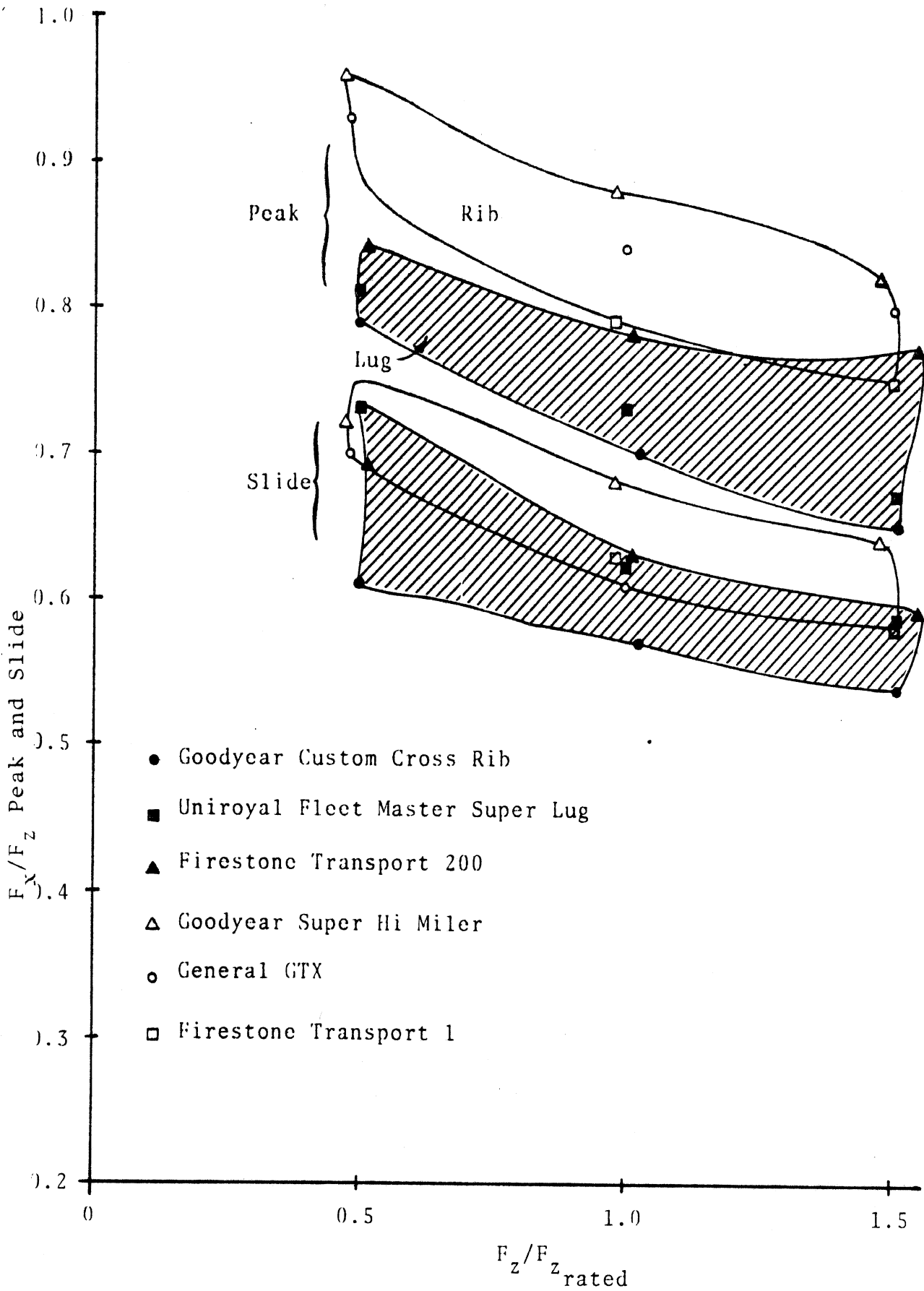


Figure 10. Peak and slide values of F_x/F_z at 20 mph for the six-tire sample.

where

ΔC_s = difference in C_s values exhibited by
typical lug and rib tires, that is,
 $C_{s_{rib}} - C_{s_{lug}} \approx 15,000 \text{ lb/unit slip}$

y = lateral spacing between wheel centers
of a dual-mounted pair (typically
about 12")

and g , a , C_{α_1} , and V are as defined earlier.

Accordingly, a typical lug tire installation on a rear axle employing dual tire sets would yield an understeer level which is lower than that for the corresponding installation of a typical rib tire by amounts such as:

0.29°/g at 10 mph
0.07°/g at 20 mph
0.03°/g at 30 mph

Thus, while the influence of C_s on understeer level represents an interesting aspect of vehicle mechanics, it provides a negligible degree of discrimination between the properties of lug- and rib-type tires for operating speeds above 10 mph.

With regard to limit braking capability, the pertinent features of the μ -slip curve are the peak value of F_x/F_z and the value which accrues under the locked-wheel condition, at $s = 100\%$. Accordingly, the longitudinal traction data obtained for the six-tire sample has been reduced to plots of "peak" and "slide" values of F_x/F_z at the various conditions of load and velocity. Figures 10, 11, and 12 illustrate the ranges of peak and slide data, as a function of loading, for the rib and lug tire classes at 20, 40, and 55 mph, respectively.

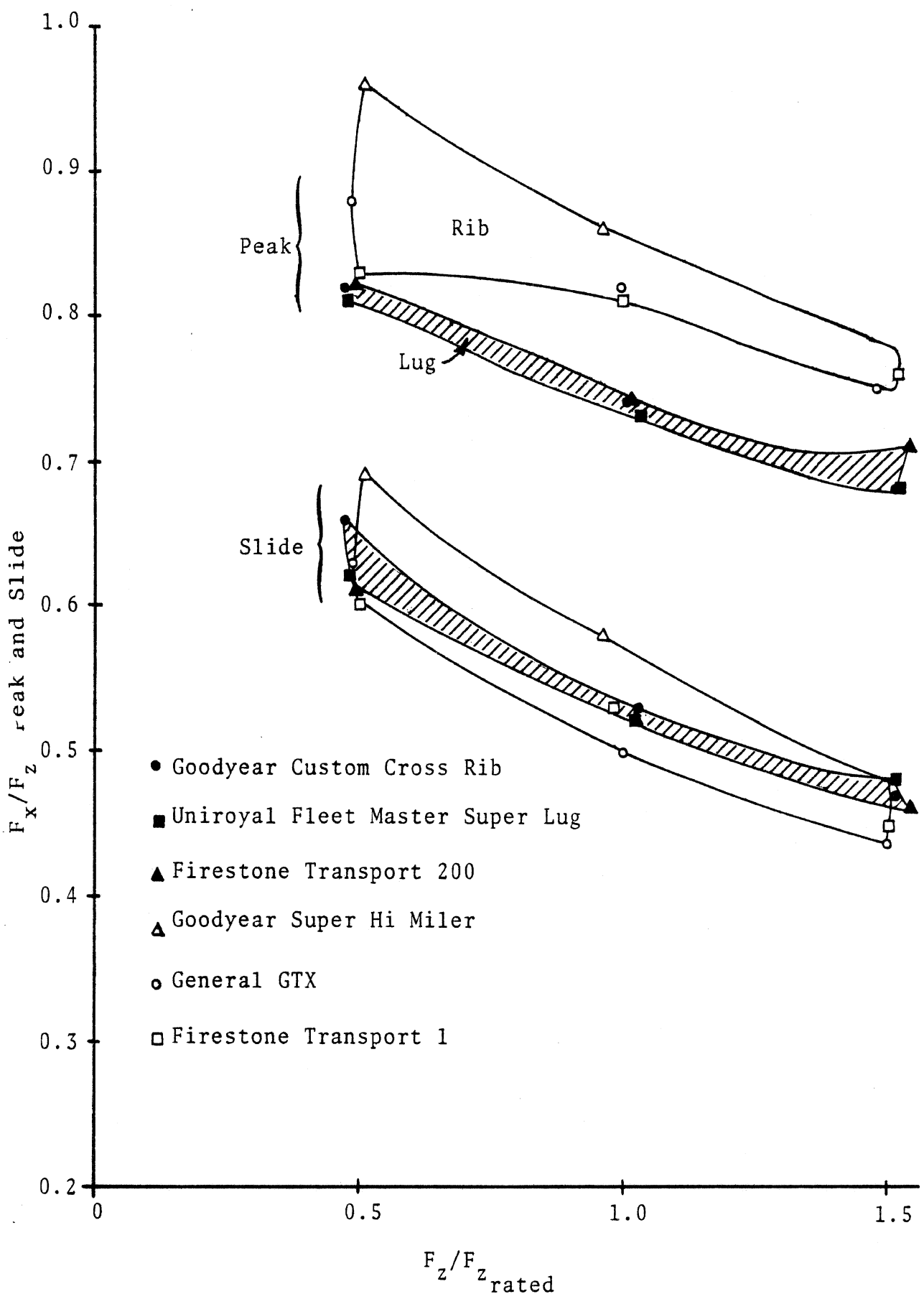


Figure 12. Peak and slide values of F_x/F_z at 55 mph for the six-tire sample.

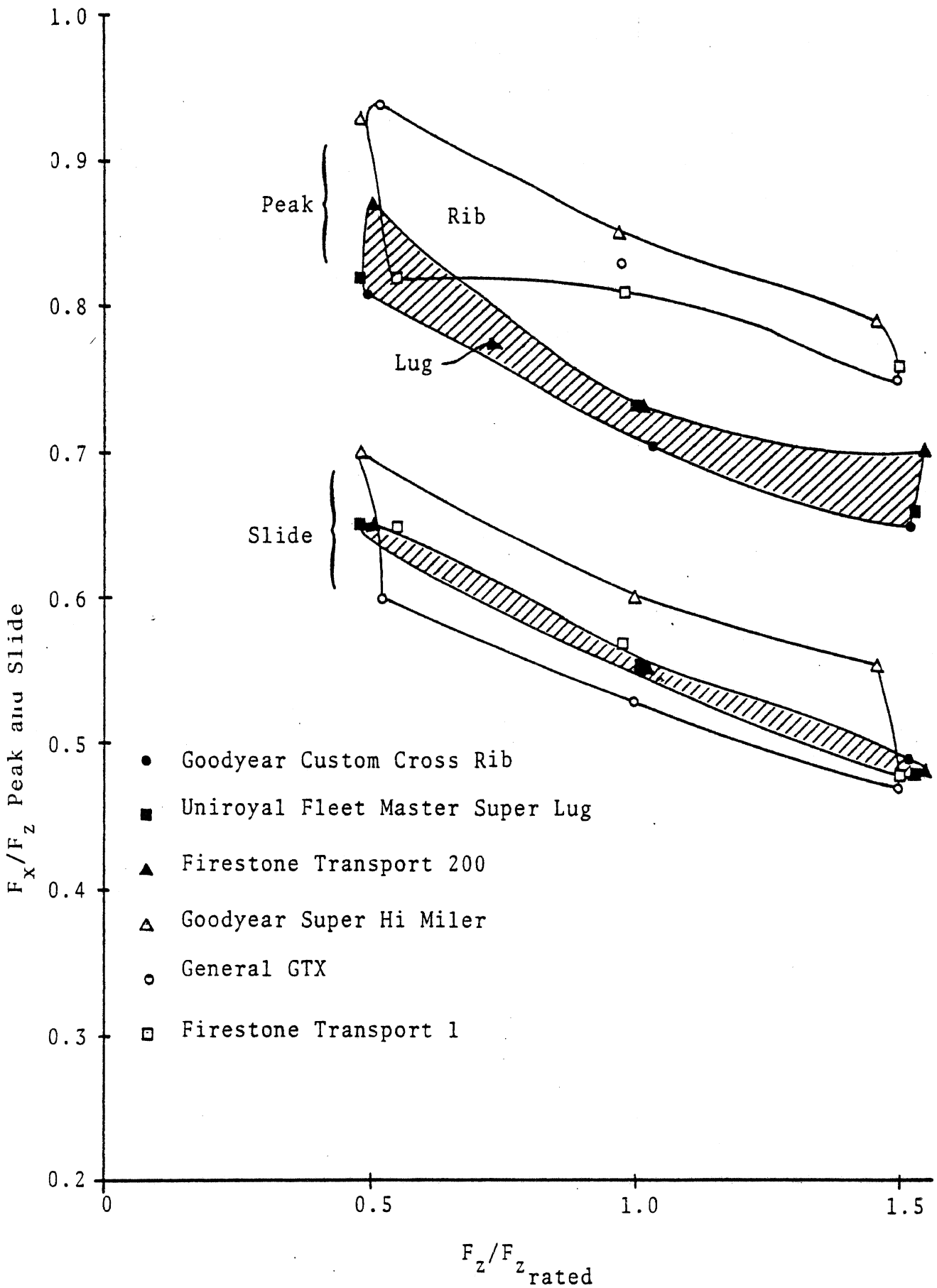


Figure 11. Peak and slide values of F_x/F_z at 40 mph for the six-tire sample.

(F)

TABLE 4

PEAK AND SLIDE VALUES OF F_x/F_z AS OBTAINED
OVER THE FIVE REPEAT RUNS FOR EACH OF
THE SIX SAMPLE TIRES

Goodyear Super Hi Miler

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .86 | .60 |
| 4 | .85 | .61 |
| 7 | .87 | .63 |
| 10 | .85 | .60 |
| 13 | .85 | .60 |
| Avg. | .856 | .608 |
| σ | .00800 | .0117 |

Firestone Transport 200

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .74 | .56 |
| 4 | .75 | .55 |
| 7 | .79 | .59 |
| 10 | .73 | .56 |
| 13 | .72 | .54 |
| Avg. | .746 | .56 |
| σ | .0242 | .0167 |

Firestone Transport 1

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .85 | .57 |
| 4 | .83 | .56 |
| 7 | .82 | .58 |
| 10 | .81 | .56 |
| 13 | .80 | .57 |
| Avg. | .822 | .568 |
| σ | .0172 | .00748 |

Goodyear Custom Cross Rib

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .67 | .53 |
| 4 | .70 | .56 |
| 7 | .74 | .55 |
| 10 | .73 | .55 |
| 13 | .73 | .55 |
| Avg. | .714 | .548 |
| σ | .0258 | .00980 |

General GTX

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .83 | .54 |
| 4 | .83 | .52 |
| 7 | .83 | .53 |
| 10 | .80 | .53 |
| 13 | .82 | .53 |
| Avg. | .822 | .53 |
| σ | .0117 | .00632 |

Uniroyal Fleetmaster Super-Lug

| Run | μ_p | μ_s |
|----------|---------|---------|
| 1 | .70 | .54 |
| 4 | .71 | .55 |
| 7 | .73 | .55 |
| 10 | .74 | .56 |
| 13 | .74 | .55 |
| Avg. | .724 | .55 |
| σ | .01625 | .00632 |

these tests were reduced to a plotted format such as shown in Figures 13 and 14. These examples indicate the basic sensitivity of the F_y/F_z versus α relationship to velocity and vertical load, respectively. As with longitudinal traction measurements, the tire exhibits a steeply rising (elastic) behavior followed by a friction-determined saturation. In the case of lateral traction, the angular slip range of interest is limited to about $\alpha=20^\circ$, thereby eliminating any need to characterize performance at high slip velocities such as are relevant to longitudinal traction. Accordingly, it is not surprising that the example of Figure 13 indicates a rather limited sensitivity of (F_y/F_z vs. α) to velocity. Indeed, as summarized in Figure 15, the performance of all six lug and rib tires over the 20 to 55 mph velocity range and at their common rated load, is contained within a relatively narrow band. Figure 15 serves to support the conclusion that no appreciable differentiation can be made between the lug- and rib-type samples on the basis of their lateral force sensitivity to velocity. In addition, Figure 15 illustrates that the absolute levels of lateral traction capability do not serve to distinguish lug from rib tires in the sample tested. Figure 16 serves to confirm this observation even further, by illustrating that the entire sample of six tires is closely packed in its lateral traction behavior over the load range, as well.

Thus we find, somewhat surprisingly, that the ability of the lug-type, cross-bias tire to generate lateral forces, at elevated slip angles and on a dry pavement, is comparable to the capability of its rib-type counterpart.

- Uniroyal Fleet Master Super Lug
- Goodyear Custom Cross Rib
- ▲— Firestone Transport 200
- Firestone Transport 1
- General GTX
- △— Goodyear Super Hi Miler

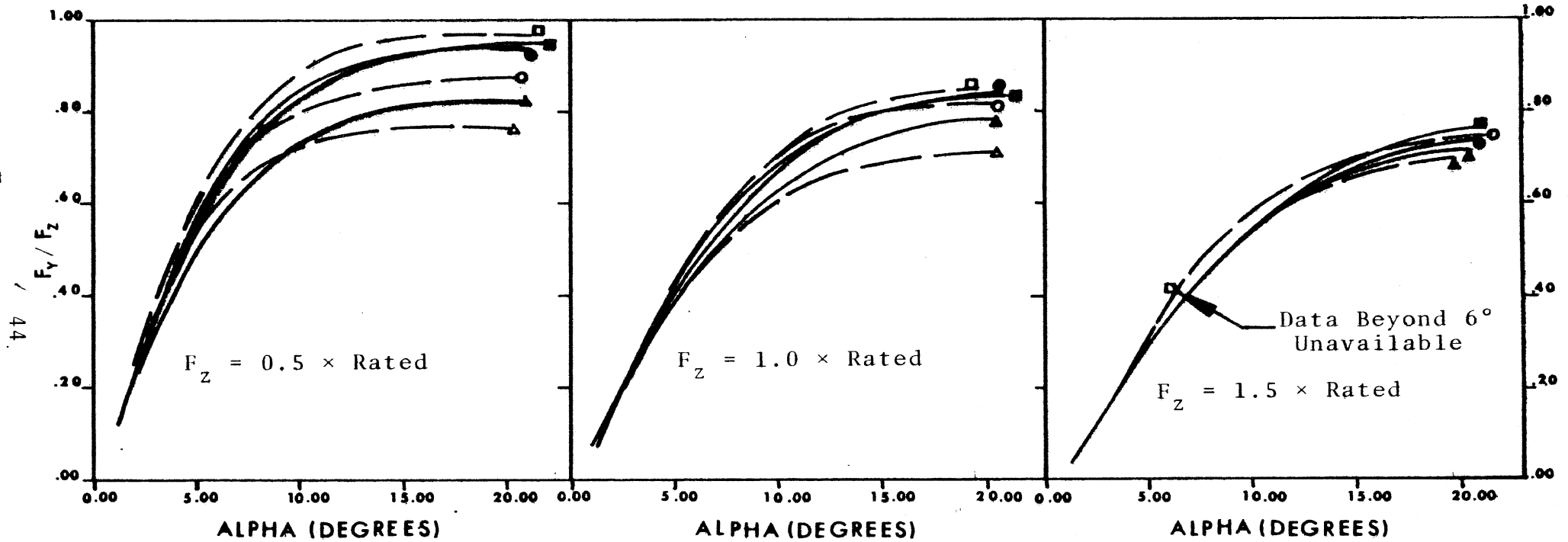


Figure 16. Summary of the F_y/F_z vs. α behavior of the six-tire sample at each of three loads, and at 20 mph.

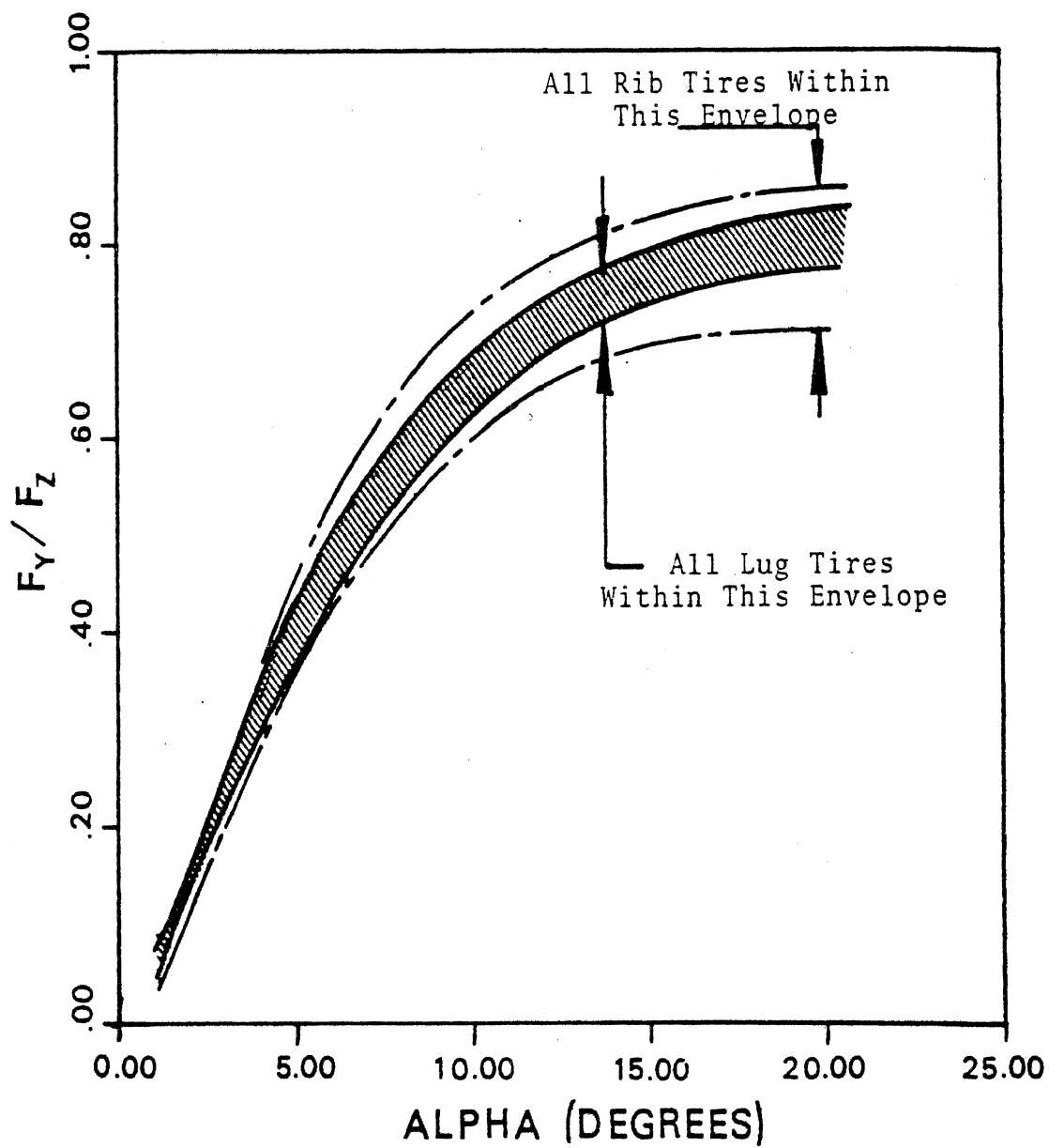


Figure 15. Envelopes of F_y/F_z vs. α data obtained at test velocities of 20, 40, and 55 mph and at rated load for all six tires in the sample.

APPENDIX B-I

TABULAR FLAT-BED TEST RESULTS

The following table indicates lateral force measurements which were obtained with each tire at slip angles of $\pm 1^\circ$ and at 0° for each of three values of vertical load. The cornering stiffness parameter, C_α , is then listed as the average of the lateral forces obtained at $+1^\circ$ and -1° .

| Tire | Vertical Load, lbs. | Lateral Force, lbs at Slip Angles, α | | | Cornering Stiffness C_α lbs/deg |
|--------------------------------|---------------------|---------------------------------------------|------------|-----------|----------------------------------------|
| | | $+1^\circ$ | -1° | 0° | |
| Goodyear Super Hi Miler | 1630 | -291 | 234 | -31 | 263 |
| | 3260 | -459 | 363 | -60 | 411 |
| | 5430 | -606 | 444 | -73 | 525 |
| General GTX | 1630 | -326 | 260 | -37 | 293 |
| | 3260 | -503 | 392 | -65 | 448 |
| | 5430 | -643 | 492 | -80 | 568 |
| Firestone Transport 1 | 1630 | -346 | 267 | -49 | 306 |
| | 3260 | -540 | 403 | -76 | 471 |
| | 5430 | -670 | 486 | -106 | 578 |
| Uniroyal Fleetmaster Super Lug | 1630 | -268 | 215 | -26 | 242 |
| | 3260 | -430 | 340 | -47 | 385 |
| | 5430 | -559 | 417 | -64 | 483 |
| Goodyear Custom Cross Rib | 1630 | -270 | 224 | -36 | 247 |
| | 3260 | -433 | 337 | -56 | 385 |
| | 5430 | -572 | 418 | -77 | 495 |
| Firestone Transport 200 | 1630 | -259 | 178 | -30 | 219 |
| | 3260 | -403 | 289 | -51 | 346 |
| | 5430 | -538 | 315 | -84 | 426 |

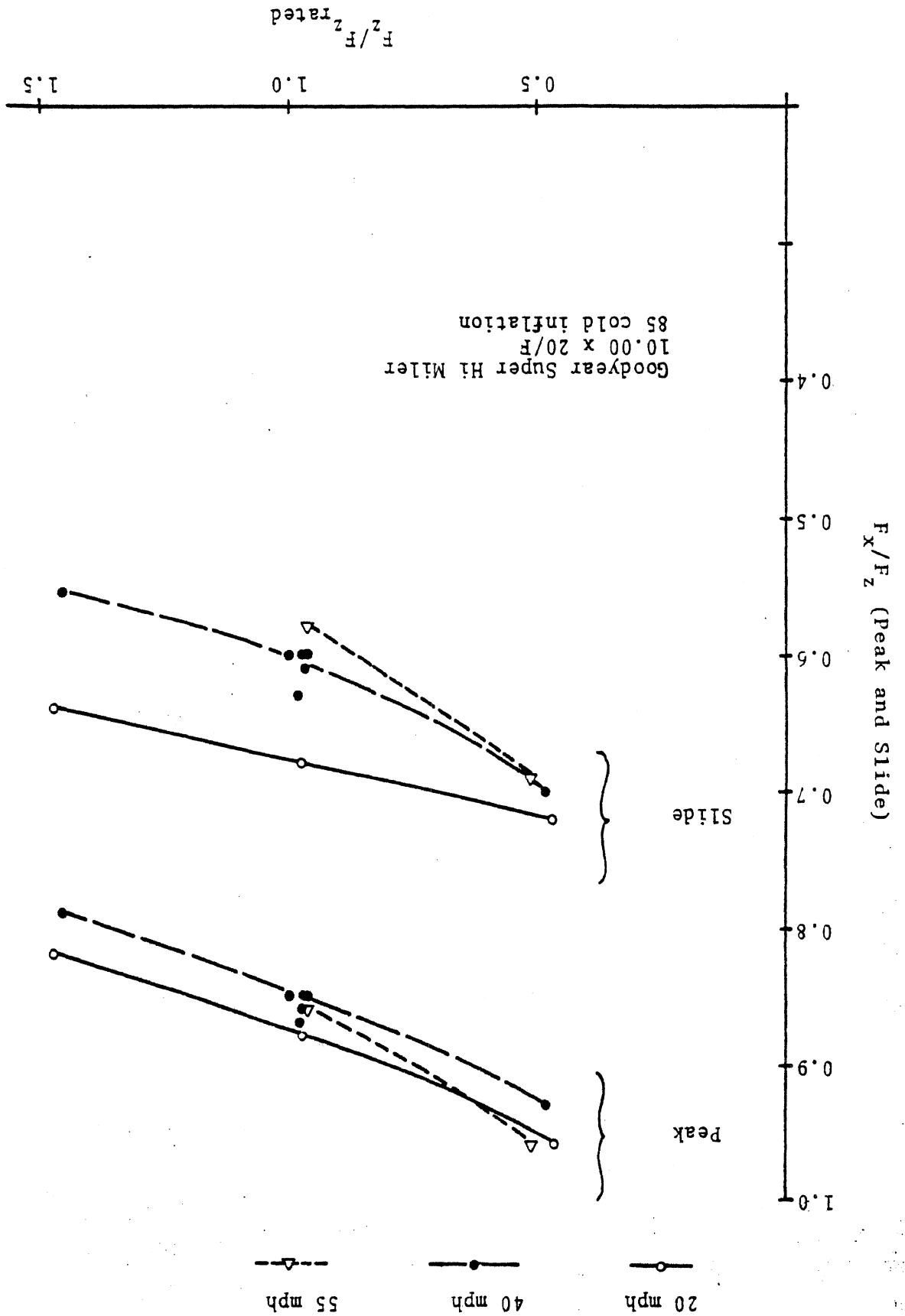
APPENDIX B-II

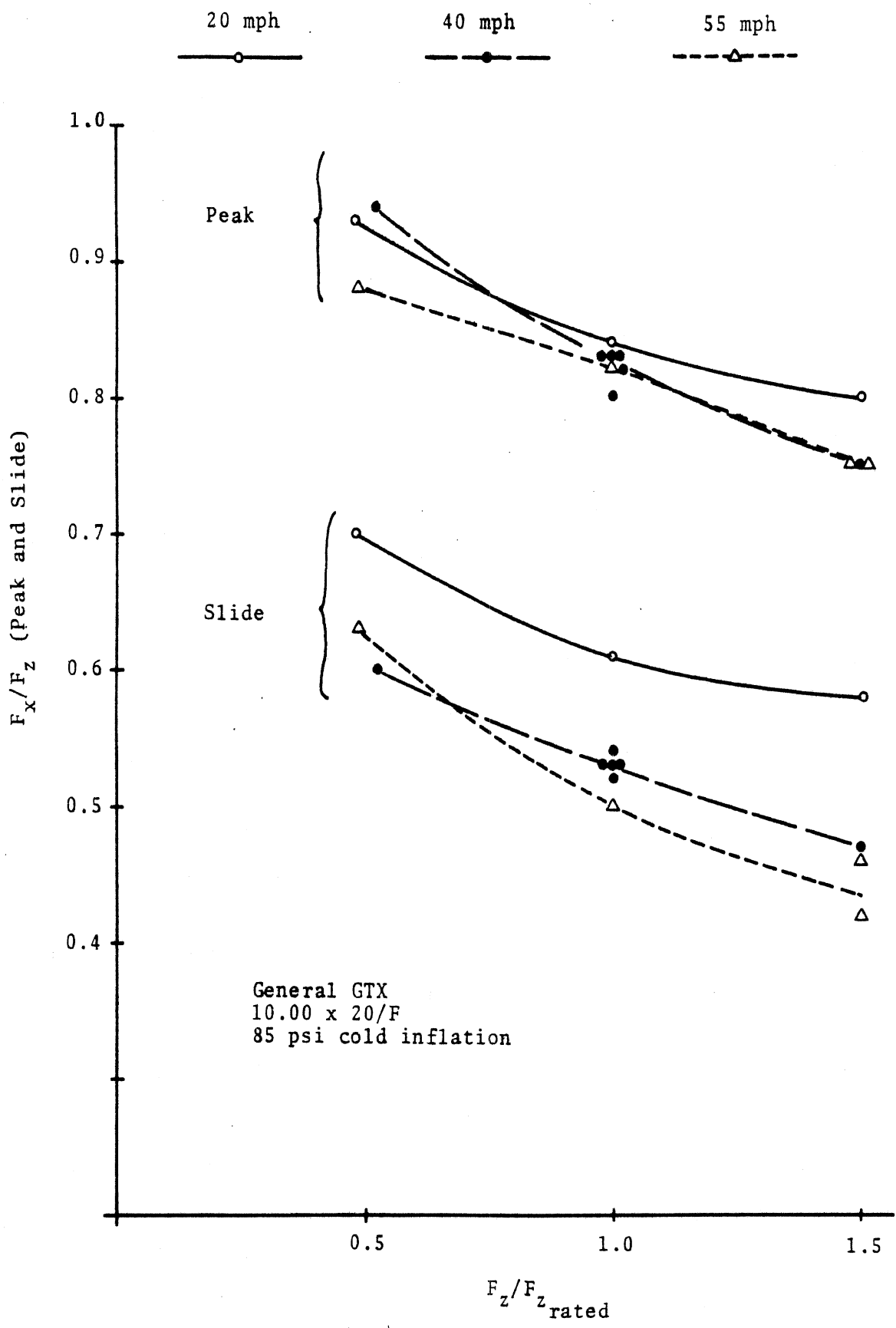
INDIVIDUAL LONGITUDINAL FORCE PLOTS
FROM MOBILE TRACTION TESTS

The following plots represent the "peak" and "slide" values of normalized longitudinal force obtained during the braking traction testing of the six-tire sample on a dry Portland cement concrete pavement. Each plot illustrates the influence of both load and velocity on the values of F_x/F_z obtained at the peak of the " μ -slip" curve and at the 100% slip condition. Additionally, data from the five repeats of the reference condition run, at $F_z = 1.0 \times$ rated load and $V = 40$ mph, are plotted as an indicator of the basic repeatability of the experiments. Tabular data from the repeat runs, together with computed standard deviations, were presented in the text, Table 3.

Coordinating Engineer 11/1/55 DTI 11/1/55

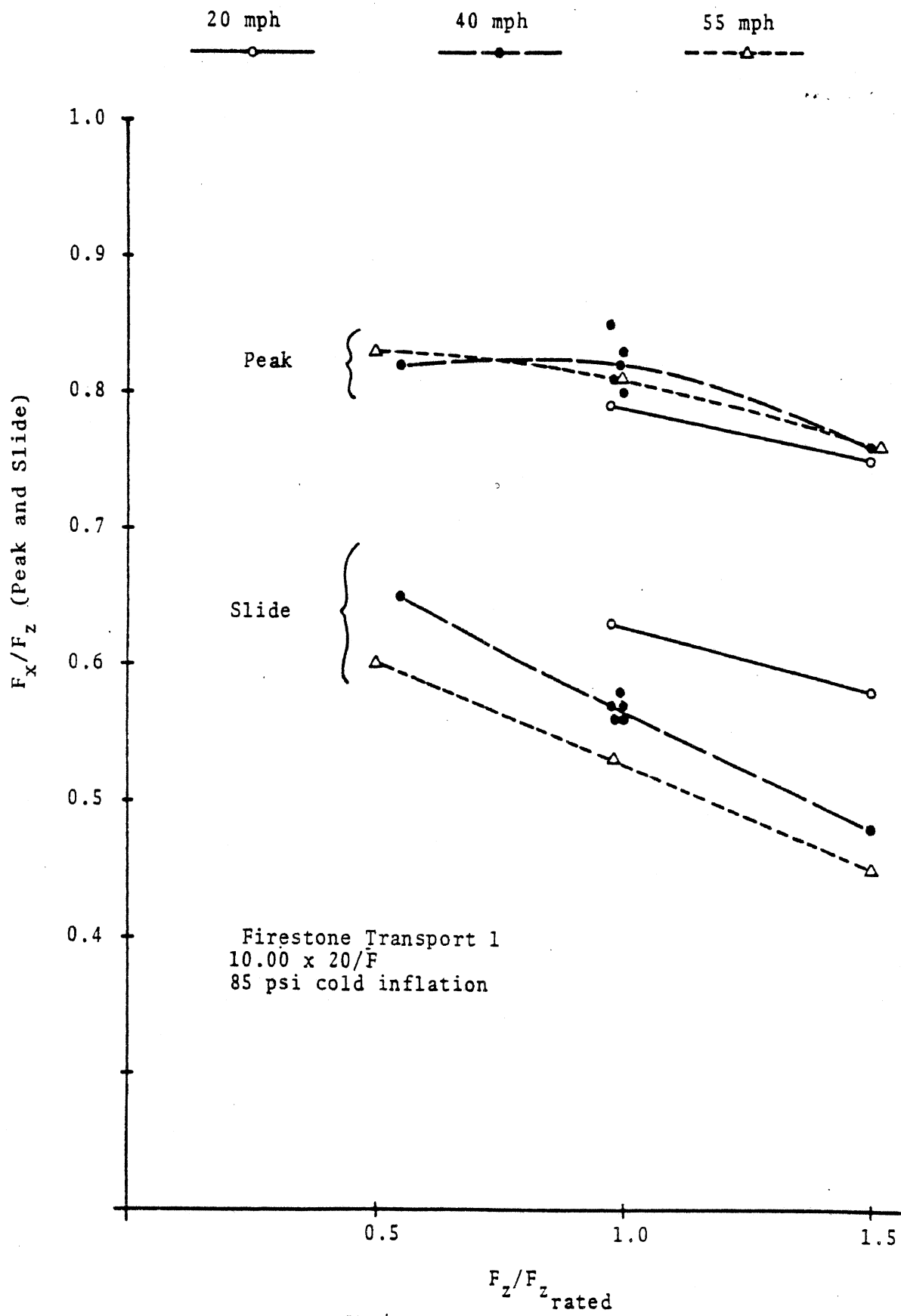
112 2/11





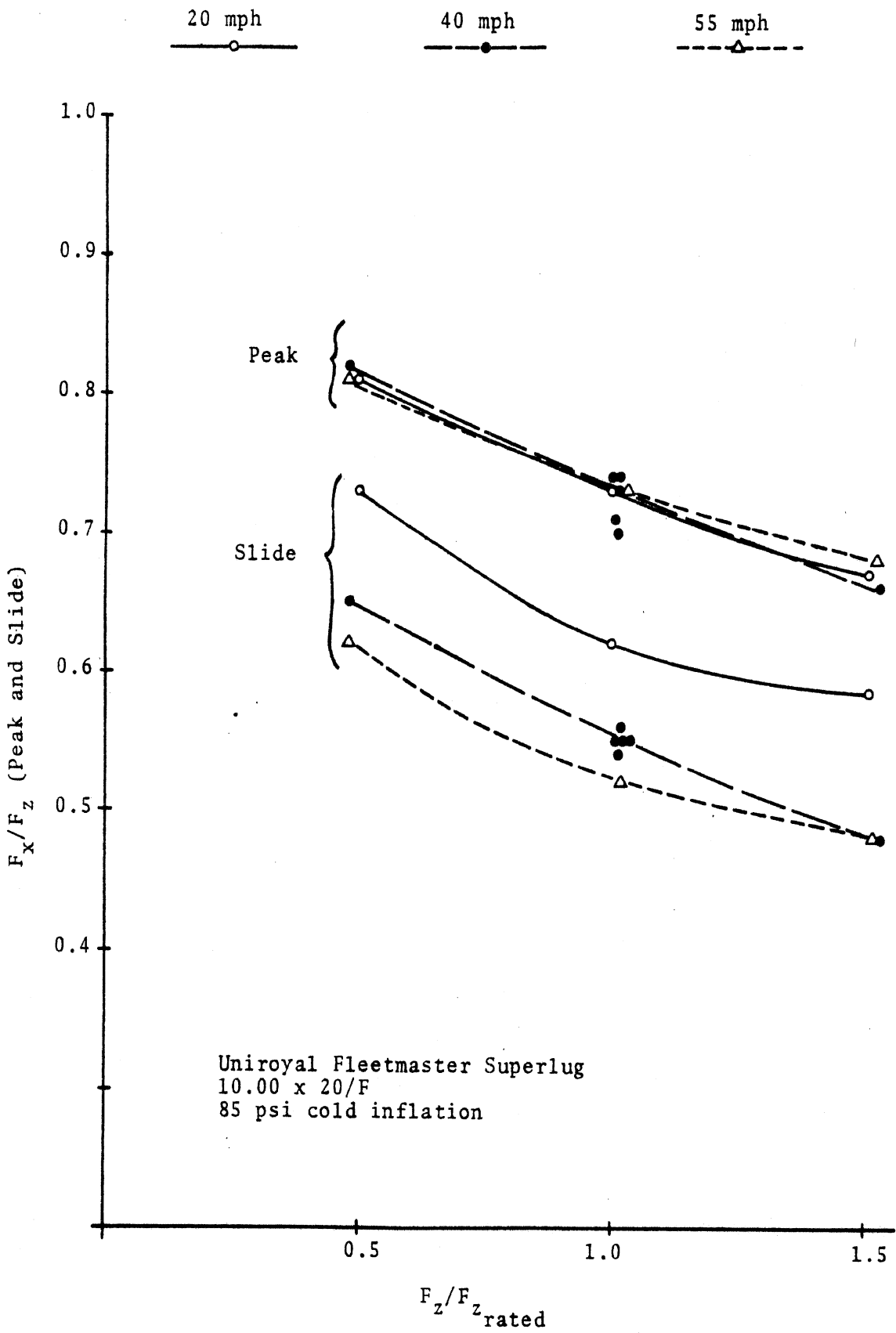
113

GENERAL GTX 10x20/F (MVMA)



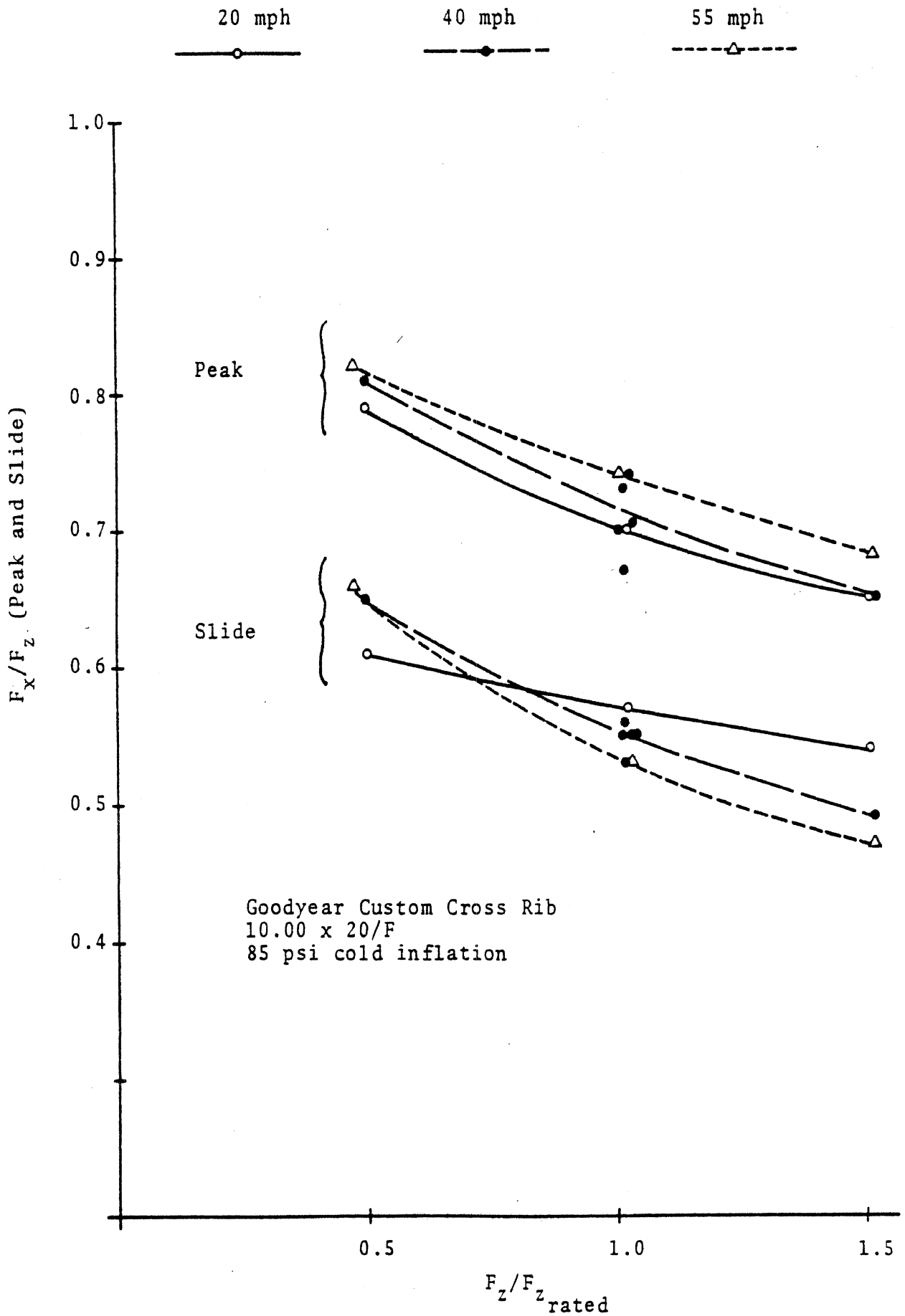
114

FIRESTONE TRANSPORT I 10X20F (MUMA)

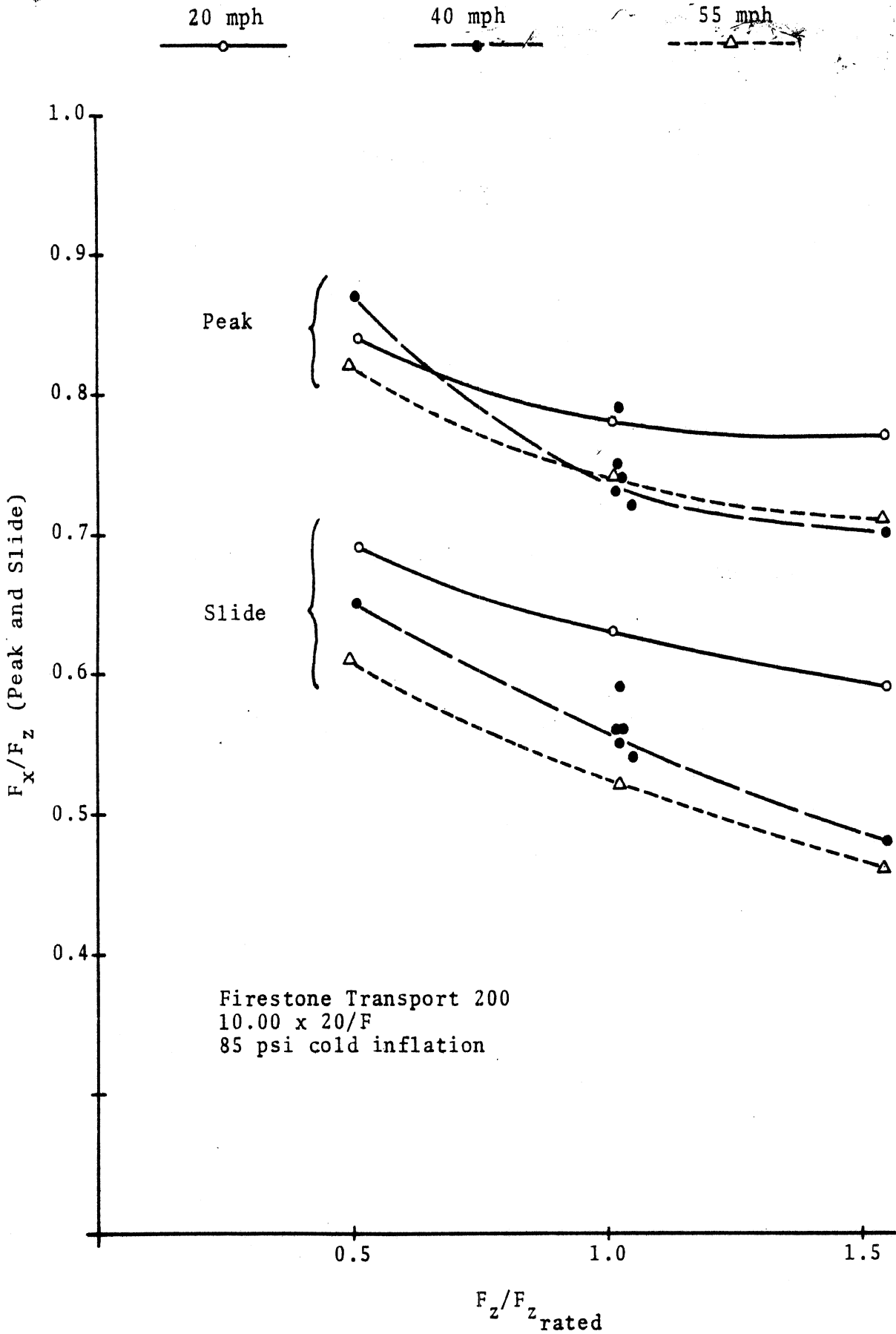


Uniroyal Fleetmaster Superlug
10.00 x 20/F
85 psi cold inflation

811 115



Goodyear Custom Cross Rib 10x20/F MUMA



APPENDIX B-III

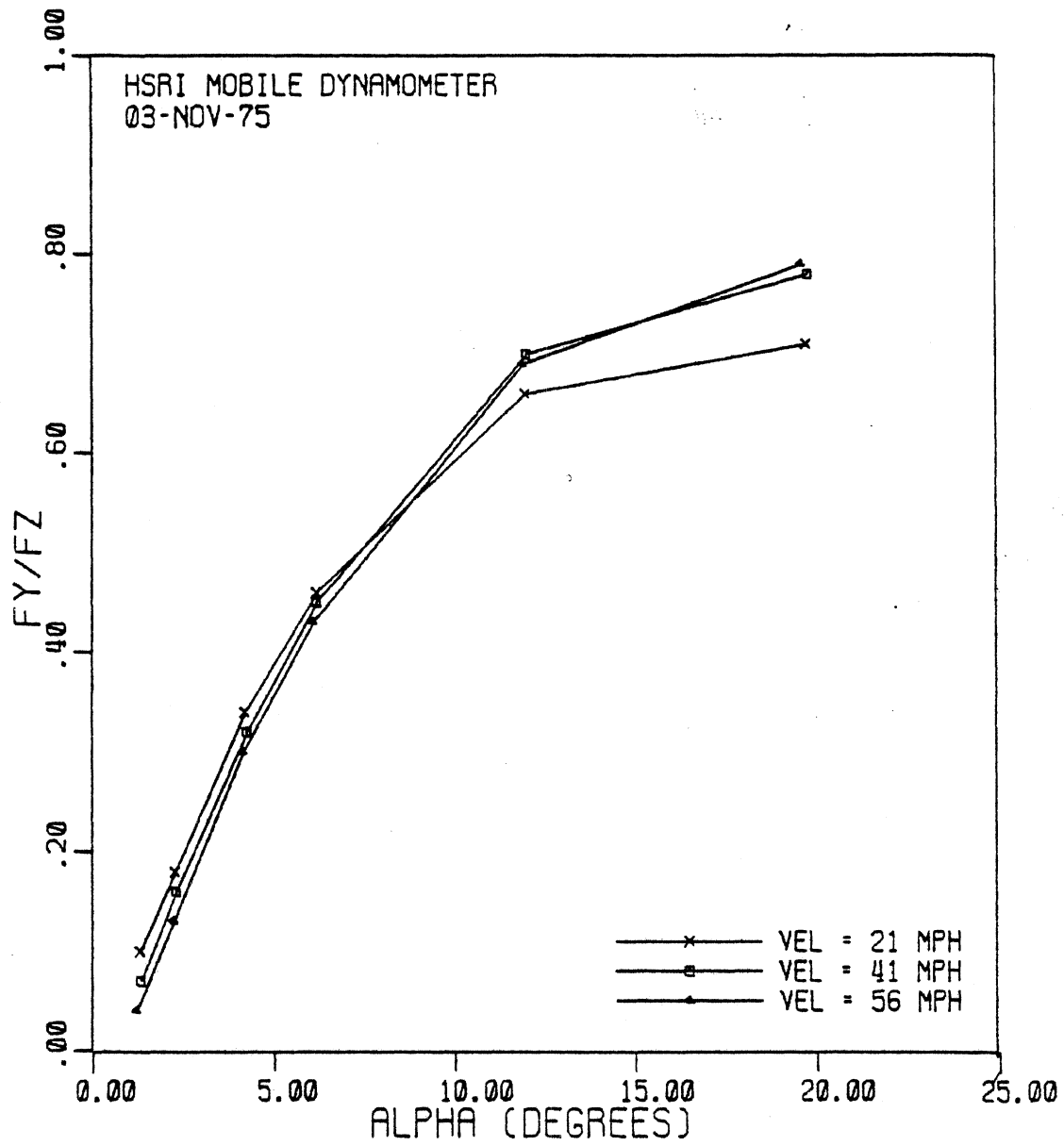
INDIVIDUAL LATERAL FORCE PLOTS
FROM MOBILE TRACTION TESTS

The following plots represent the lateral force, F_y , or the normalized lateral force, F_y/F_z , versus slip angle, α , behaviour of each tire in the test sample. These data were obtained using the HSRI mobile dynamometer on a dry Portland cement concrete pavement. Each tire is represented by three plots indicating the influence on lateral traction of

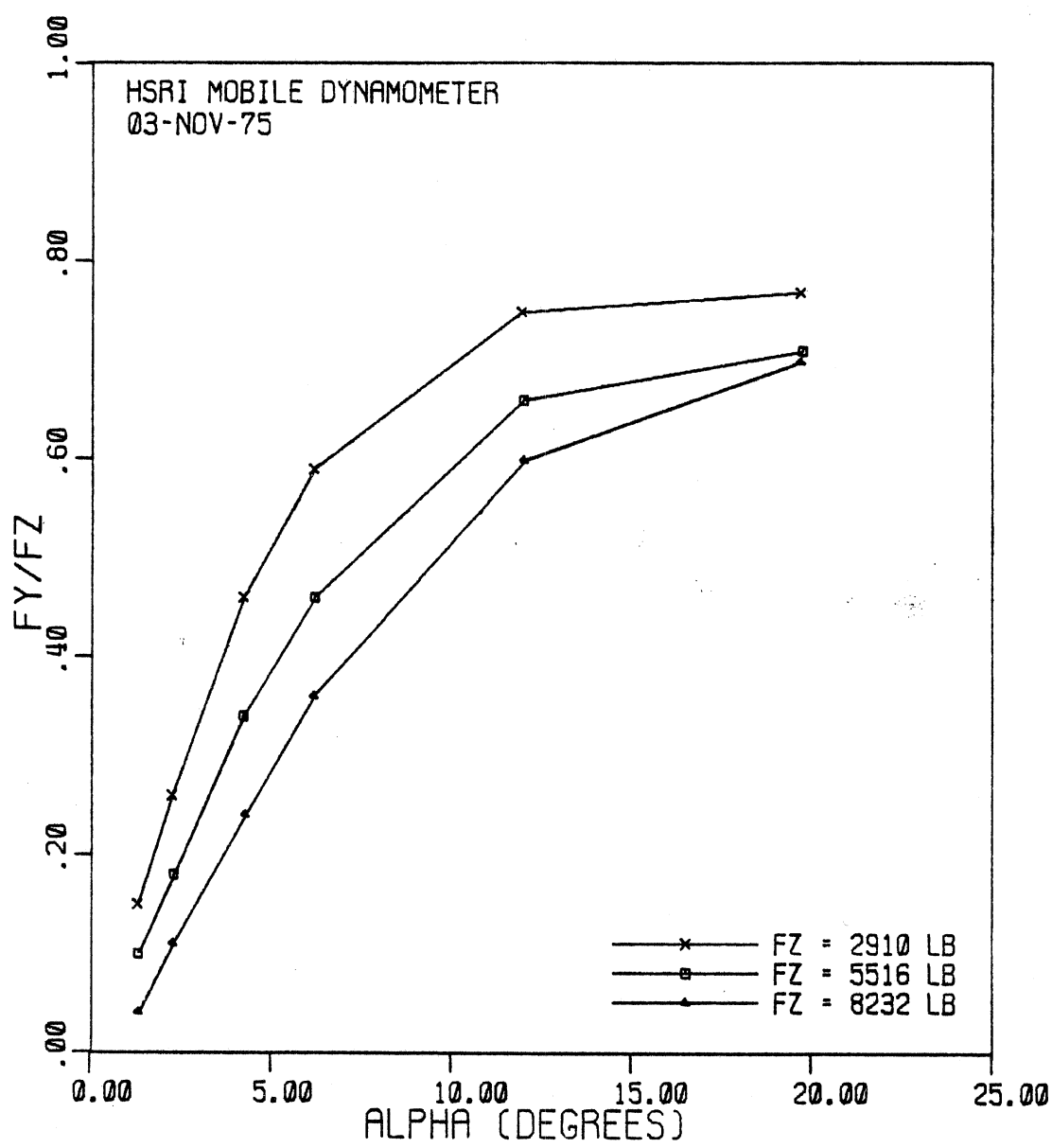
- 1) velocity
- 2) load
- 3) repeated test runs

Accordingly, the first plot for each tire represents tests conducted all at rated load, but at velocities of nominally 20, 40, and 55 mph.

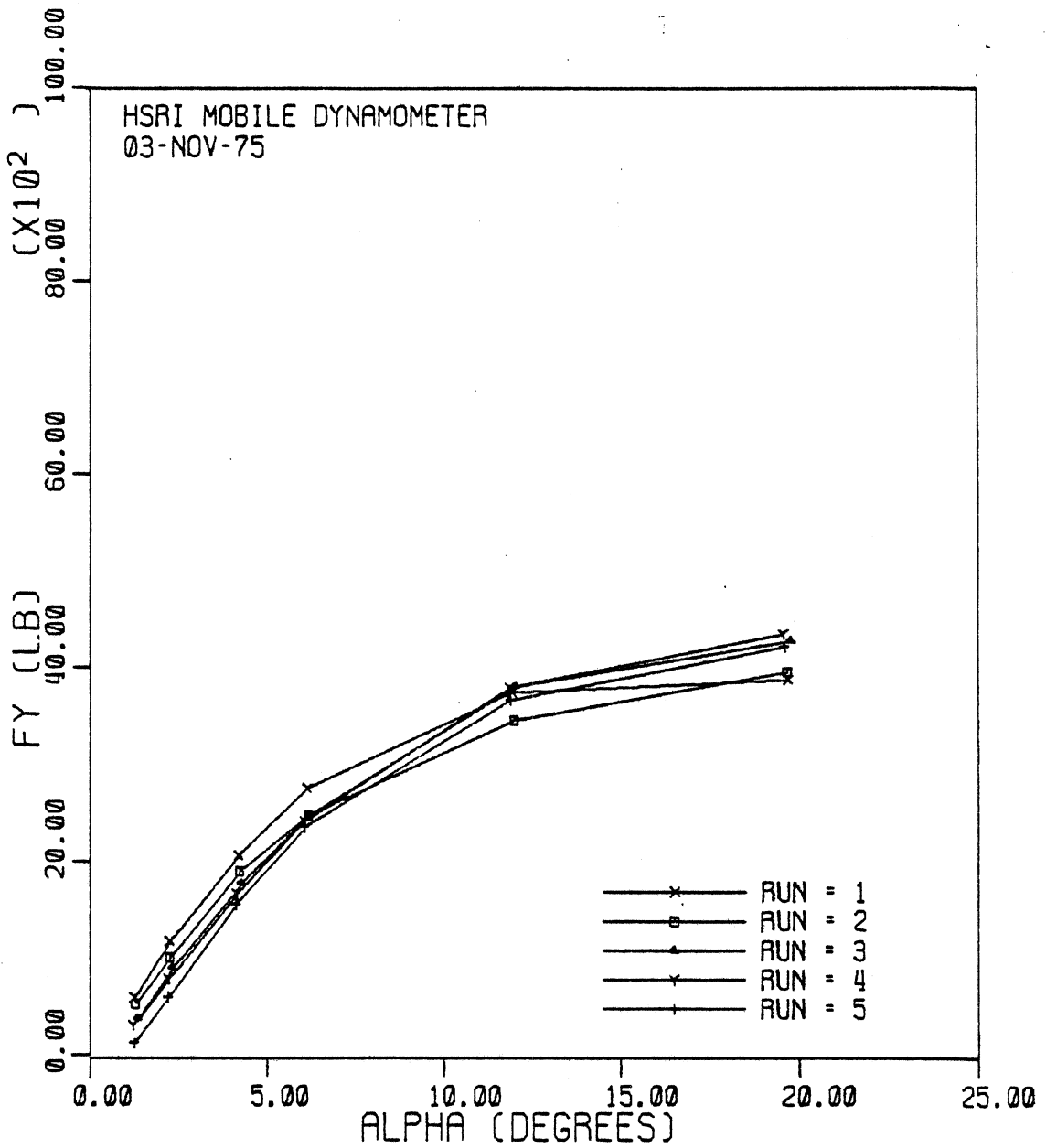
Similarly, the second plot for each tire represents tests conducted at 40 mph and at vertical loads of $F_z = 0.5, 1.0, \text{ and } 1.5$ times the T&RA rated load. The final plot serves to document the stability of the tire specimen as a force-producing mechanism over the sequence of test runs. These data indicate the tire's F_y/α behaviour as measured during each of five "spot checks" at conditions of $F_z = \text{rated load}$ and $V = 40$ mph.



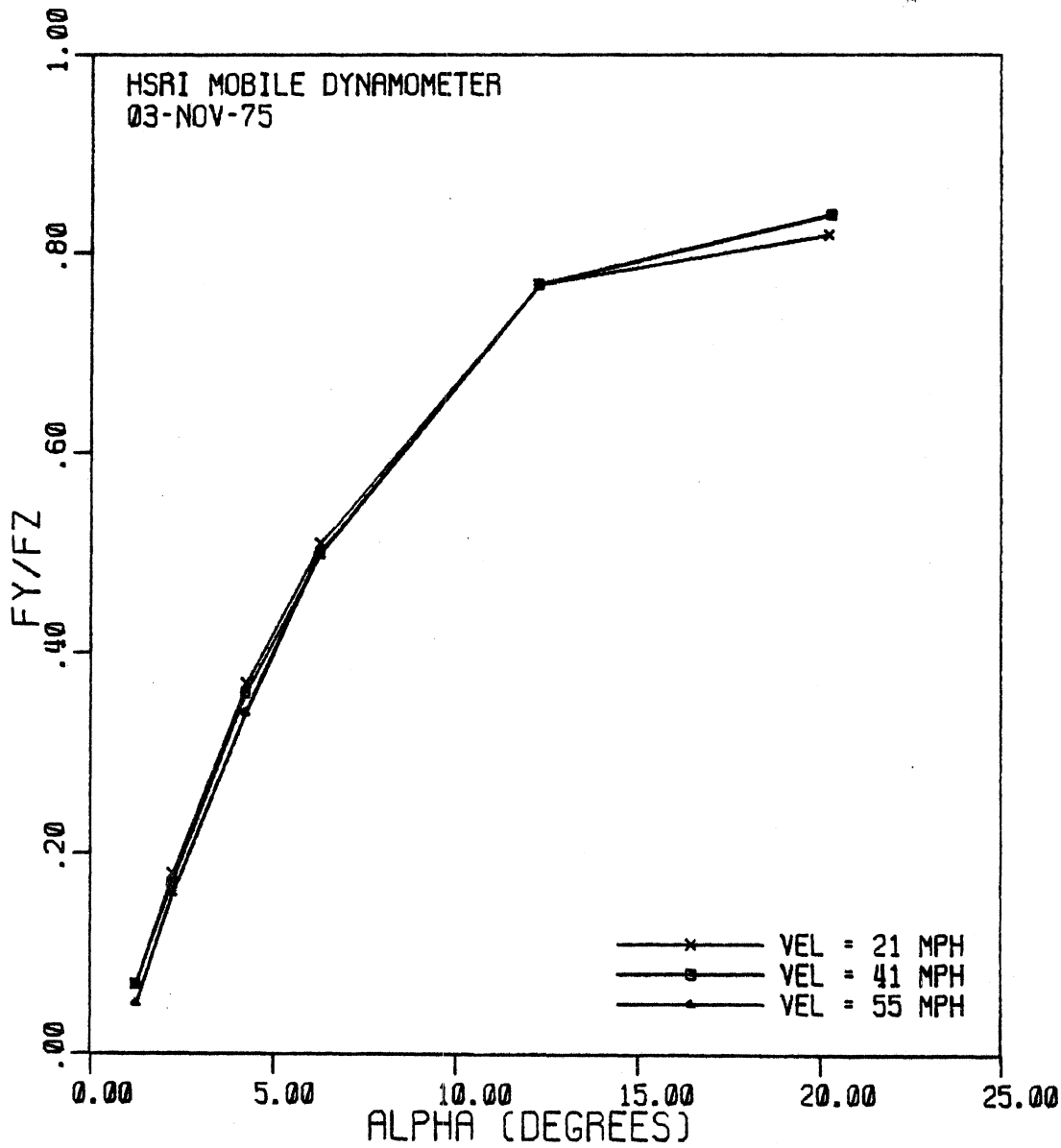
GOODYEAR SUPER HI MILER 10.00X20/F
FZ = 5530 LB



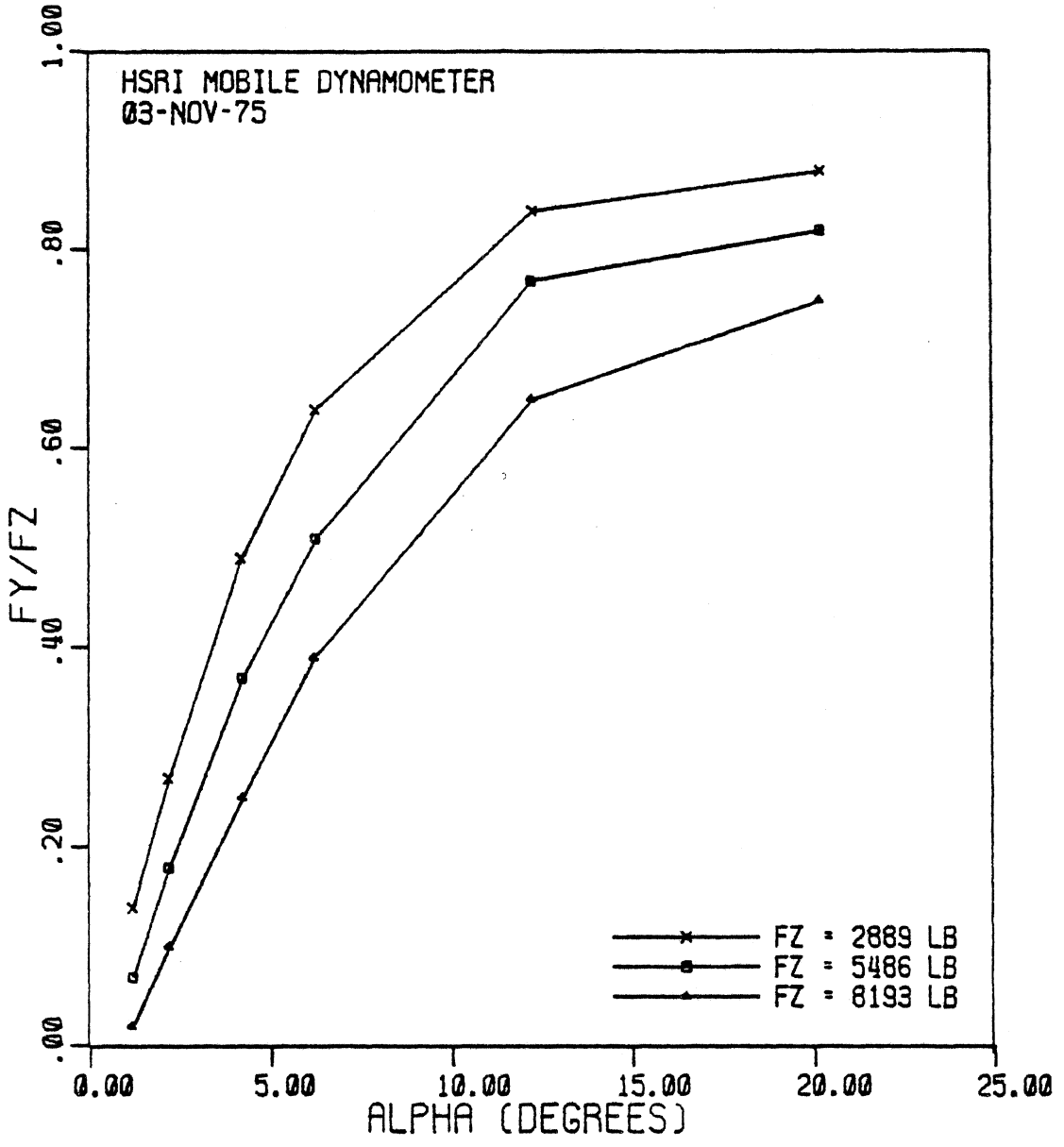
GOODYEAR SUPER HI MILER 10.00X20/F
VEL = 22 MPH



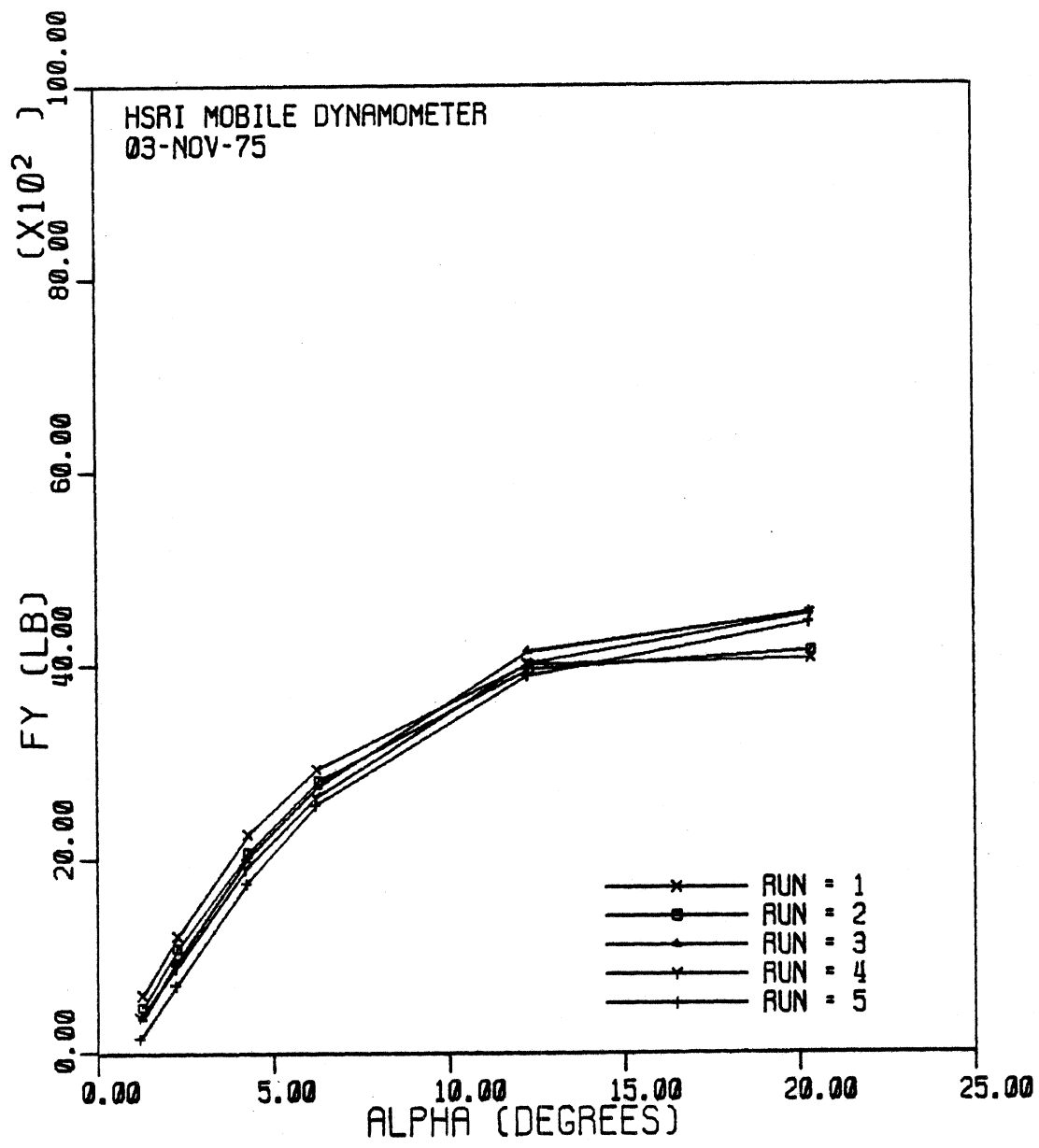
GOODYEAR SUPER HI MILER 10.00X20/F
FZ = 5535 LB VEL = 41 MPH



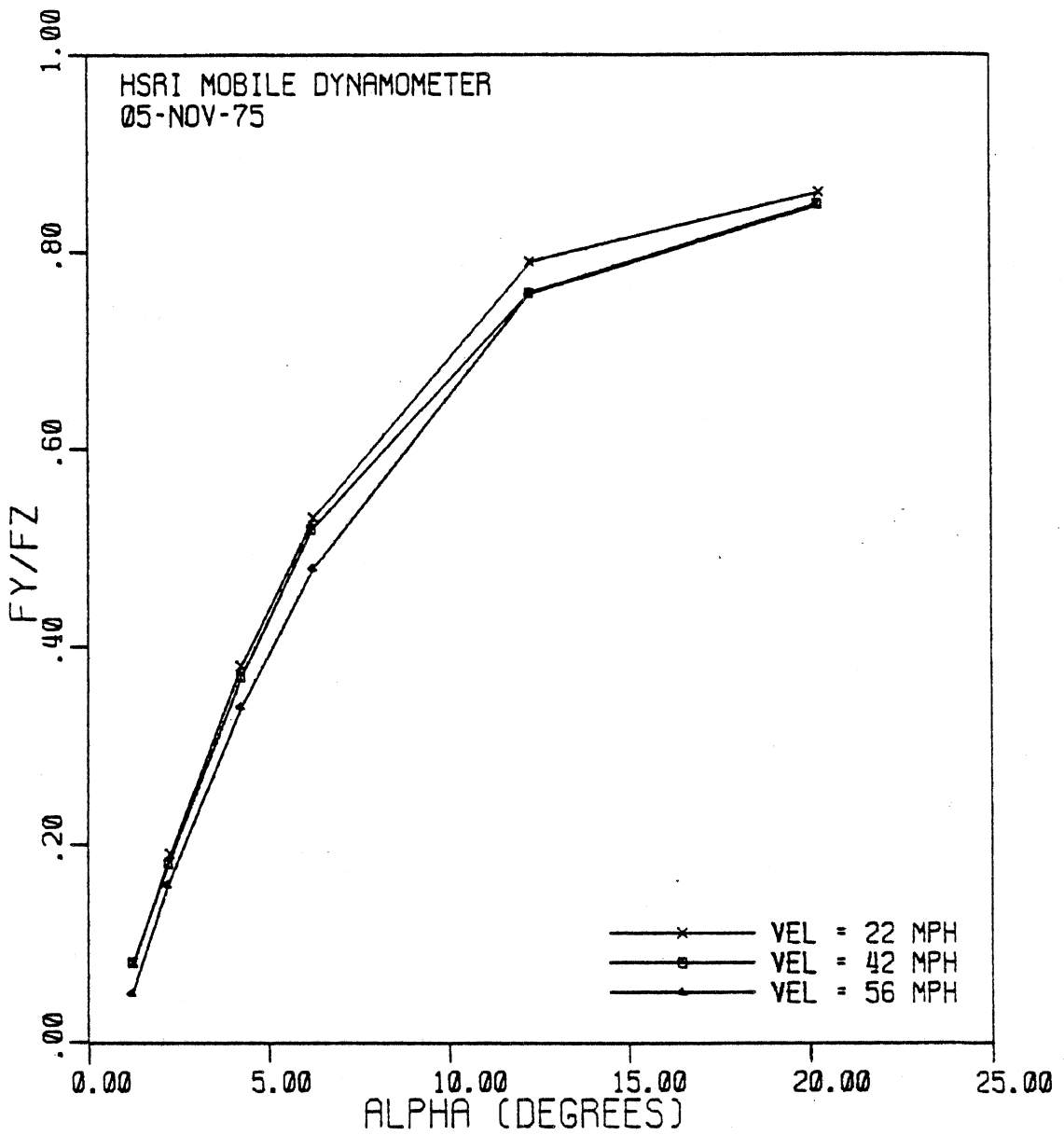
GENERAL GTX 10.00X20/F
FZ = 5515 LB



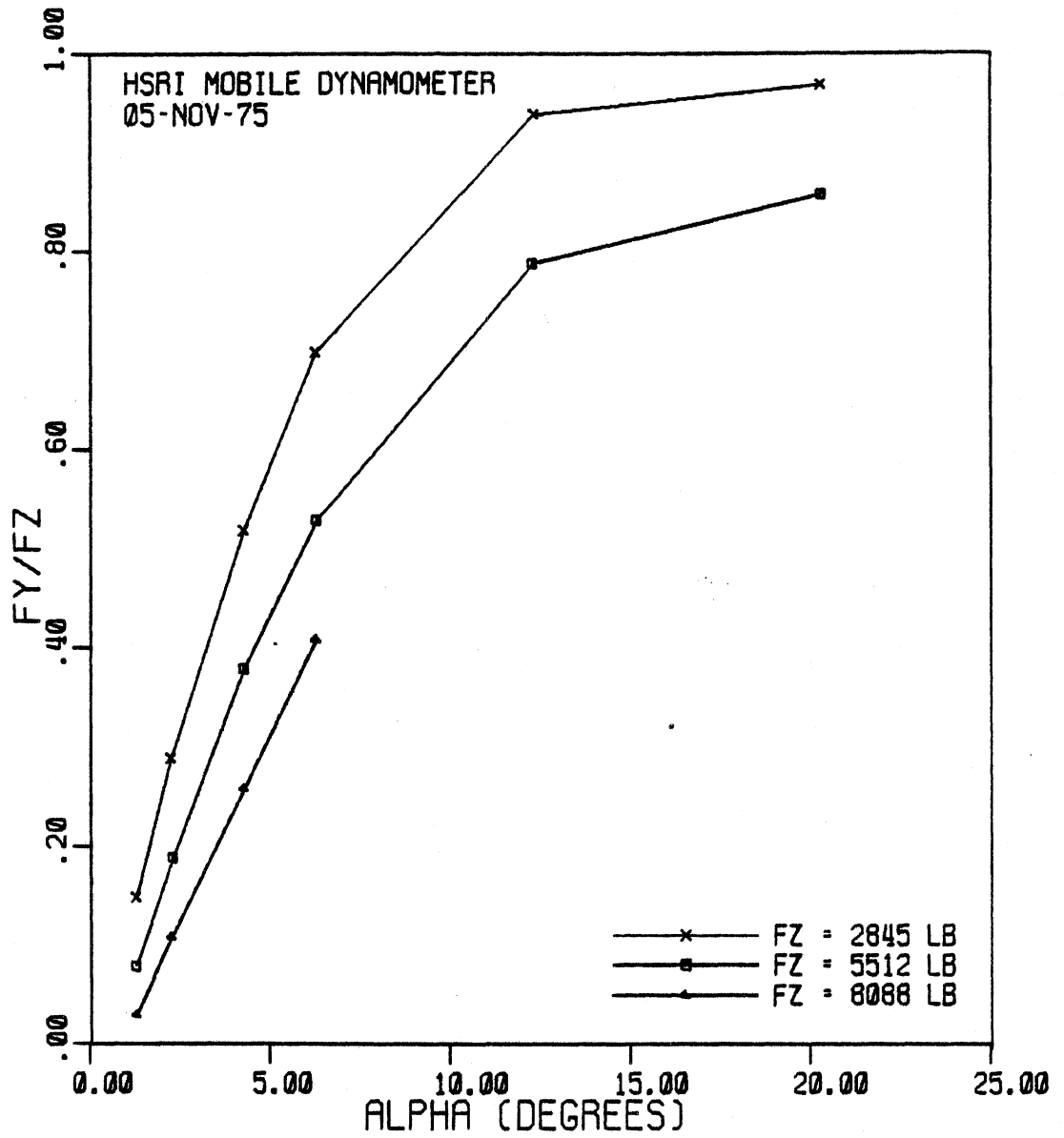
GENERAL GTX 10.00X20/F
VEL = 22 MPH



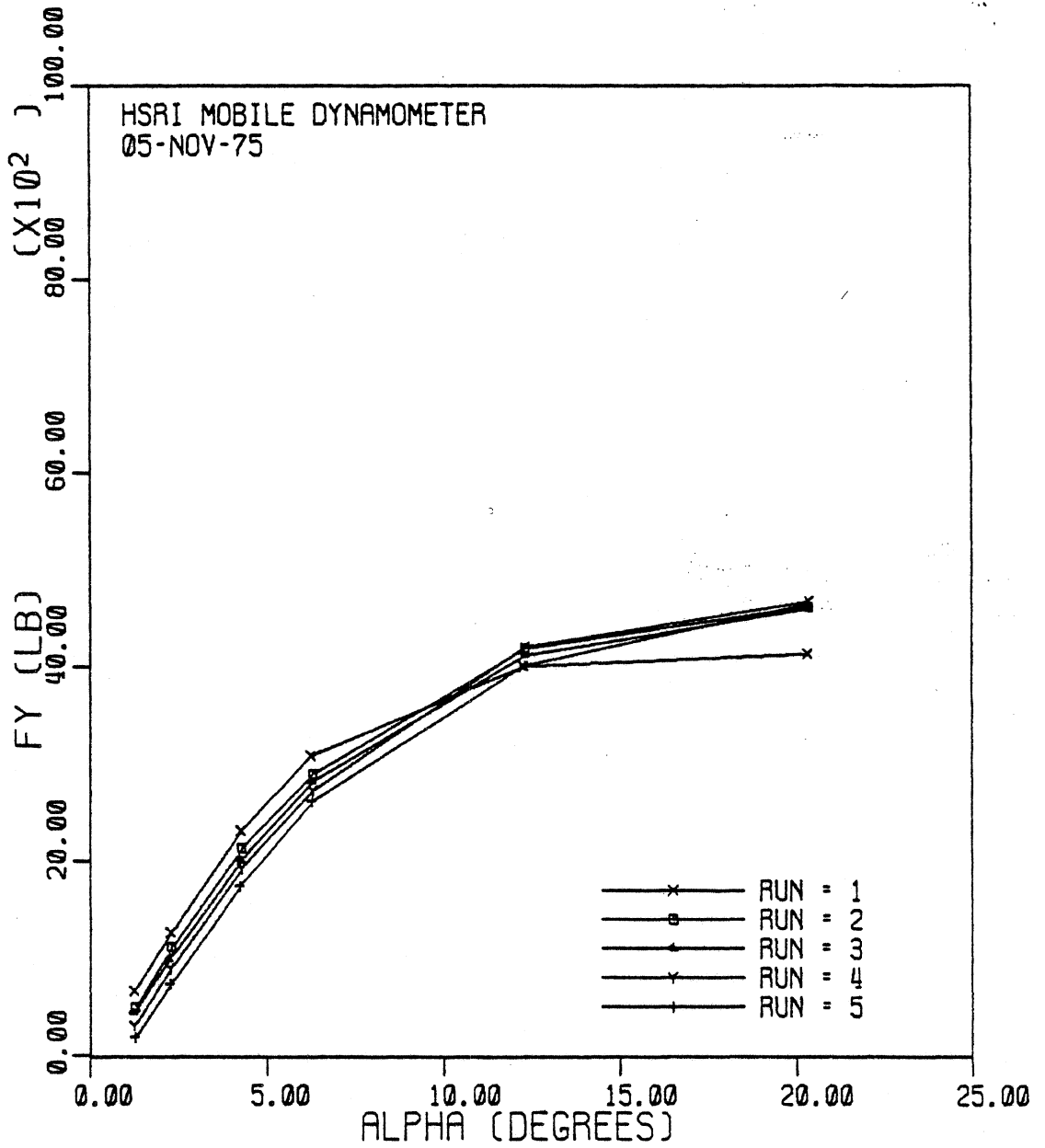
GENERAL GTX 10.00X20/F
FZ = 5533 LB VEL = 41 MPH



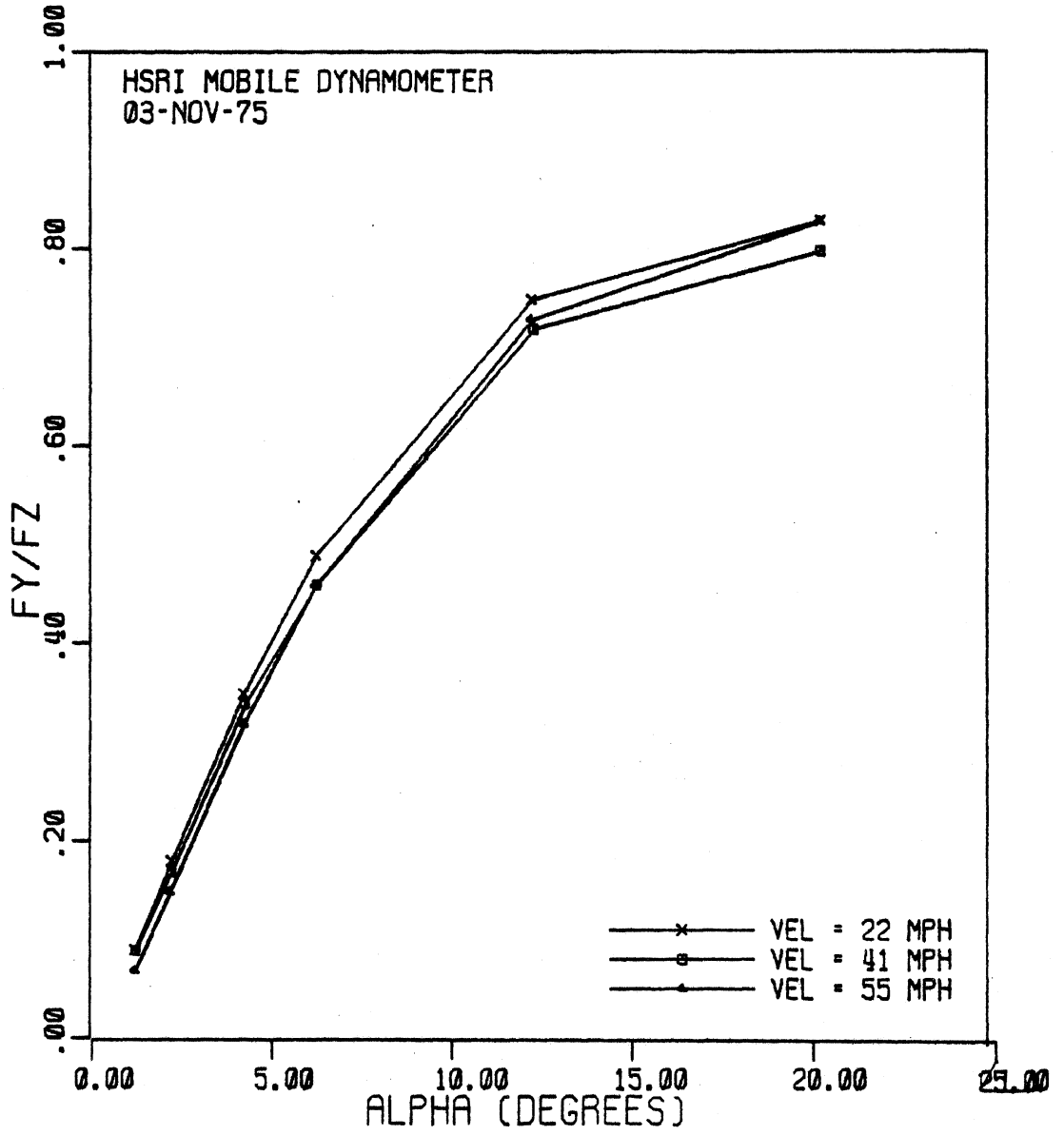
FIRESTONE TRANSPORT 1 10.00X20/F
FZ = 5527 LB



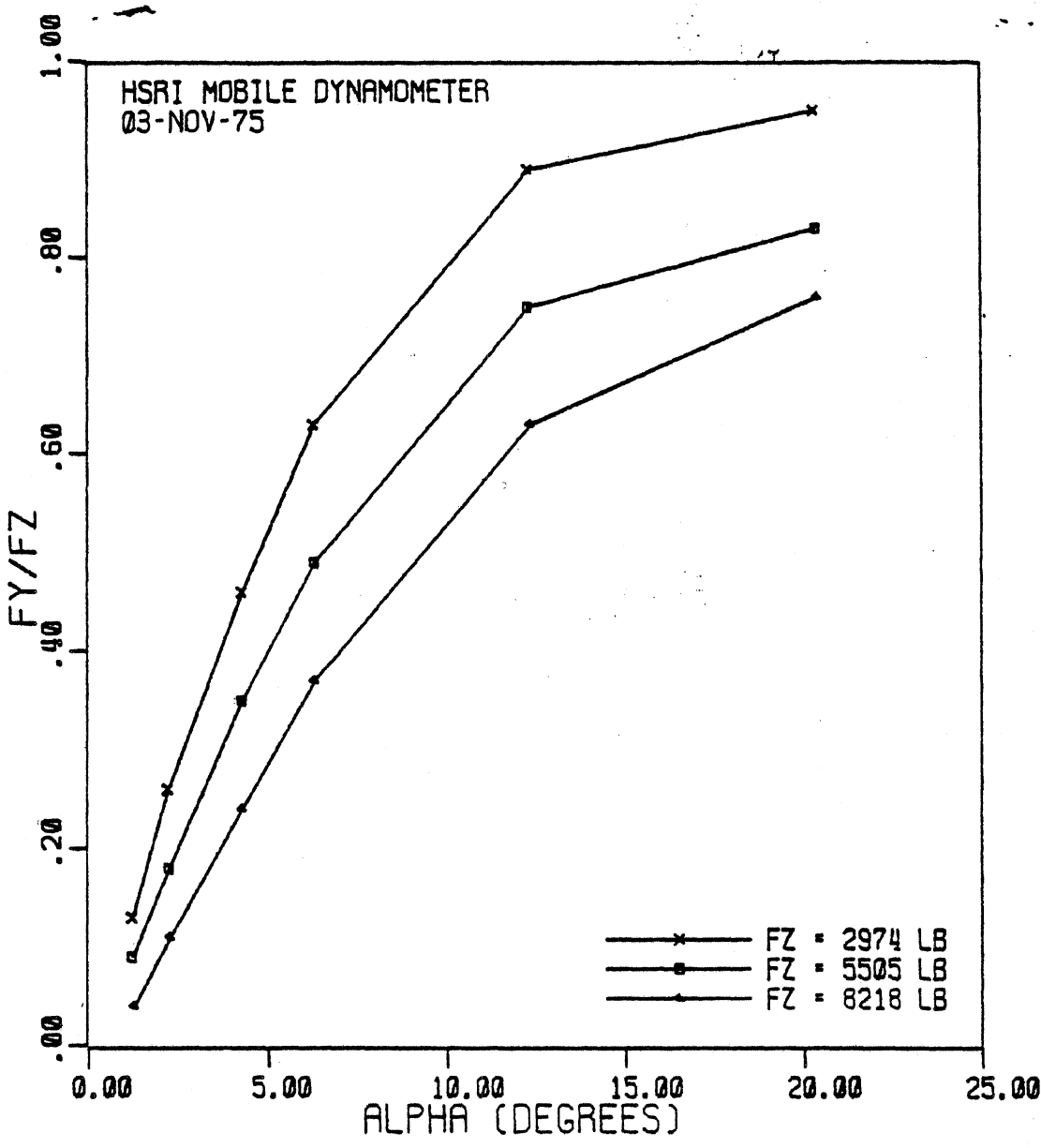
FIRESTONE TRANSPORT 1 10.00X20/F
VEL = 22 MPH



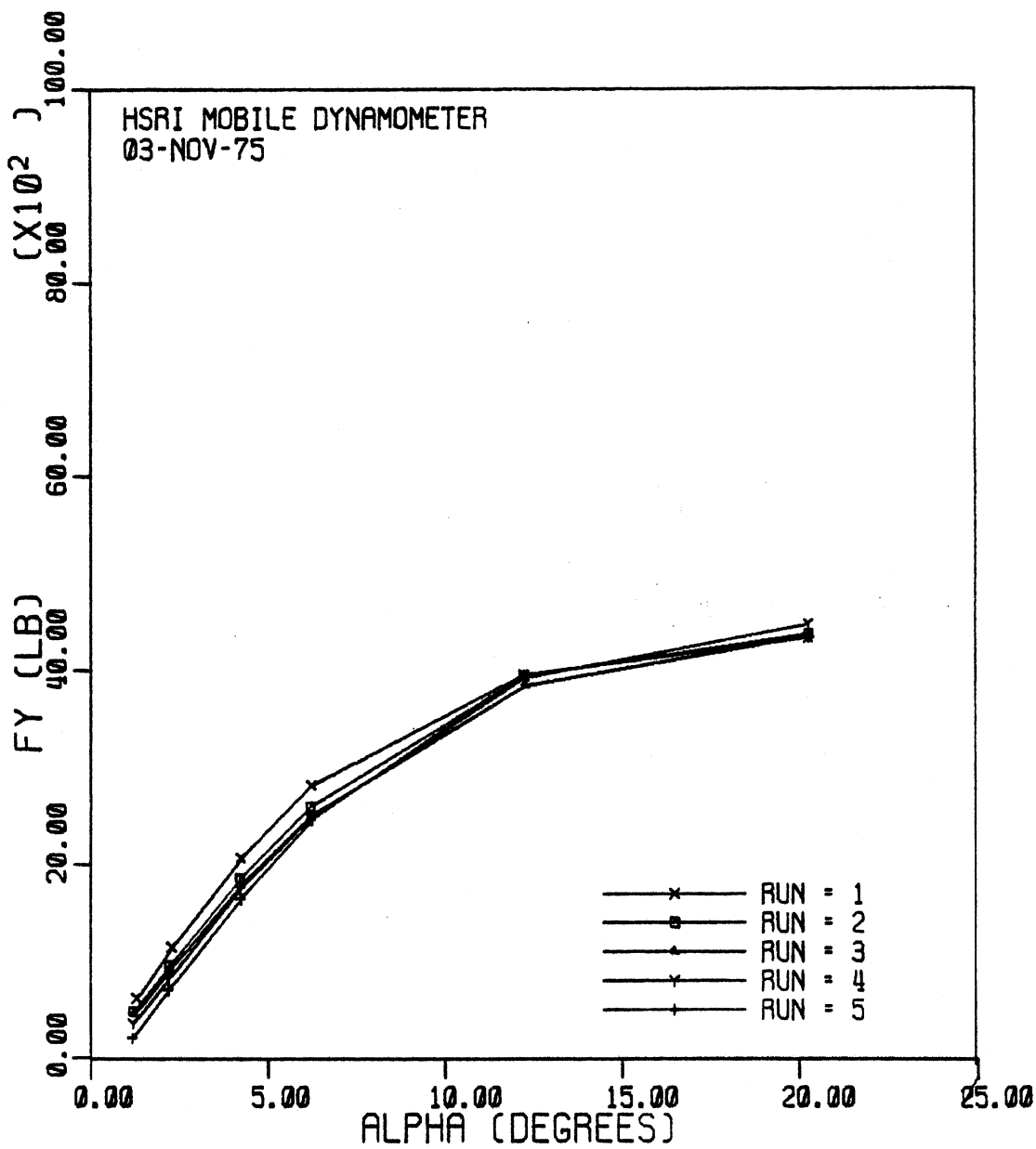
FIRESTONE TRANSPORT 1 10.00X20/F
FZ = 5510 LB VEL = 41 MPH



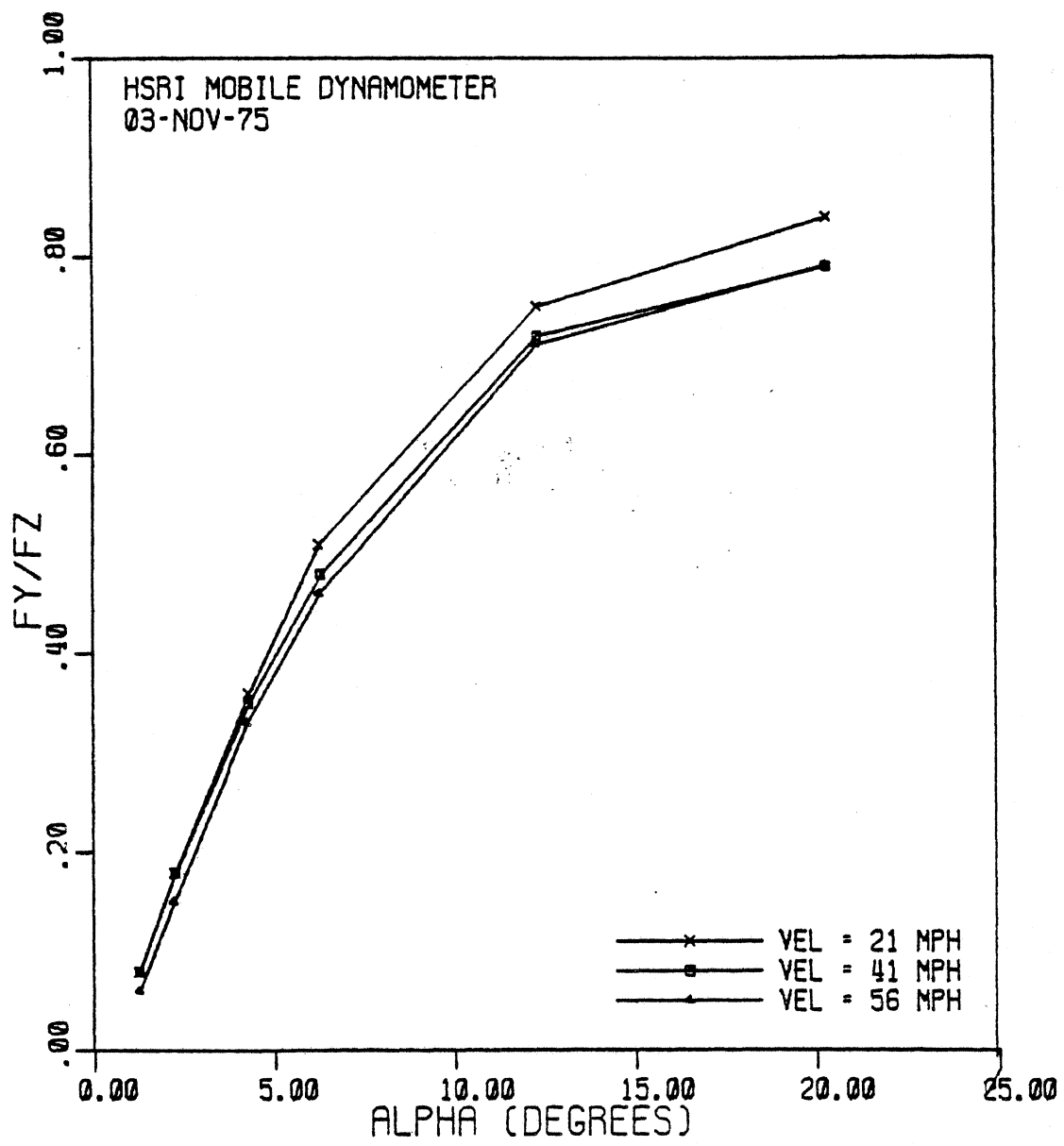
UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
FZ = 5512 LB



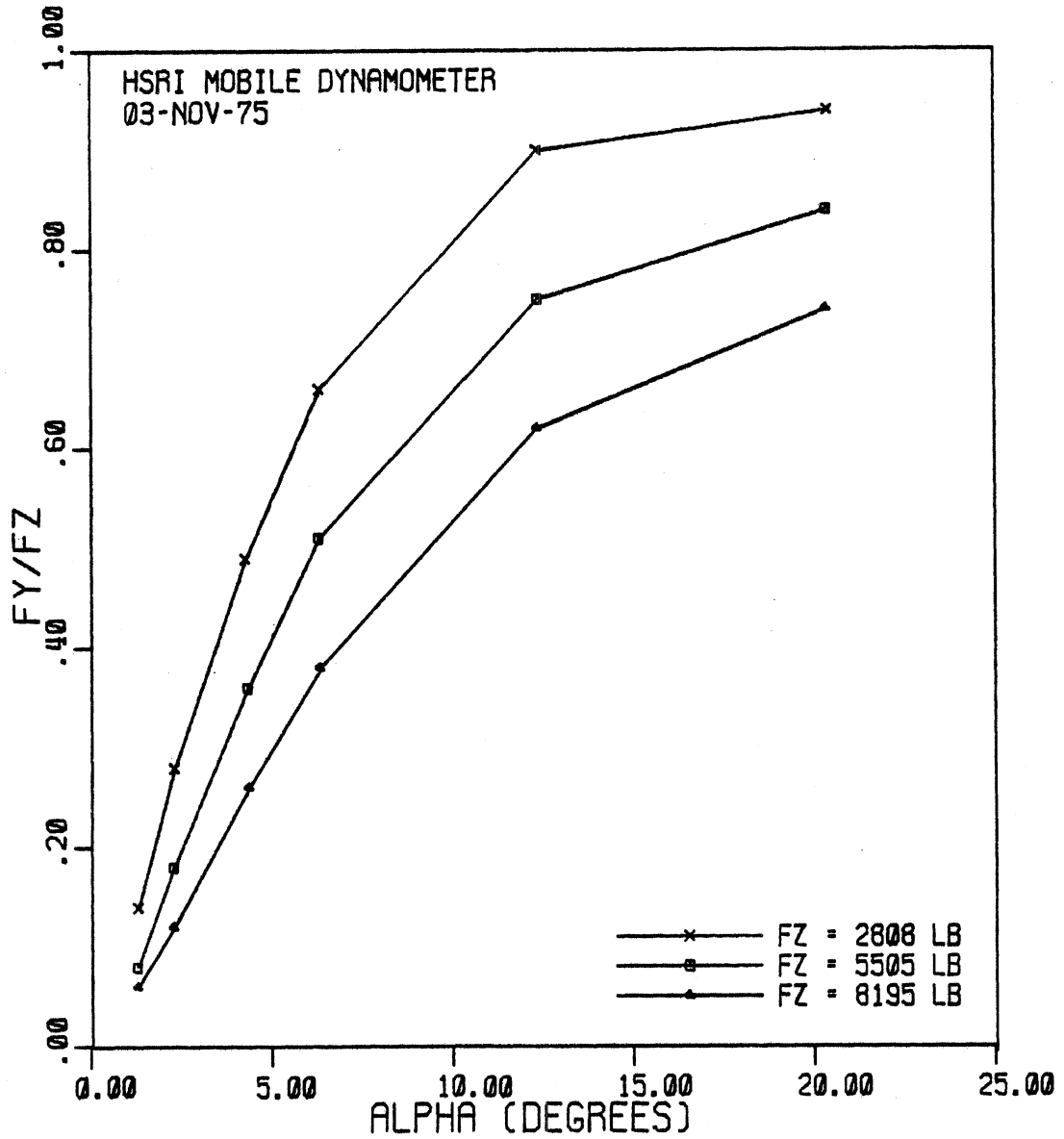
UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
VEL = 21 MPH



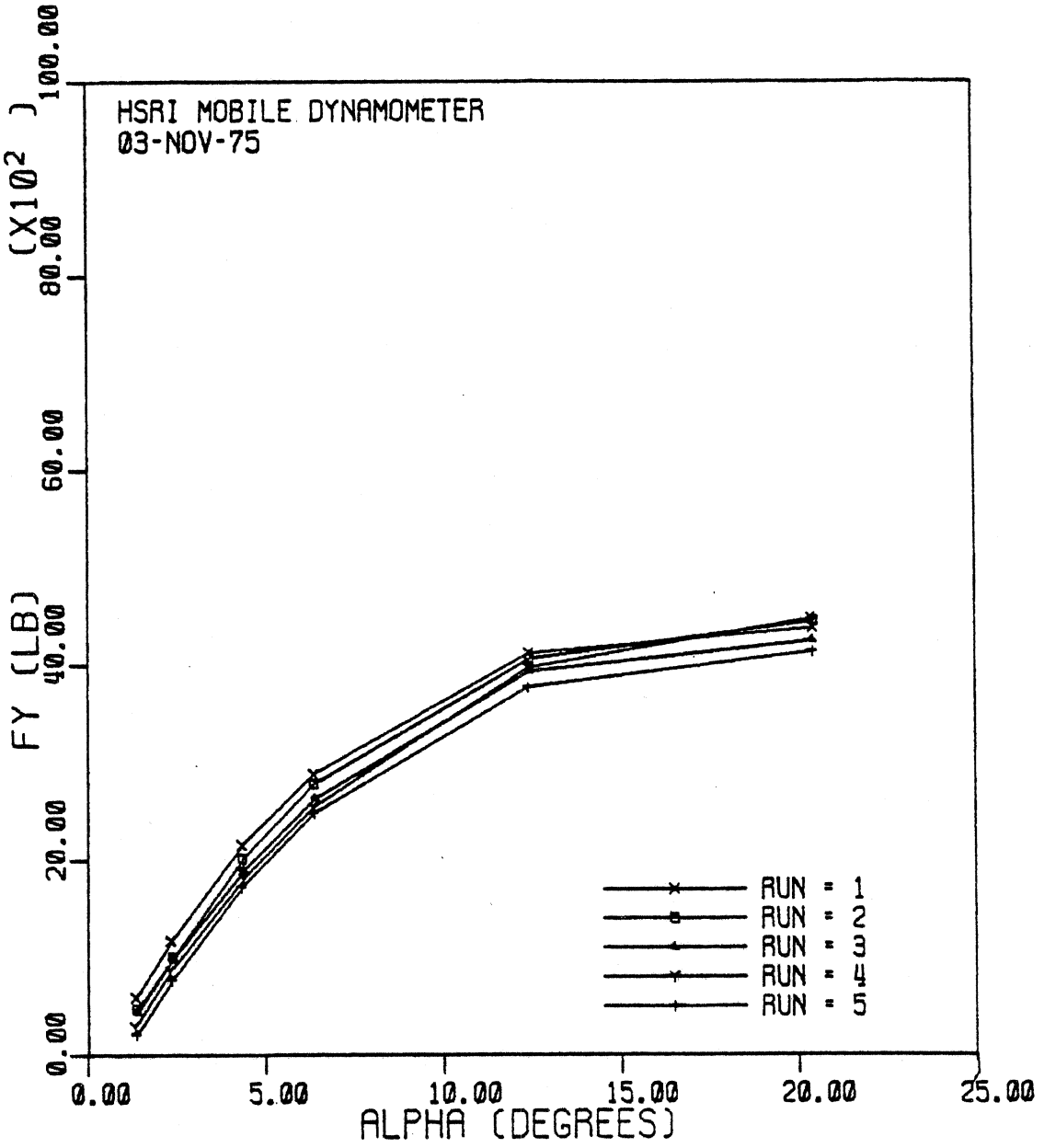
UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
FZ = 5523 LB VEL = 41 MPH



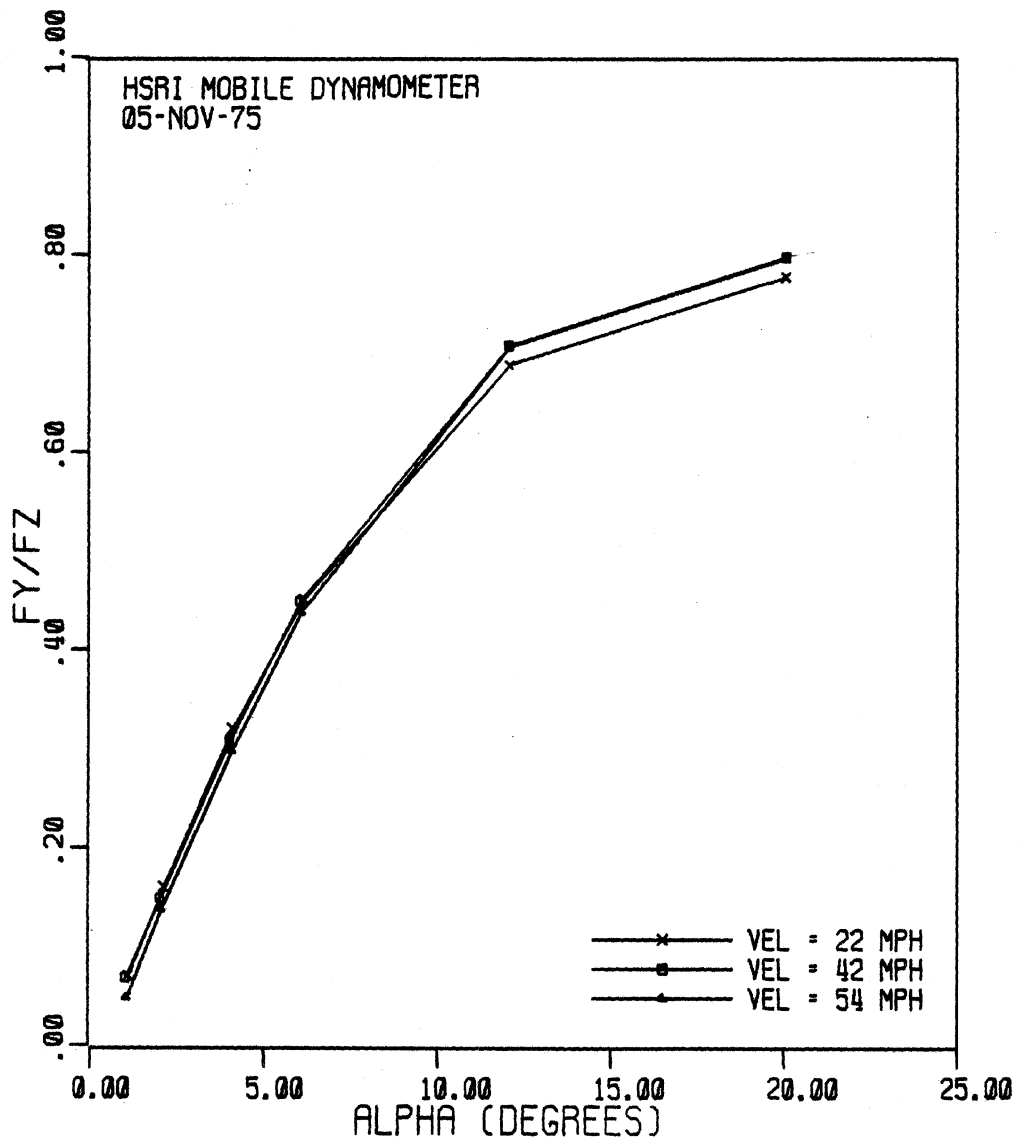
GOODYEAR CUSTOM CROSS RIB HI MILER 10.00X20/F
 FZ = 5526 LB



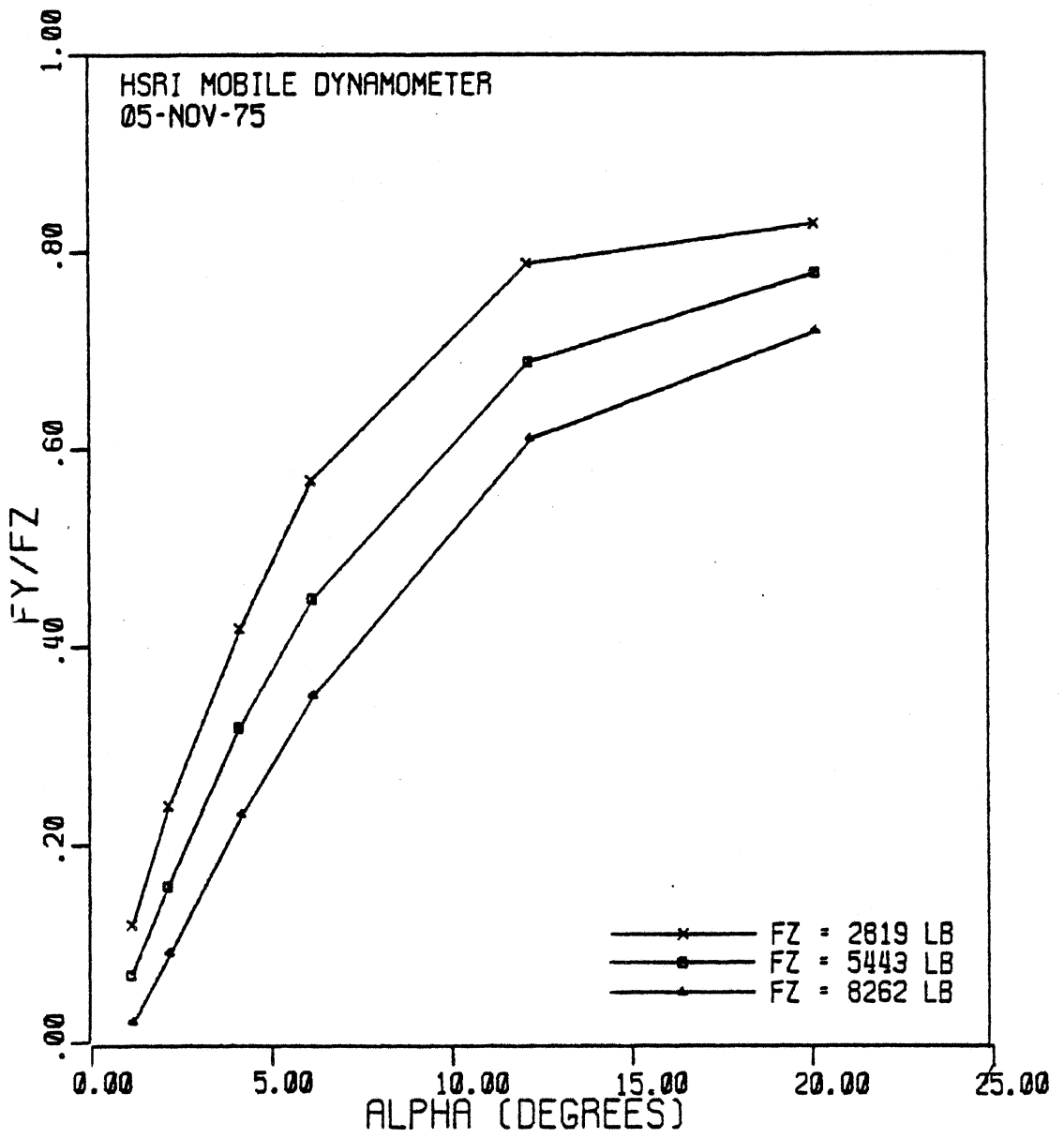
GOODYEAR CUSTOM CROSS RIB HI MILER 10.00X20/F
VEL = 21 MPH



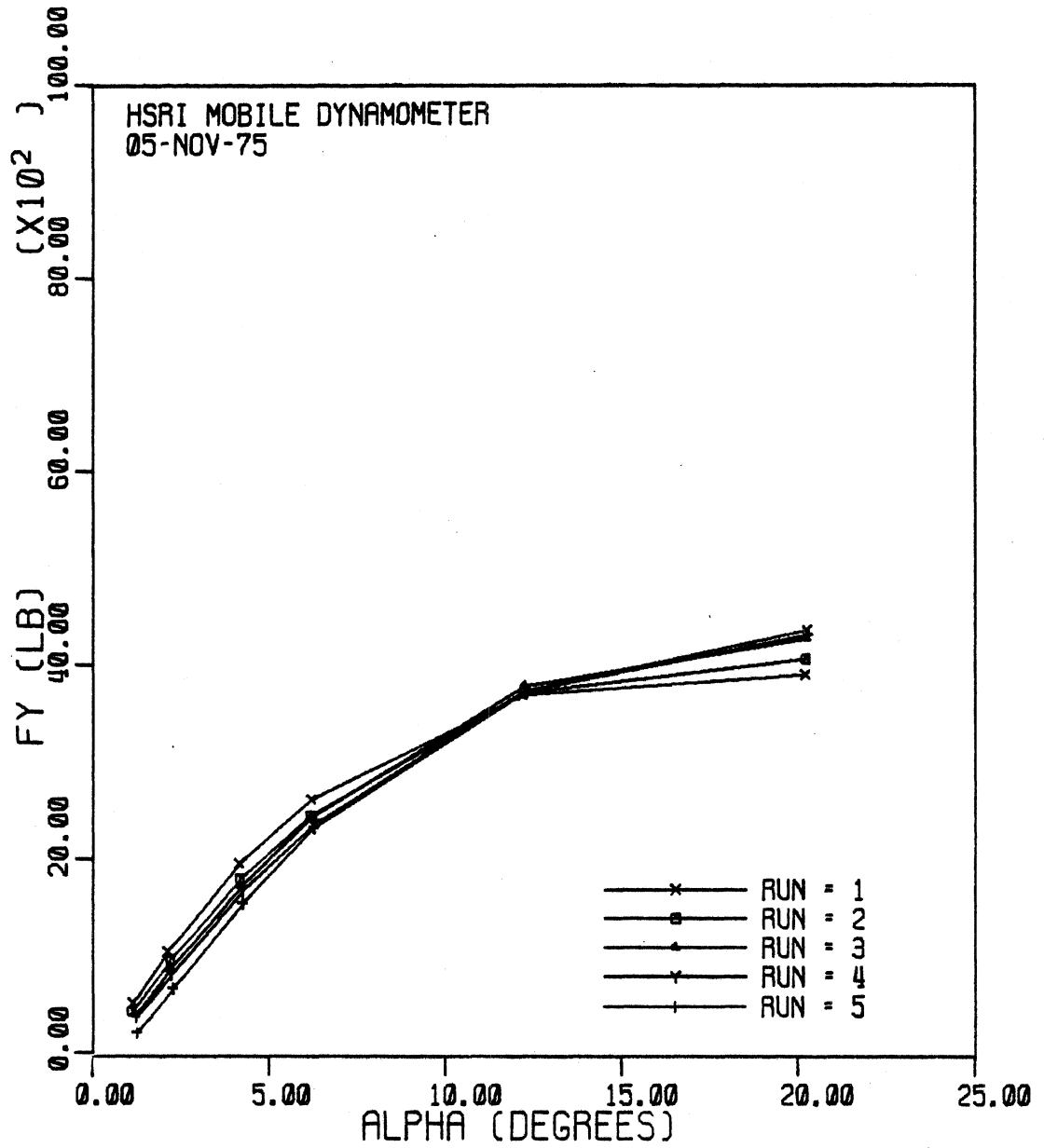
GOODYEAR CUSTOM CROSS RIB HI MILER 10.00X20/F
FZ = 5611 LB VEL = 41 MPH



FIRESTONE TRANSPORT 200 10.00X20/F
FZ = 5437 LB



FIRESTONE TRANSPORT 200 10.00X20/F
VEL = 22 MPH



FIRESTONE TRANSPORT 200 10.00X20/F
FZ = 5469 LB VEL = 41 MPH

Table 1. Peak and Slide Values of F_x/F_z as Obtained Over the Five Repeat Runs for Each of the Six Sample Tires on Wet Concrete.

| <u>Goodyear Super Hi Miler</u> | | | <u>Firestone Transport 200</u> | | |
|--------------------------------|---------|---------|--------------------------------|---------|---------|
| Run | μ_p | μ_s | Run | μ_p | μ_s |
| 1 | .68 | .47 | 1 | .67 | .49 |
| 4 | .69 | .47 | 4 | .64 | .49 |
| 7 | .66 | .45 | 7 | .65 | .50 |
| 10 | .66 | .42 | 10 | .63 | .48 |
| 13 | .68 | .43 | 13 | .64 | .48 |
| Avg. | .674 | .448 | Avg. | .646 | .488 |
| σ | .012 | .0204 | σ | .013 | .0075 |

| <u>Firestone Transport 1</u> | | | <u>Goodyear Custom Cross Rib</u> | | |
|------------------------------|---------|---------|----------------------------------|---------|---------|
| Run | μ_p | μ_s | Run | μ_p | μ_s |
| 1 | .79 | .61 | 1 | .58 | .46 |
| 4 | .77 | .57 | 4 | .62 | .47 |
| 7 | .75 | .57 | 7 | .61 | .47 |
| 10 | .80 | .58 | 10 | .62 | .47 |
| 13 | .79 | .54 | 13 | .61 | .44 |
| Avg. | .780 | .574 | Avg. | .608 | .462 |
| σ | .0179 | .0195 | σ | .0147 | .0117 |

| <u>General GTX</u> | | | <u>Uniroyal Fleetmaster Super-Lug</u> | | |
|--------------------|---------|---------|---------------------------------------|---------|---------|
| Run | μ_p | μ_s | Run | μ_p | μ_s |
| 1 | .76 | .54 | 1 | .55 | .43 |
| 4 | .72 | .51 | 4 | .53 | .41 |
| 7 | .73 | .51 | 7 | .48 | .37 |
| 10 | .73 | .52 | 10 | .53 | .38 |
| 13 | .72 | .51 | 13 | .49 | .36 |
| Avg. | .732 | .518 | Avg. | .516 | .390 |
| σ | .0147 | .0156 | σ | .0262 | .0261 |

- △ Firestone Transport 1
- General GTX
- Goodyear Super Hi Miler
- ▲ Firestone Transport 200
- Goodyear Custom Cross Rib
- Uniroyal Fleetmaster Super Lug

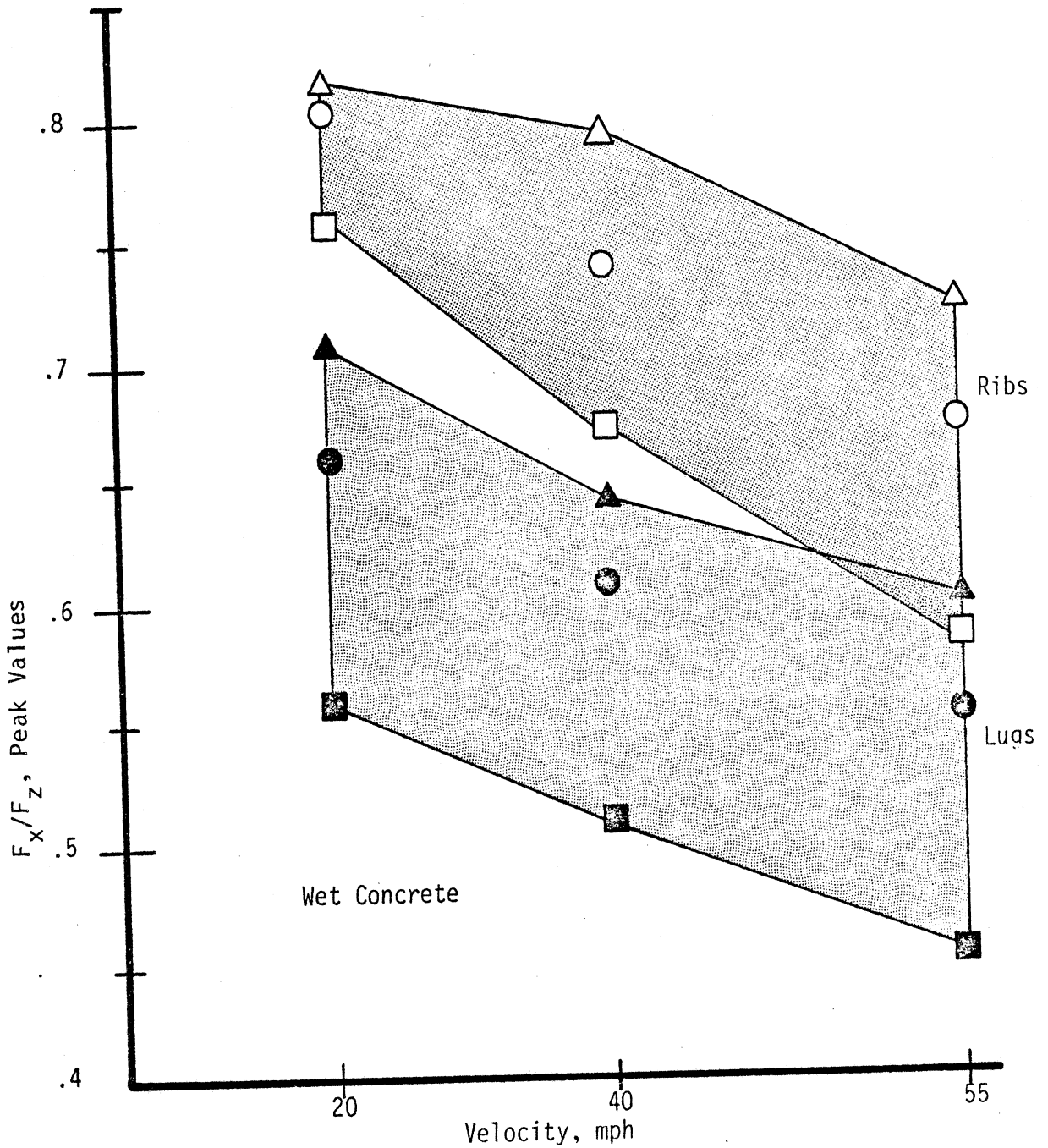


Figure 1. Velocity sensitivity of peak F_x/F_z values at rated load.

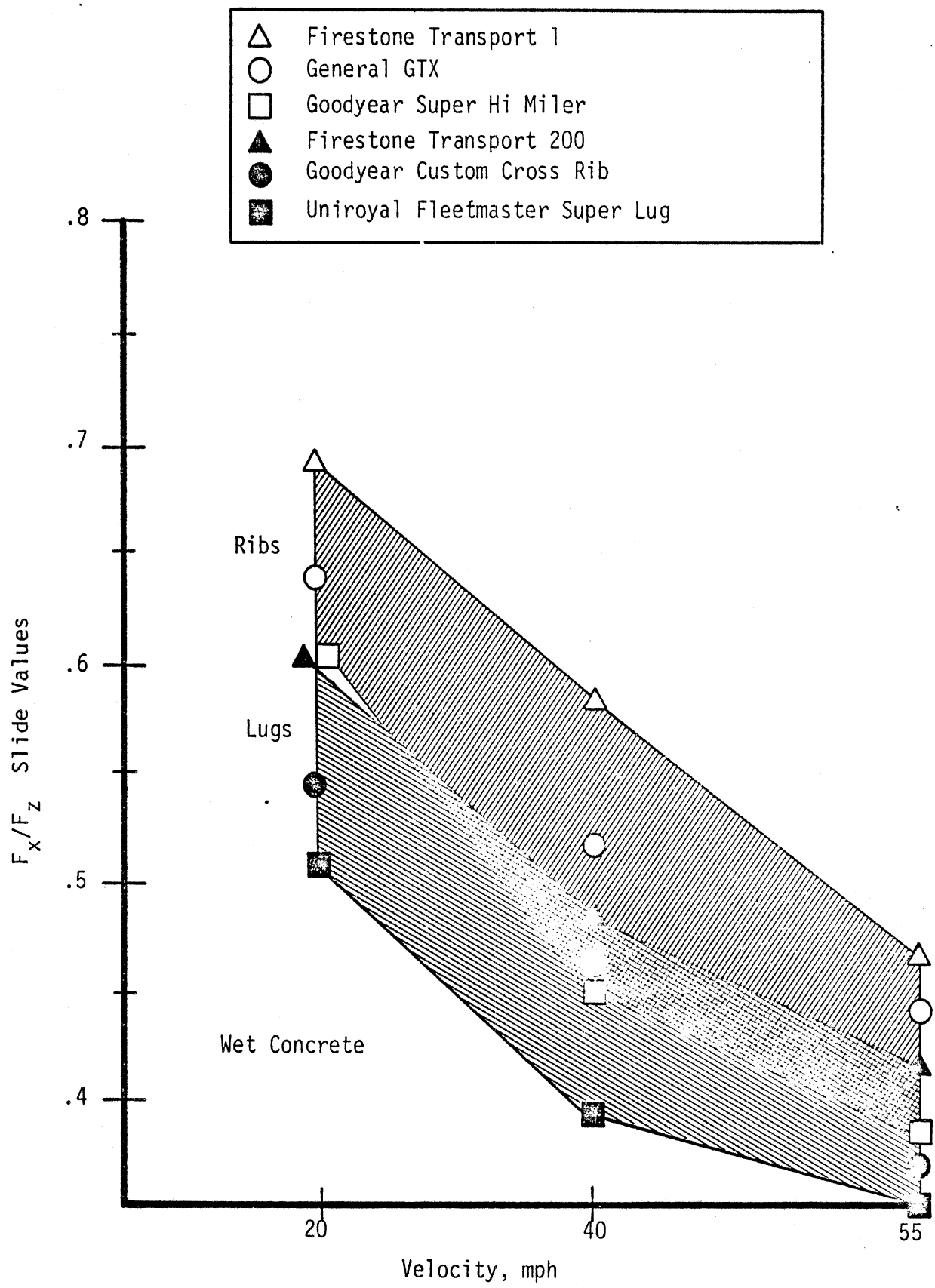


Figure 2. Velocity sensitivity of slide value of F_x/F_z at rated load.

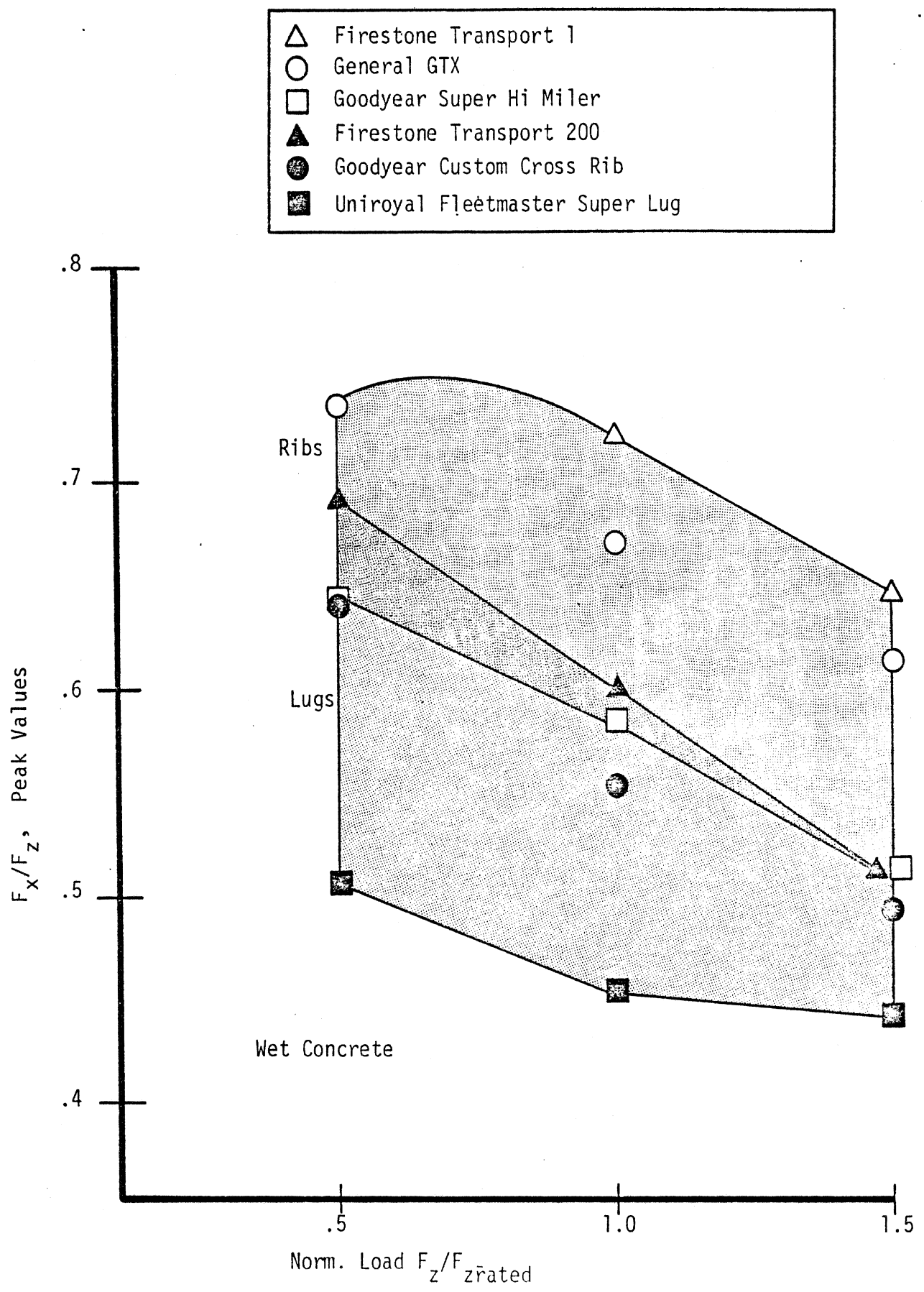


Figure 3. Load sensitivity of peak values of F_x/F_z at 55 mph.

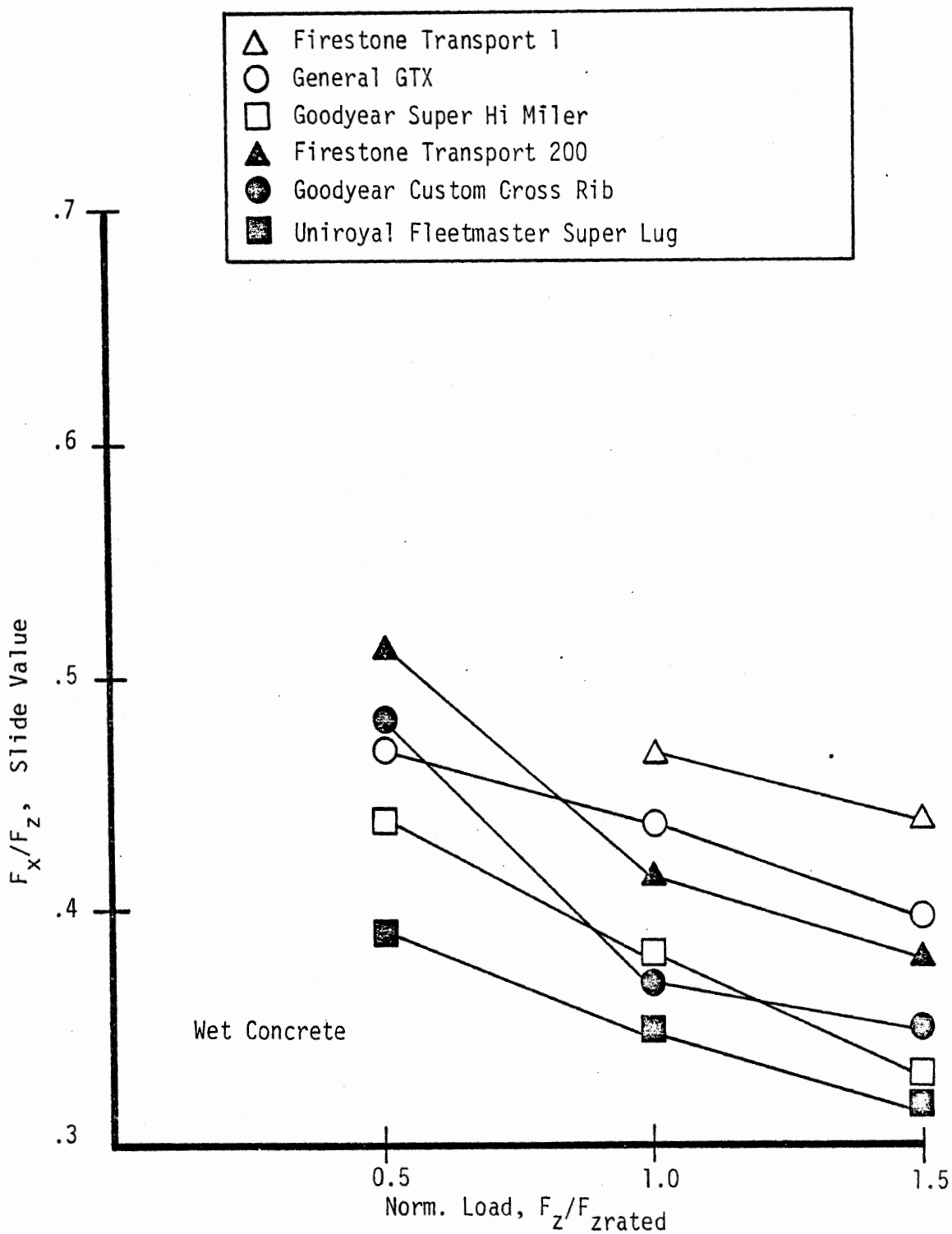


Figure 4. Load sensitivity of slide values of F_x/F_z at 55 mph.

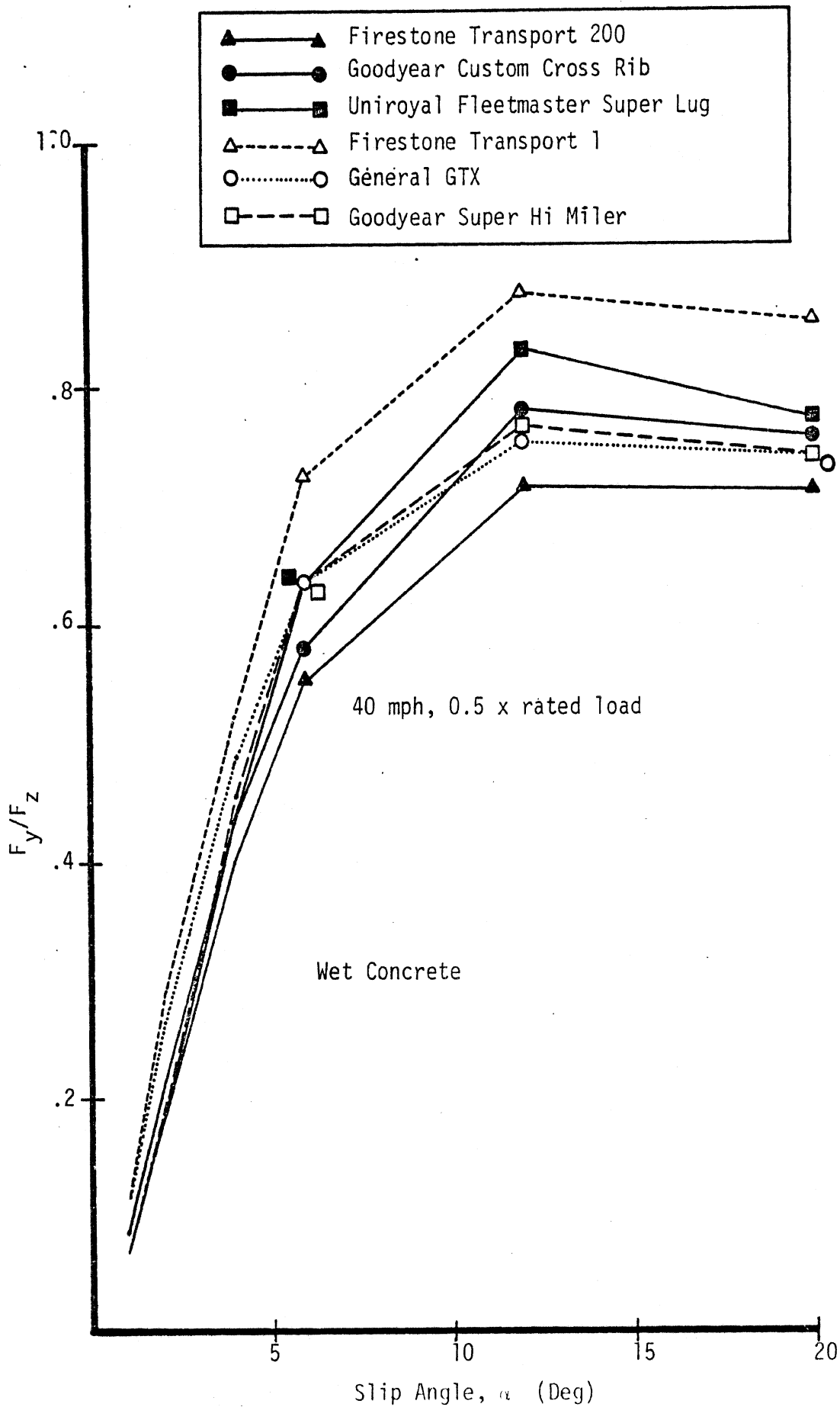


Figure 5. Lateral traction results, 40 mph, 0.5 x rated load.

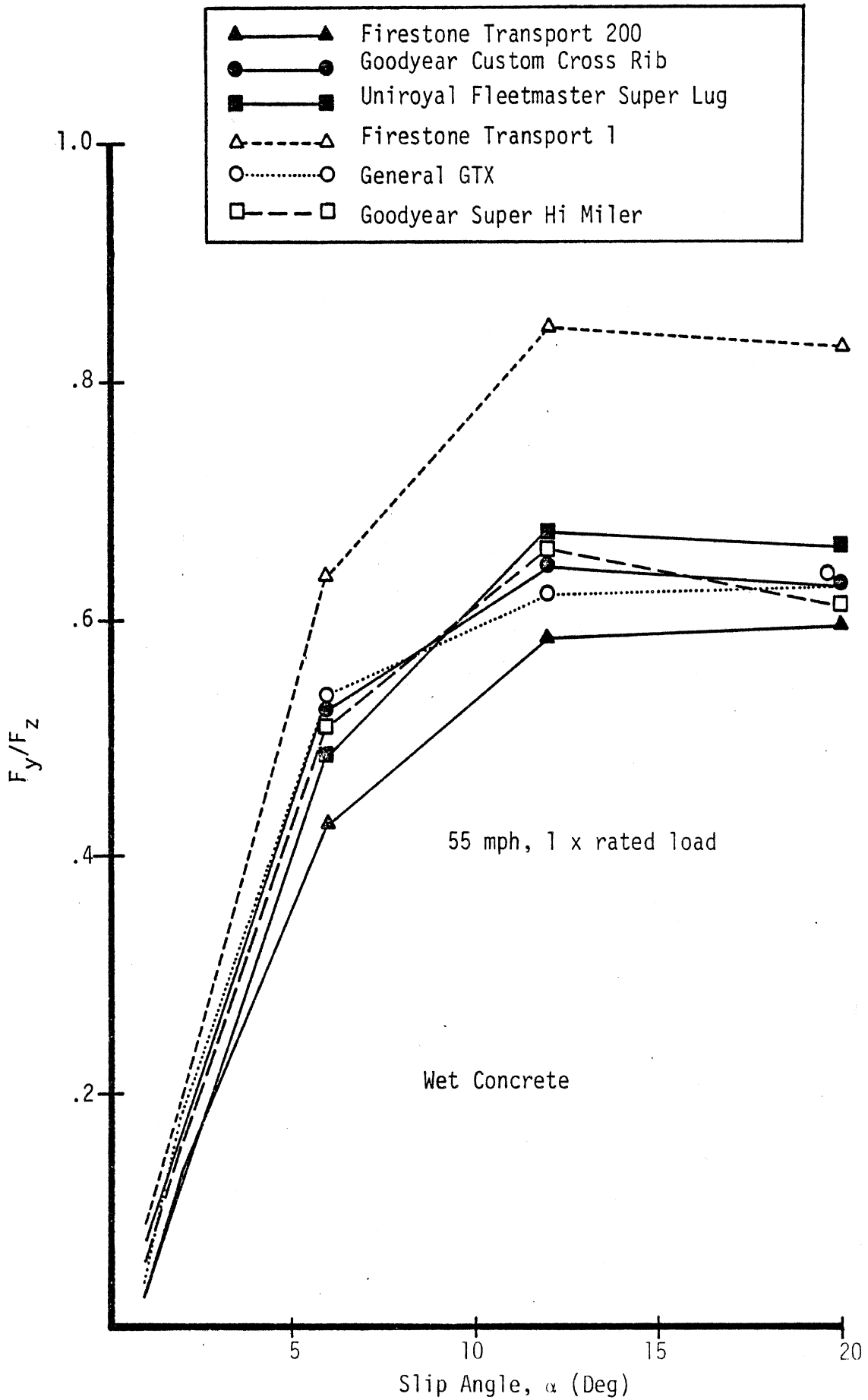
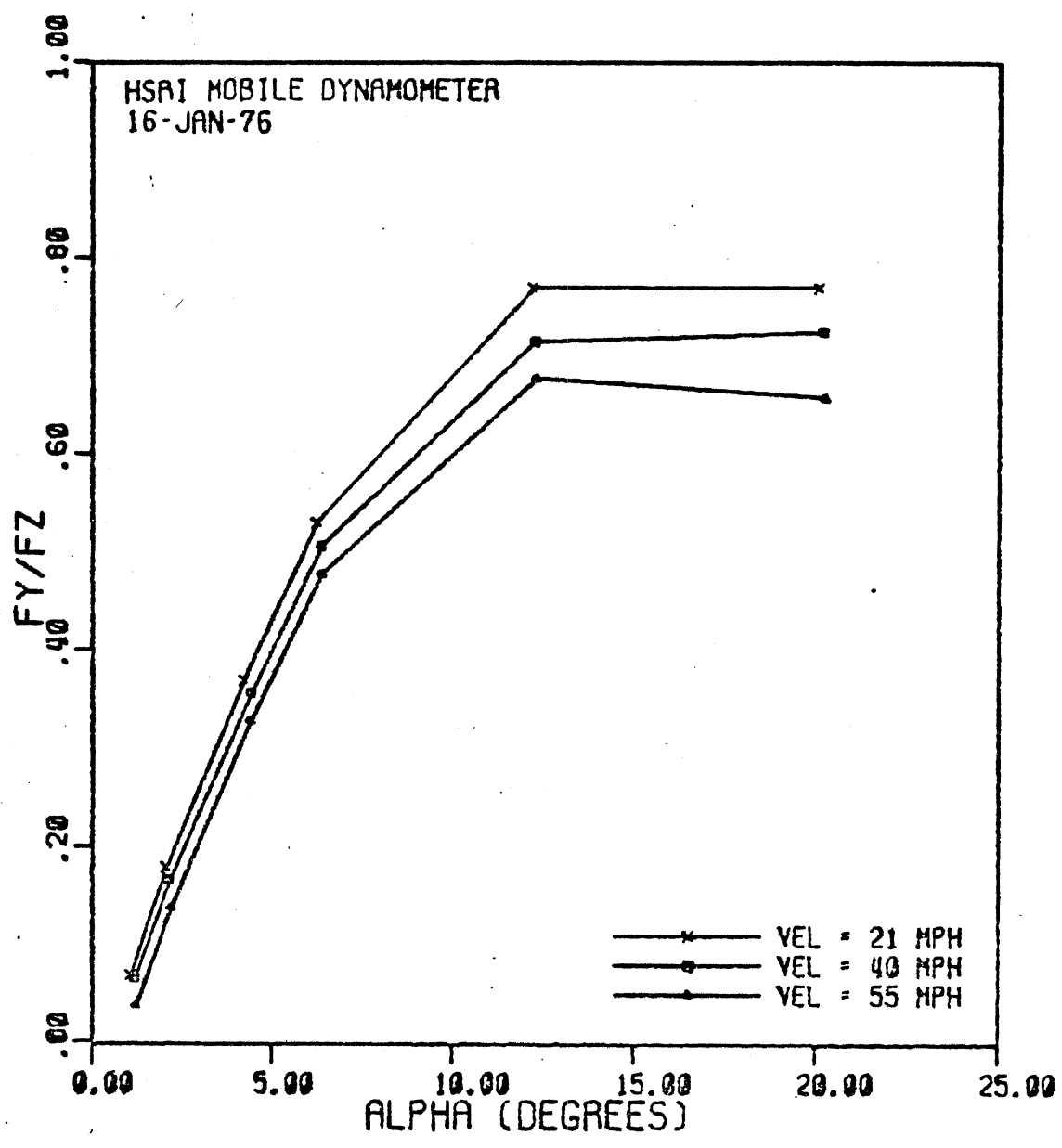
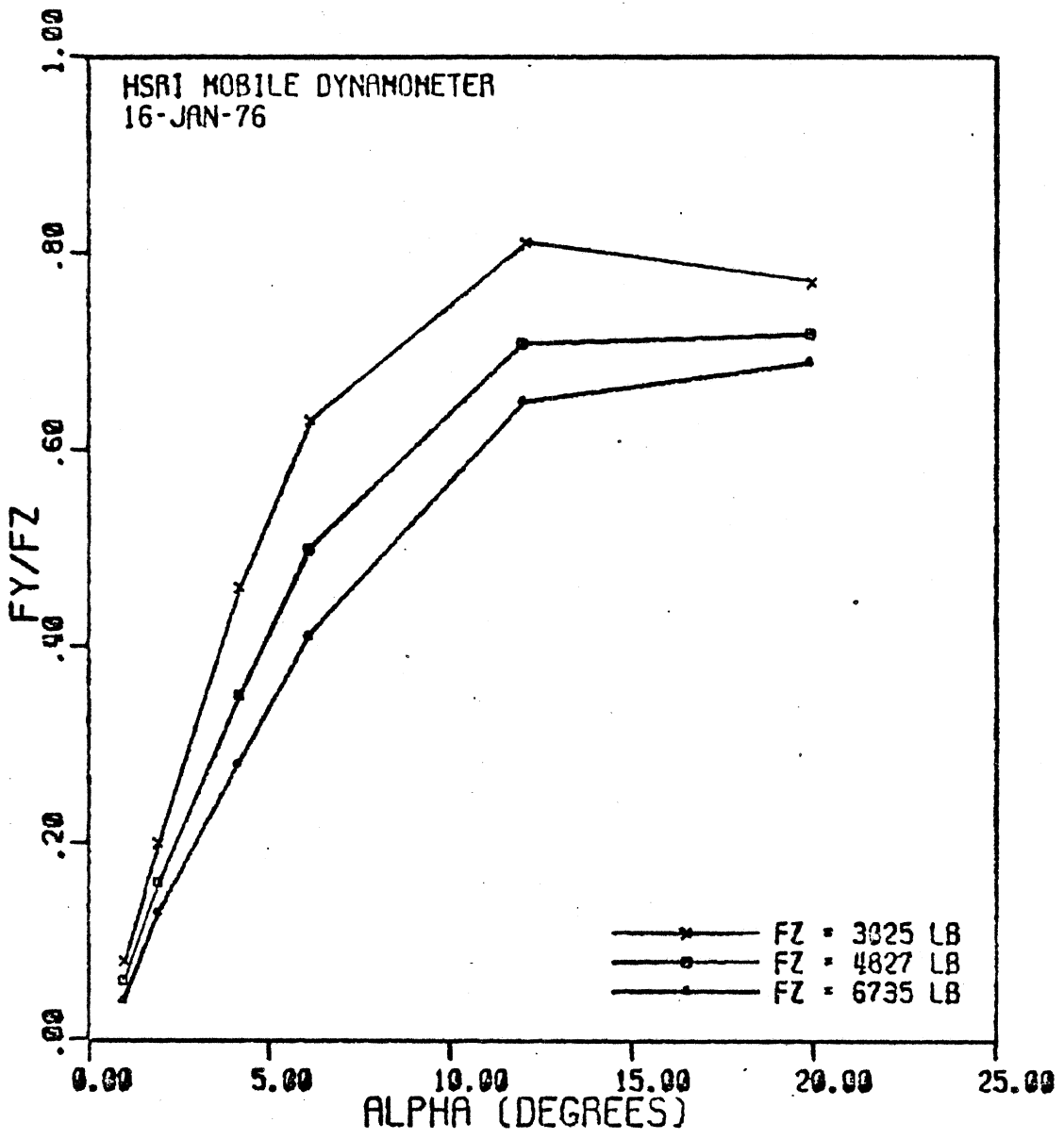


Figure 6. Lateral traction results, 55 mph, 1.0 x rated load.



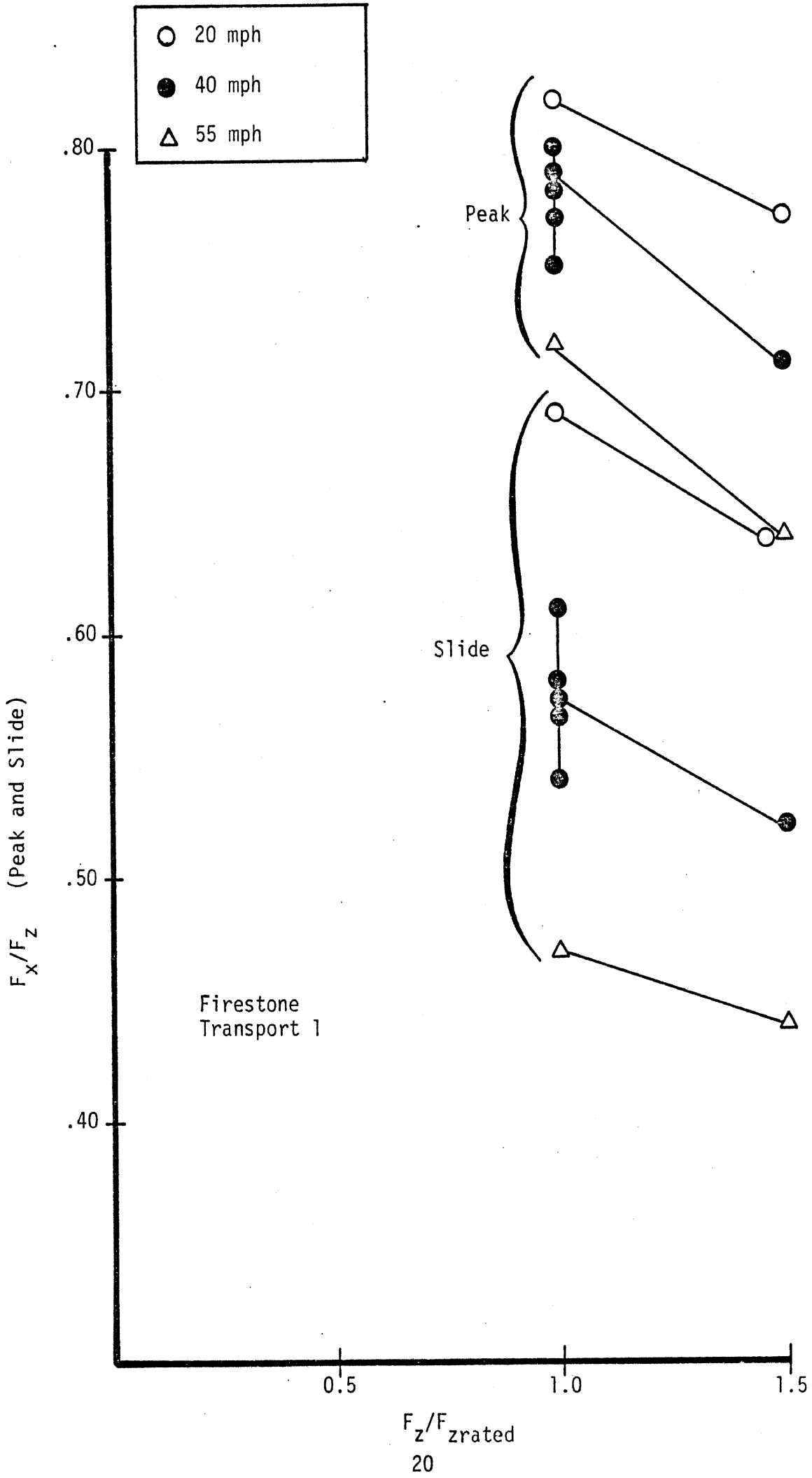
UNIROYAL FLEETMASTER SUPERLUG 10.00X20/F-VET
FZ = 4790 LB

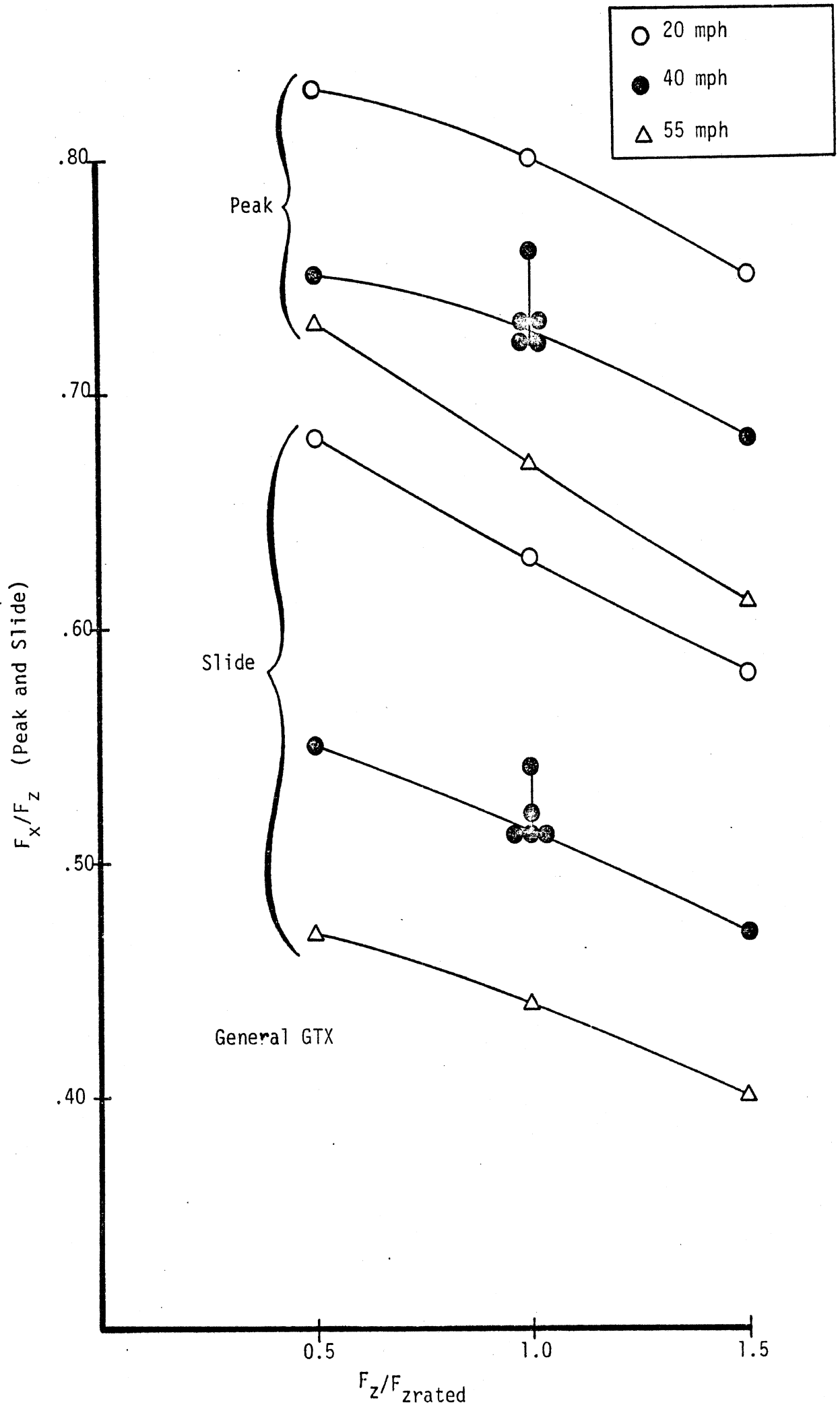
Figure 7.

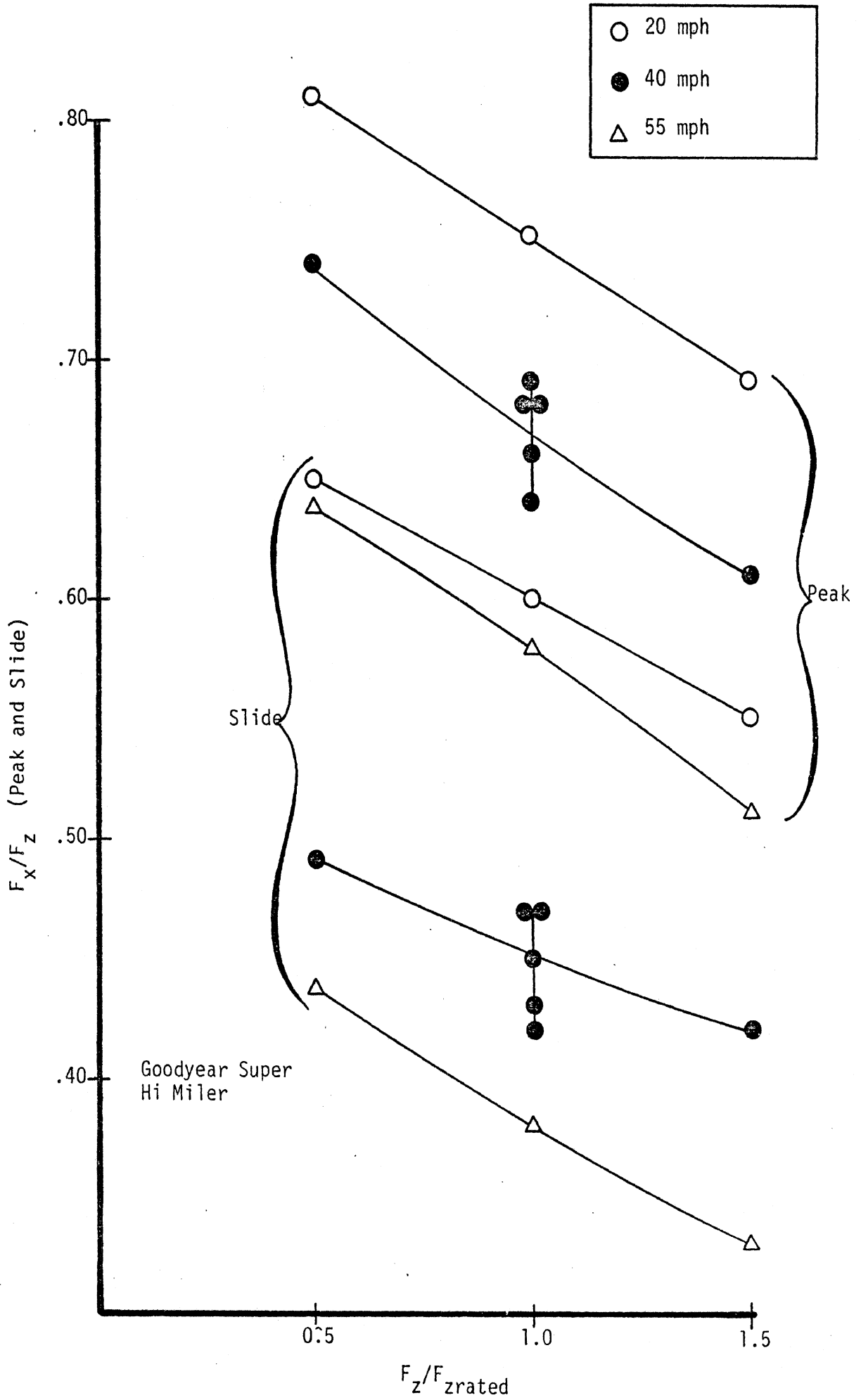


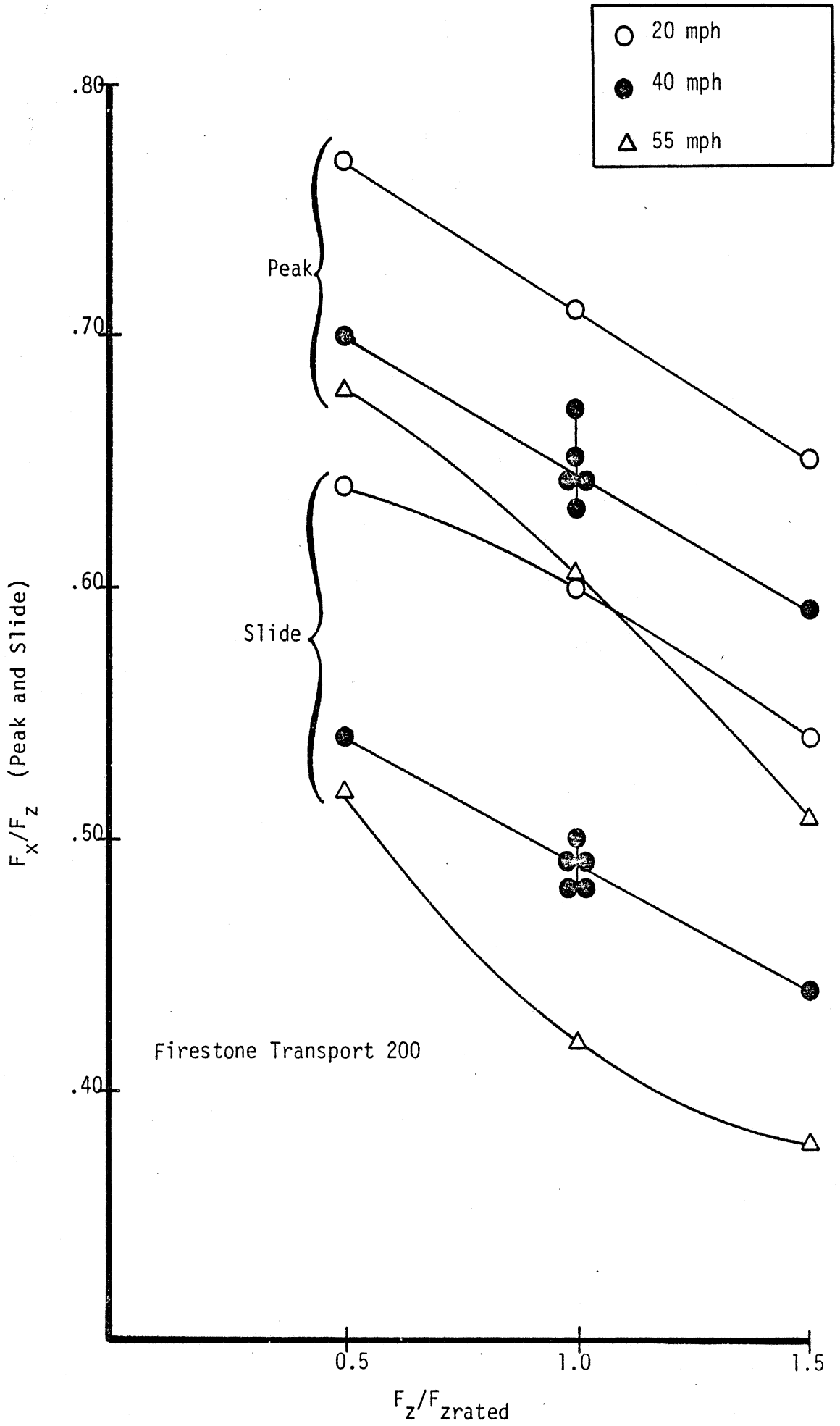
UNIROYAL FLEETMASTER SUPERLUG 10.00X20/F-VET
VEL = 40 MPH

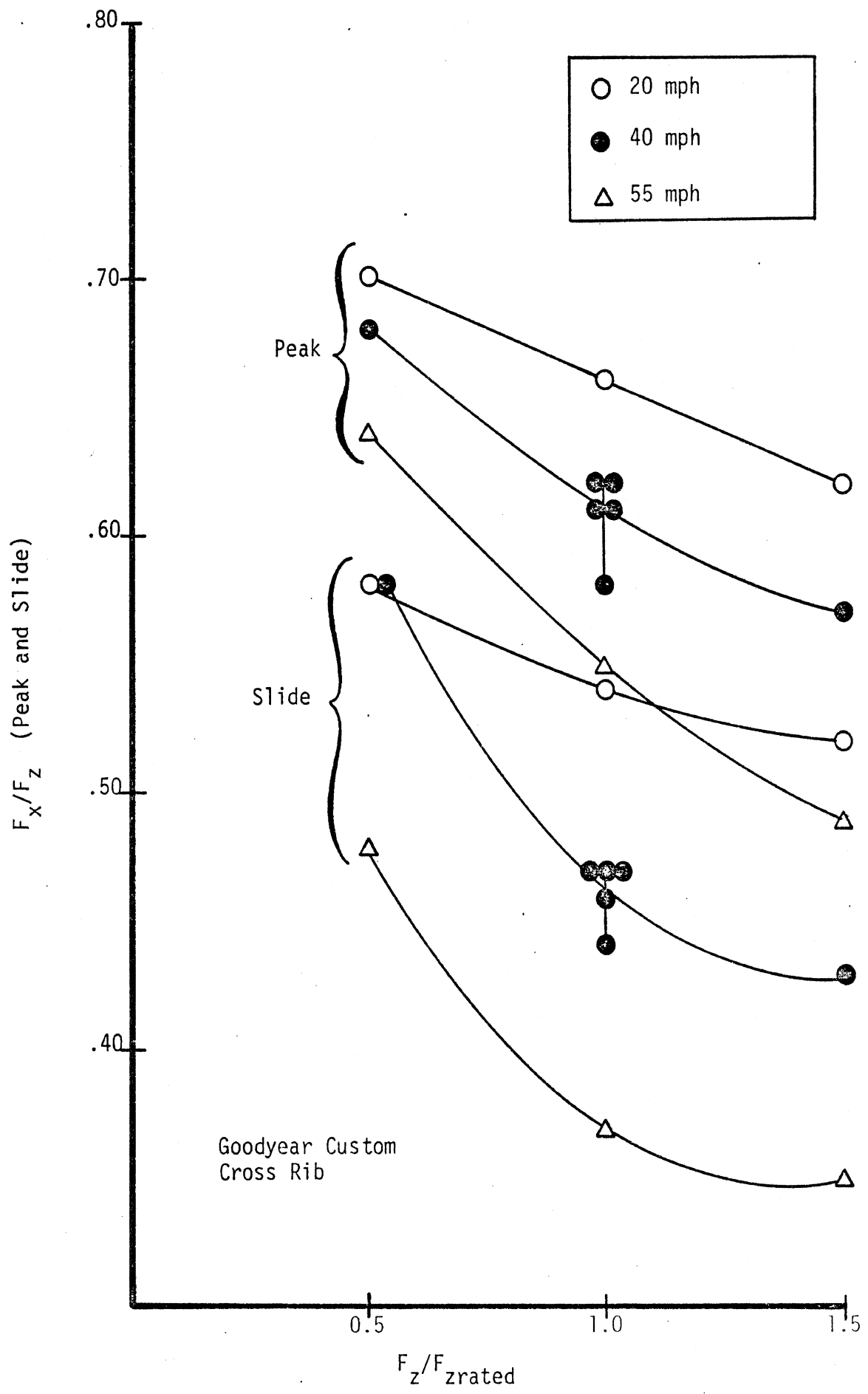
Figure 8

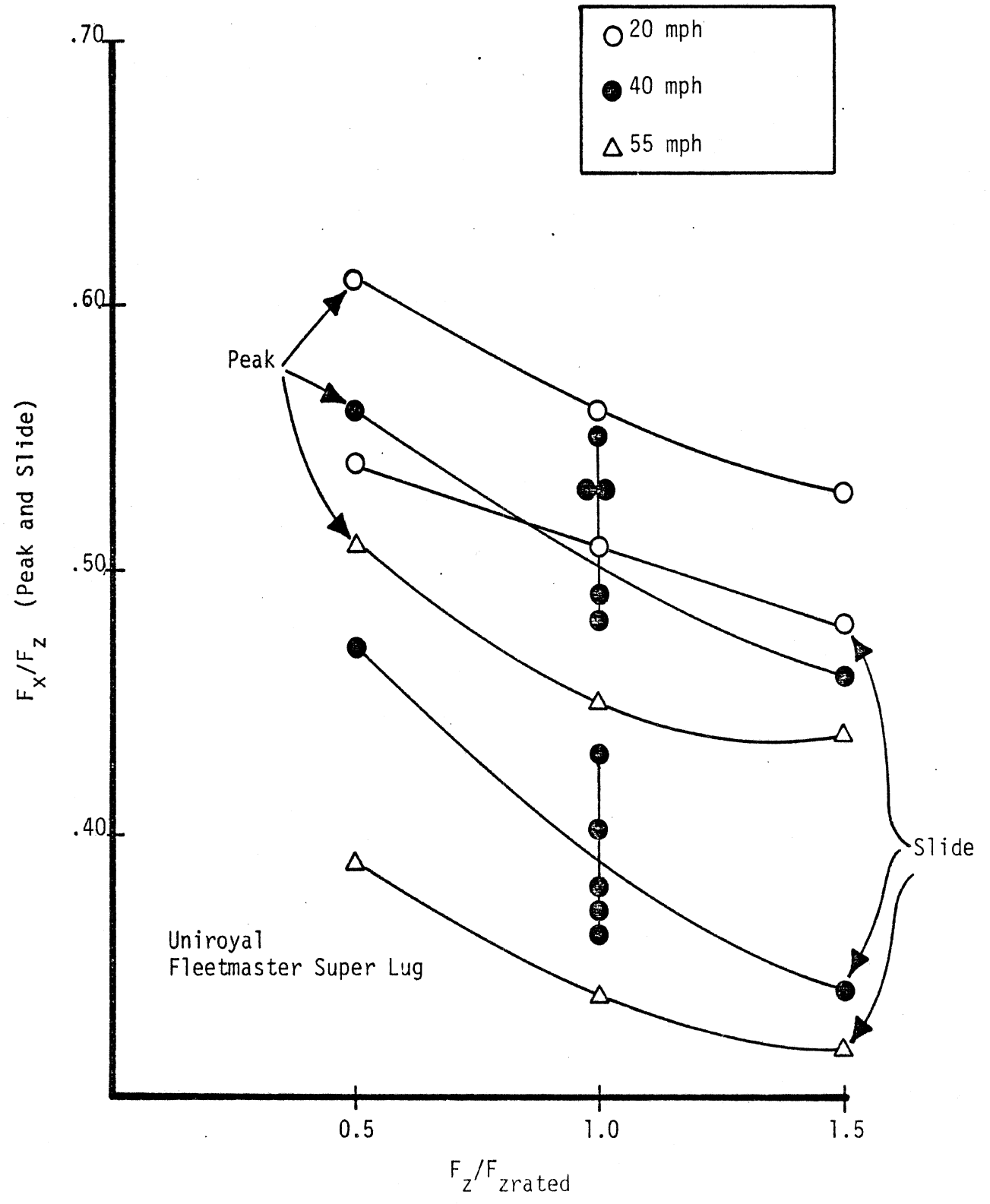




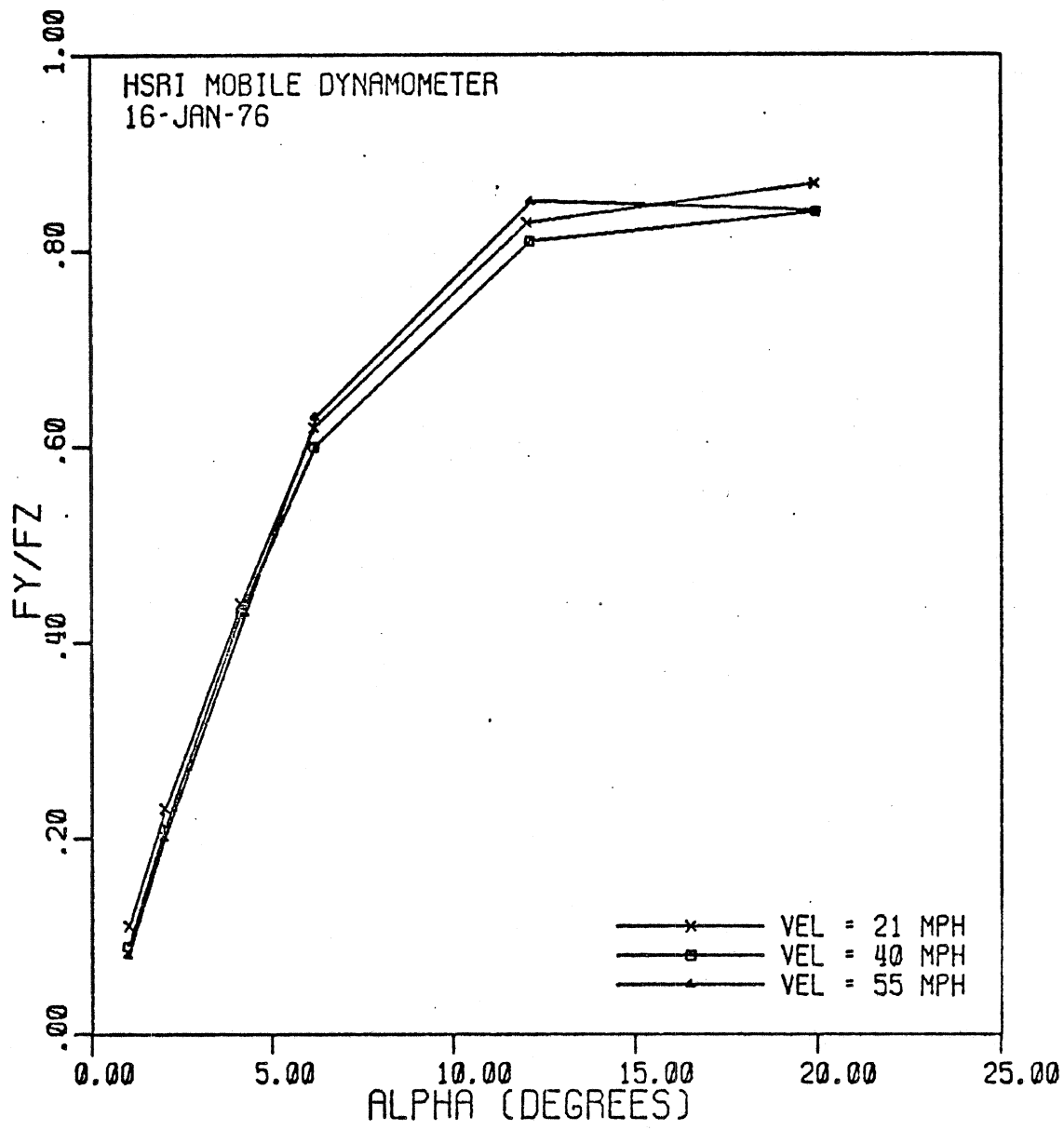




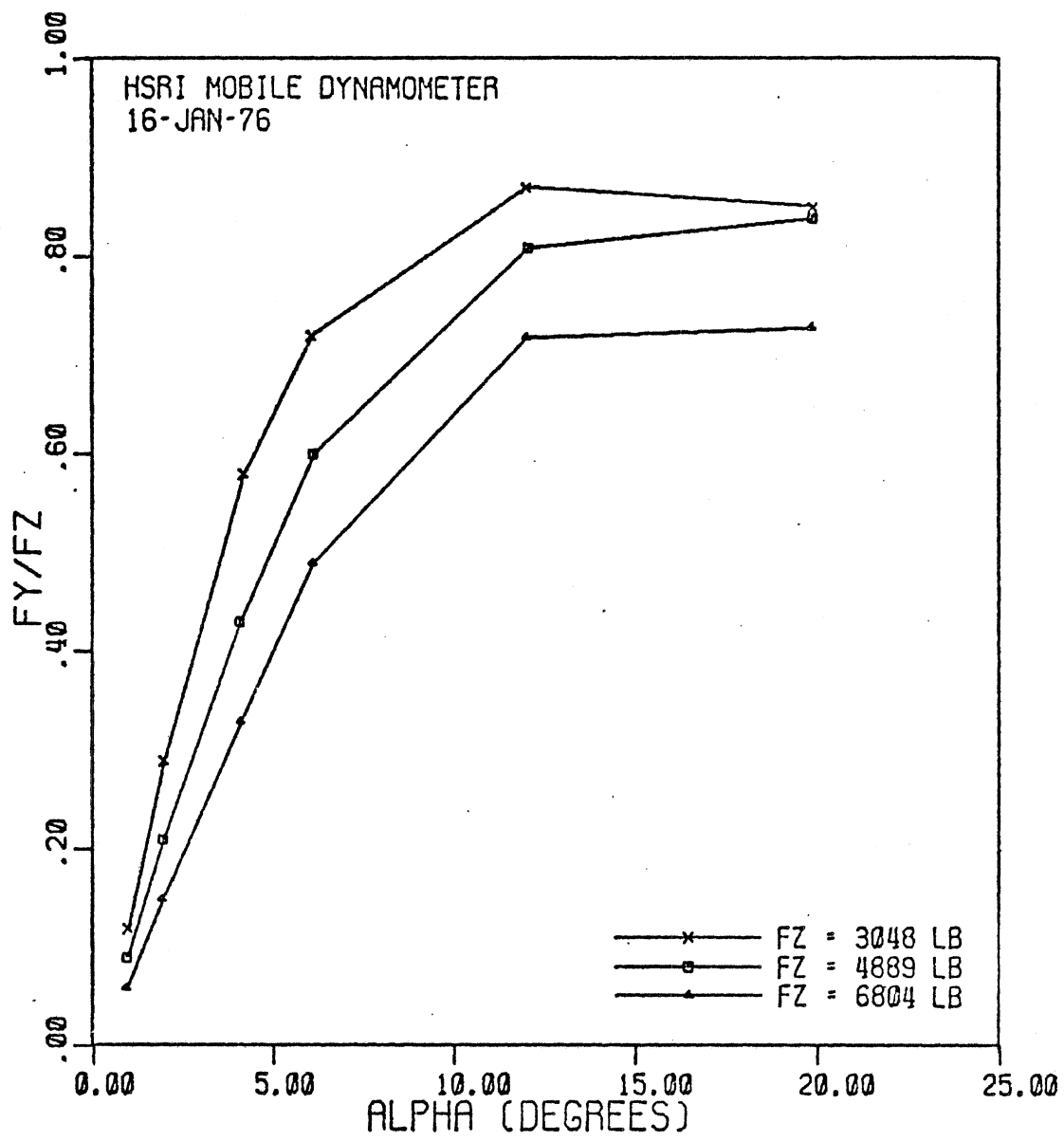




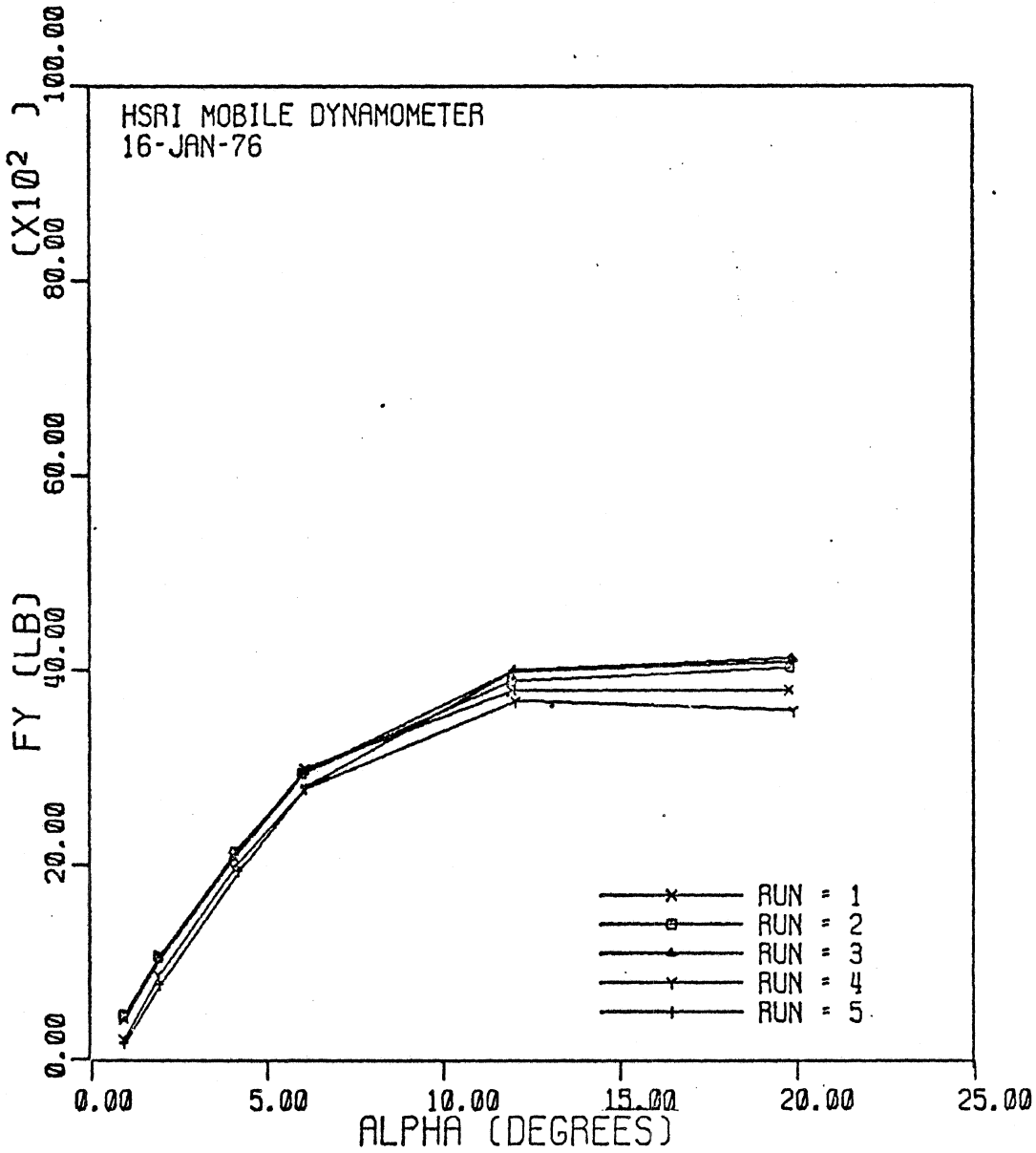
Uniroyal
Fleetmaster Super Lug



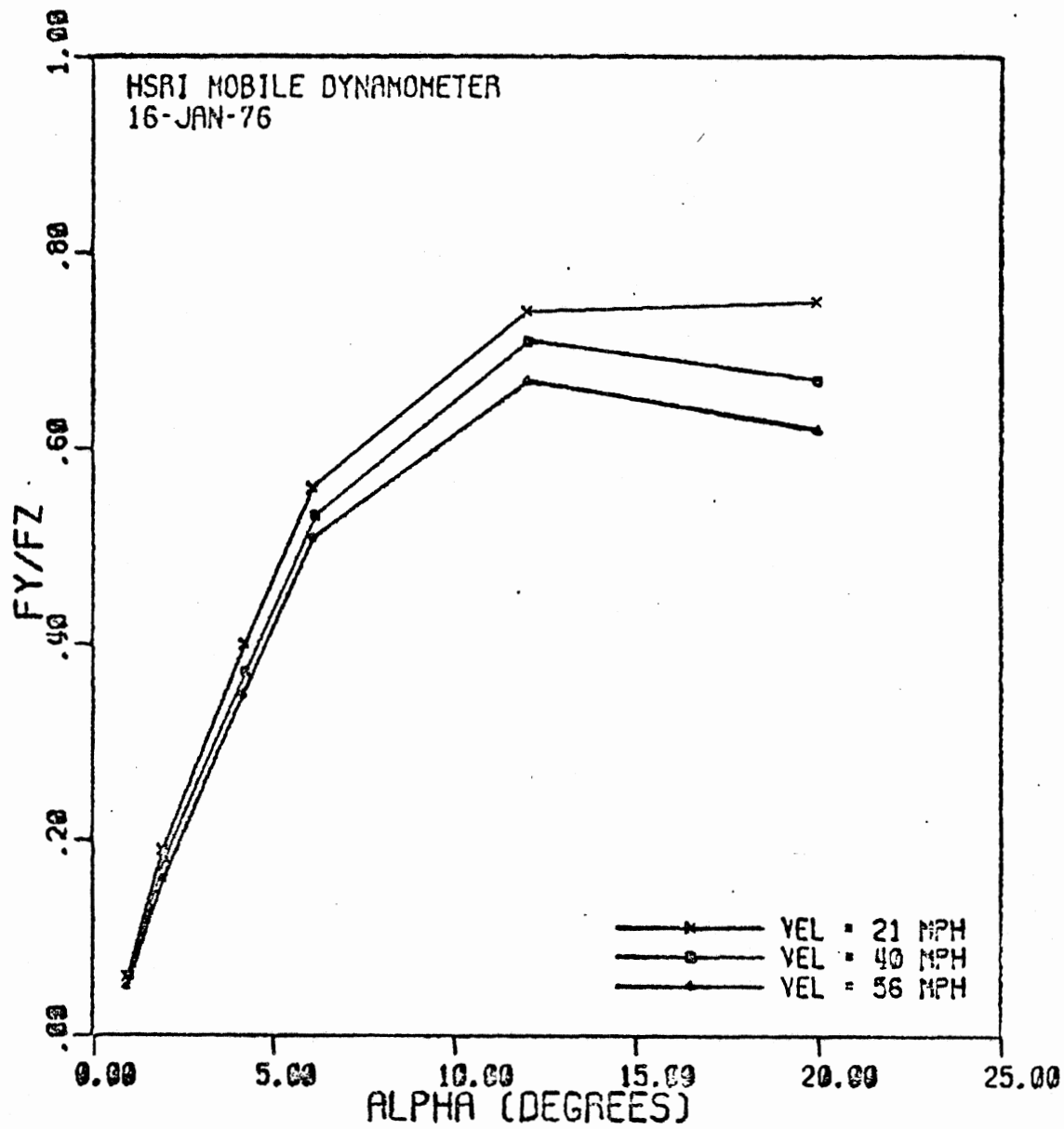
FIRESTONE TRANSPORT I 10.00X20/F-WET
FZ = 4867 LB



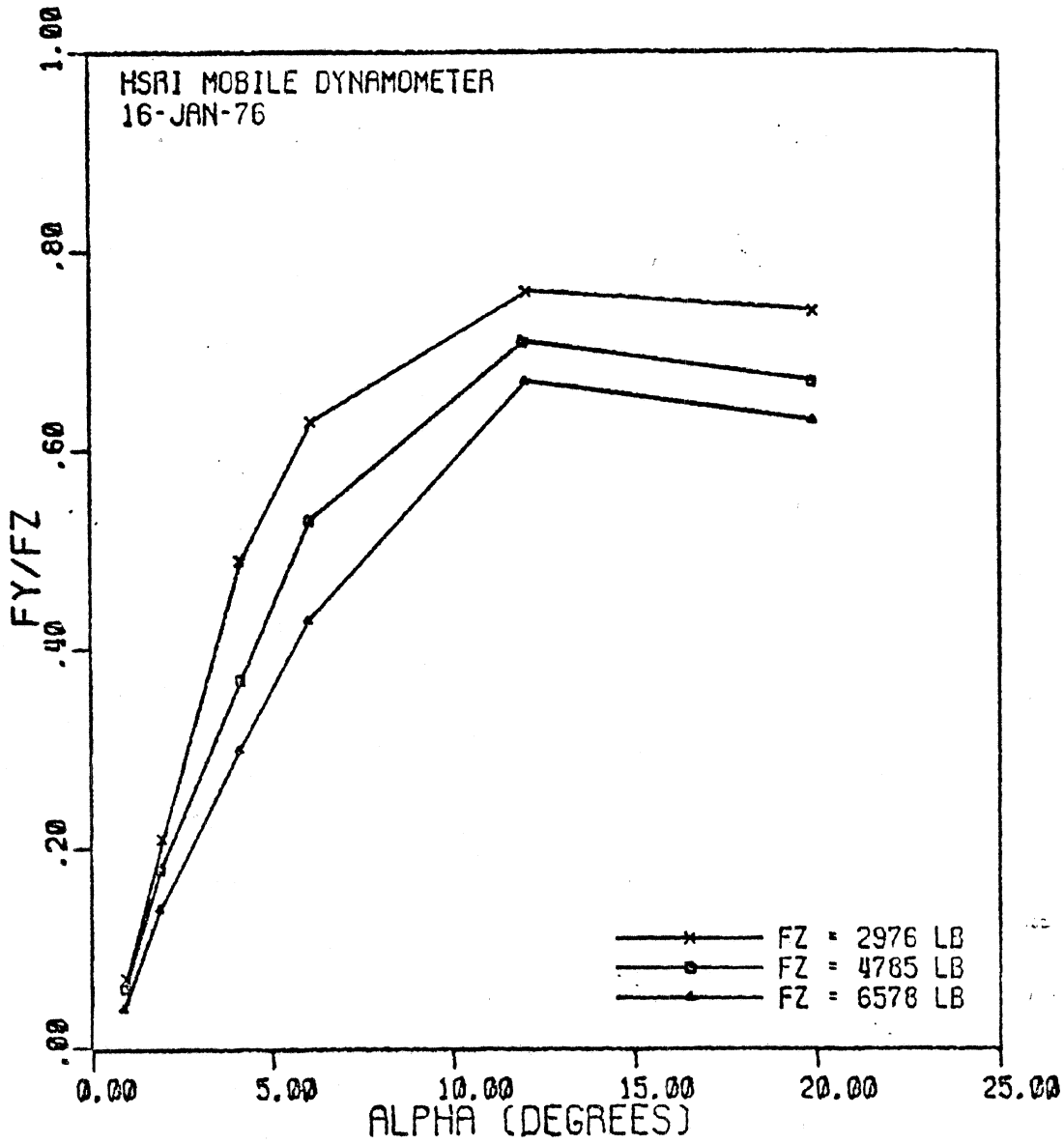
FIRESTONE TRANSPORT I 10.00X20/F-WET
VEL = 39 MPH



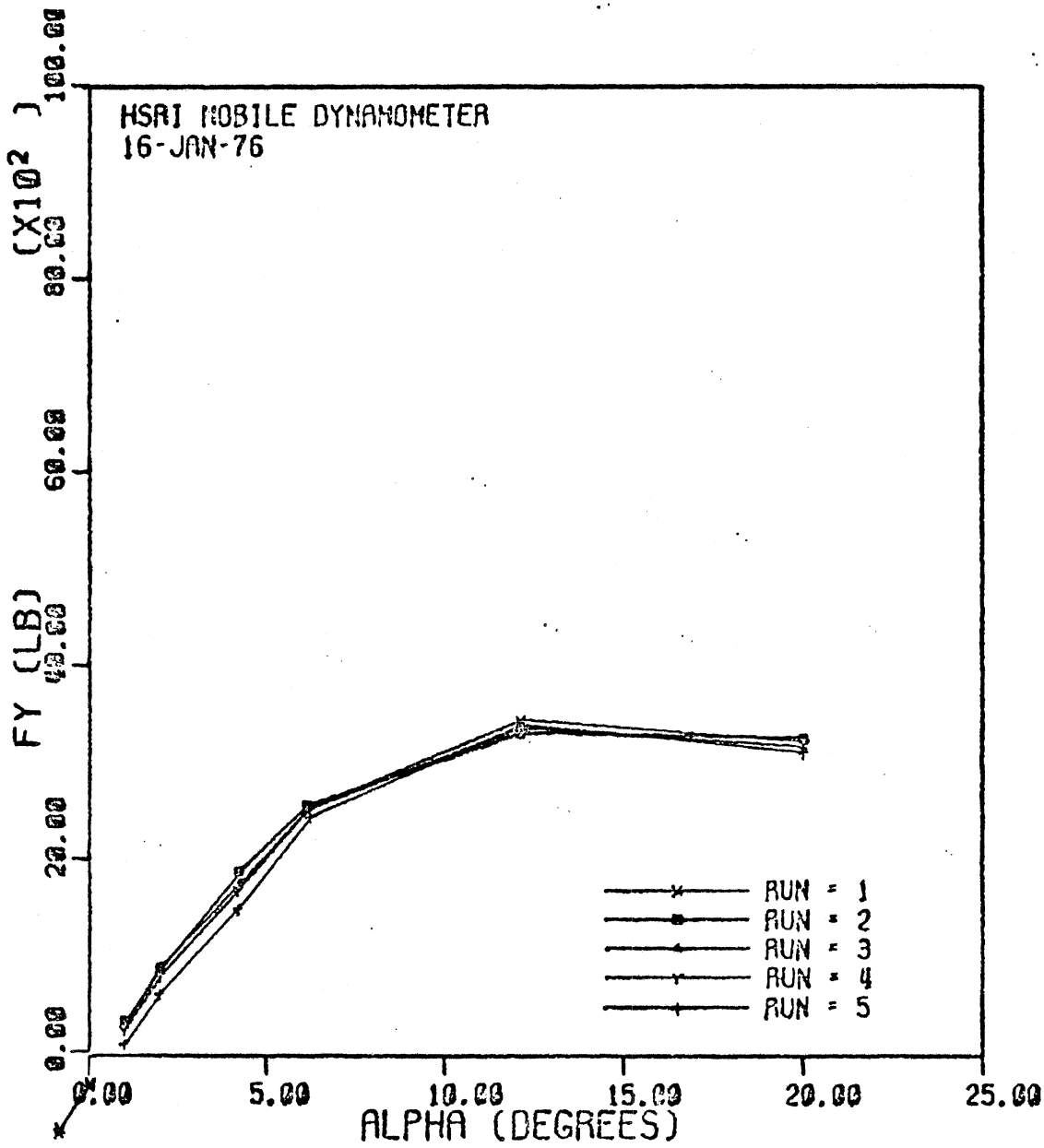
FIRESTONE TRANSPORT I 10.00X20/F-WET
FZ = 4858 LB VEL = 40 MPH



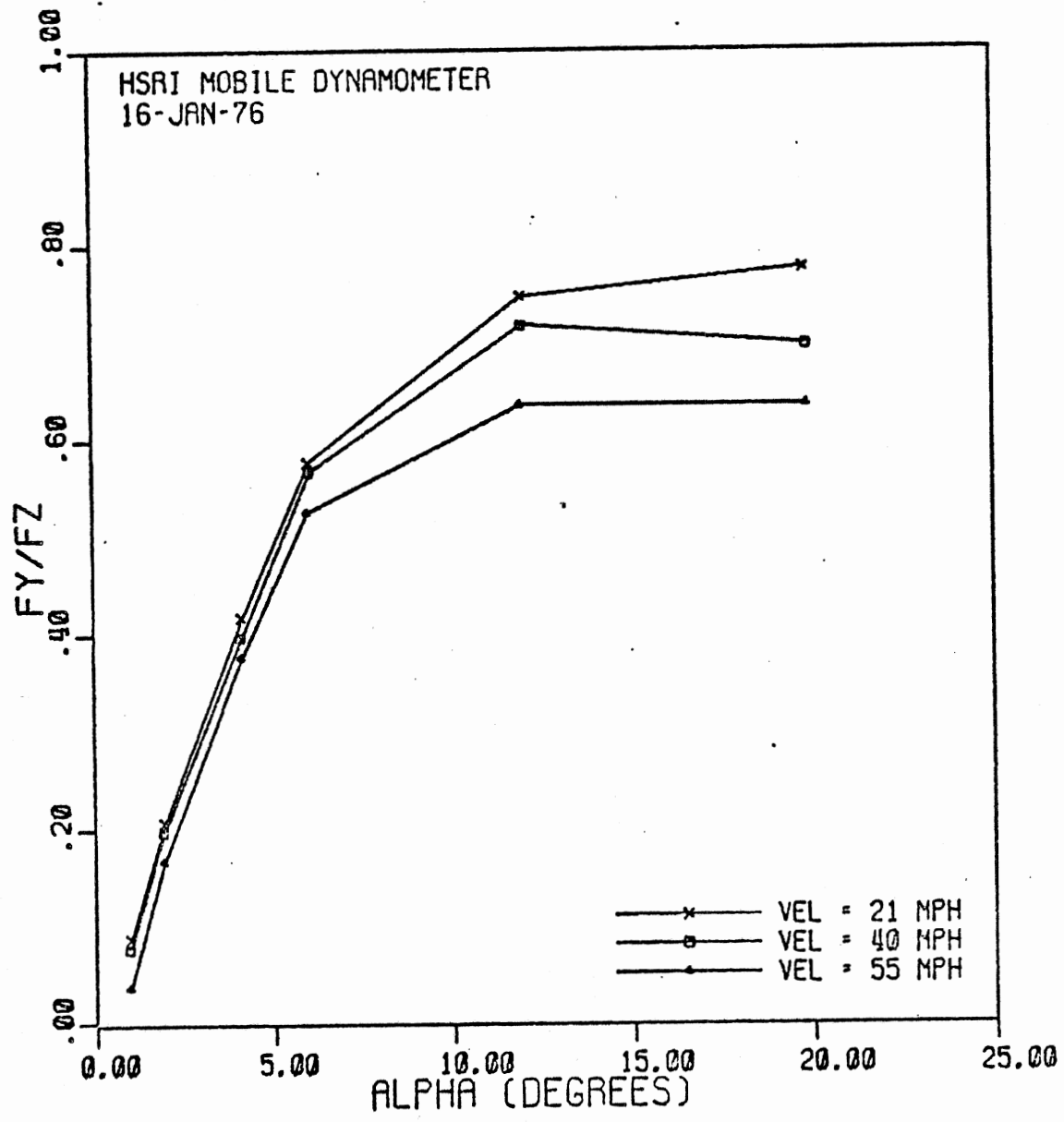
GOODYEAR SUPER HI-MILER 10.00X20/F-WET
FZ = 4761 LB



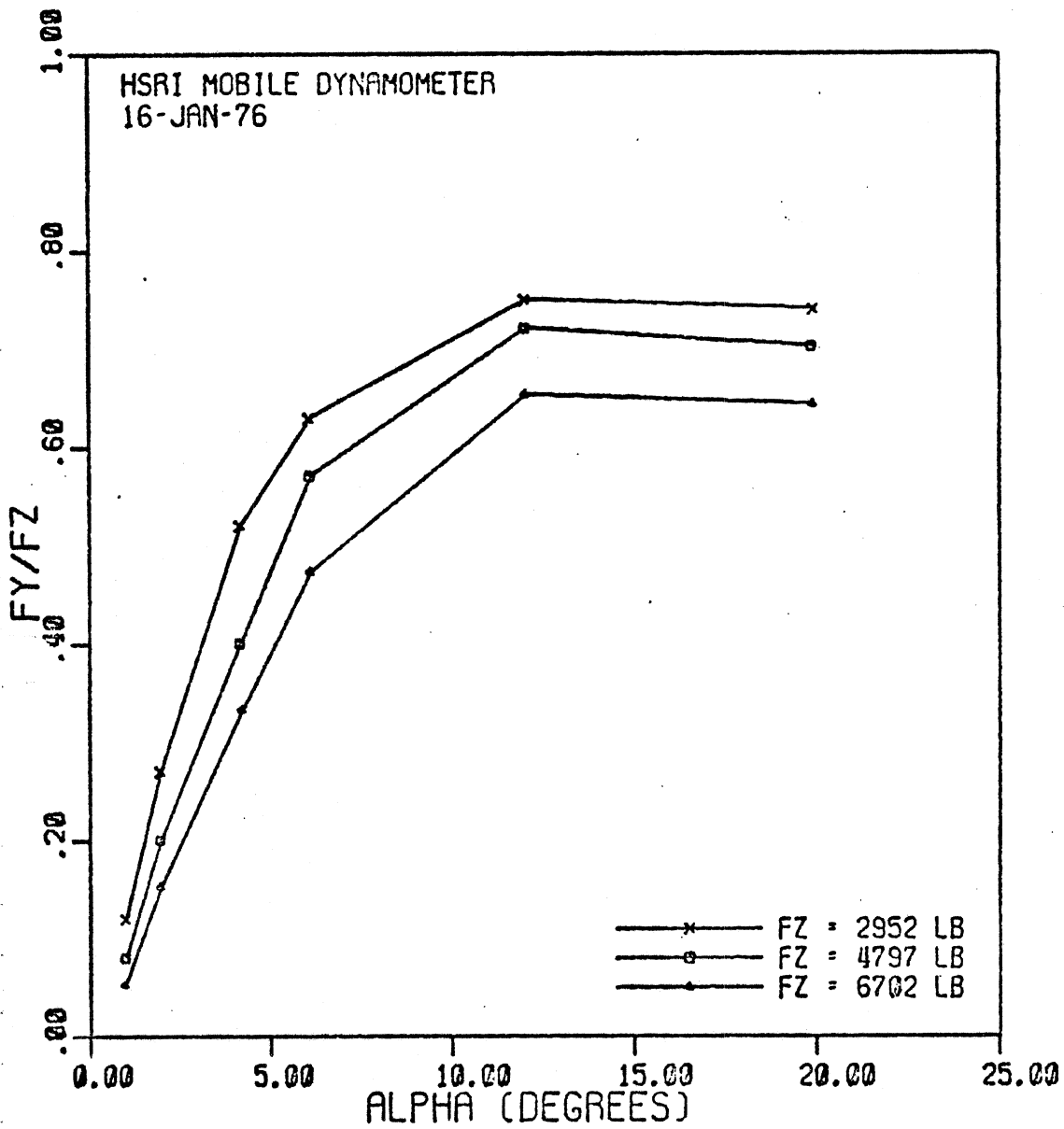
GOODYEAR SUPER HI-MILER 10.00X20/F-VET
VEL = 40 MPH



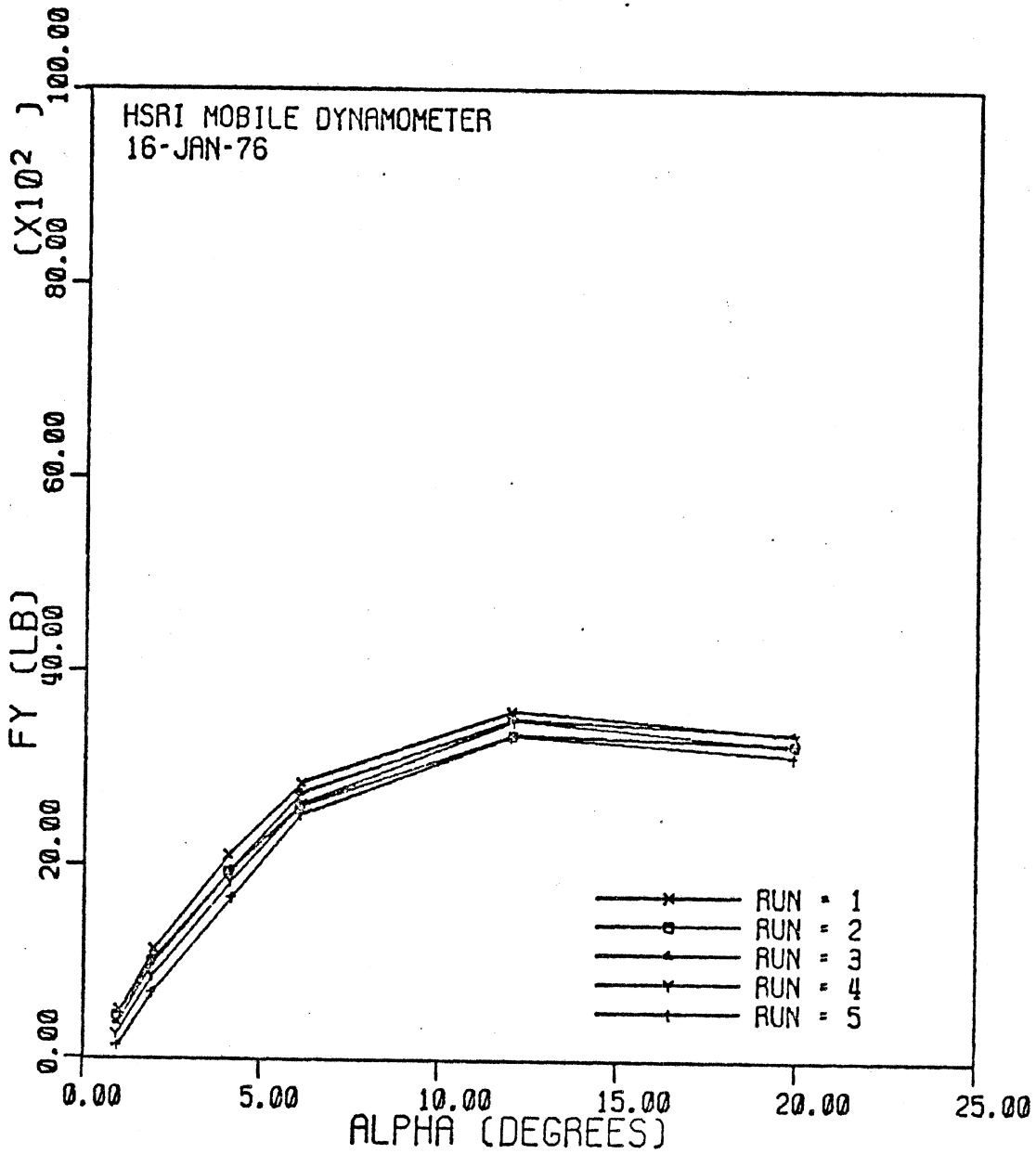
GOODYEAR SUPER HI-MILER 10.00X20/F-WET
FZ = 4685 LB VEL = 39 MPH



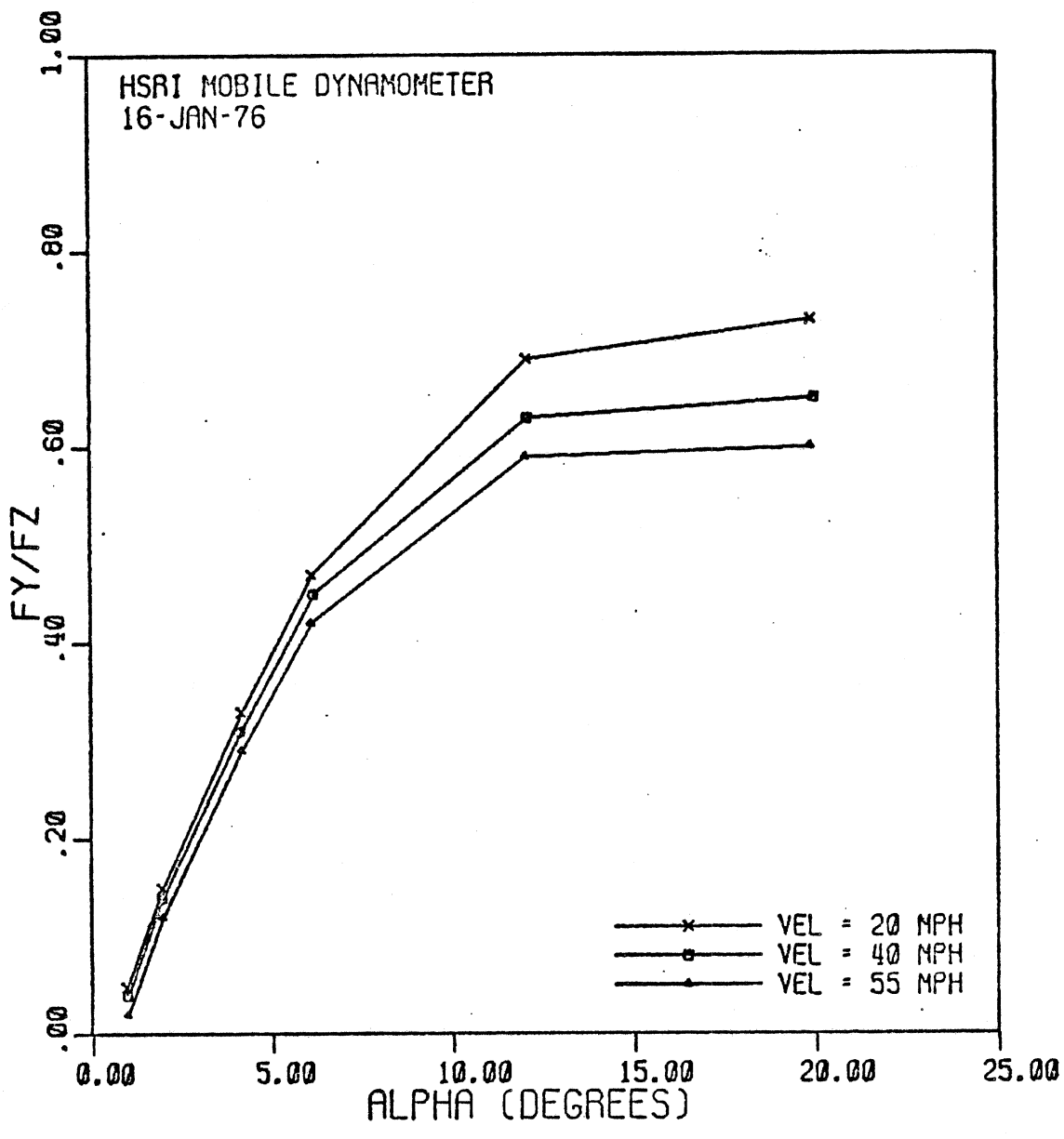
GENERAL GTX 10.00X20/F-WET
FZ = 4776 LB



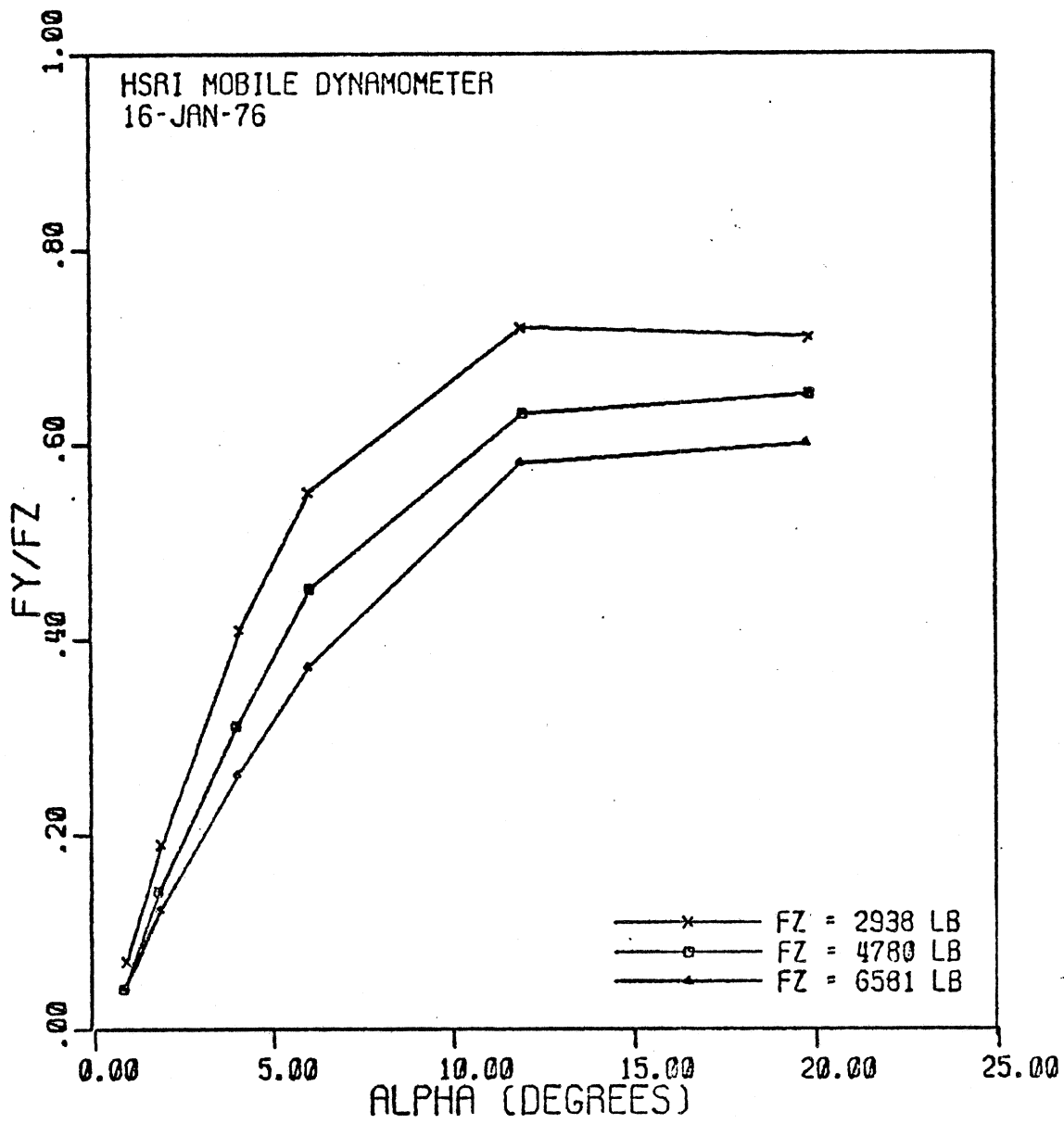
GENERAL GTX 10.00X20/F-WET
VEL = 41 MPH



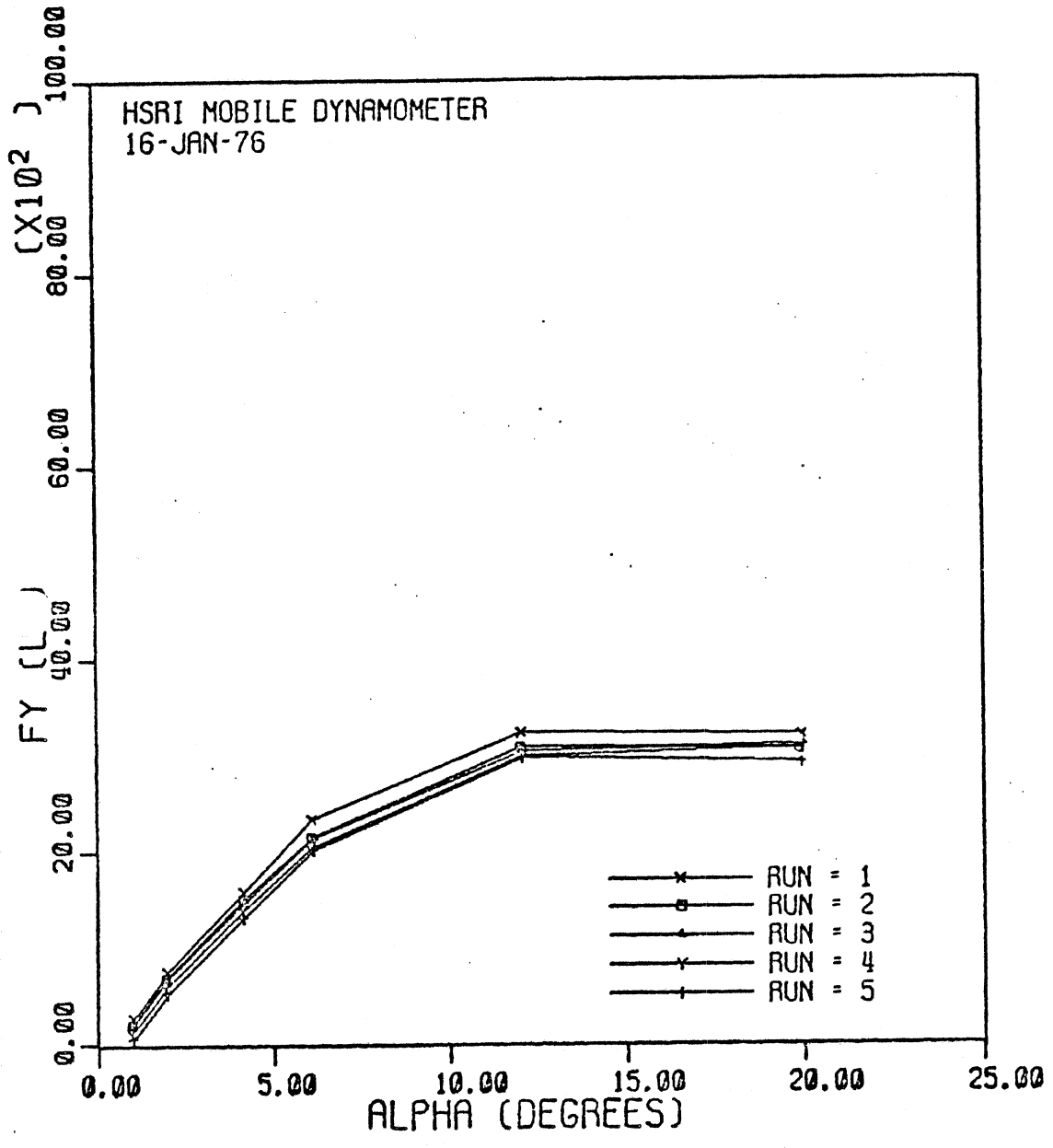
GENERAL GTX 10.00X20/F-WET
FZ = 4780 LB VEL = 40 MPH



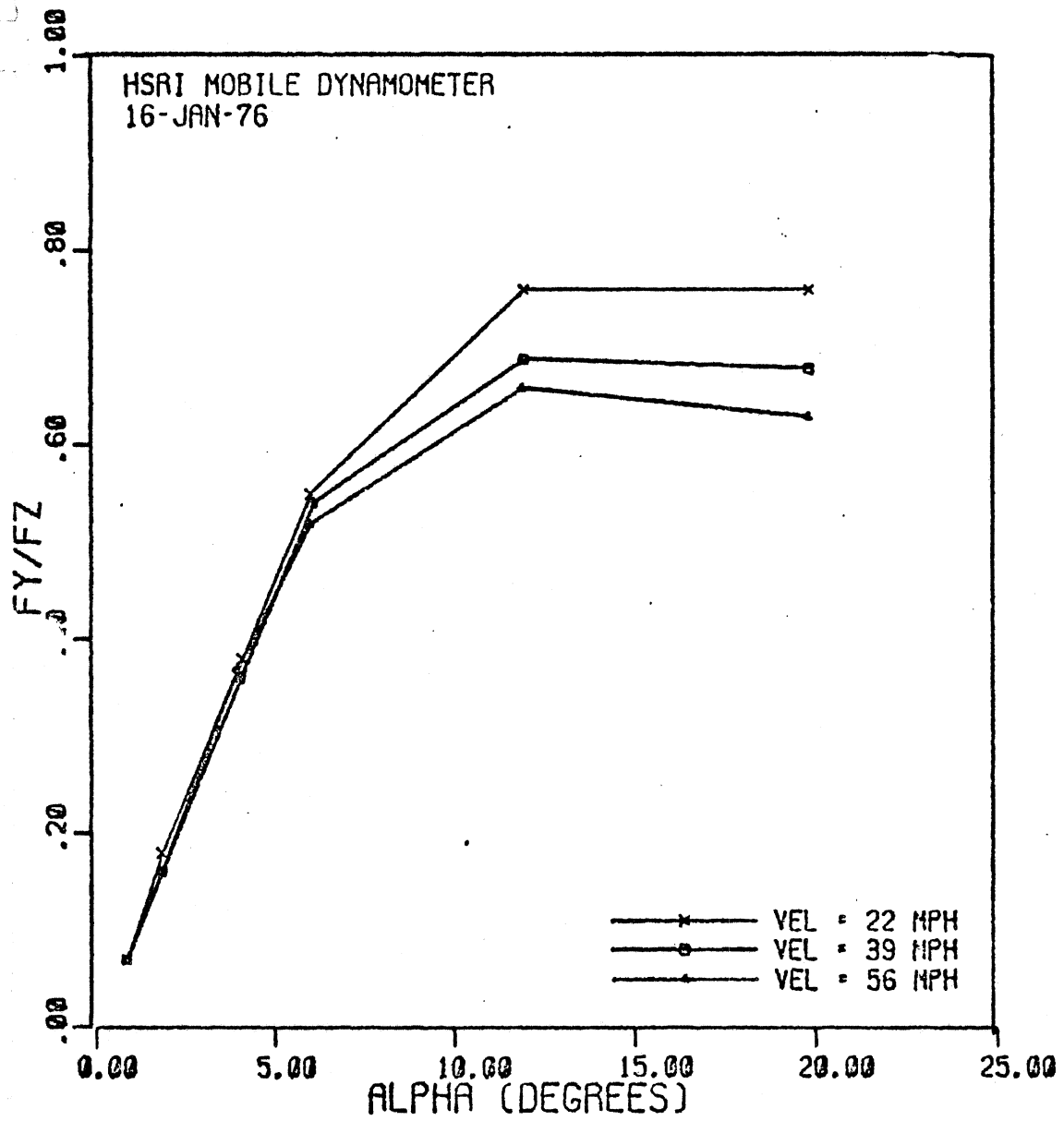
FIRESTONE TRANSPORT 200 10.00X20/F-WET
FZ = 4743 LB



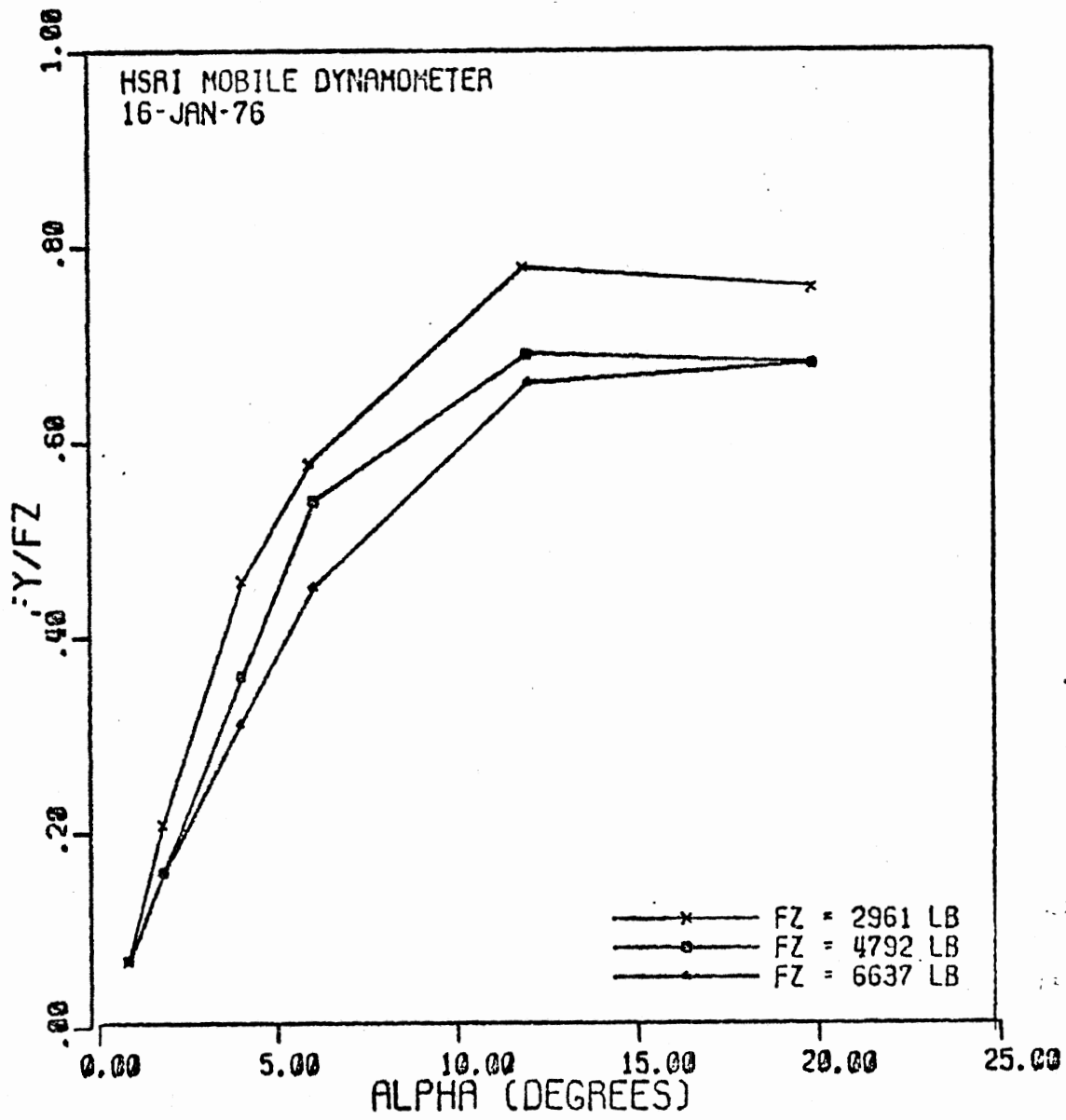
FIRESTONE TRANSPORT 200 10.00X20/F-WET
VEL = 40 MPH



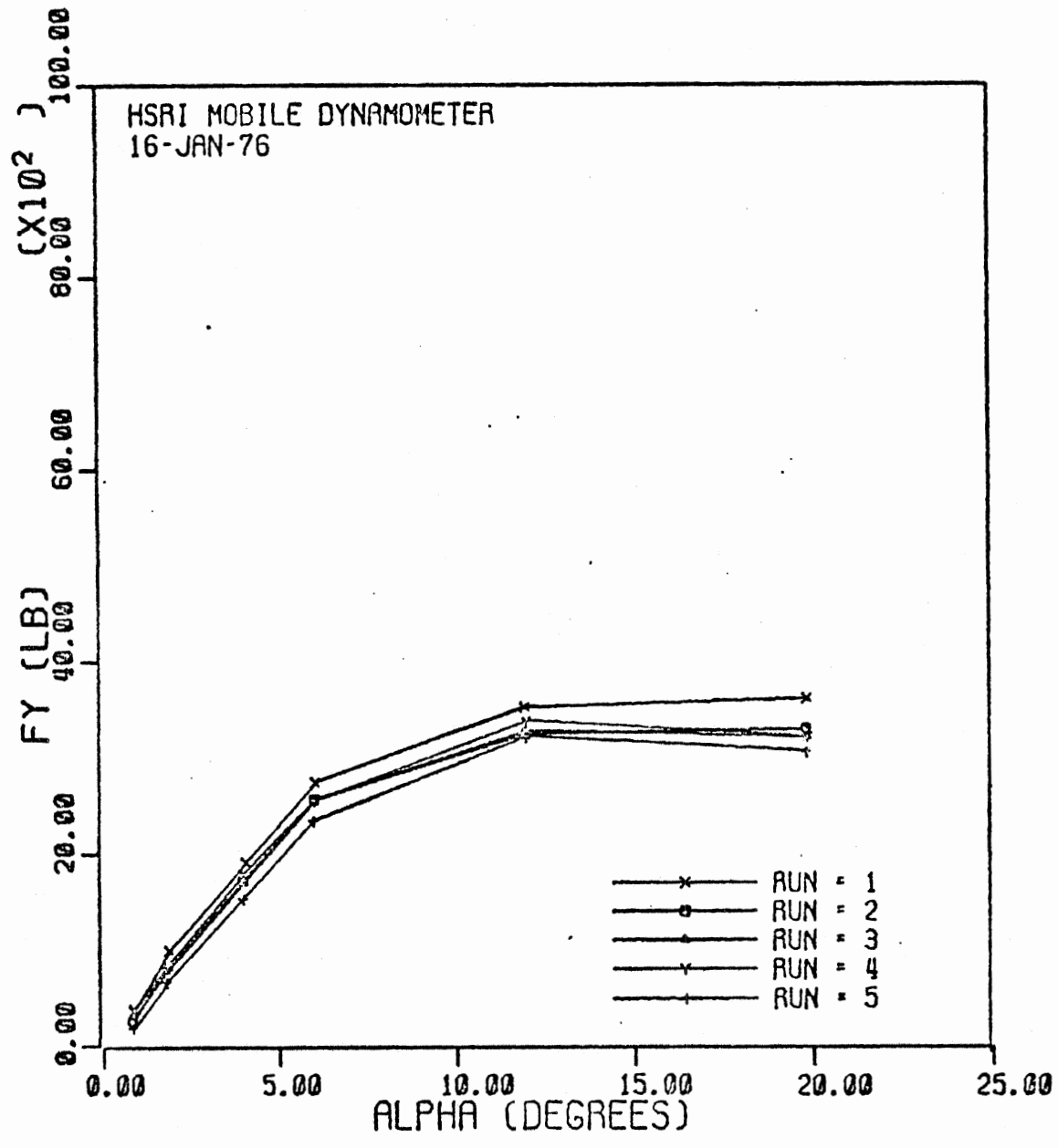
FIRESTONE TRANSPORT 200 10.00X20/F-WET
FZ = 4740 LB VEL = 40 MPH



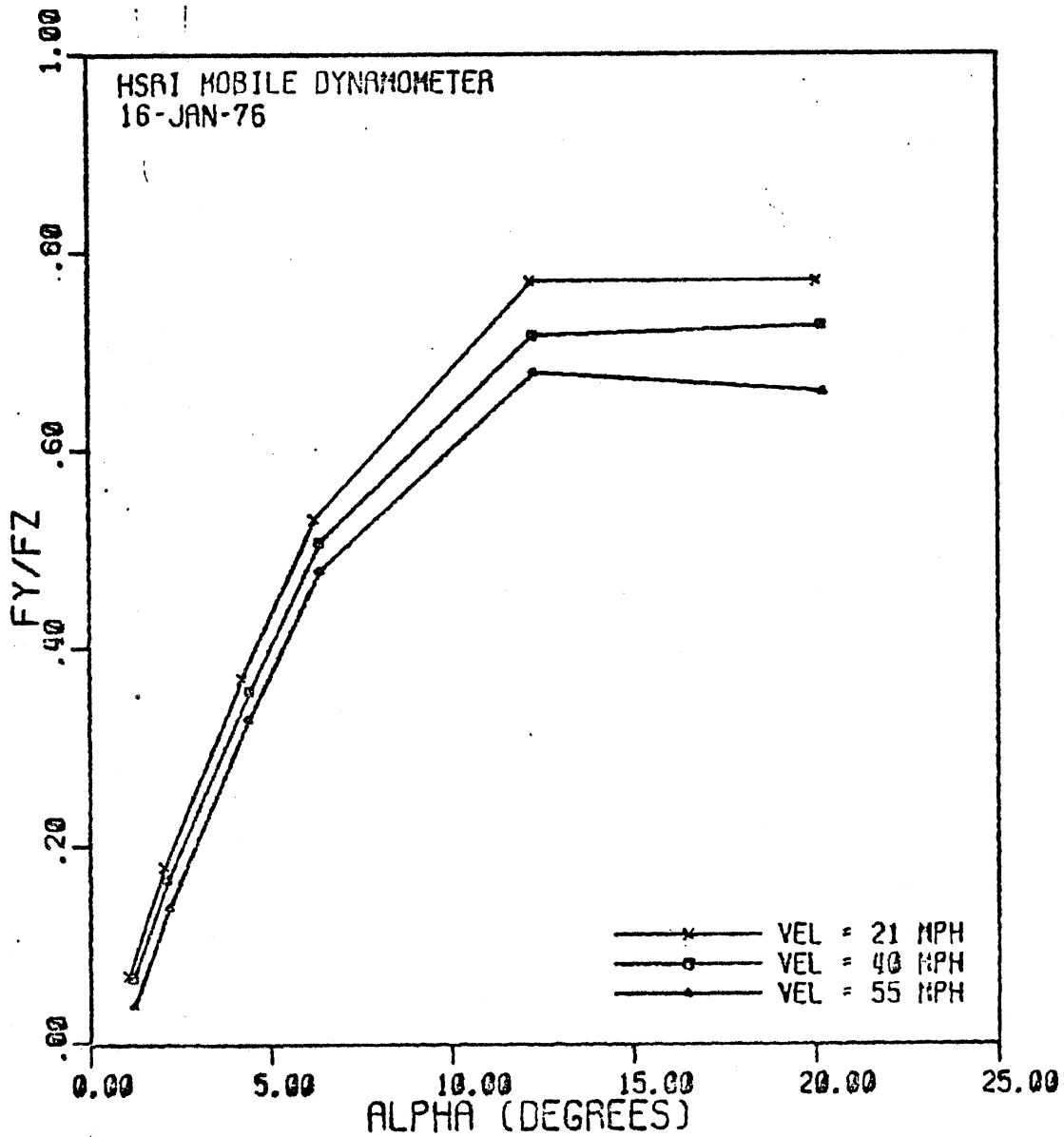
GOODYEAR CUSTOM CROSS RIB 10.00X20/F-WET
FZ = 4738 LB



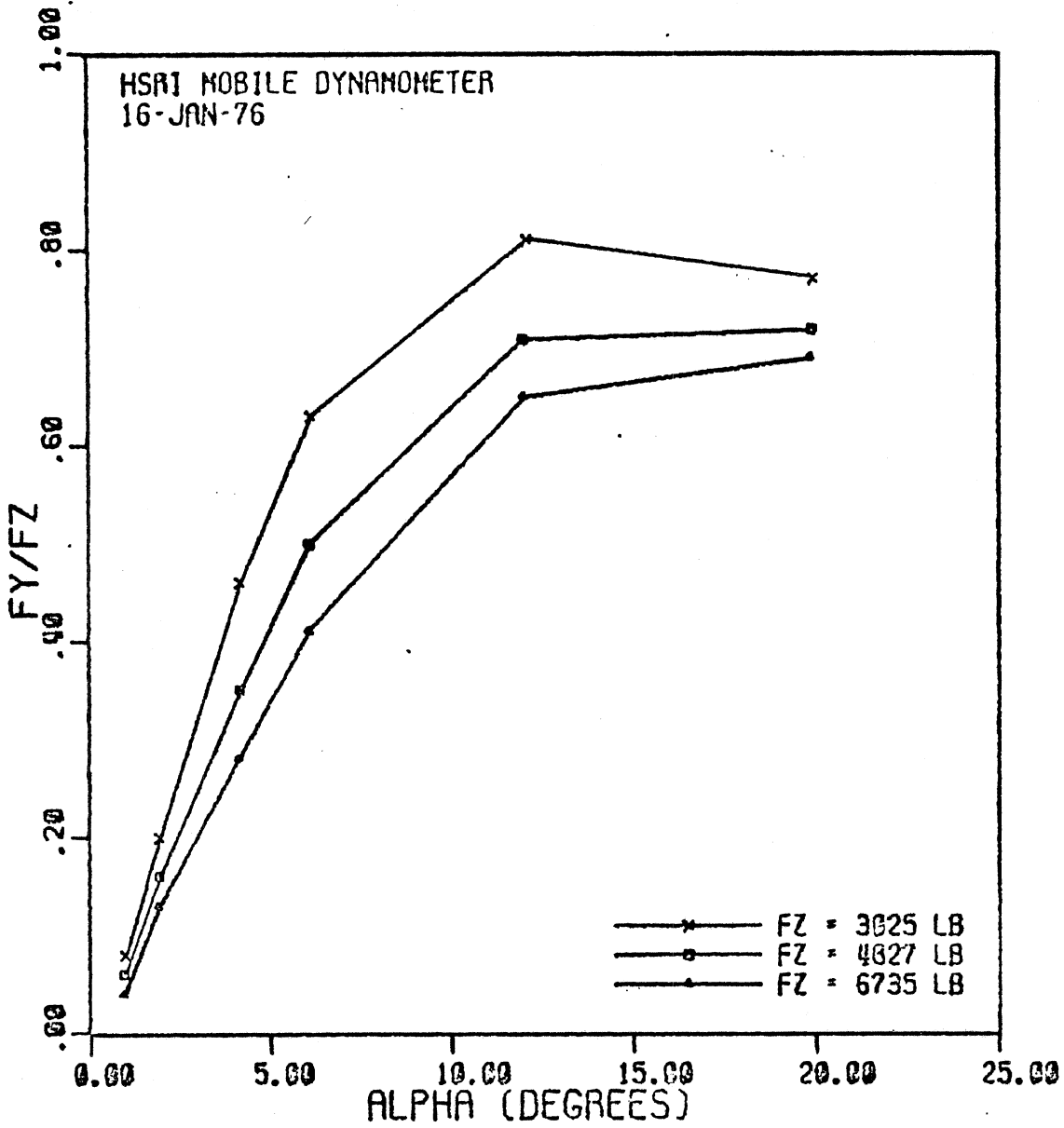
GOODYEAR CUSTOM CROSS RIB 10.00X20/F-VET
VEL = 39 MPH



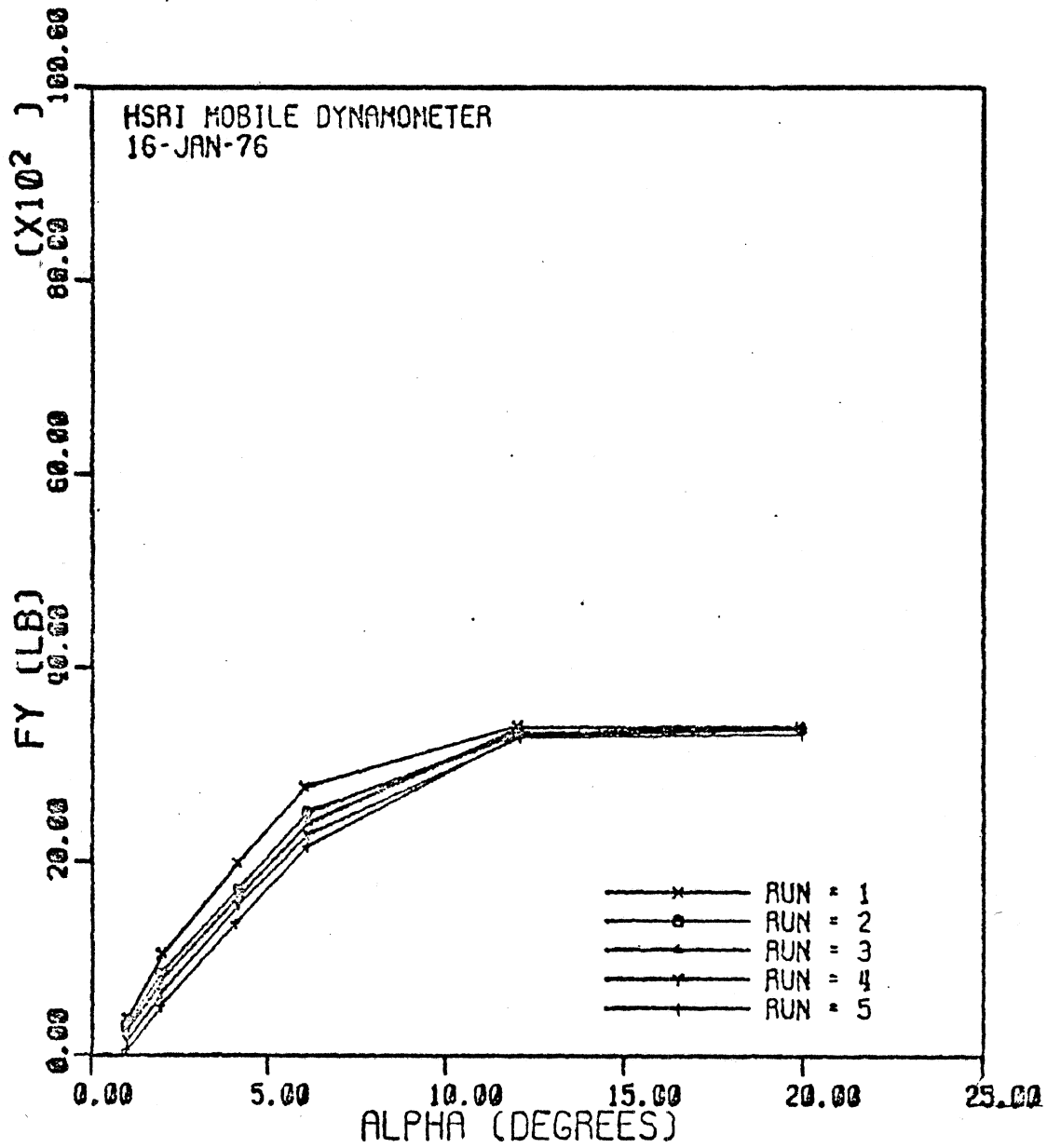
GOODYEAR CUSTOM CROSS RIB 10.00X20/F-WET
FZ = 4751 LB VEL = 39 MPH



UNIROYAL FLEETMASTER SUPERLUG 10.00X20/F-WET
FZ = 4790 LB



UNIROYAL FLEETMASTER SUPERLUG 10.00X20/F-VET
VEL = 40 MPH



UNIROYAL FLEETMASTER SUPERLUG 10.00X20/F-WET
FZ = 4795 LB VEL = 40 MPH

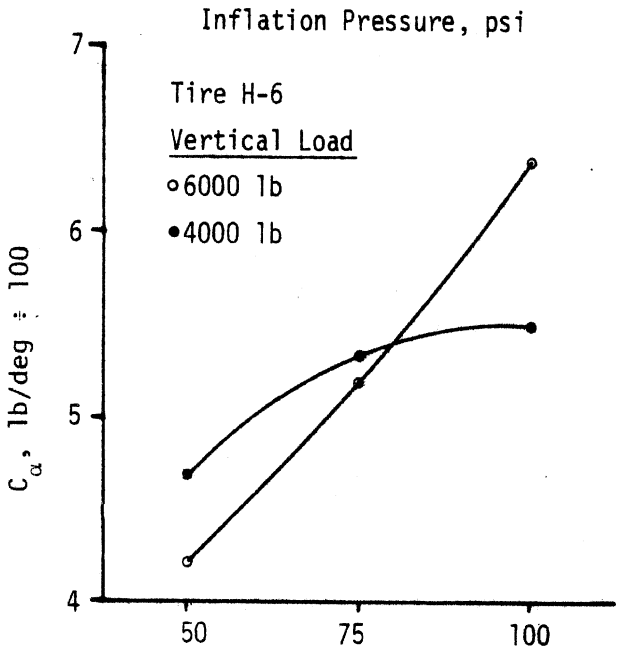
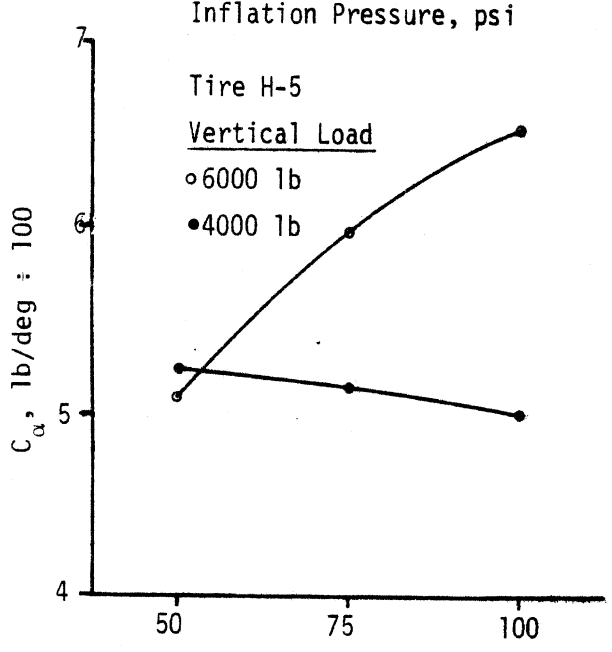
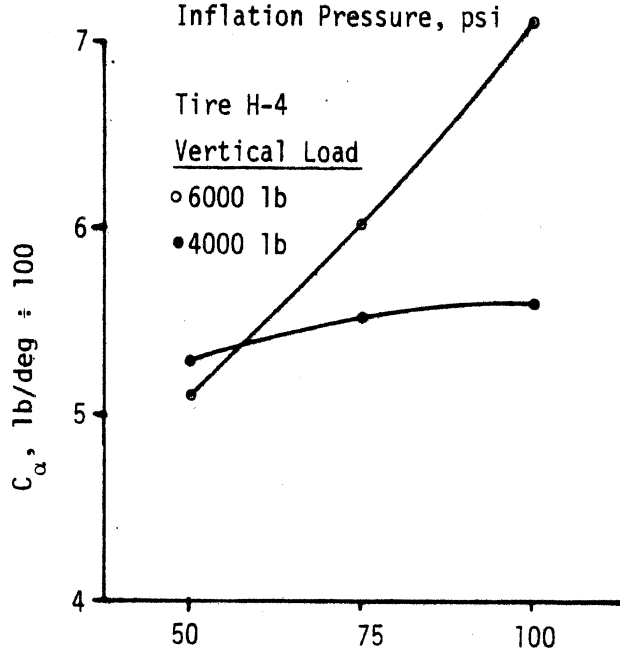
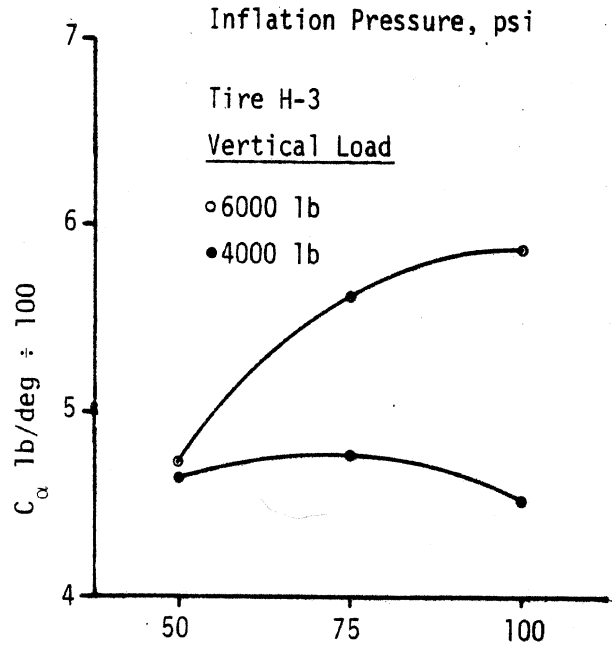
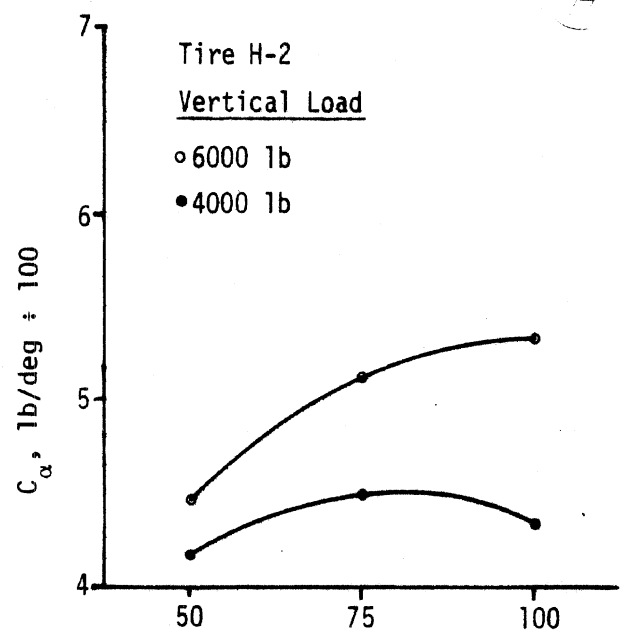
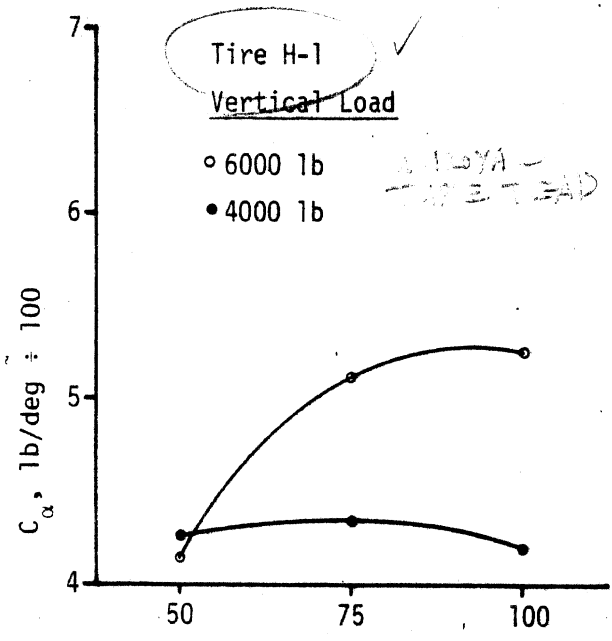


Figure 3.9 The effects of inflation pressure on cornering stiffness: heavy truck tires

TABLE 3.1. FLAT-BED TEST TIRES

| <u>Tire No.</u> | <u>Manufacturer</u> | <u>Model</u> | <u>Size</u> |
|--------------------------|---------------------|-------------------------------|---------------|
| Heavy Truck Tires | | | |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| H-2 | Uniroyal | Triple Tread | 10 x 20G |
| H-3 | Uniroyal | Triple Tread | 11 x 22.5F |
| H-4 | B.F. Goodrich | Milesaver Radial Steel H.D.R. | 10 R 20 G |
| H-5 | B.F. Goodrich | Milesaver Radial Steel H.D.B. | 10 R 20 G |
| H-6 | Goodyear | Unisteel R-1 | 10 R 20 G |
| H-7 | Goodyear | Unisteel L-1 | 10 R 20 G |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| H-9 | Uniroyal | Unimaster Rib | 15 x 22.5H |
| H-10 | Michelin | Radial | 10 R 20 G |
| [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| Heavy Bus Tires | | | |
| H-12 | Firestone | Hiway Mileage | 12.5 x 22.5G |
| H-13 | B.F. Goodrich | Intercity Mileage | 12.5 x 22.5G |
| H-14 | B.F. Goodrich | Intercity Mileage | 11.5 x 20G |
| H-15 | Uniroyal | Intercity | 12.5 x 22.5G |
| H-16 | Uniroyal | MaxRoute I | 11.00 R 20H |
| H-17 | Goodyear | Custom Cruiser | 12.5 x 22.5G |
| H-18 | Michelin | Radial XZA | 11 R 20 H |
| H-19 | Michelin | Radial XZA | 11 R 22.5 H |
| H-20 | Michelin | Radial XZA | 12 R 22.5H |
| Light Truck Tires | | | |
| L-1 | Firestone | Transport 500 | 8.00 x 16.5D |
| L-2 | Goodyear | Custom HiMiler | 8.75 x 16.5E |
| L-3 | Goodyear | Rib HiMiler | 8.00 x 16.5D |
| L-4 | Firestone | Transport 110 | 7.50 x 16.5C |
| L-5 | Goodyear | Super Single HiMiler | 10.00 x 16.5E |
| L-6 | Firestone | Town & Country Truck | 8.00 x 16.5D |
| L-7 | Goodyear | Custom Flexsteel | 8.00 R 16.5E |
| L-8 | Goodrich | Milesaver Radial | 8.00 R 16.5D |
| L-9 | Goodyear | Glas Guard XG | 8.00 x 16.5D |
| L-10 | Goodyear | Glas Guard XG | 8.75 x 16.5E |
| L-11 | Firestone | Town & Country Truck | 8.75 x 16.5E |
| L-12 | Goodyear | Custom Flexsteel | 8.75 R 16.5E |
| L-13 | Michelin | Radial XCA | 8.00 R 16.5E |
| L-14 | Wards | Steel Belted Super Wide | 9.50 x 16.5D |
| L-15 | Michelin | Radial XCA | 8.75 R 16.5D |
| L-16 | General | Jumbo Power Jet | 8.00 x 16.5D |
| L-17 | General | Jumbo Power Jet | 8.75 x 16.5E |
| L-18 | Goodyear | Glas Guard | 8.00 x 16.5D |
| L-19 | Goodyear | Glas Guard | 8.75 x 16.5E |
| L-20 | Goodyear | Rib HiMiler | 8.75 x 16.5E |

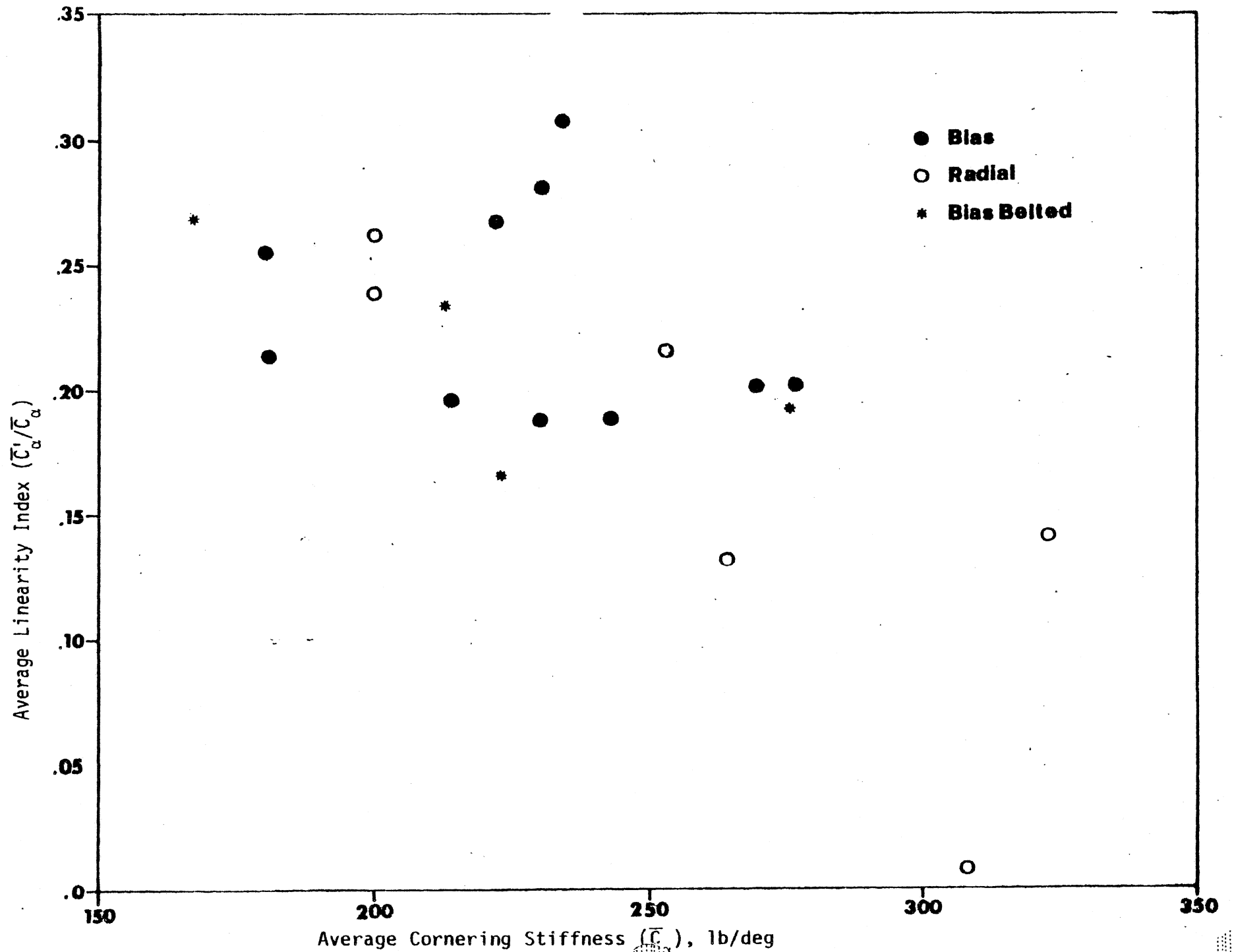


Figure 3.8 The effects of cornering stiffness on the linearity index: light truck tires.

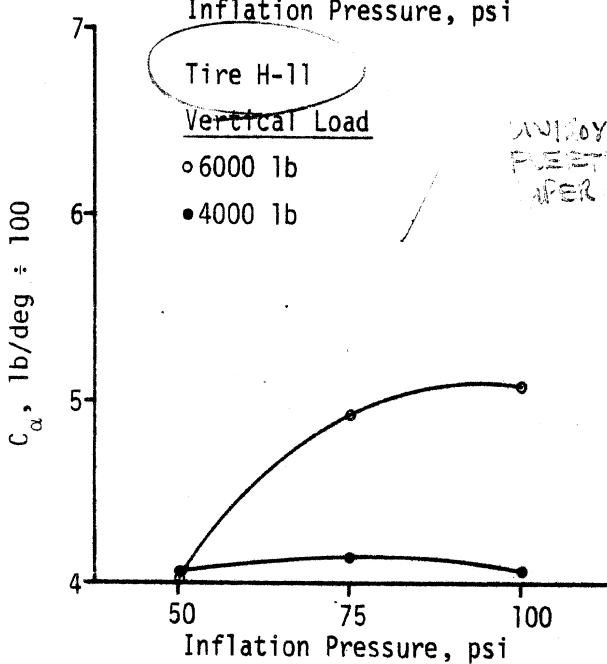
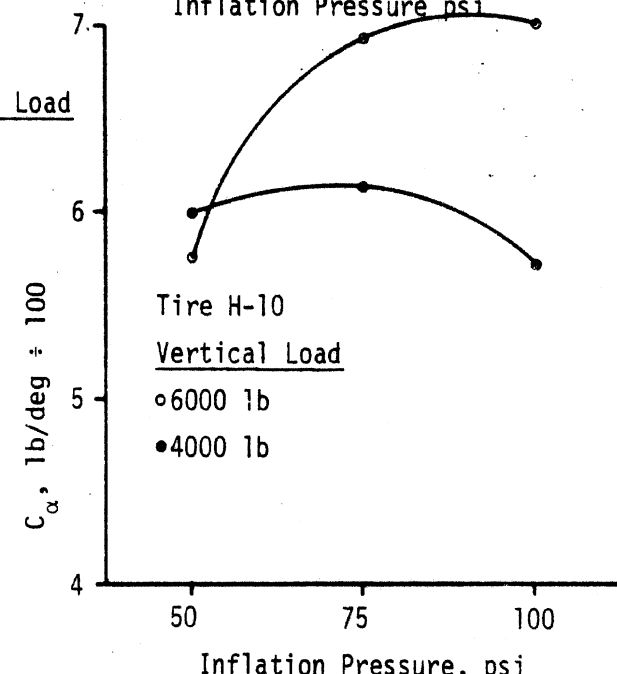
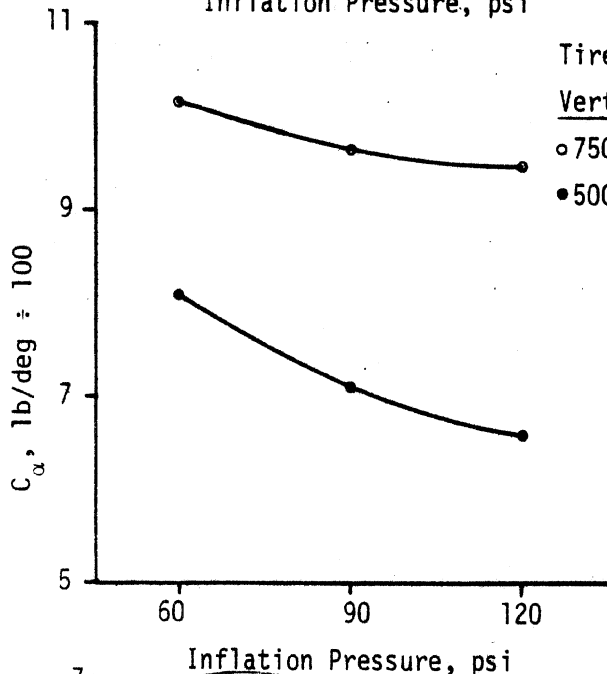
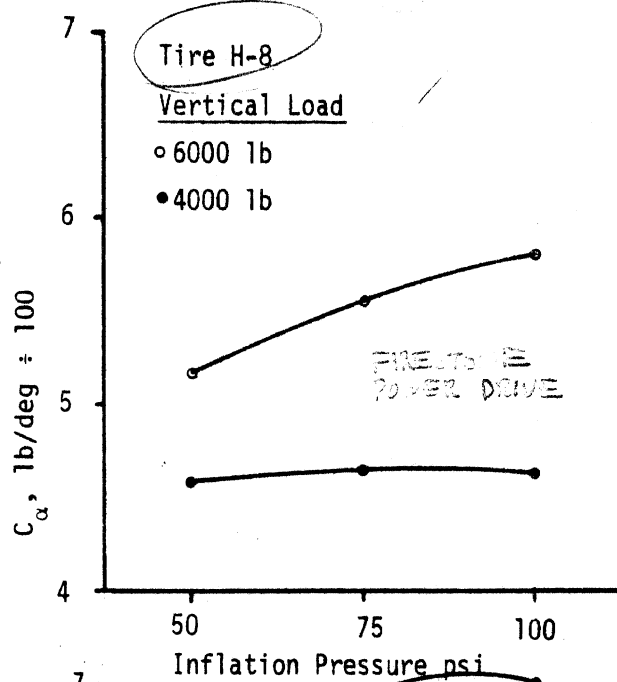
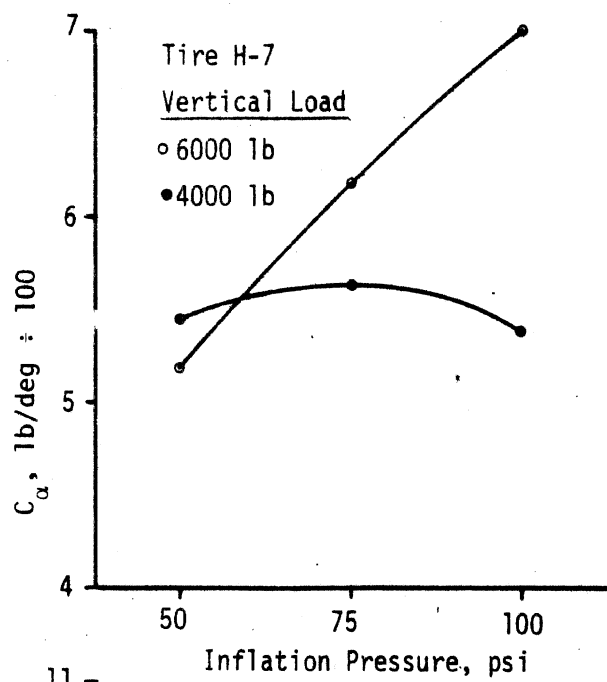


Figure 3. 10 The effects of inflation pressure on cornering stiffness: heavy truck tires (cont.).

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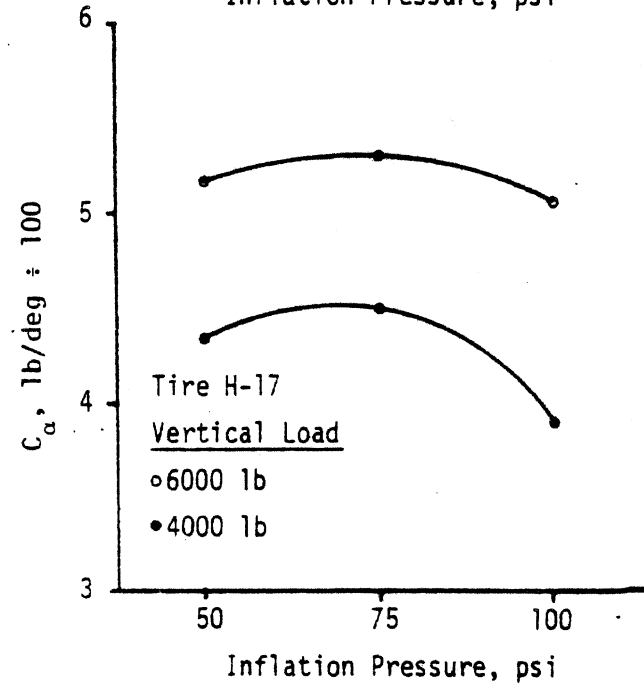
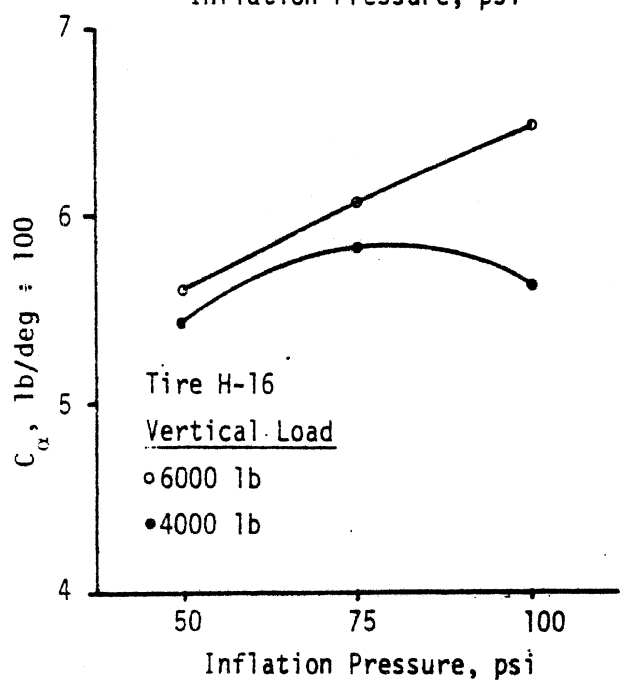
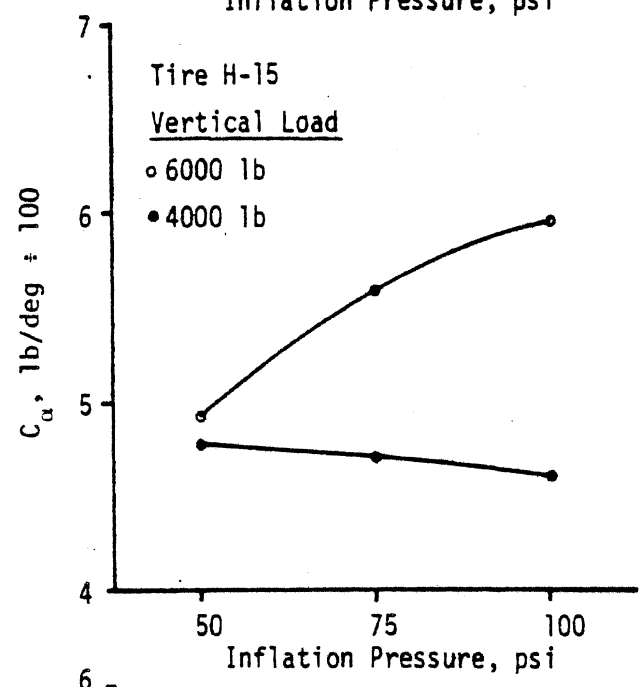
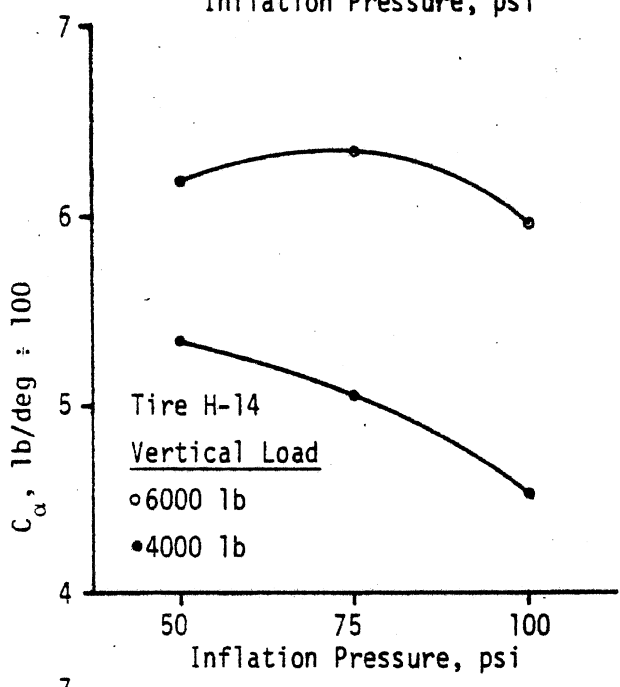
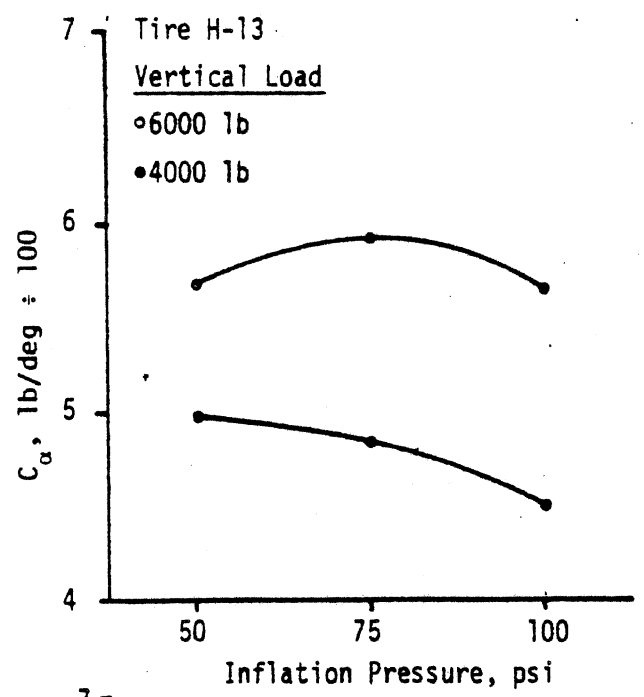
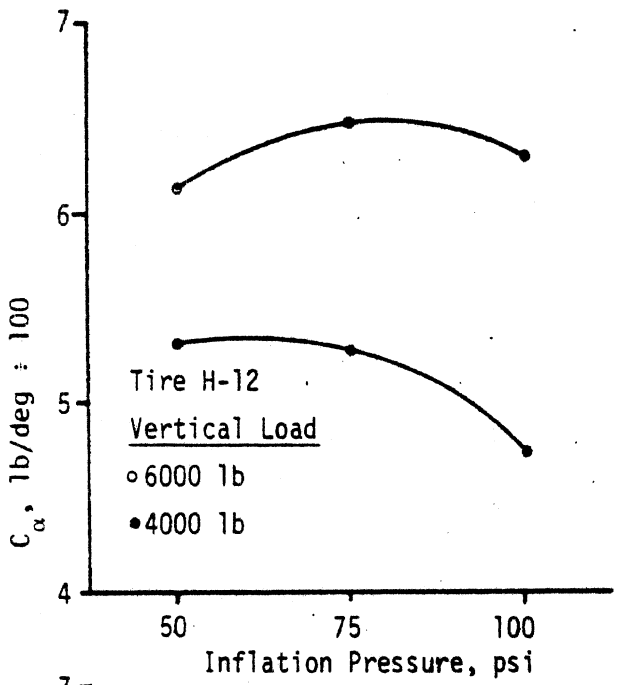


Figure 3.11 The effects of inflation pressure on cornering stiffness: heavy bus tires.

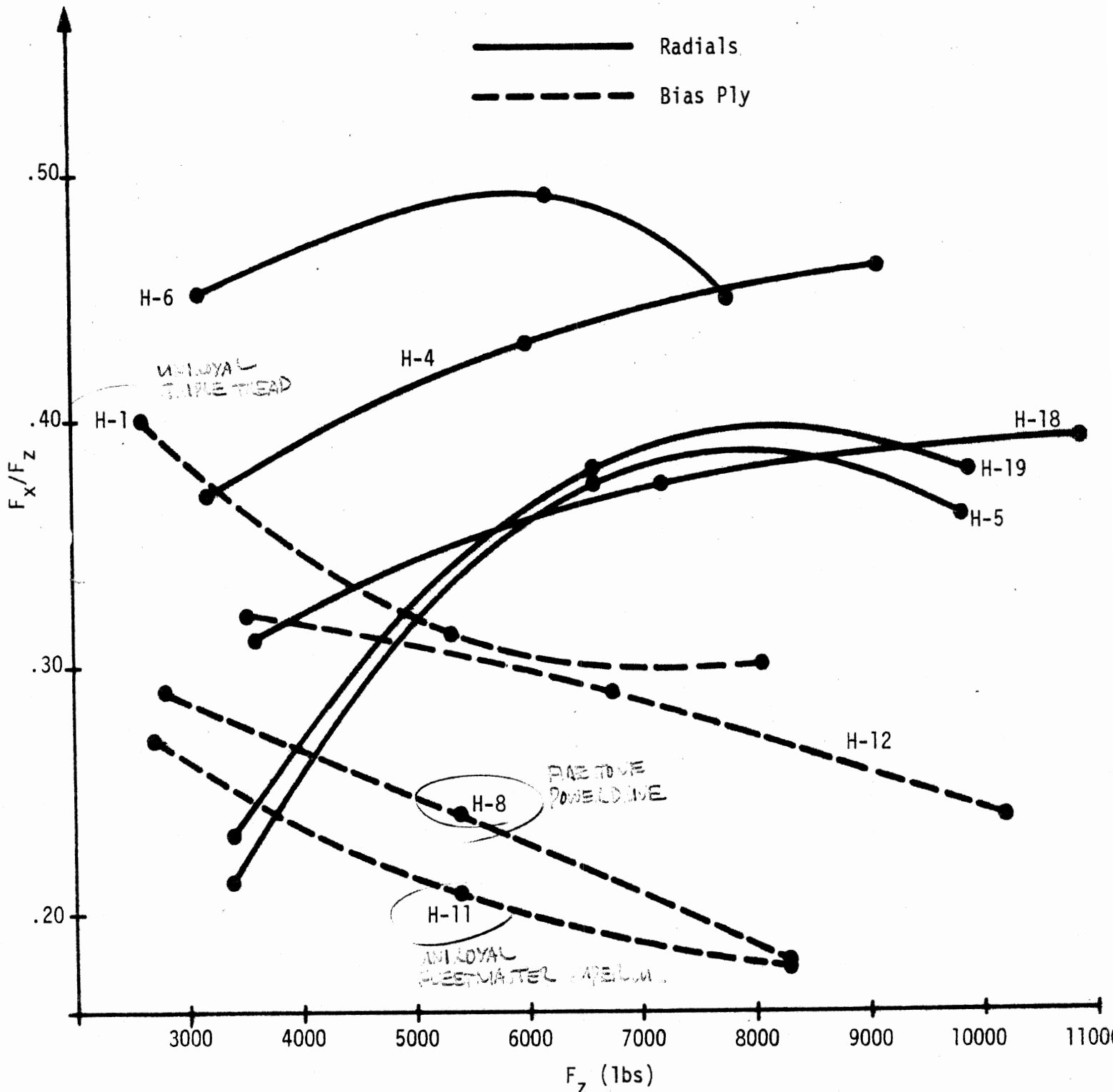


Figure 3.17. The load sensitivity of F_x/F_z values measured at 4% slip for heavy tires of radial and bias-ply construction (tires are identified by code numbers previously listed in Table 3-1).

showing, first, individual bus tires within the bus/truck tire envelope and then individual truck tires within that envelope.

Accordingly, Figures 3.18, 3.19, and 3.20 illustrate peak and slide performances for individual bus tires within the overall envelope for the respective velocities of 20, 40, and 55 mph. In general, the selected bus tires are seen to register low values of peak traction within the indicated envelope. Further, the two radial samples show consistently lower slide traction performance than the single bias-ply sample. Also, the growing spread between peak and slide envelopes as velocity increases is characteristic of commercial tire behavior on dry pavements.

In Figures 3.21, 3.22, and 3.23, the peak and slide performances of individual truck tires are presented for each of the three respective test velocities. These data indicate no clearly defineable distinctions among tire types although the bias-rib tire is a generally superior performer, considering both peak and slide behavior. Also, the radial tires exhibit generally reduced levels of slide traction.

3.2.2 Lateral Traction - Mobile Measurements. A set of eight heavy and eight light truck tires was subjected to a series of lateral traction measurements using the HSRI Mobile Dynamometer. These experiments involved a matrix of load and velocity conditions at each of which a staircase time history of slip angle (α) was applied. All data were gathered on a dry concrete surface and were obtained with each tire inflated to its T & RA-recommended cold inflation pressure. The data was computer processed from the time history format to yield discrete numerics of the tire's normalized side force response, F_y/F_z , at each value of α for which a "dwell" was employed in the staircase time history.

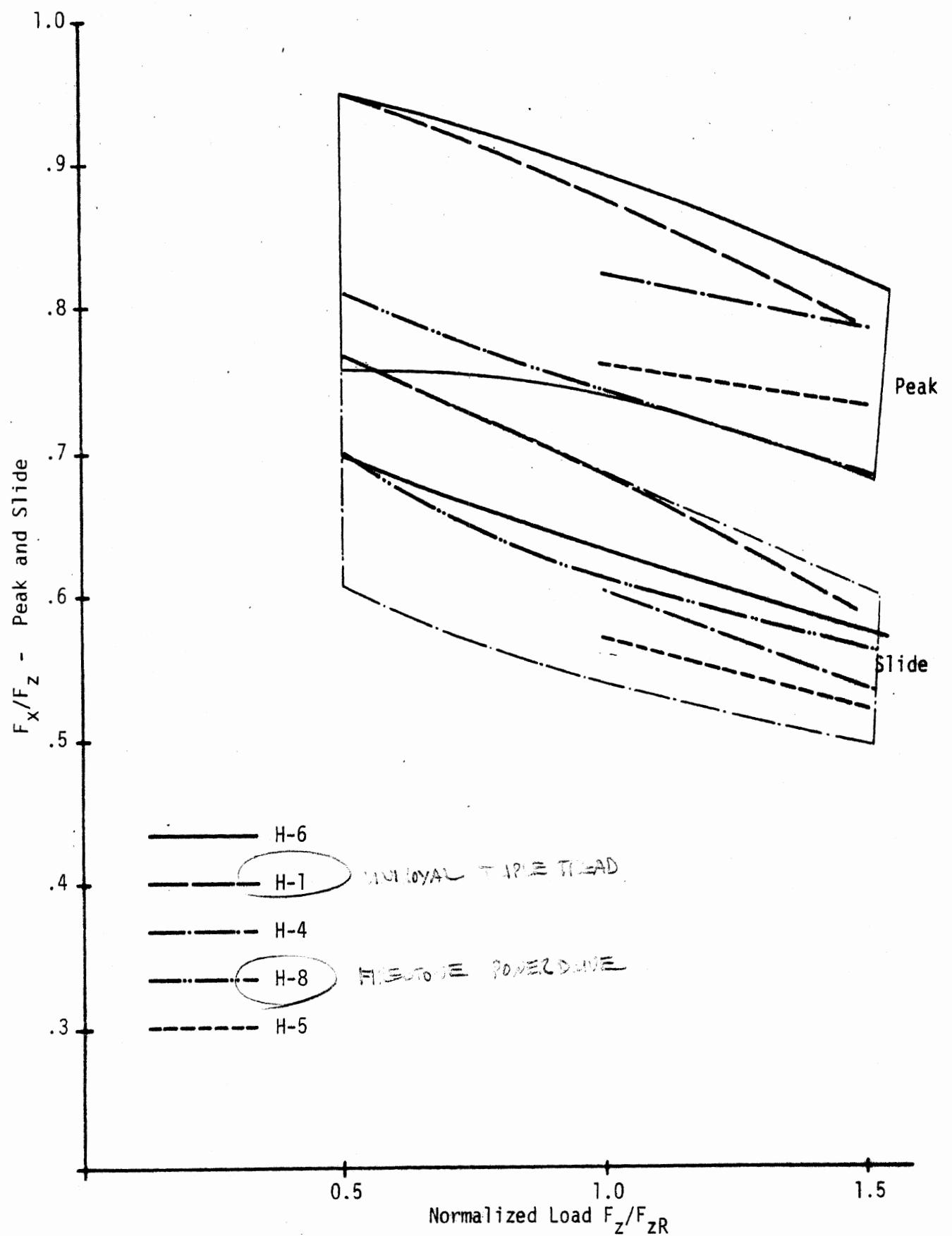


Figure 3.21. "Peak and slide" values of F_x/F_z vs. load for individual truck tires—superimposed within the envelope of data taken on eight truck and bus tires at 20 mph (for code number identifications, see Table 3-1).

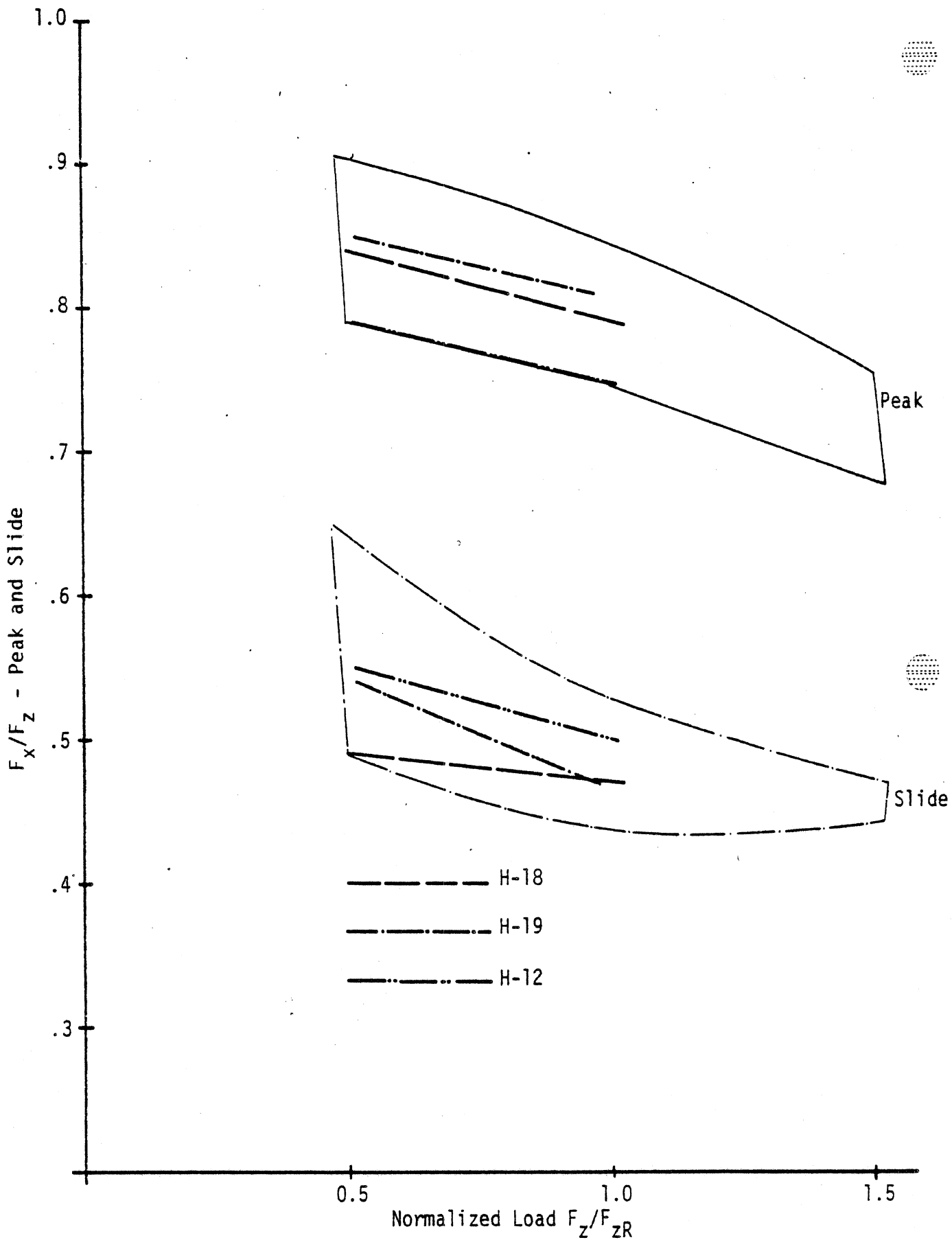


Figure 3.20. "Peak and slide" values of F_x/F_z vs. load for individual bus tires—superimposed within the envelope of data taken on eight truck and bus tires at 55 mph (for code identifications, see Table 3-1).

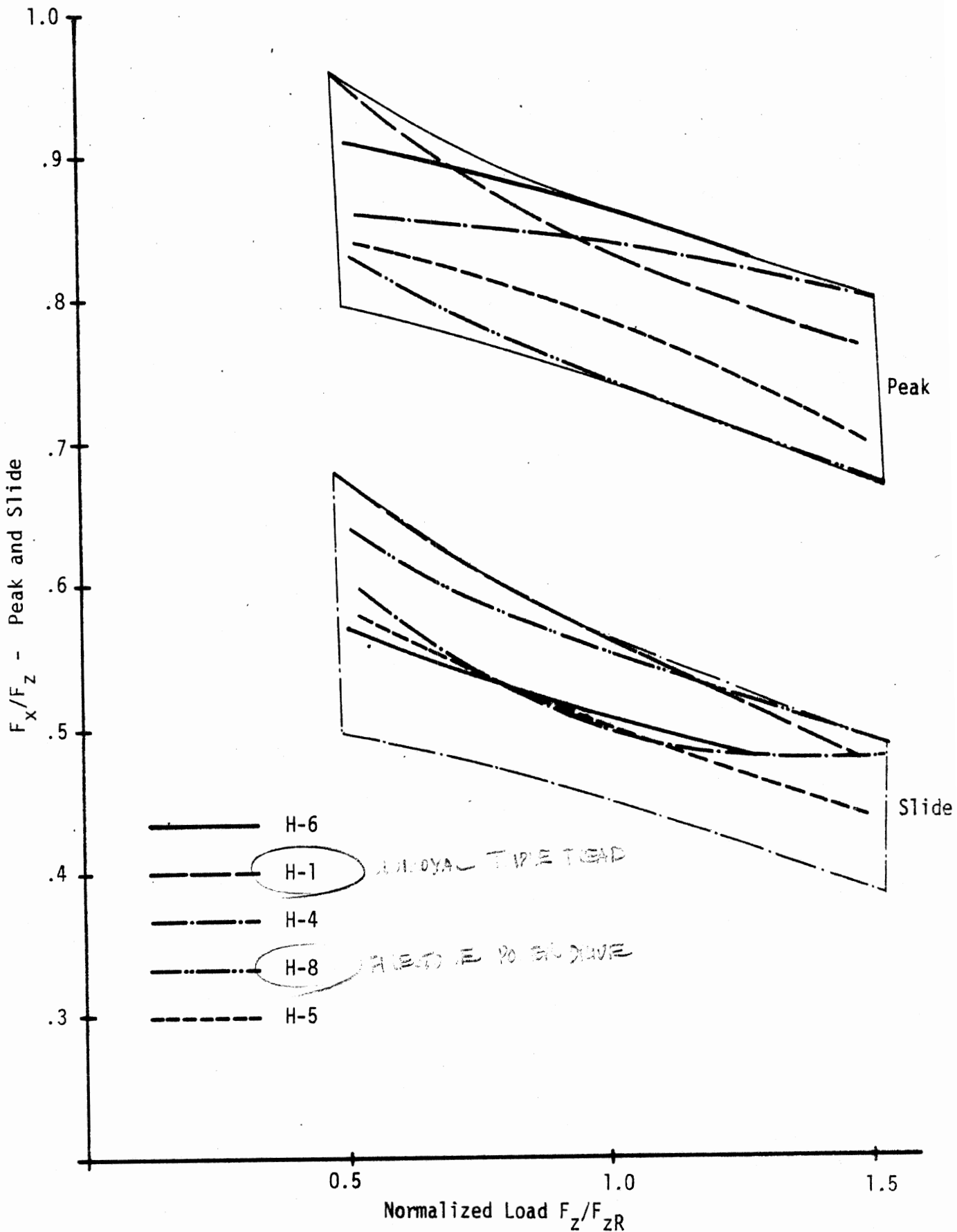


Figure 3.22. "Peak and slide" values of F_x/F_z vs. load for individual truck tires—superimposed within the envelope of data taken on eight truck and bus tires at 40 mph (for code number identifications, see Table 3-1). 55

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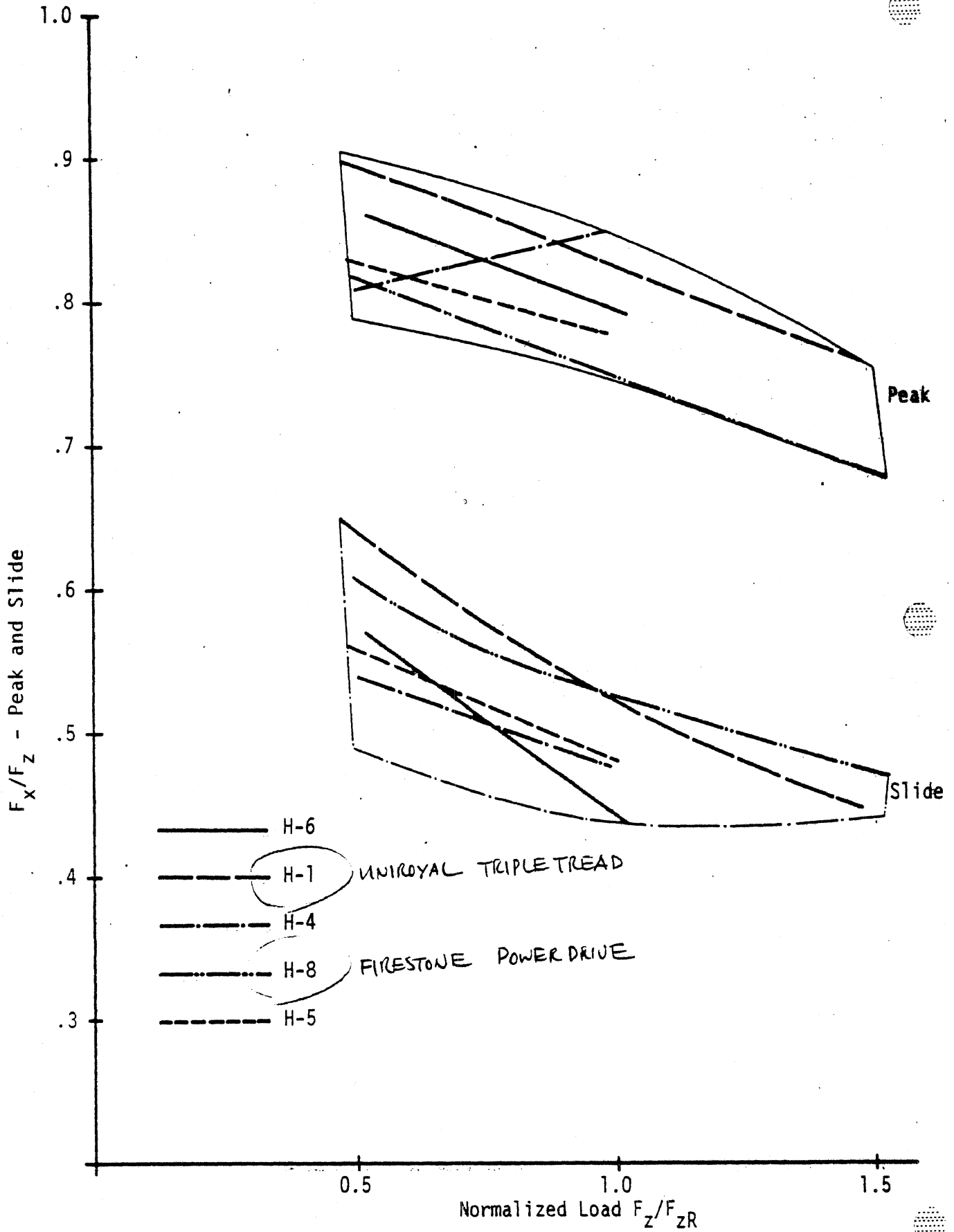


Figure 3.23. "Peak and slide" values of F_x/F_z vs. load for individual truck tires—superimposed within the envelope of data taken on eight truck and bus tires at 55 mph (for code number identifications, see Table 3-1).

As shown in Figures 3.24 and 3.25, the F_y/F_z performance of the heavy truck and bus tire sample at two values of vertical load is summarized. The plots indicate the envelope of responses obtained with all eight tires at the test velocity of 20 mph. The sensitivity of individual tires to changes in vertical load spanning the range from 0.5 to 1.5 times rated load is presented in Appendix C. An example of a typical tire's F_y/F_z performance over the load range is shown in Figure 3.26.

Examination of the envelope summaries and individual load sensitivities reveals a number of findings pertaining to specific tire constructions and to heavy vehicle tires in general. As illustrated in Figures 3.24 and 3.25, we observe that, at the higher load value, the range of behavior of the sample is more condensed and absolute values of normalized lateral traction are reduced over values of slip angle. Clearly, as was established previously with flat-bed measurements, F_y/F_z performance at small slip angles reduces with increasing load as a manifestation of the concave (downward) curvature of the C_α sensitivity to load.

The reduction of F_y/F_z with load at higher slip angles derives from the same sensitivity of the frictional coupling mechanism as influenced the load sensitivity of peak values of longitudinal traction. Indeed, the average reduction in F_y/F_z at $\alpha = 20^\circ$ deriving from the load variation over the 0.5 to 1.5x F_{zR} range is seen to be about -0.12 which compares closely with the average $(F_x/F_z)_{\text{peak}}$ reduction of -0.10. Certain tires, however, depart markedly from the average sensitivity of peak F_y/F_z to load. The indicated radial-type bus tire, for example, falls by 0.25 in its F_y/F_z peak value while the bias-ply bus tire shows virtually zero reduction in F_y/F_z over the 0.5 to 1.5 F_{zR} load range.

As can be seen in the specific tire examples overlaid on Figures 3.24 and 3.25, the occurrence of the saturated shear force, or "peak," F_y/F_z condition is not uniquely tied to any given value of slip angle. Thus, for example, certain radial tires have reached their friction-limited condition in the vicinity of $\alpha = 12^\circ$ at the

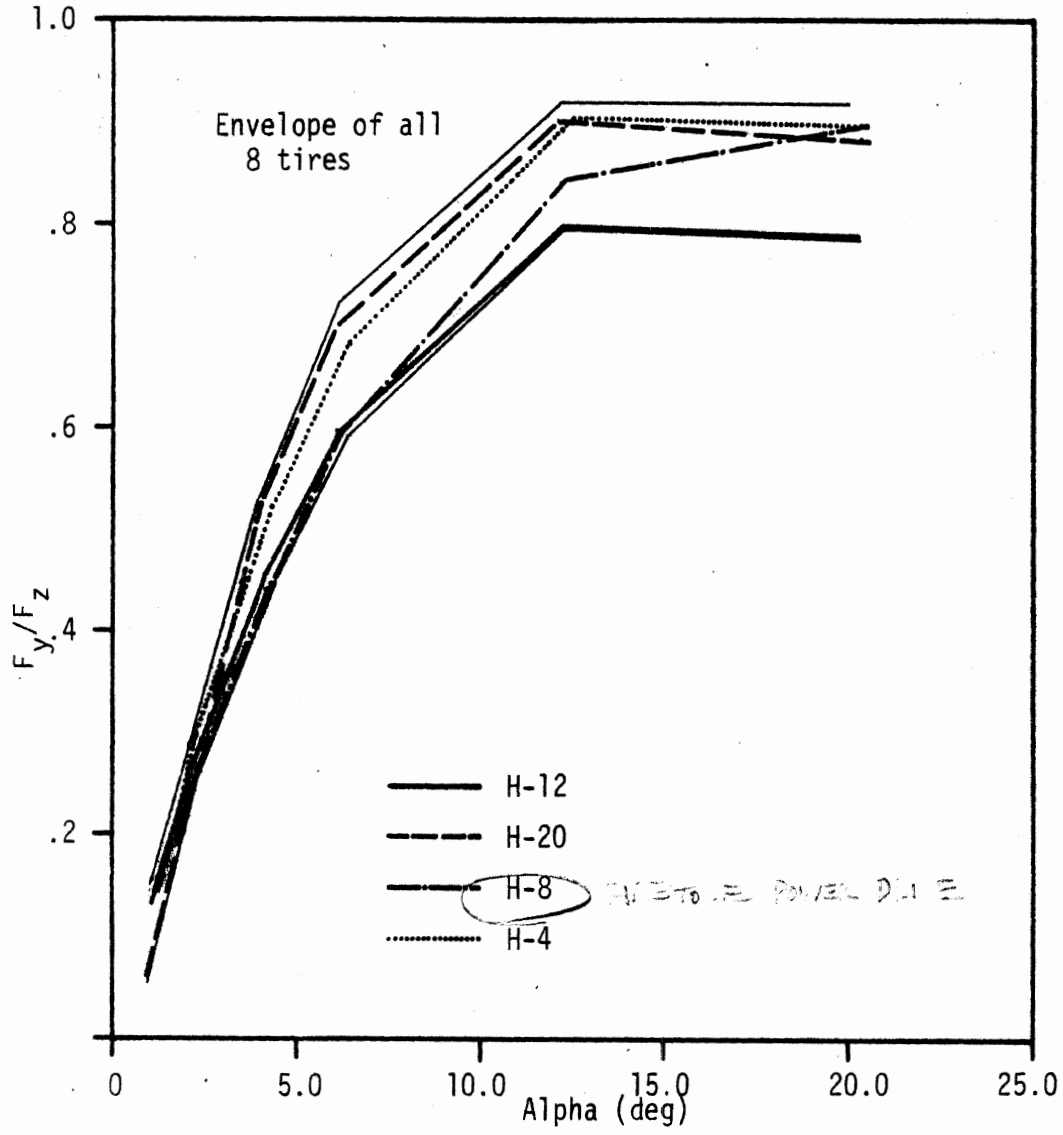


Figure 3.24. Lateral force measurements of heavy truck and bus tires at 20 mph and 0.5 x rated load.

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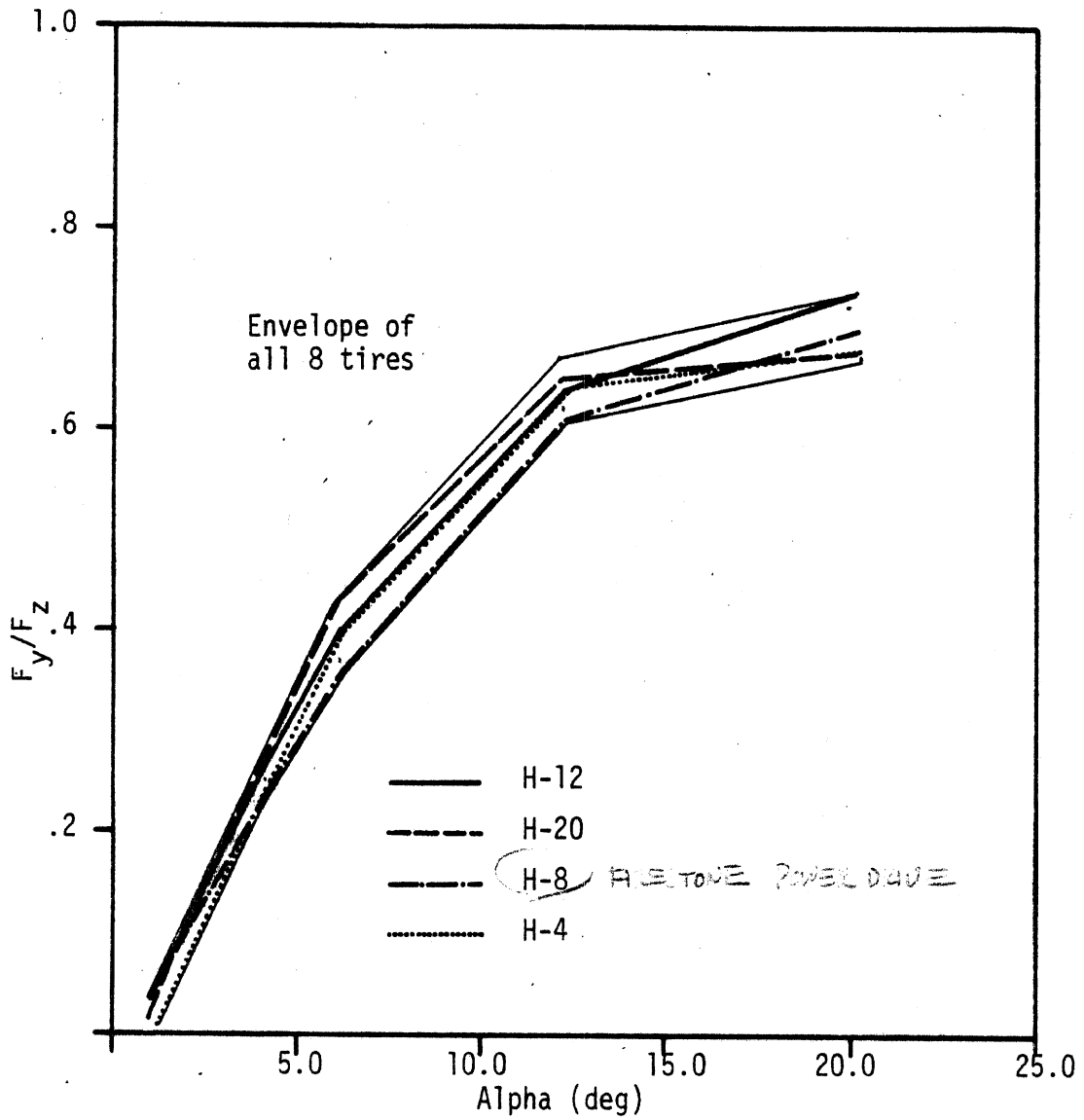
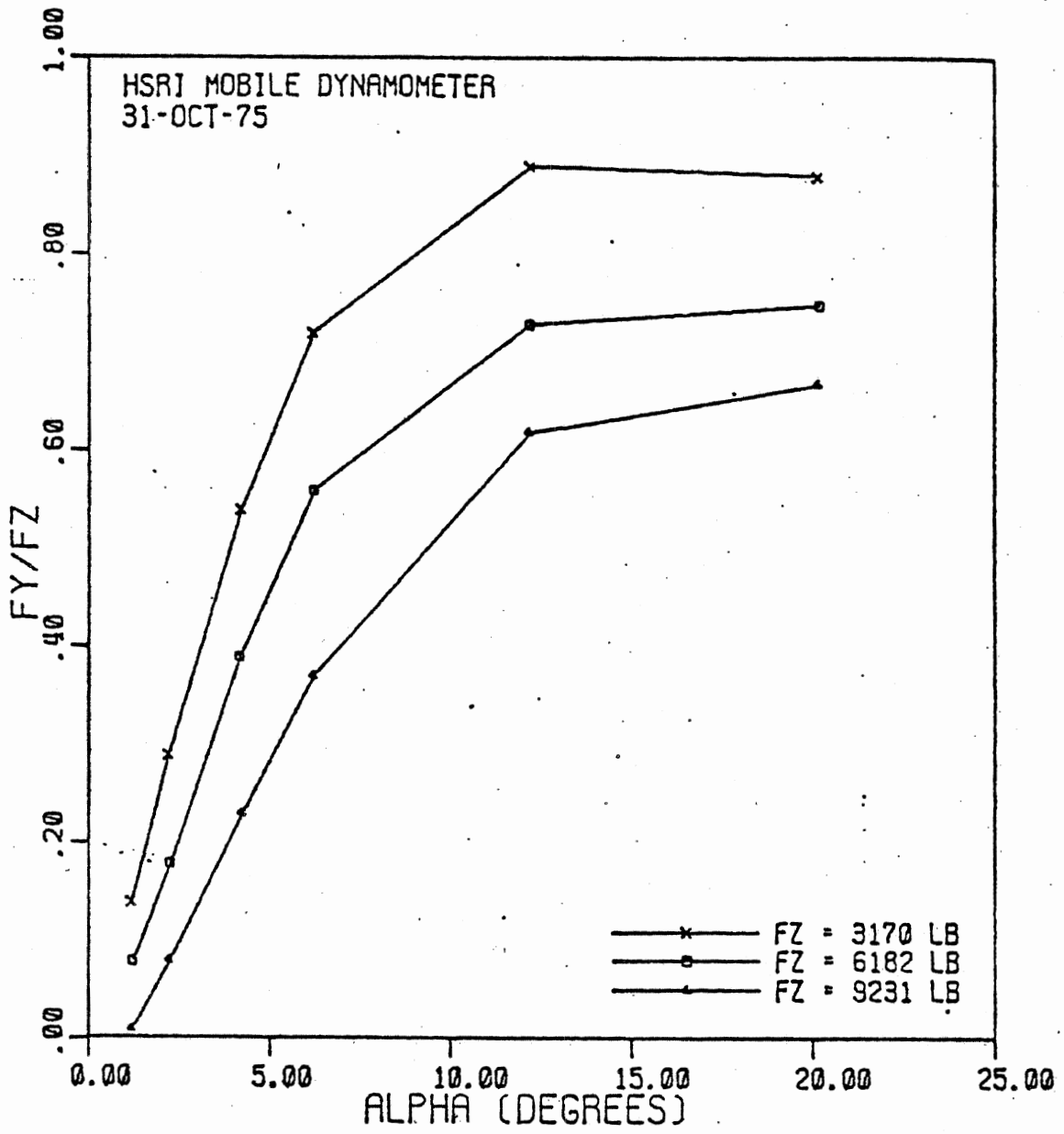


Figure 3.25. Lateral force measurements of heavy truck and bus tires at 20 mph, 1.5 x rated load.



GOODYEAR UNISTEEL R-1 10.00R20/G
VEL = 21 MPH

Figure 3.26. Typical array of (F_y/F_z vs. α) curves covering the load range from $0.5F_{zR}$ to $1.5F_{zR}$.

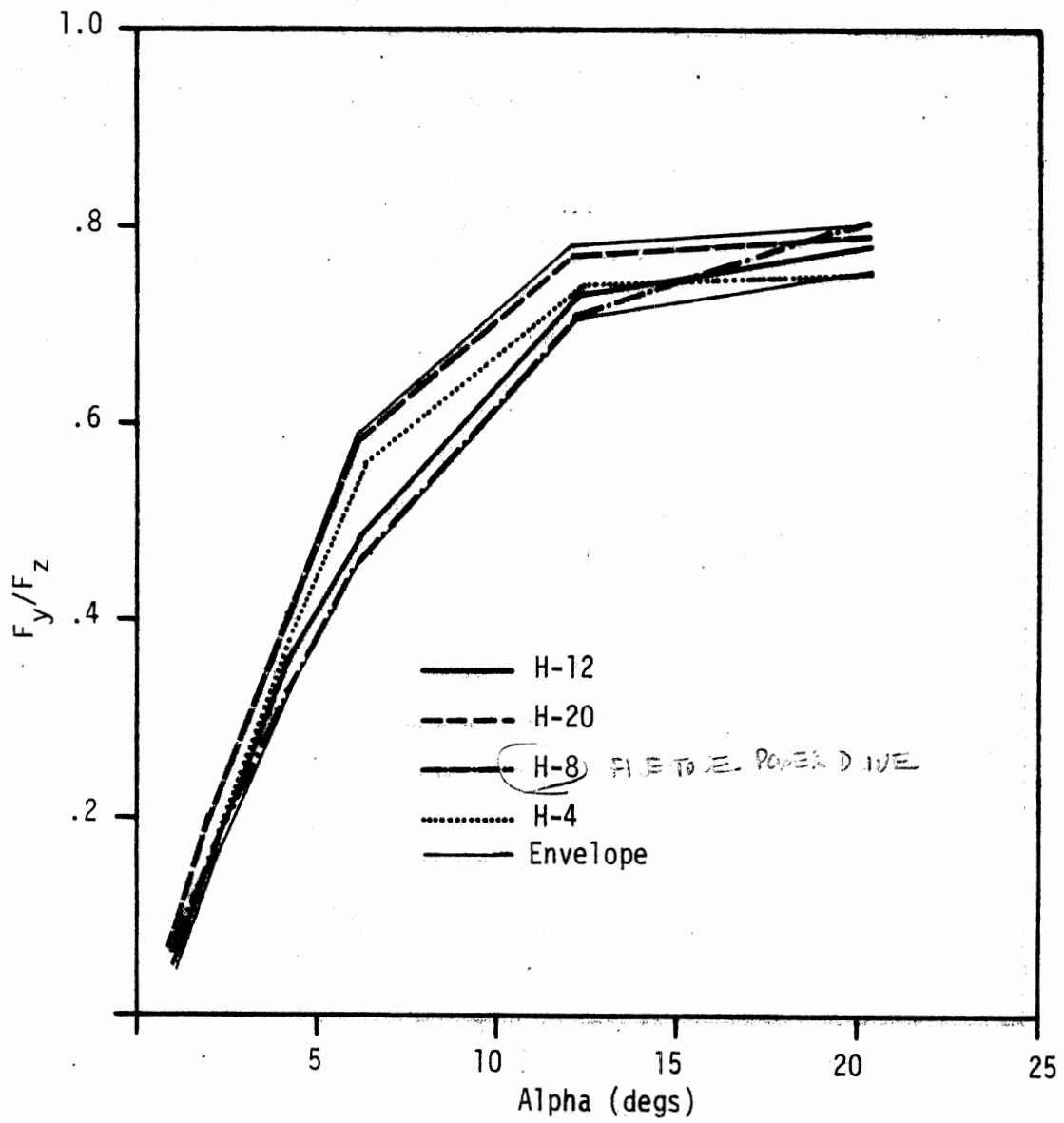


Figure 3.27. Envelope and specific examples of (F_y/F_z vs. α) measurements taken for 8 heavy truck and bus tires at $1.0 F_{zR}$ and 20 mph.

$F_z = 0.5 F_{zR}$ condition while the same tire is not yet saturated at $\alpha = 20^\circ$ under the $1.5 F_{zR}$ load condition. This fundamental property of the side force response of pneumatic tires requires that we pay particular attention to the slip values at which saturation occurs as well as to the limit traction levels themselves.

In this vein, we can draw certain marked distinctions among the limit traction behavior of the various tire types represented. Radial tires in the sample, for example, typically peak in F_y/F_z at lower slip angles than do bias-ply specimens. This performance can be shown to follow directly from the elevated values of cornering stiffness characterizing the radials. Additionally, at the lower vertical load value, the radial samples exhibit a distinct negative slope in their F_y/F_z versus α relationship in the slip angle regime above $\alpha = 12^\circ$. While the various sizes of bias-ply tires exhibit somewhat mixed results, they generally indicate a positive slope in F_y/F_z versus α up to the 20° value of α , at all loads examined. Further, at the $1.5 F_{zR}$ condition, the bias-ply tires exhibit rather steep slopes indicating that actual side force saturation may not occur until α attains values in the proximity of 30° . In line with this observation, the lug-type tire is particularly notable as a construction variety which, by dint of its compliant tread structure and low C_α behavior, tends to saturate at quite high values of α .

Shown in Figures 3.27, 3.28, and 3.29, the envelopes of F_y/F_z versus α responses obtained at rated load and at three values of velocity are presented. The ranges of traction performance indicated at each value velocity are similar to those observed at each of the two extreme values of vertical load. Going from the 20- to 55-mph velocity condition, the only noticeable feature is that very little, if any, net reduction in F_y/F_z peak results from the velocity increment. Indeed, individual plots of each tire's velocity sensitivity, such as typified by the example of Figure 3.30, indicate remarkably low changes in F_y/F_z behavior with test speed. Additionally, the summary plots of Figures 3.27, 3.28, and 3.29 indicate only minor changes in $F_y/F_z/\alpha$ shape and in the rank order of the illustrated example tires over the velocity range.

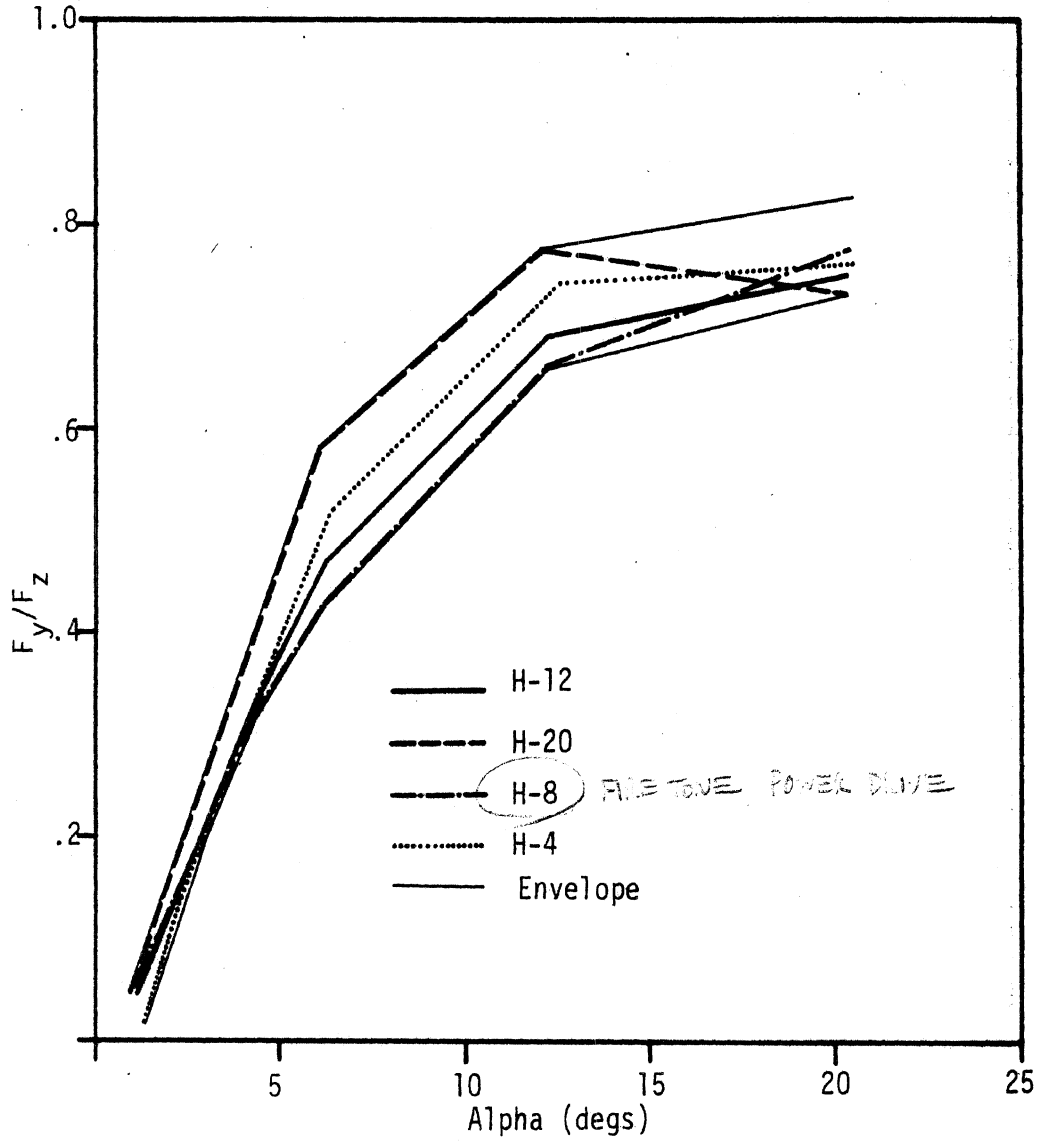


Figure 3.29. Envelope and specific examples of (F_y/F_z vs. α measurements taken for 8 heavy truck and bus tires at $1.0 F_{zR}$ and 55 mph.

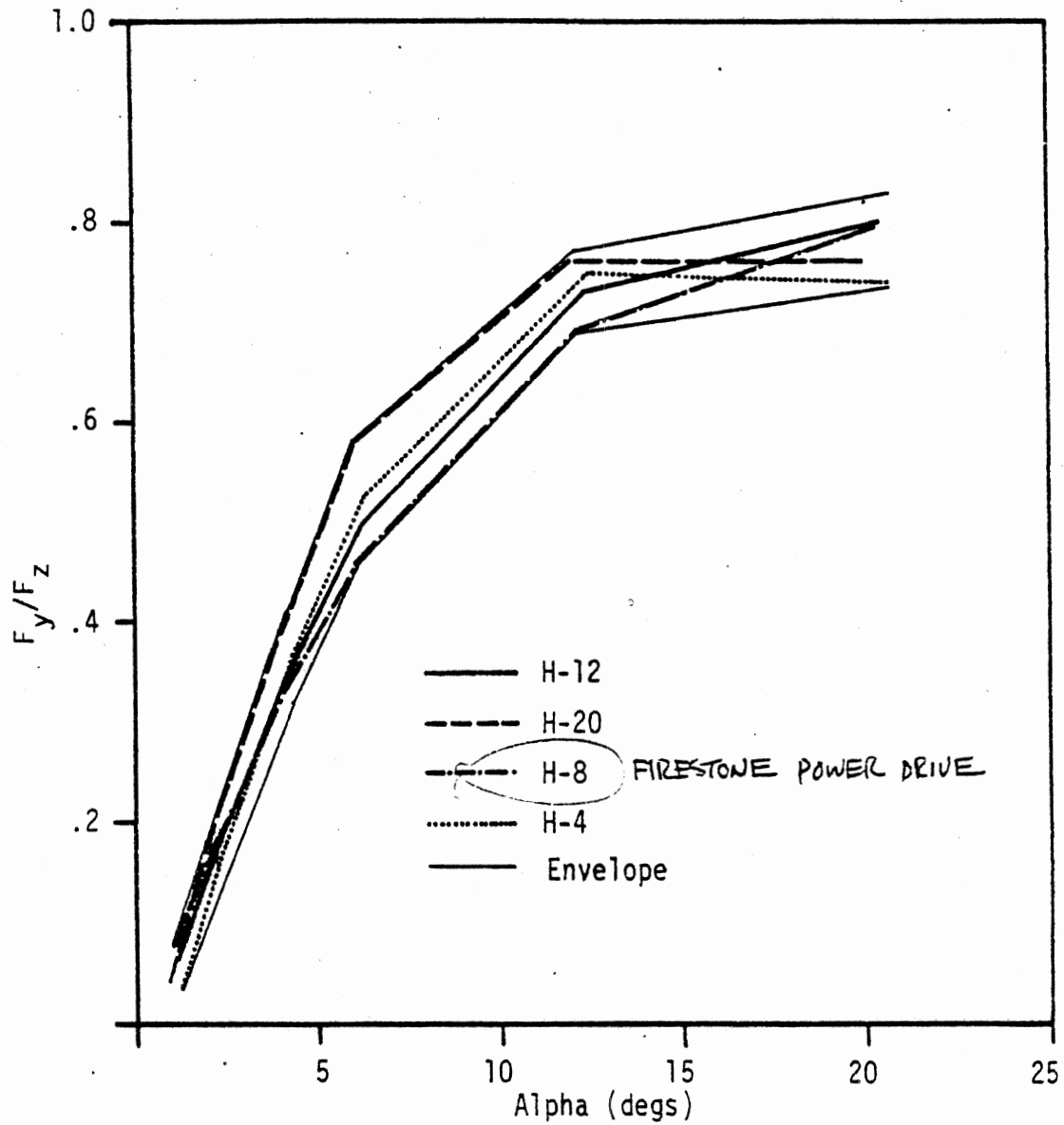


Figure 3.28. Envelope and specific examples of (F_y/F_z vs. α) measurements taken for 8 heavy truck and bus tires at $1.0 F_{zR}$ and 40 mph.

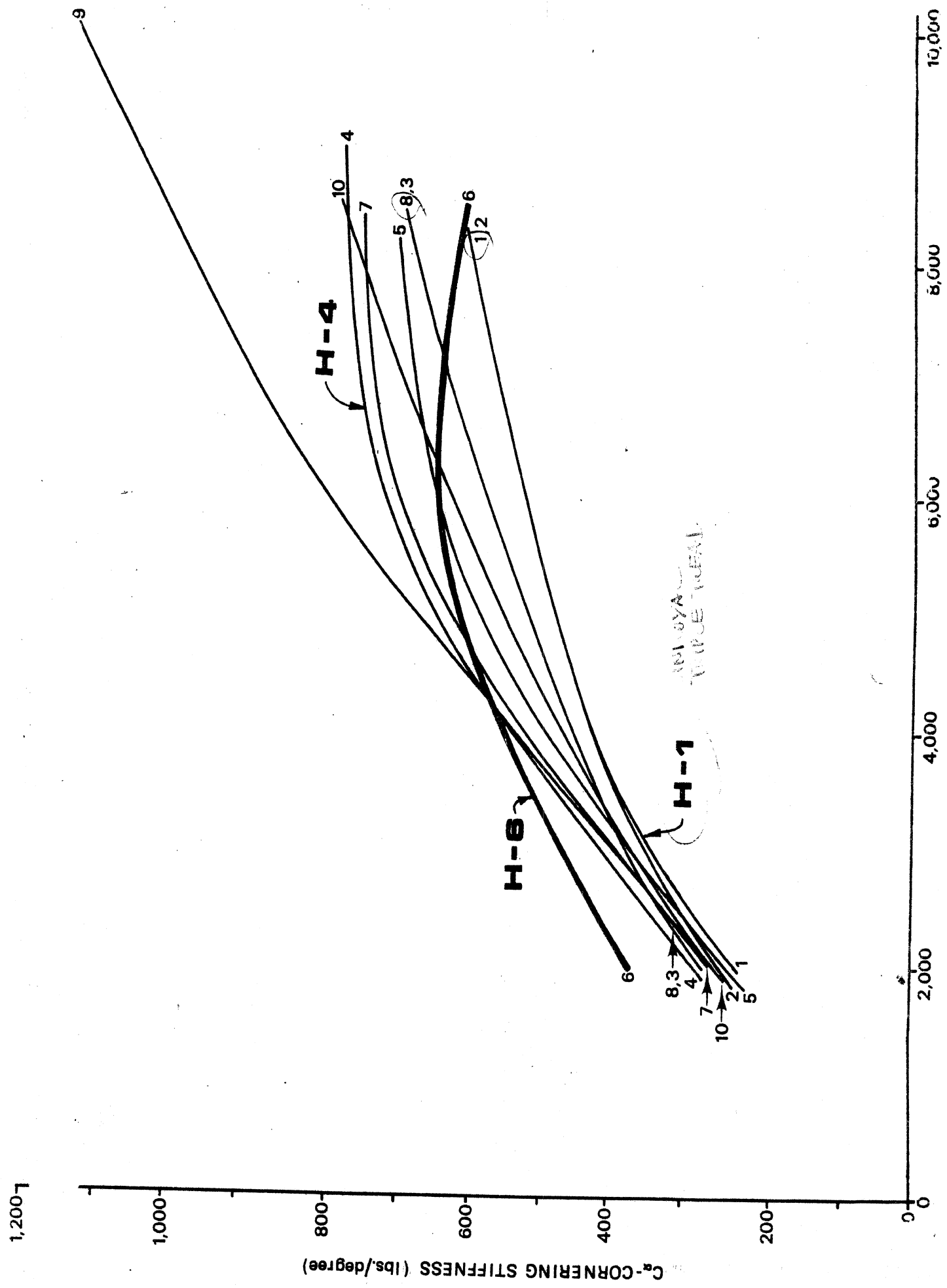


Figure 4.14. Load sensitivity of the cornering stiffness parameter for the three tires, H1, H4, and H6, employed in heavy truck simulations (compared to the remainder of the heavy truck tire sample).

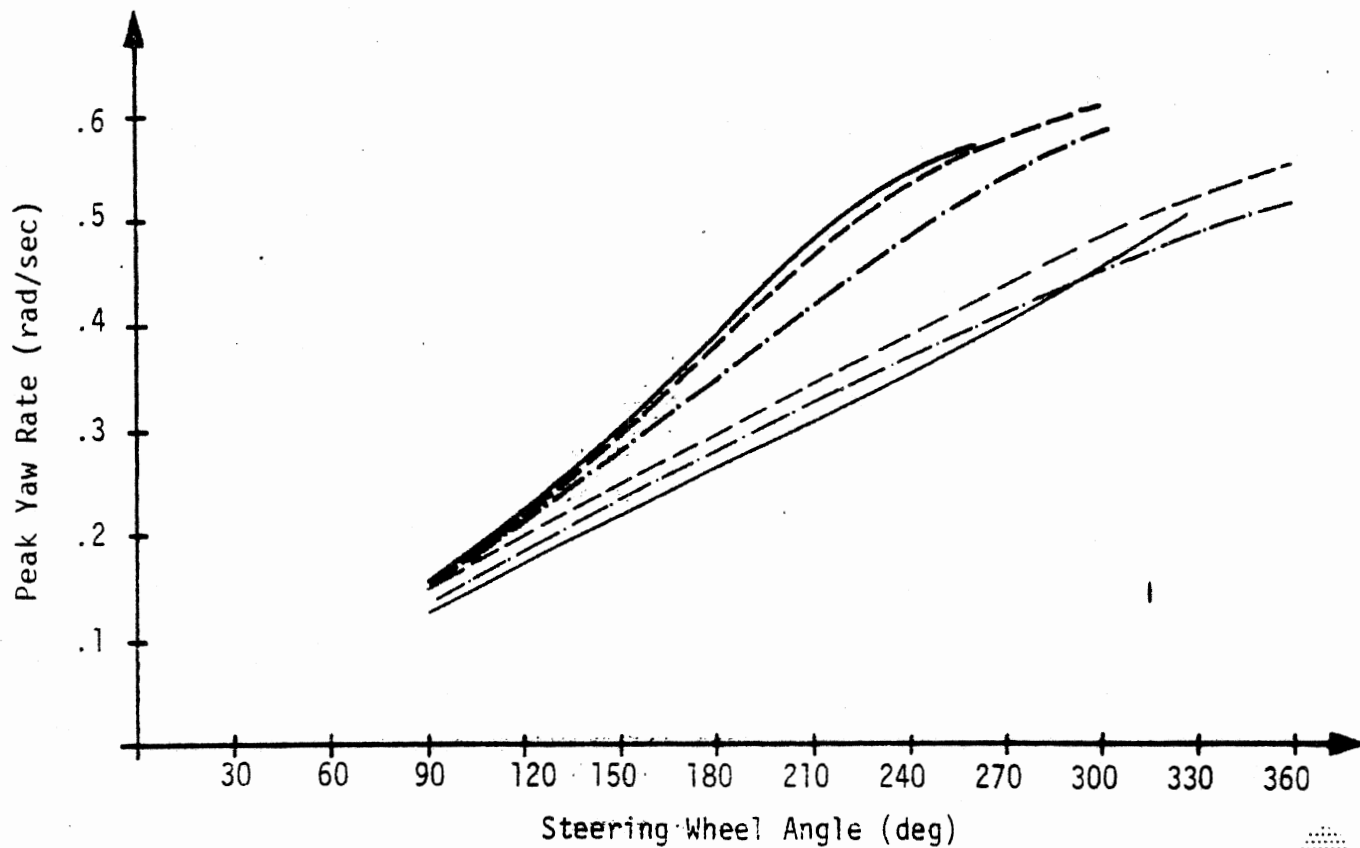
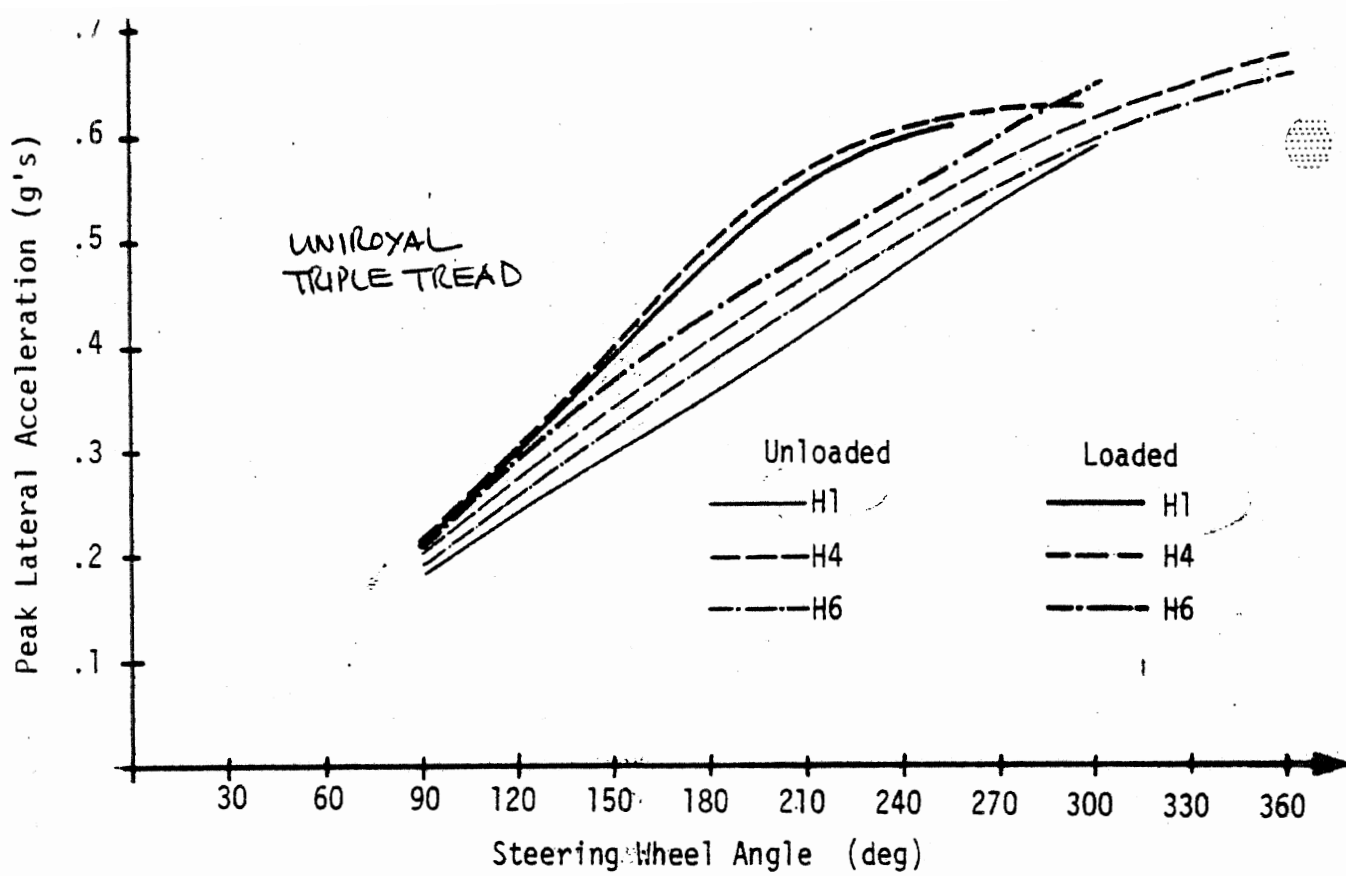
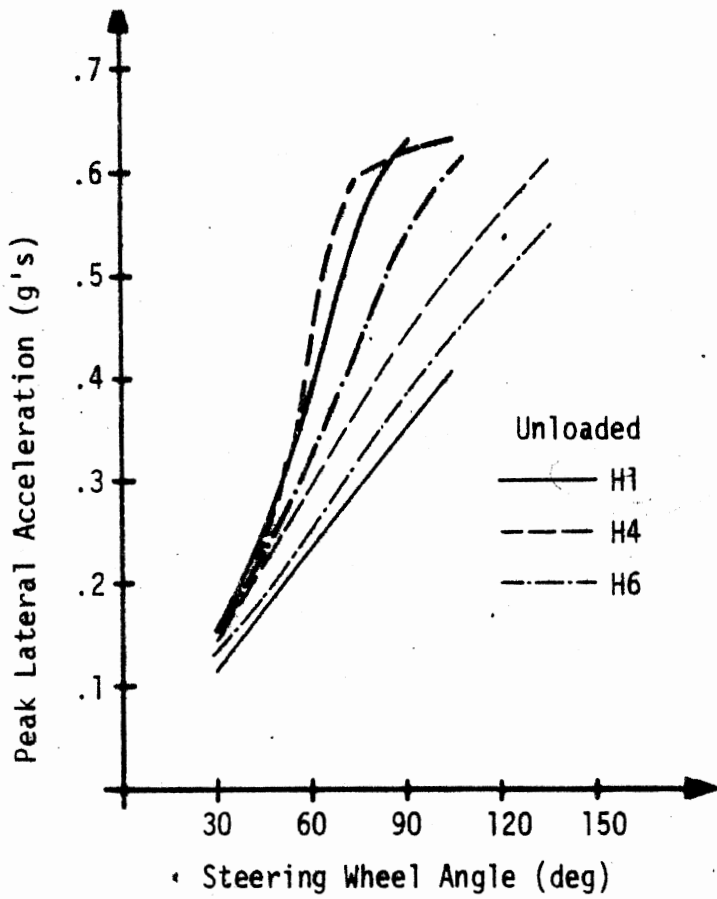


Figure 4.15. Simulated response of the White Road Boss to a sequence of trapezoidal steer inputs at 30 mph (loaded and unloaded).



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TRIPLE-LEAD

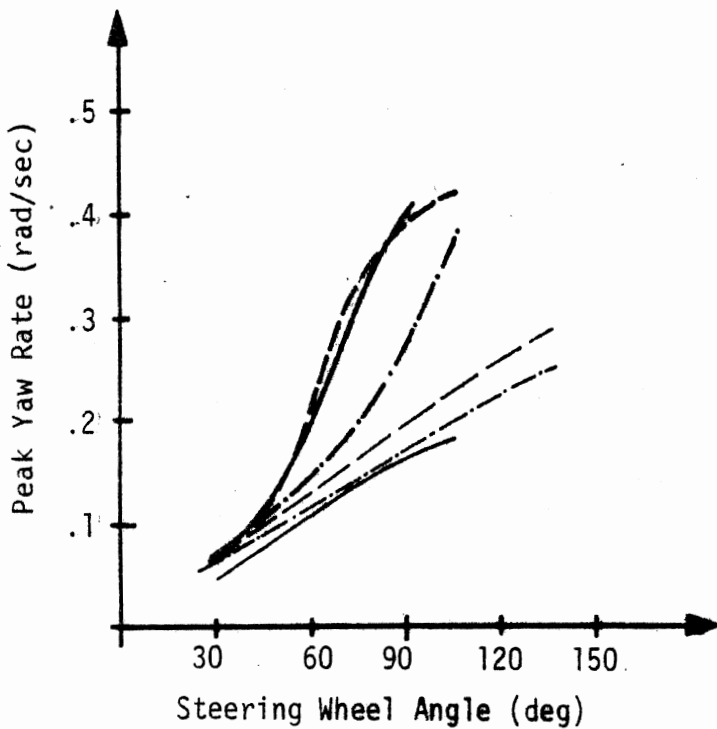


Figure 4.16. Simulated response of the White Road Boss to a sequence of trapezoidal steer inputs at 50 mph (loaded and unloaded).

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Both the 30-mph and 50-mph responses serve to confirm the often-repeated finding, here, that the differences in vehicle response gain deriving from the common installation of alternative tire selections at all wheel positions (no tire mix) are generally small. Thus, for example, we see a rather small distinction between results obtained with the bias-ply tire, H1, and the stiff radial, H4. A somewhat more significant departure derives, however, in the case of the anomalous characteristics (in terms of C_{α}/F_z , at least) afforded by the radial sample, H6.

4.2.5 Simulation Results - Heavy Bus. The GMC intercity coach was simulated on the APL hybrid computer with three sets of tires and in both the loaded and empty conditions. An expected, but nonetheless, important feature of the results of these calculations is that the unloaded vehicle exhibits decidedly less understeer than does the loaded vehicle. This result is explained by noting that the empty vehicle has a rearward biased load center, with its engine cantilevered well aft of the rear axle. As the bus becomes loaded, with its passenger and cargo areas located forward of the empty vehicle's mass center, the total vehicle c.g. is translated forward considerably. Since both the bias- and radial-ply bus tires exhibited a significant curvature of their C_{α}/F_z relationship, the forward translation of the mass center is inadequately compensated by the upward increment in front tire cornering stiffness. Accordingly, the expression

$$\left(\frac{a}{C_{\alpha_2}} - \frac{b}{C_{\alpha_1}} \right)$$

becomes increasingly positive (more understeer) as the bus is loaded.

In Figures 4.17 and 4.18, the trapezoidal steer response of the bus is shown for simulations at 30 and 50 mph and for the loaded and unloaded vehicle configurations. Differences in

UNIROY FLEETMASTER TRIPLE TREAD 10.00X20 F

LATERAL FORCE (LB.) AT INDICATED INFLATION PRESSURE (PSI.), LOAD (LB.), AND STEER ANGLE (DEG.)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|--------|--------|-------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| 100.0 | 2000.0 | -39.6 | -270.3 | 223.4 | -472.7 | 411.7 | -770.9 | 759.6 | -1165.6 | 1162.0 | -1340.4 | 1374.4 | -1500.4 | 1570.3 |
| 100.0 | 4000.0 | -54.4 | -477.3 | 364.0 | -810.2 | 722.4 | -1301.1 | 1331.6 | -2101.0 | 2170.0 | -2593.7 | 2654.3 | -2966.0 | 2965.3 |
| 100.0 | 6000.0 | -89.0 | -596.5 | 455.0 | -1069.5 | 935.0 | -1840.5 | 1736.5 | -2979.0 | 2956.0 | -3623.1 | 3664.0 | -4175.3 | 4160.6 |
| 100.0 | 8000.0 | -104.9 | -689.3 | 506.6 | -1215.1 | 1074.1 | -2125.7 | 1987.5 | -3567.4 | 3531.0 | -4469.6 | 4402.5 | -5173.2 | 5163.0 |
| 75.0 | 4000.0 | -81.0 | -501.6 | 370.6 | -866.3 | 750.2 | -1404.3 | 1447.5 | -2305.9 | 2296.0 | | | -3034.6 | 3044.5 |
| 75.0 | 6000.0 | 79.3 | 587.3 | 437.7 | -1025.2 | 907.9 | -1816.1 | 1726.1 | -2955.5 | 2905.0 | | | -4198.4 | 4141.4 |
| 50.0 | 4000.0 | -61.0 | -487.0 | 363.5 | -844.1 | 745.4 | -1464.9 | 1413.2 | -2280.1 | 2247.0 | | | -3088.3 | 3043.5 |
| 50.0 | 6000.0 | -64.4 | -472.3 | 362.2 | -852.4 | 742.1 | -1532.3 | 1474.7 | -2646.6 | 2500.5 | | | | 3938.9 |

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ALIGNING MOMENT (FT.-LB.) AT INDICATED INFLATION PRESSURE (PSI), LOAD (LB.), AND STEER ANGLE (DEG.)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| 100.0 | 2000.0 | 0.2 | 20.7 | -21.6 | 34.0 | -37.5 | 37.3 | -49.4 | 28.6 | -36.0 | 12.5 | -23.9 | 7.6 | -15.5 |
| 100.0 | 4000.0 | 7.0 | 63.7 | -50.2 | 102.1 | -94.4 | 131.9 | -147.0 | 112.0 | -126.0 | 70.0 | -97.3 | 65.0 | -60.2 |
| 100.0 | 6000.0 | 11.0 | 106.7 | -89.2 | 174.9 | -167.5 | 250.2 | -251.0 | 251.9 | -251.7 | 161.2 | -210.0 | 152.4 | -154.0 |
| 100.0 | 8000.0 | 16.9 | 145.0 | -118.5 | 247.0 | -226.7 | 367.3 | -367.4 | 404.9 | -411.1 | 323.0 | -365.2 | 268.2 | -250.0 |
| 75.0 | 4000.0 | 0.5 | 79.5 | -70.5 | 132.9 | -124.0 | 184.5 | -195.1 | 170.0 | -102.7 | | | 71.4 | -70.0 |
| 75.0 | 6000.0 | 67.5 | 128.5 | -102.2 | 211.5 | -204.0 | 323.5 | -327.9 | 339.3 | -352.3 | | | 172.6 | -186.3 |
| 50.0 | 4000.0 | 13.0 | 101.0 | -81.5 | 160.3 | -155.6 | 232.7 | -237.1 | 211.0 | -227.5 | | | 89.5 | -93.1 |
| 50.0 | 6000.0 | 14.0 | 150.9 | -122.9 | 267.2 | -246.0 | 404.0 | -407.4 | 441.9 | -453.4 | | | | -222.7 |

LATERAL FORCE (LB.) AT INDICATED INFLATION PRESSURE (PSI.), LOAD (LB.), AND STEER ANGLE (DEG.)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|-------|--------|-------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| 100.0 | 2000.0 | -30.4 | -326.6 | 260.0 | -554.4 | 506.0 | -971.5 | 931.6 | -1492.4 | 1450.3 | -1796.9 | 1732.9 | -1042.0 | 1044.1 |
| 100.0 | 4000.0 | -66.3 | -526.6 | 400.7 | -917.0 | 834.2 | -1612.7 | 1505.0 | -2550.7 | 2497.3 | -3000.0 | 2976.9 | -3160.6 | 3105.4 |
| 100.0 | 6000.0 | -65.7 | -656.6 | 505.2 | -1109.5 | 1035.0 | -2007.0 | 1910.4 | -3375.0 | 3313.6 | -4136.0 | 3909.1 | -4309.7 | 4366.7 |
| 100.0 | 8000.0 | -97.4 | -755.2 | 576.9 | -1359.1 | 1193.2 | -2401.6 | 2240.9 | -3975.3 | 3925.4 | -4990.6 | 4831.4 | -5260.6 | 5341.8 |
| 75.0 | 4000.0 | -32.3 | -531.4 | 401.5 | -942.9 | 815.5 | -1649.0 | 1563.7 | -2653.6 | 2597.9 | | | -3384.4 | 3297.9 |
| 75.0 | 6000.0 | -62.3 | -636.7 | 476.8 | -1144.9 | 996.2 | -2015.6 | 1904.7 | -3375.2 | 3298.6 | | | -4520.7 | 4436.5 |
| 50.0 | 4000.0 | -45.2 | -523.6 | 394.6 | -942.8 | 814.0 | -1665.6 | 1554.2 | -2651.6 | 2624.0 | | | -3493.9 | 3310.2 |
| 50.0 | 6000.0 | -93.9 | -601.6 | 434.3 | -1055.6 | 921.7 | -1912.1 | 1790.1 | -3222.5 | 3179.3 | | | -4483.6 | 4306.0 |

ALIGNING MOMENT (FT.-LB.) AT INDICATED INFLATION PRESSURE (PSI), LOAD (LB.), AND STEER ANGLE (DEG.)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| 100.0 | 2000.0 | -0.1 | 25.2 | -20.3 | 40.0 | -44.6 | 54.3 | -63.1 | 59.2 | -56.6 | 30.4 | -35.1 | 5.6 | -12.5 |
| 100.0 | 4000.0 | 2.1 | 64.6 | -58.5 | 106.9 | -105.0 | 156.5 | -160.6 | 169.4 | -162.3 | 104.3 | -98.1 | 36.9 | -38.1 |
| 100.0 | 6000.0 | 0.2 | 103.1 | -93.6 | 179.7 | -168.5 | 268.4 | -267.2 | 304.0 | -295.6 | 216.3 | -200.1 | 94.9 | -85.7 |
| 100.0 | 8000.0 | 13.5 | 143.1 | -126.0 | 245.7 | -237.0 | 307.4 | -300.4 | 457.4 | -452.7 | 339.0 | -324.7 | 160.0 | -150.2 |
| 75.0 | 4000.0 | -3.1 | 82.6 | -70.0 | 123.1 | -125.9 | 170.0 | -191.1 | 182.1 | -182.5 | | | 56.6 | -34.2 |
| 75.0 | 6000.0 | 11.1 | 114.4 | -106.2 | 204.4 | -199.1 | 306.1 | -319.1 | 325.4 | -342.3 | | | 106.2 | -93.1 |
| 50.0 | 4000.0 | 7.3 | 86.1 | -77.6 | 146.3 | -139.4 | 210.0 | -223.0 | 209.0 | -212.6 | | | 52.7 | -24.4 |
| 50.0 | 6000.0 | 14.9 | 144.9 | -113.0 | 239.3 | -231.5 | 369.2 | -379.9 | 393.0 | -393.3 | | | 129.0 | -105.6 |

UNIROYAL FLIETMASTIR SUPER LUG 10 x 20 12 PLY

LATERAL FORCE (LB.) AT INDICATED INFLATION PRESSURE (PSI), LOAD (LB), AND STEER ANGLE (DEG)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|-----|------|-----|-------|------|-------|------|-------|------|-------|------|-------|------|
| 100.0 | 2000.0 | -33 | -276 | 222 | -508 | 453 | -859 | 810 | -1408 | 1276 | -1699 | 1666 | -1886 | 1796 |
| 100.0 | 4000.0 | -62 | -457 | 359 | -829 | 727 | -1431 | 1360 | -2387 | 2266 | -2974 | 2944 | -3345 | 3247 |
| 100.0 | 6000.0 | -62 | -573 | 443 | -1033 | 921 | -1840 | 1725 | -3150 | 3015 | -3968 | 3951 | -4612 | 4446 |
| 100.0 | 8000.0 | -67 | -637 | 489 | -1181 | 1032 | -2122 | 1970 | -3697 | 3543 | -4819 | 4730 | -5595 | 5430 |
| 75.0 | 4000.0 | -61 | -465 | 363 | -873 | 745 | -1526 | 1453 | -2526 | 2386 | | | -3422 | 3274 |
| 75.0 | 6000.0 | -44 | -557 | 426 | -1015 | 882 | -1635 | 1739 | -3157 | 3039 | | | -4580 | 4438 |
| 50.0 | 4000.0 | -39 | -461 | 348 | -843 | 731 | -1524 | 1422 | -2500 | 2395 | | | -3353 | 3259 |
| 50.0 | 6000.0 | -25 | -447 | 356 | -883 | 767 | -1850 | 1526 | -2868 | 2815 | | | -4340 | 4229 |

ALIGNING MOMENT (FT-LB) AT INDICATED INFLATION PRESSURE (PSI), LOAD (LB), AND STEER ANGLE (DEG)

| PSI | LOAD | 0 | +1 | -1 | +2 | -2 | +4 | -4 | +8 | -8 | +12 | -12 | +16 | -16 |
|-------|--------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
| 100.0 | 2000.0 | - .9 | 24 | -27 | 38 | -41 | 45 | -52 | 56 | -43 | 35 | -44 | 12 | -20 |
| 100.0 | 4000.0 | 4.5 | 59 | -58 | 101 | -103 | 139 | -147 | 170 | -154 | 126 | -129 | 73 | -62 |
| 100.0 | 6000.0 | 12.6 | 102 | -85 | 171 | -159 | 252 | -245 | 320 | -293 | 240 | -247 | 152 | -141 |
| 100.0 | 8000.0 | 16.8 | 142 | -113 | 241 | -222 | 368 | -354 | 488 | -444 | 406 | -404 | 260 | -254 |
| 75.0 | 4000.0 | 8.8 | 76 | -64 | 130 | -118 | 236 | -183 | 205 | -182 | | | 81 | -56 |
| 75.0 | 6000.0 | 16 | 122 | -94 | 215 | -190 | 393 | -309 | 394 | -357 | | | 191 | -151 |
| 50.0 | 4000.0 | 9 | 92 | -73 | 154 | -140 | 190 | -221 | 243 | -214 | | | 76 | -51 |
| 50.0 | 6000.0 | 13 | 139 | -105 | 248 | -214 | 328 | -363 | 471 | -413 | | | 218 | -172 |

| TIRF Tire No. | Speed mph | Slip Angle | Vertical Load, lb | | | Run No. | Remarks | |
|---------------|-----------|------------|-------------------|------|------|---------|----------------------------------------------------------|---------------------------|
| | | | 2715 | 5430 | 7000 | | | |
| 7 | 20 | F | x | - | - | 11 | Original HSRI Schedule Additional TIRF Schedule | |
| | 40 | | - | - | x | 12 | | |
| | 55 | | x | x | x | 13 | | |
| | 40 | | x | x | - | 14 | | |
| | 20 | | - | x | x | 15 | | |
| 8 | 20 | | - | x | - | 16 | Original HSRI Schedule Additional TIRF Schedule | |
| | 40 | | x | - | - | 17 | | |
| | 55 | | x | x | x | 18 | | |
| | 40 | | - | x | x | 19 | | |
| | 20 | | x | - | x | 20 | | |
| 9 | 20 | | F | - | - | x | 21 | Original HSRI Schedule |
| | 40 | | | - | x | - | 22 | |
| | 55 | | | x | - | - | 23 | |

Table C-3. TIRF TEST SCHEDULE - CORNERING TESTS

Uniroyal 10.00-20F, Rim 8 in

Inflation Pressure 100 psi

F = 0°, 1°, 2°, 4°, 8°, 12°

| TIRF Tire No. | Speed mph | Slip Angle | Vertical Load, lb | | | Run No. | Remarks |
|---------------|-----------|------------|-------------------|-------|----|---------|---------------------------------------------------|
| | | | 2715 | 4500* | -- | | |
| 11 | 55 | E | - | x | | 24 | Original HSRI Schedule (Incomplete) Repeat Repeat |
| | 20 | 0 | x | x | | 24 | |
| 10 | 40 | E | - | x | | 25 | |
| | 40 | 0 | x | x | | 25 | |
| 12 | 20 | E | - | x | | 26 | |
| | 55 | > 0 | x | x | | 26 | |
| | 20 | E | - | x | | 26 | |
| | 55 | 0 | x | - | | 26 | |
| | 55 | 0 | x | - | | 27 | |

*Instead of 5430 lb, as scheduled by HSRI

Table C-4. TIRF TEST SCHEDULE - BRAKING/CORNERING TESTS

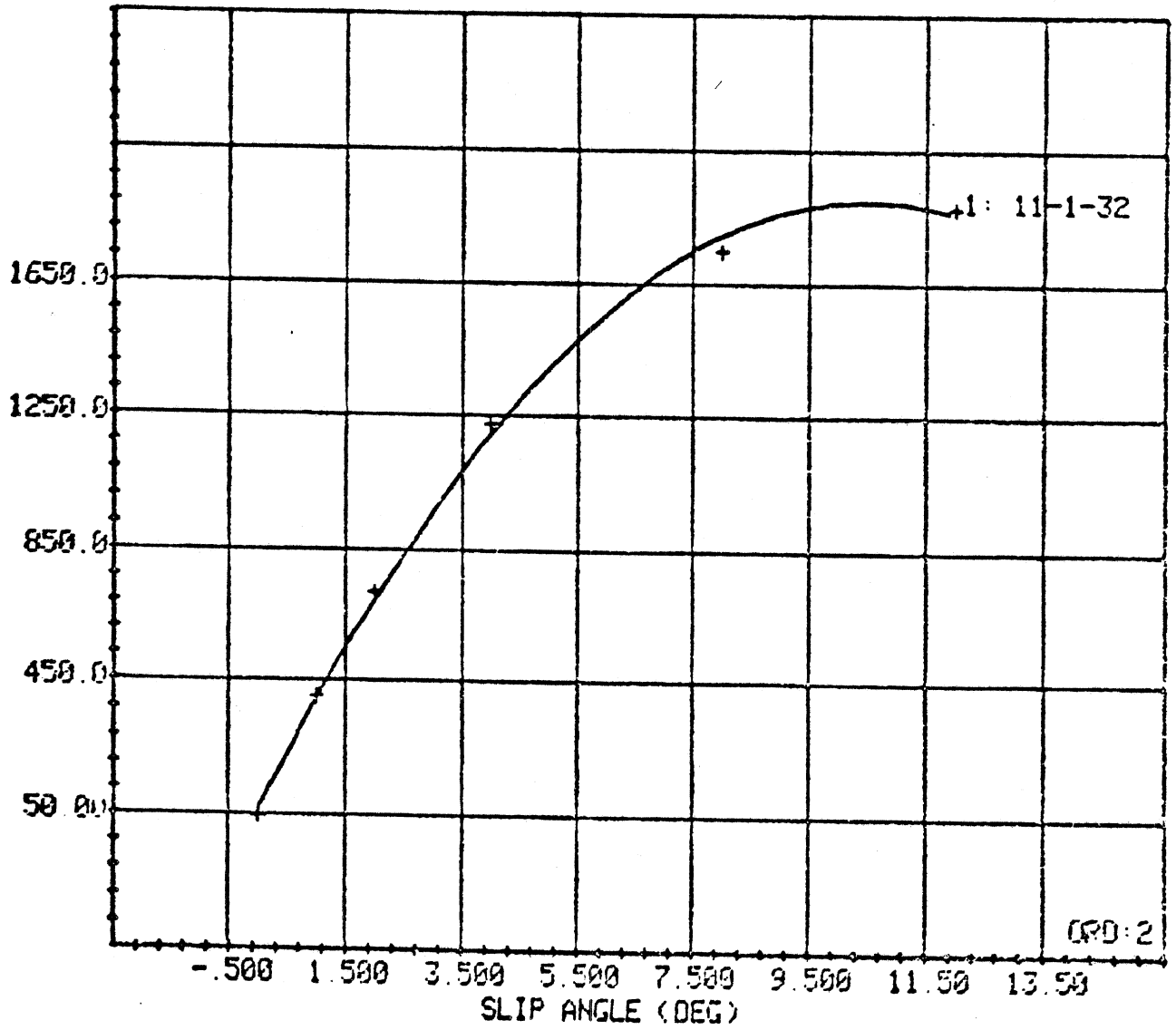
Longitudinal Slip From 0 to -1

Uniroyal 10.00-20F, Rim 8 in

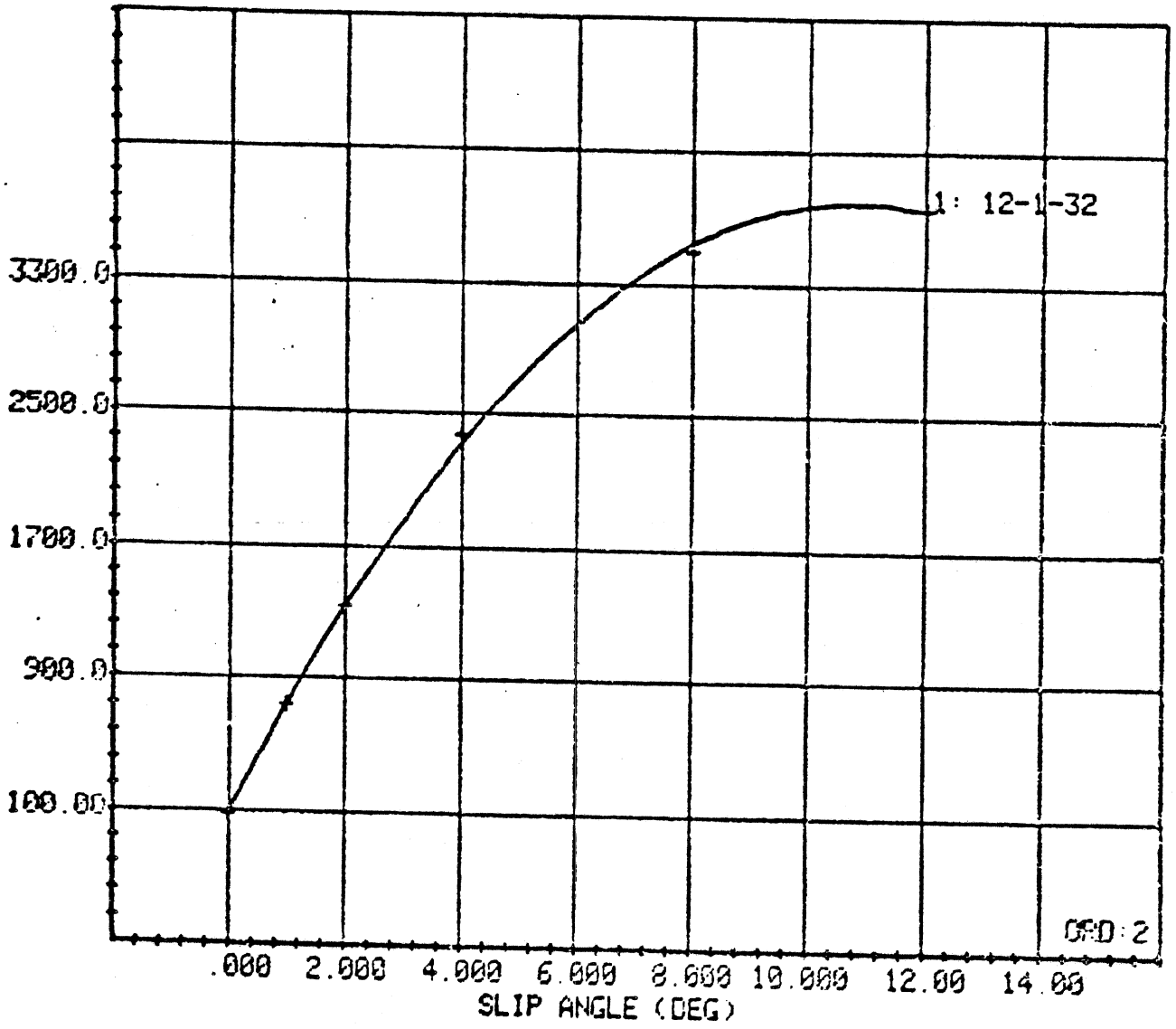
Inflation Pressure 100 psi

$$E = 0^{\circ}, 2^{\circ}, 4^{\circ}, 8^{\circ}$$

1: F Y (LBS)

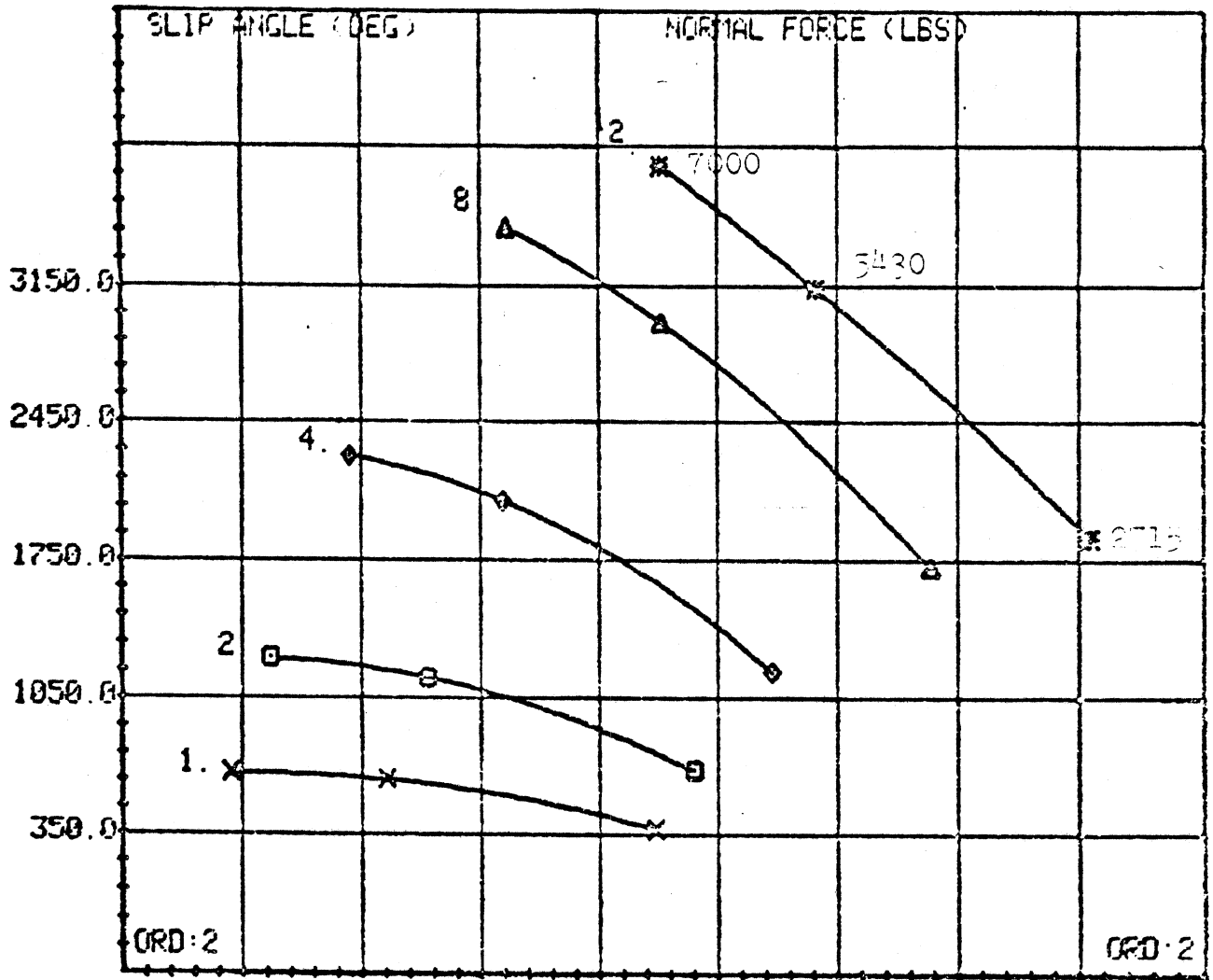


1: F Y (LBS)



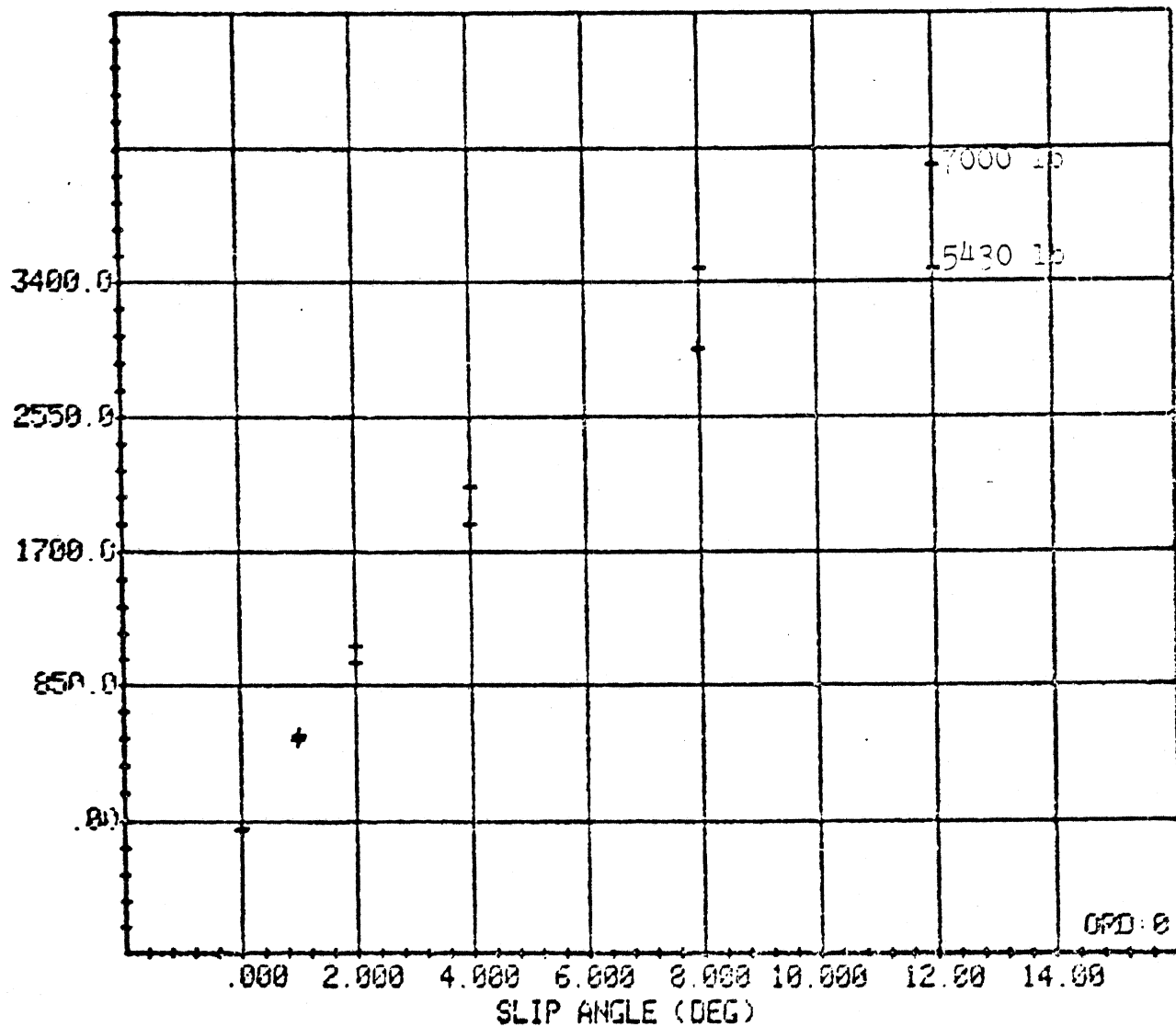
1: F Y (LBS)

RUN: 13- 1-32

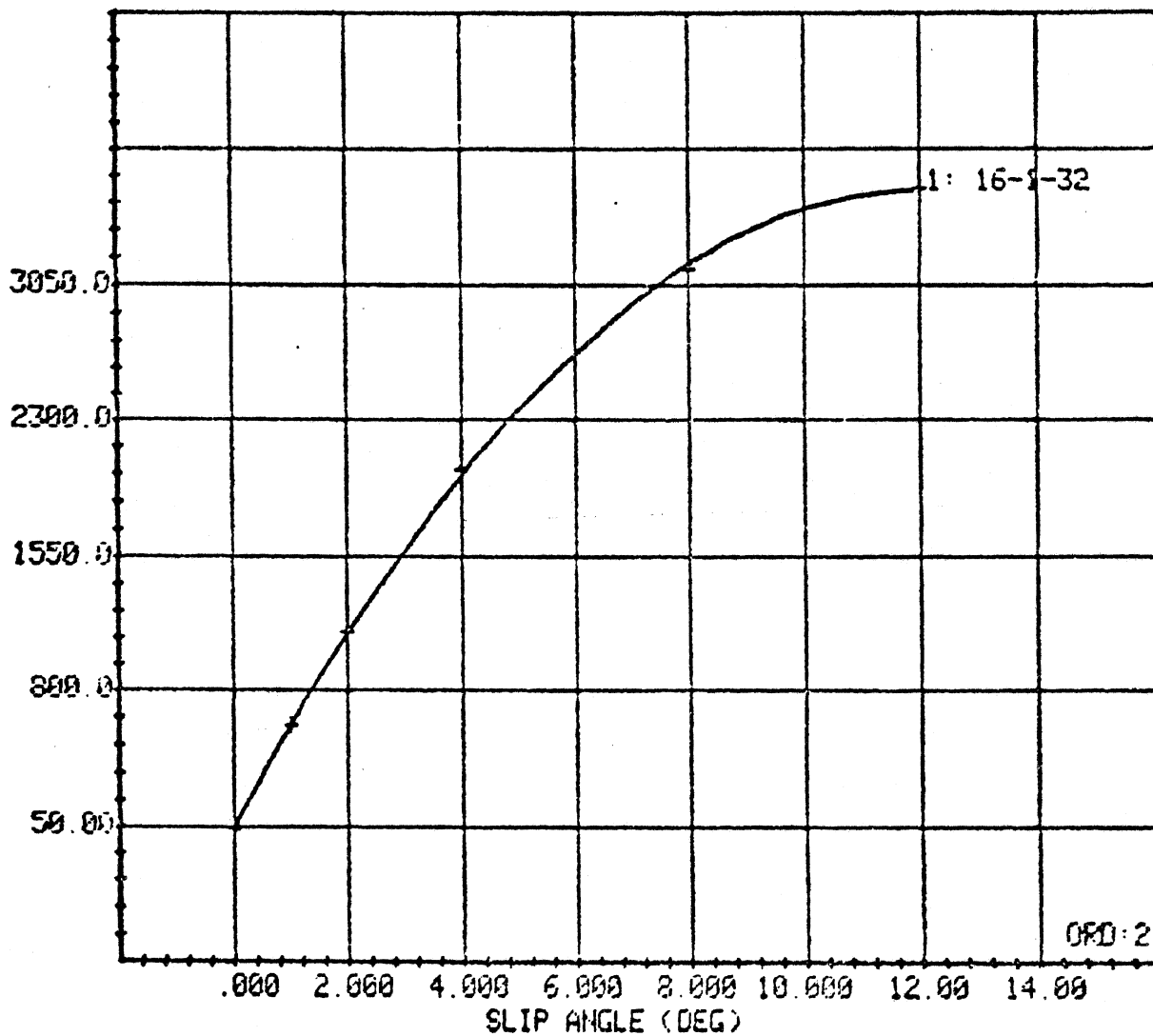


1: F Y (LBS)

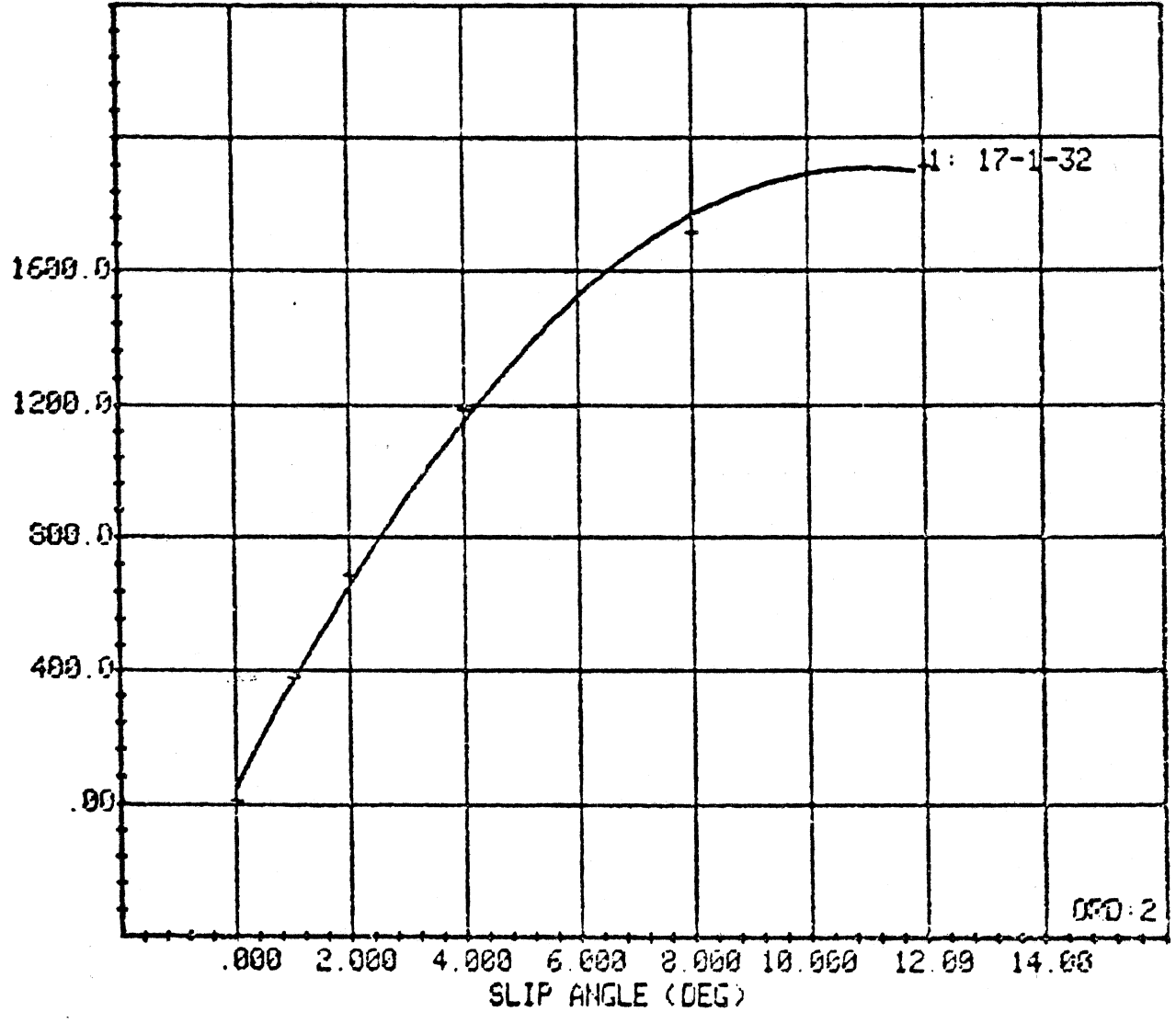
RUN 15- 1-32



1: F Y (LBS)

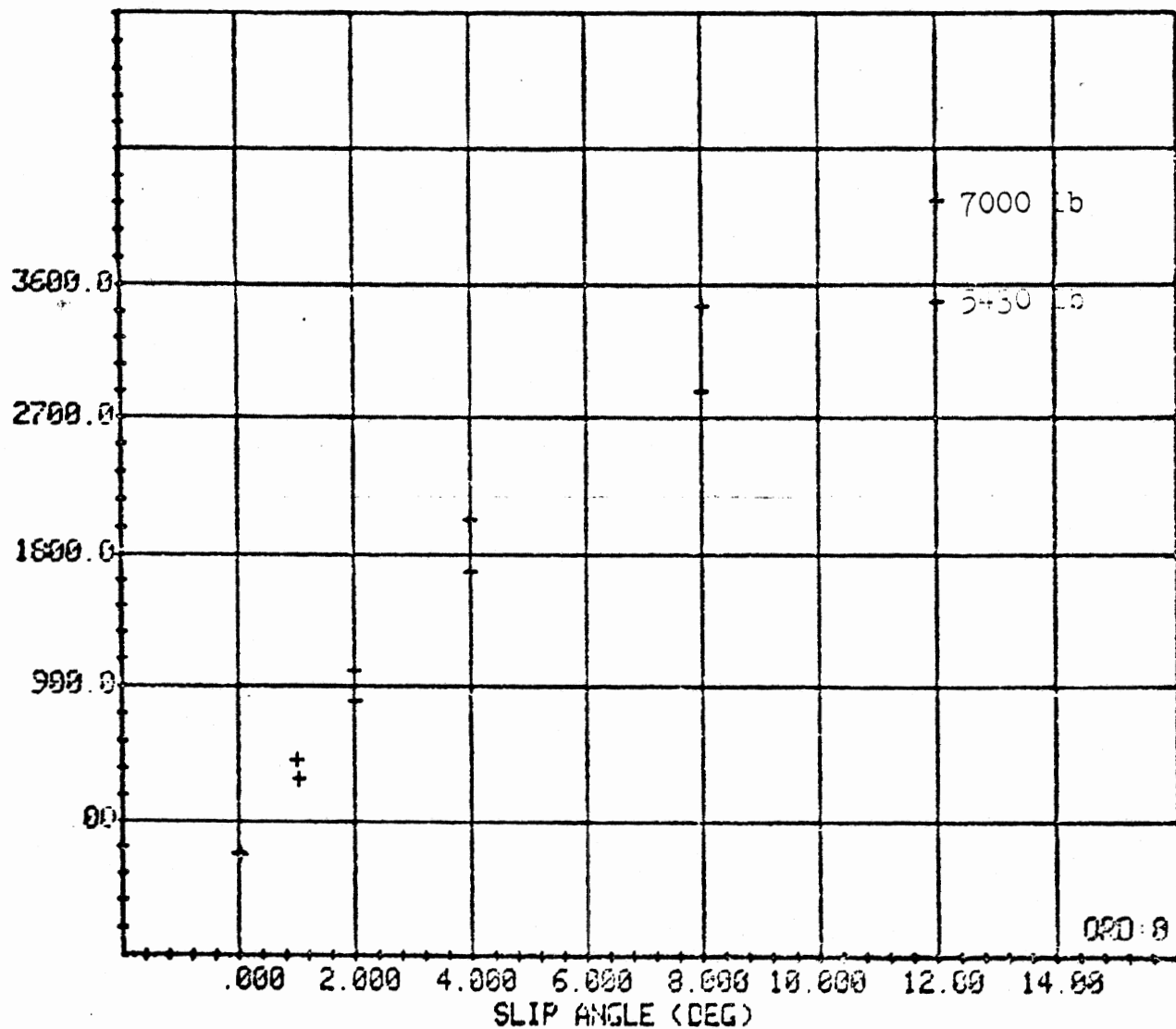


1: F Y (LBS)



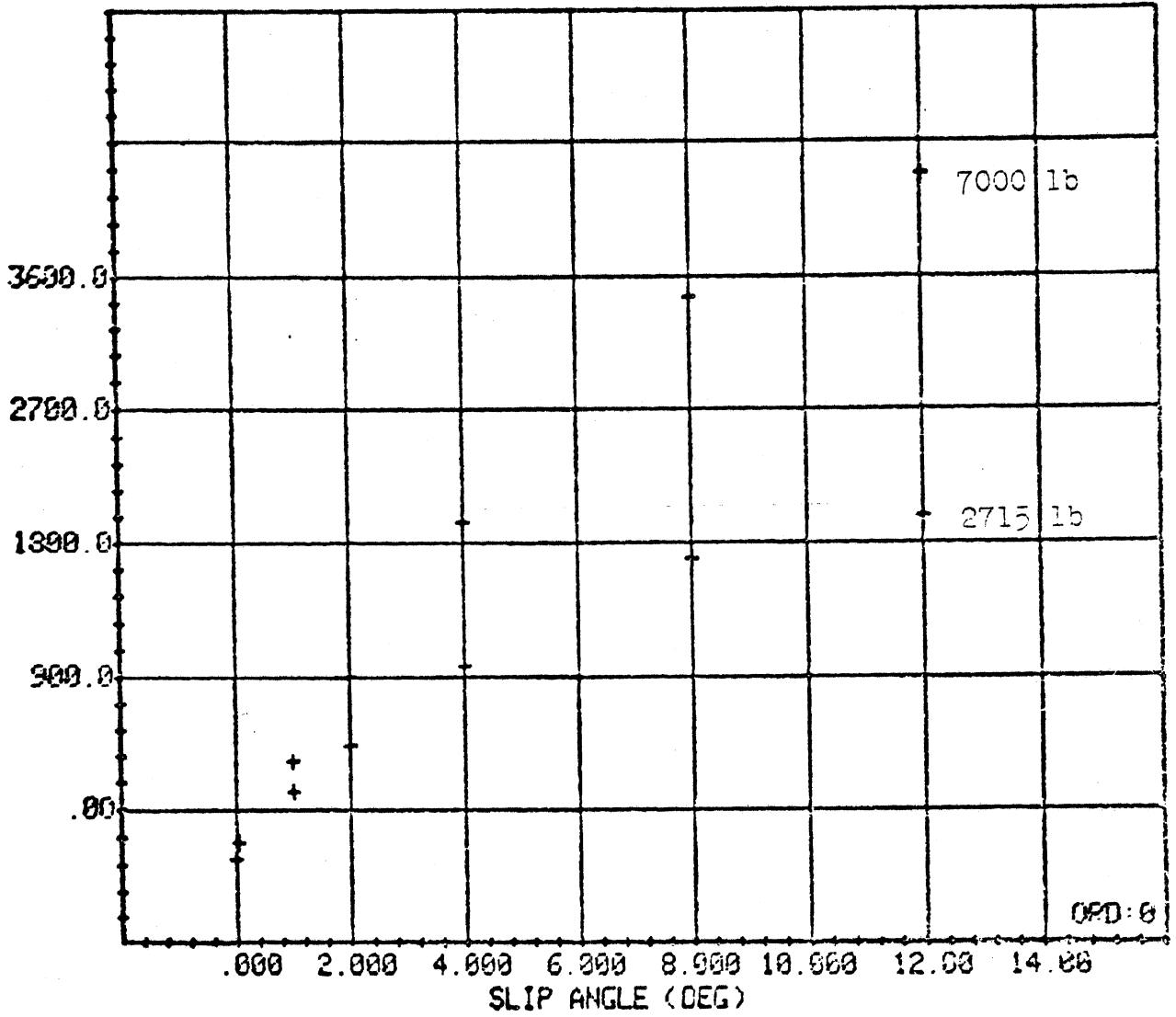
1: F Y (LBS)

RUN 19- 1-32

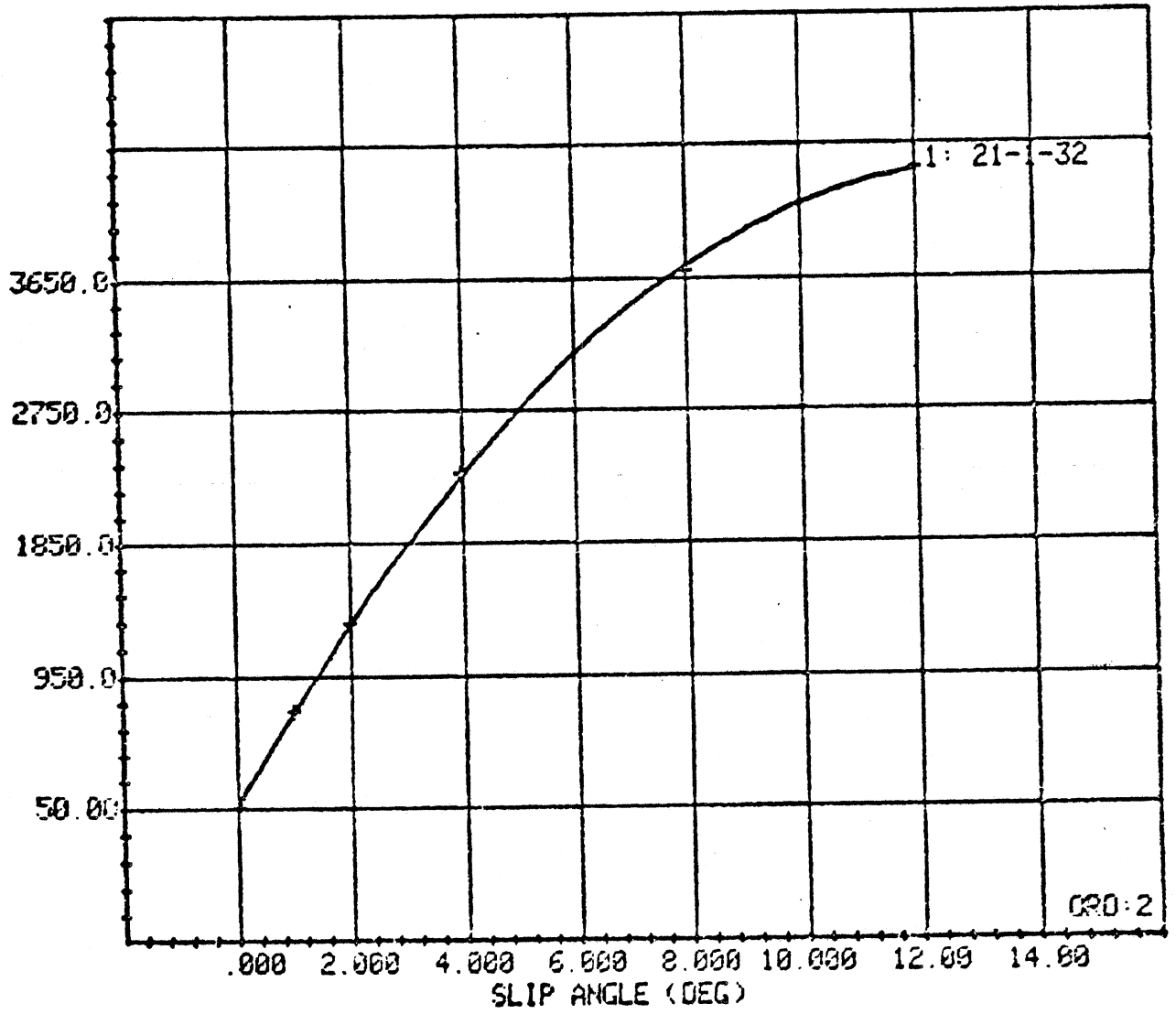


1: F Y (LBS)

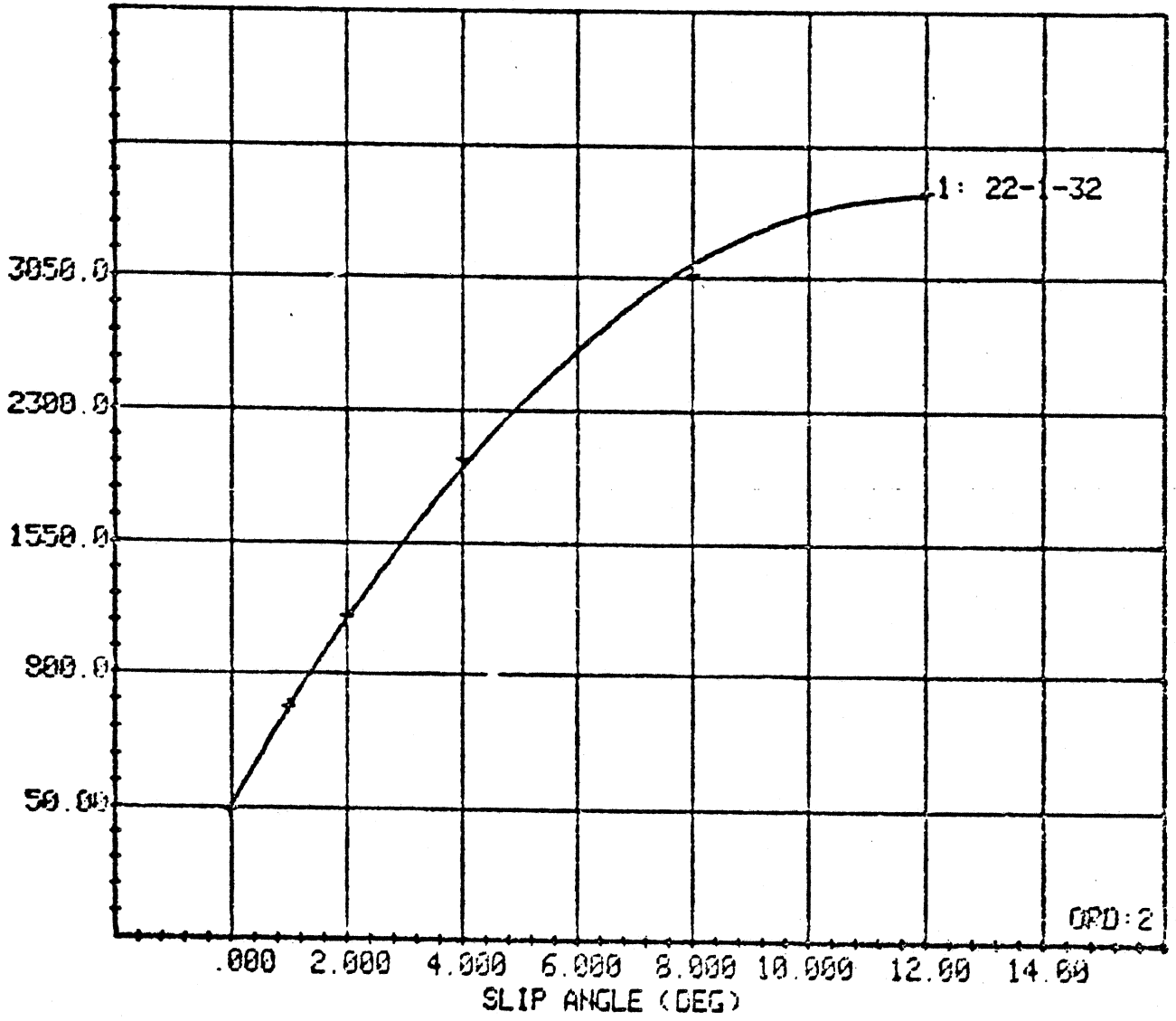
RUN 20- 1-32



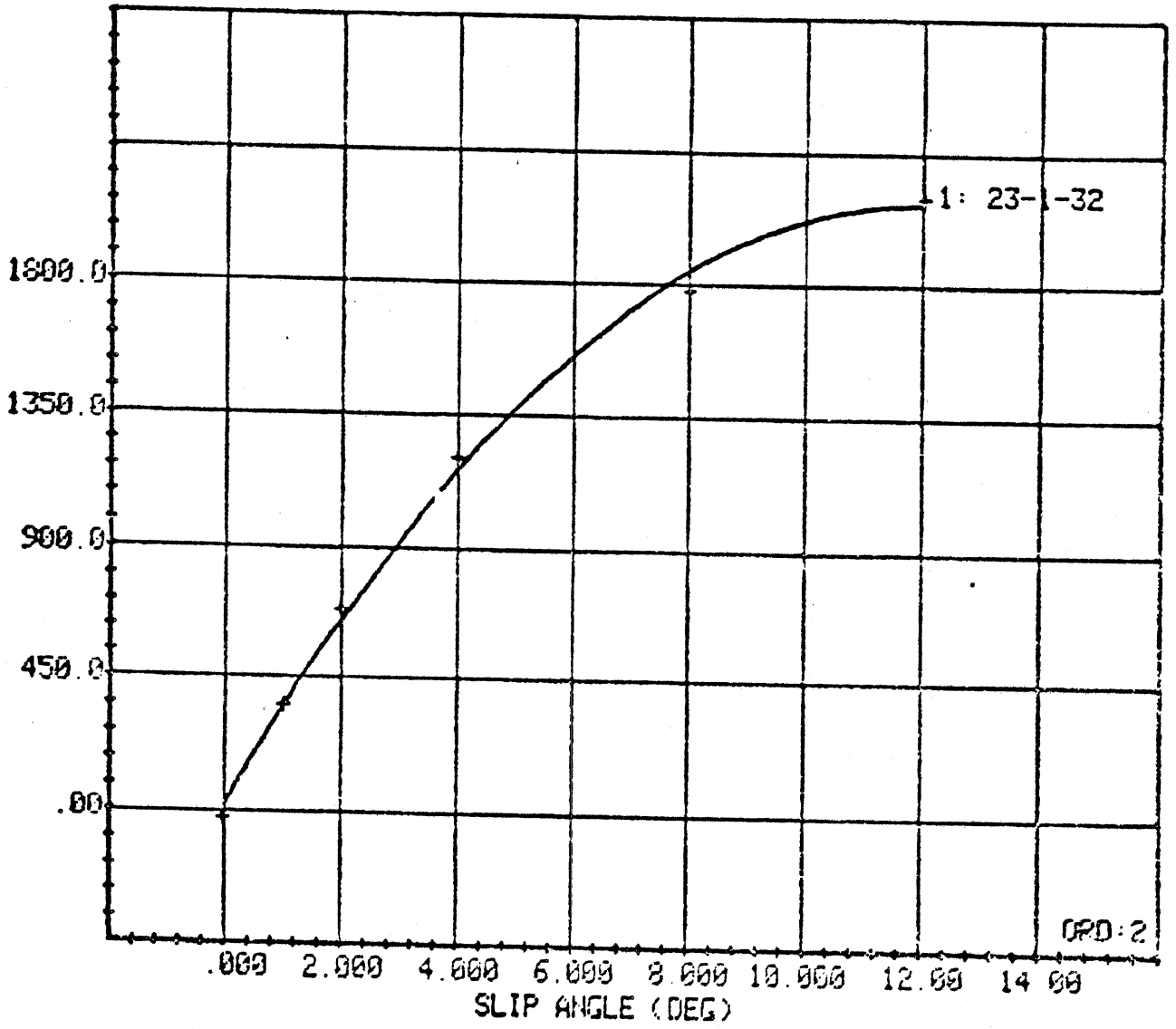
1: F Y (LBS)



1: F Y (LBS)

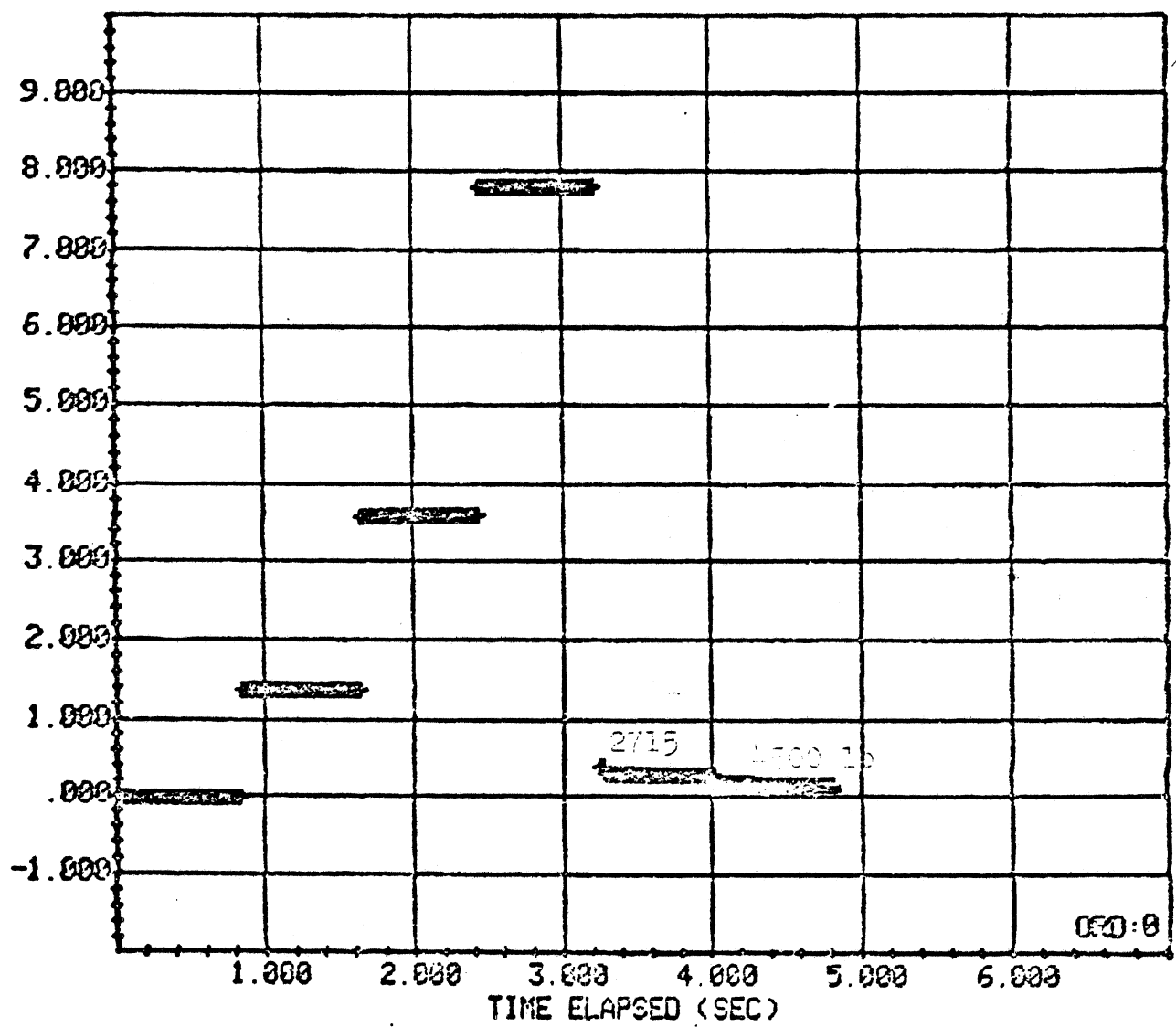


1: F Y (LBS)



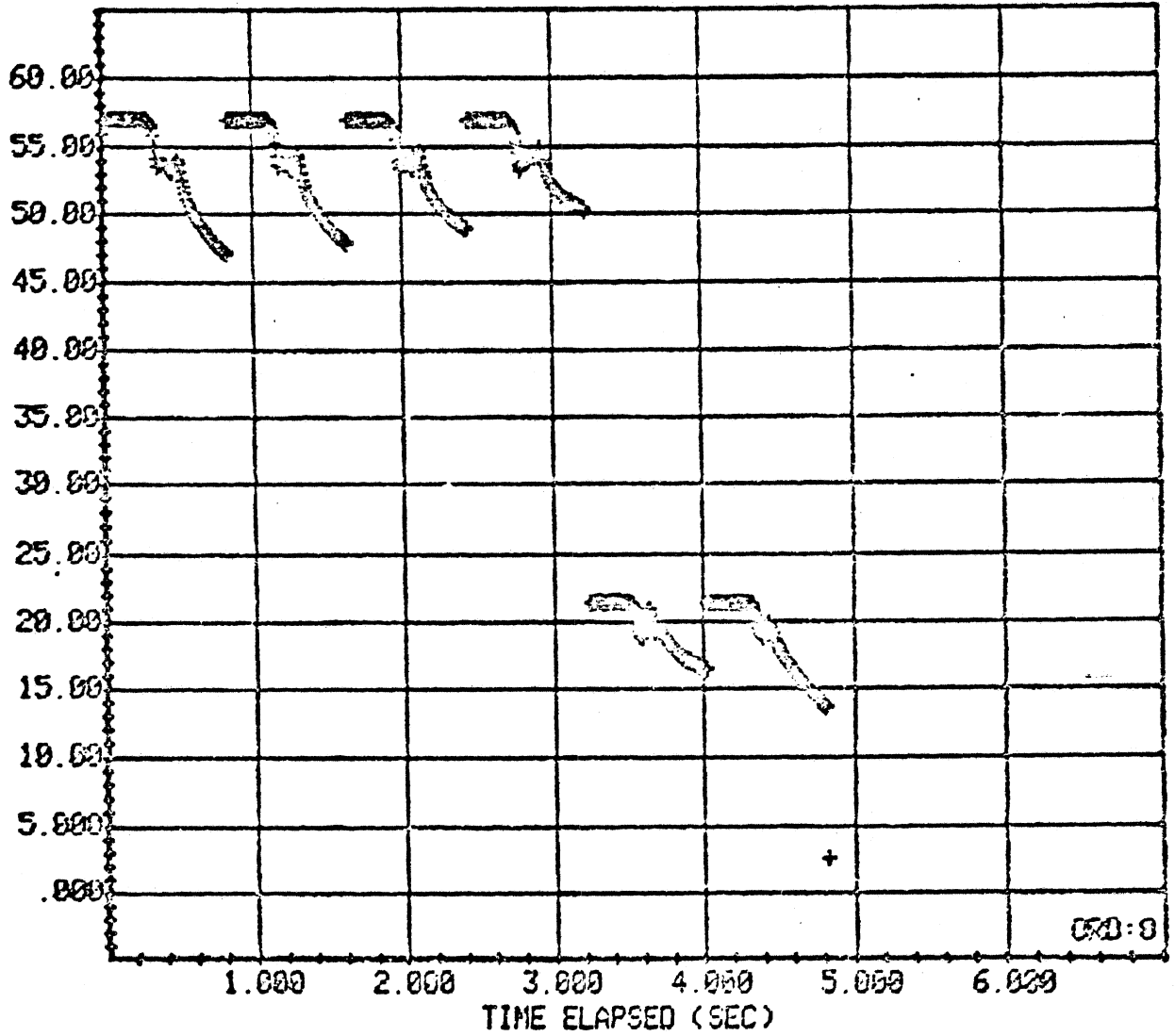
1: SLIP ANGLE (DEG)

RUN 24- 1-32



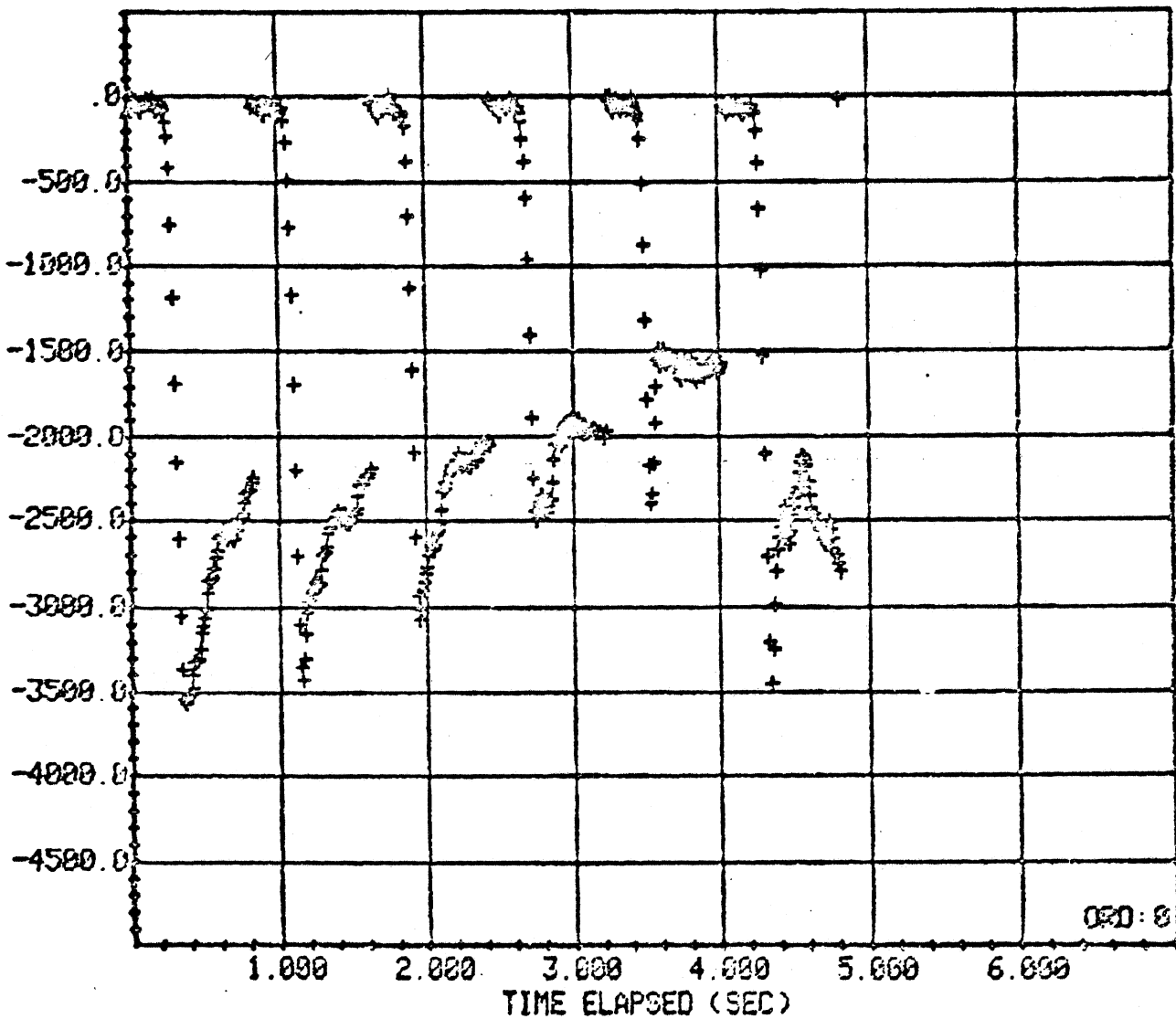
1: ROAD SPEED (MPH)

RUN 24- 1-32



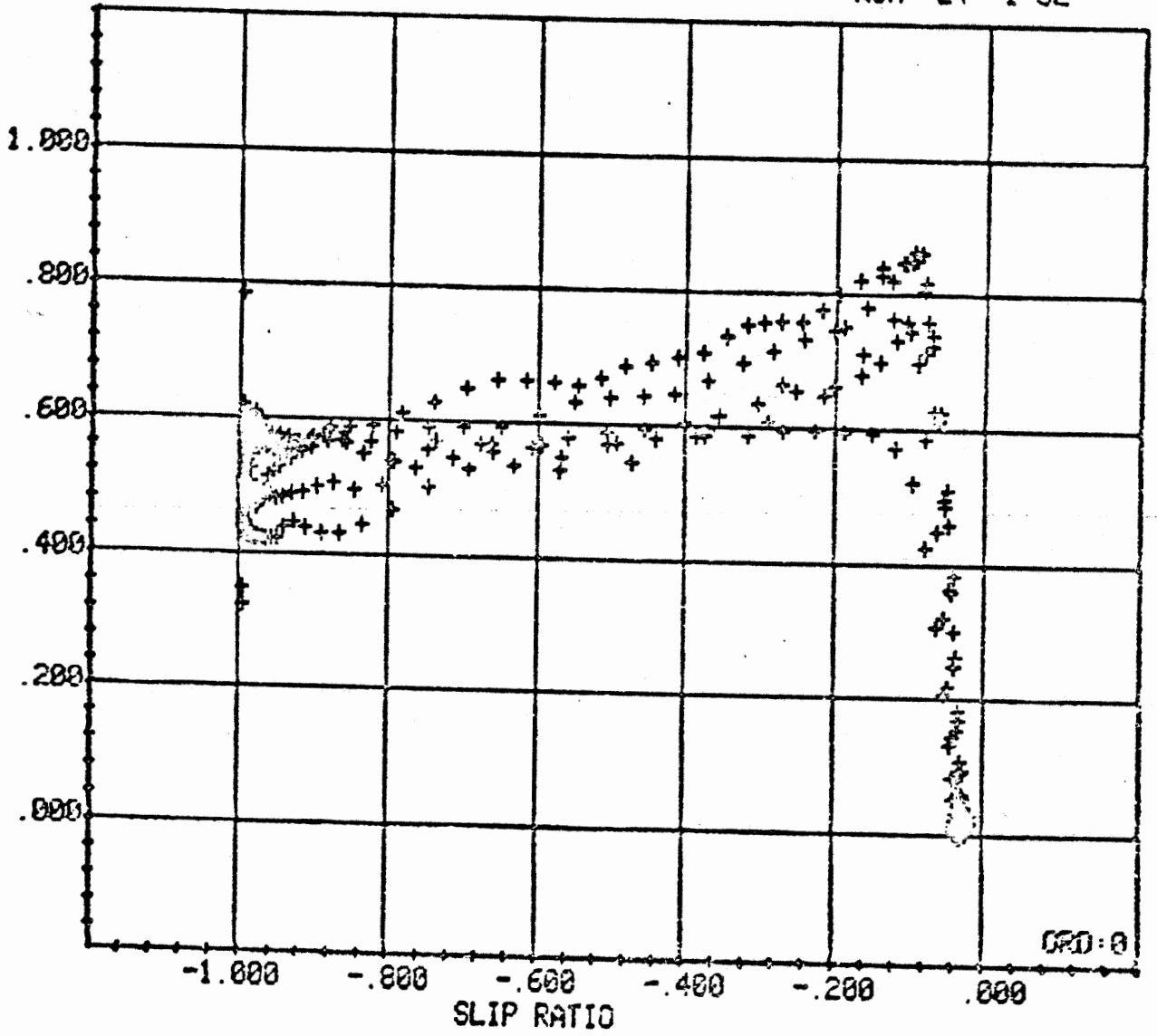
1: TRACTIVE FORCE (LBS)

RUN 24- 1-32



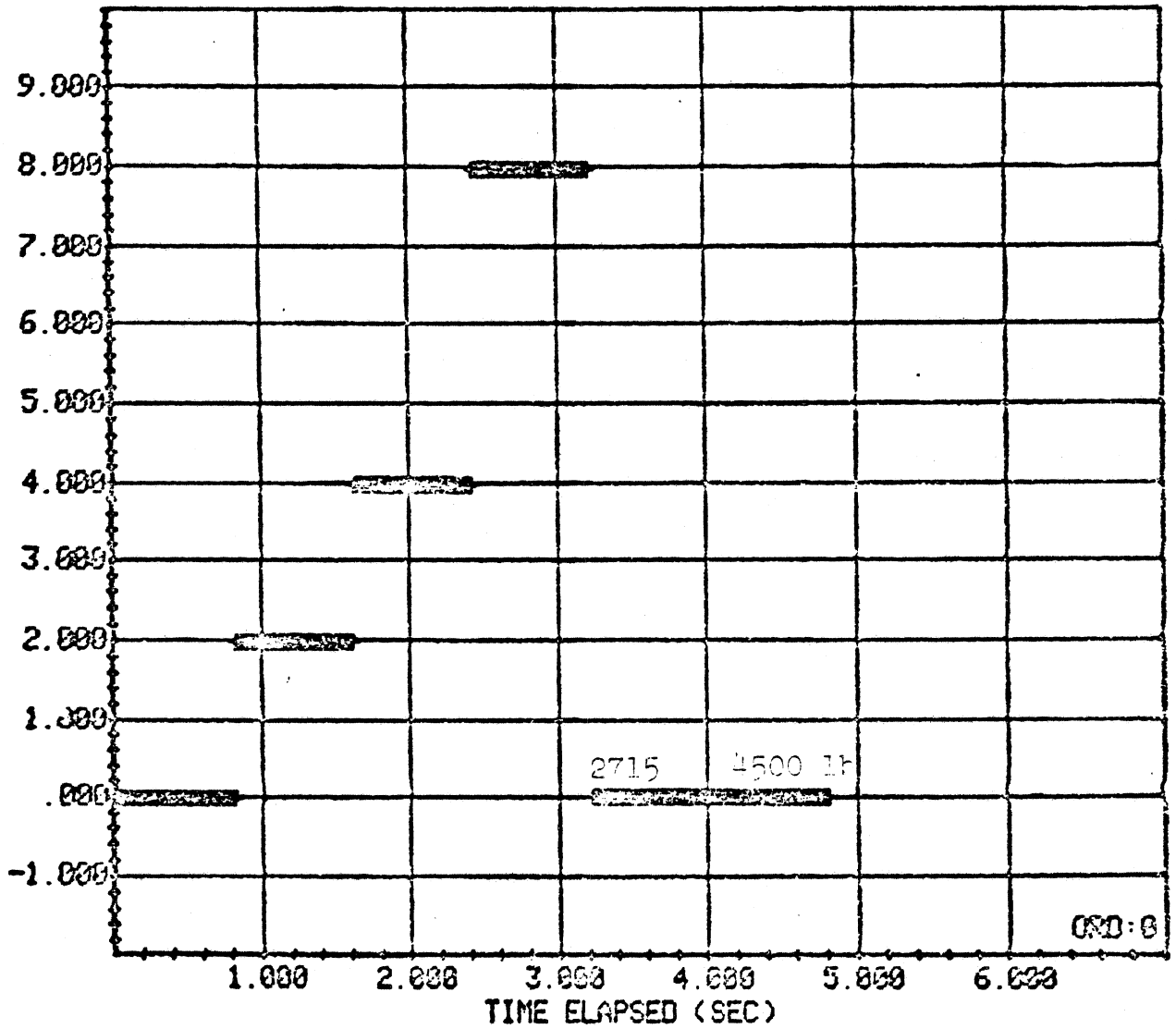
1: NORM. TRACTIVE FORCE

RUN 24- 1-32



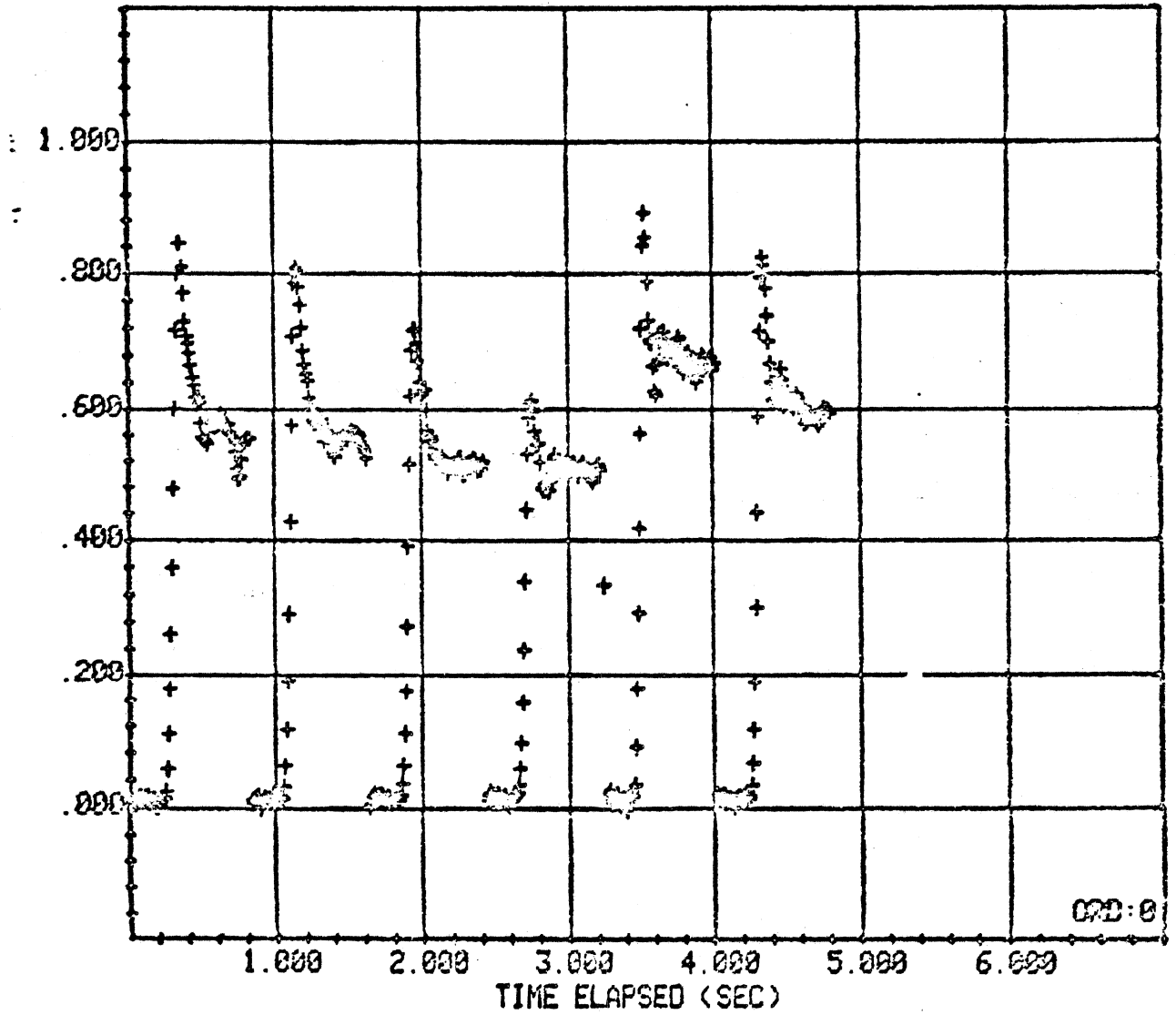
1: SLIP ANGLE (DEG)

RUN 25- 1-32



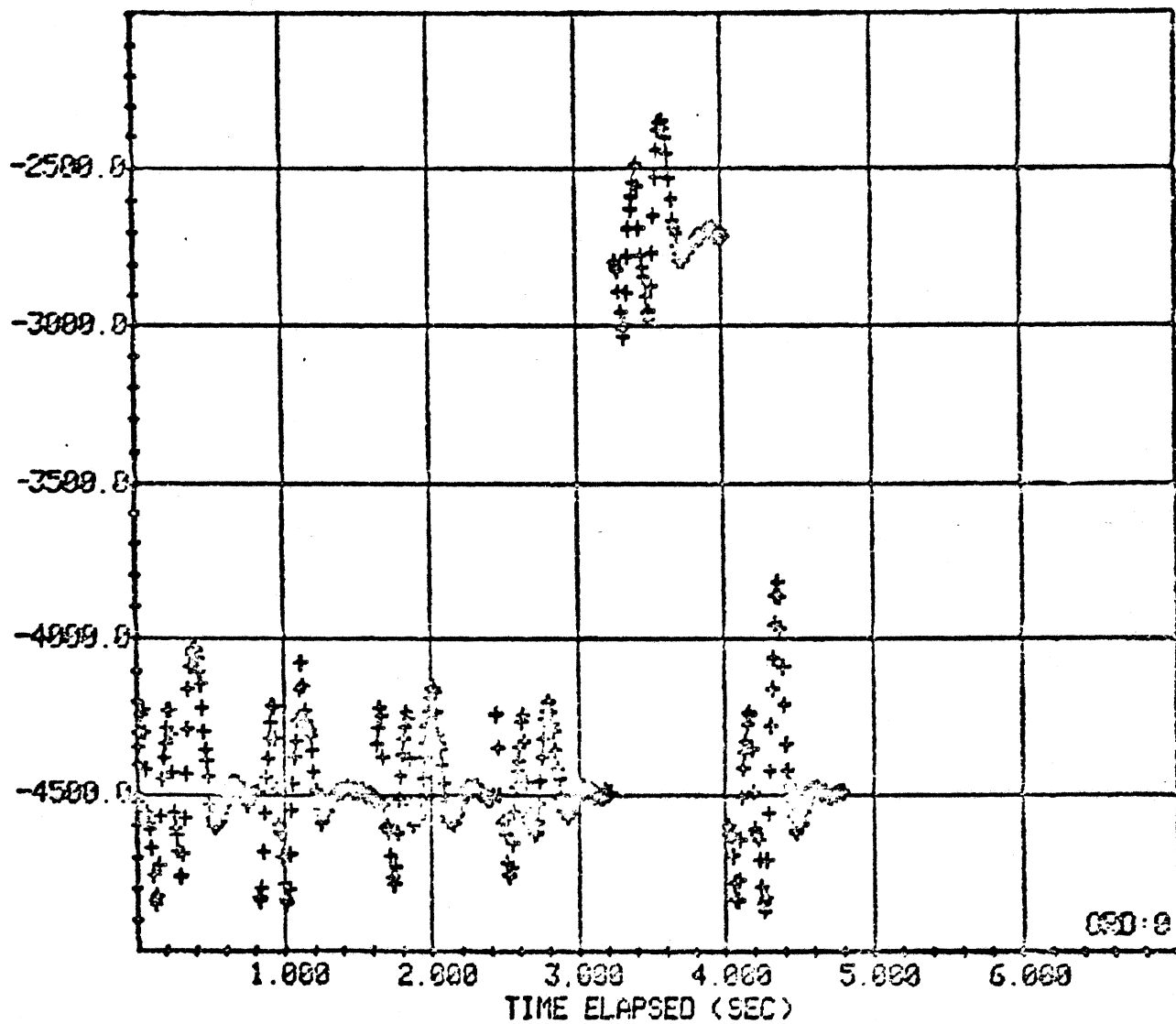
1: NORM. TRACTIVE FORCE

RUN 25- 1-32



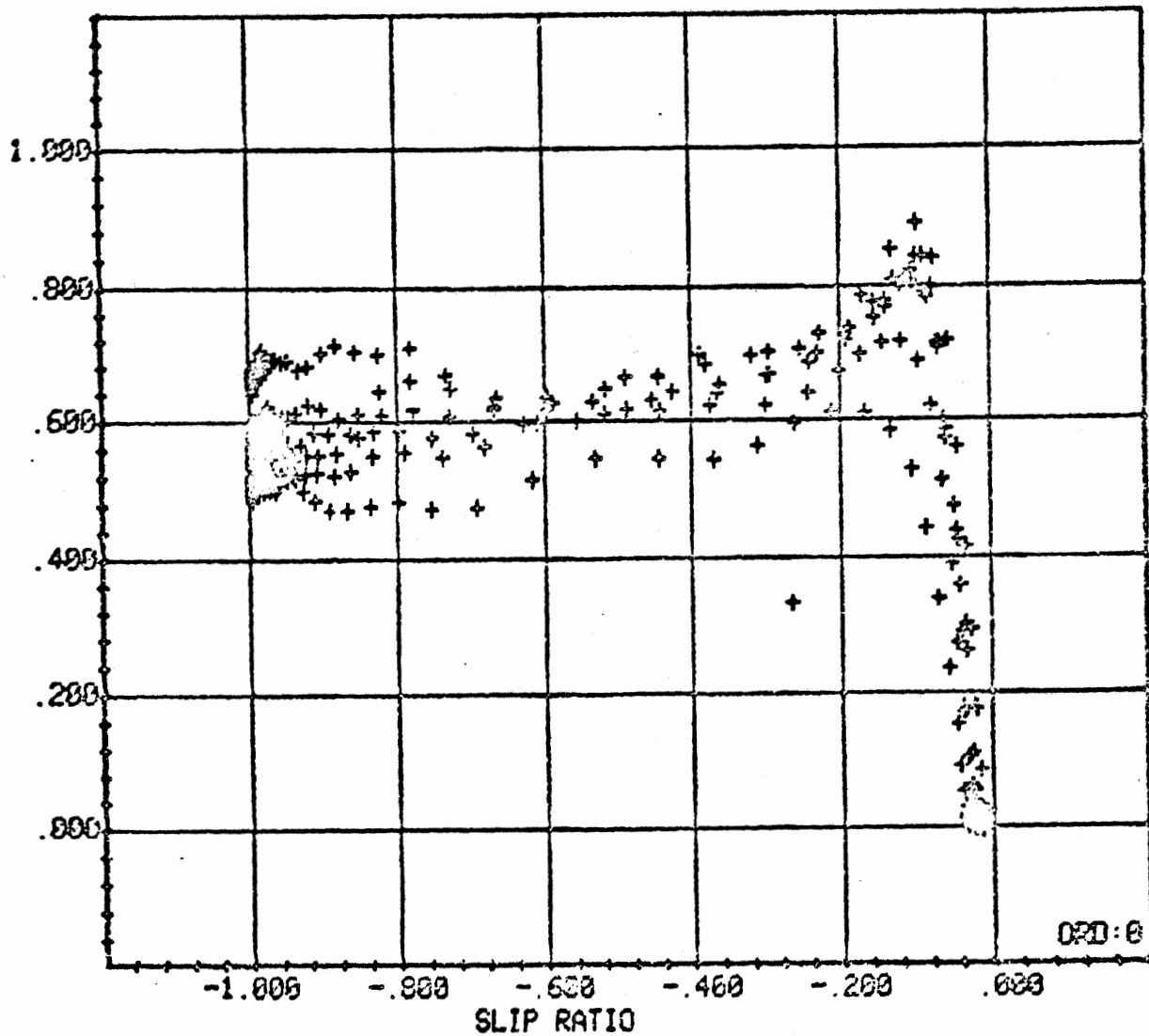
1: NORMAL FORCE (LBS)

RUN 25- 1-32



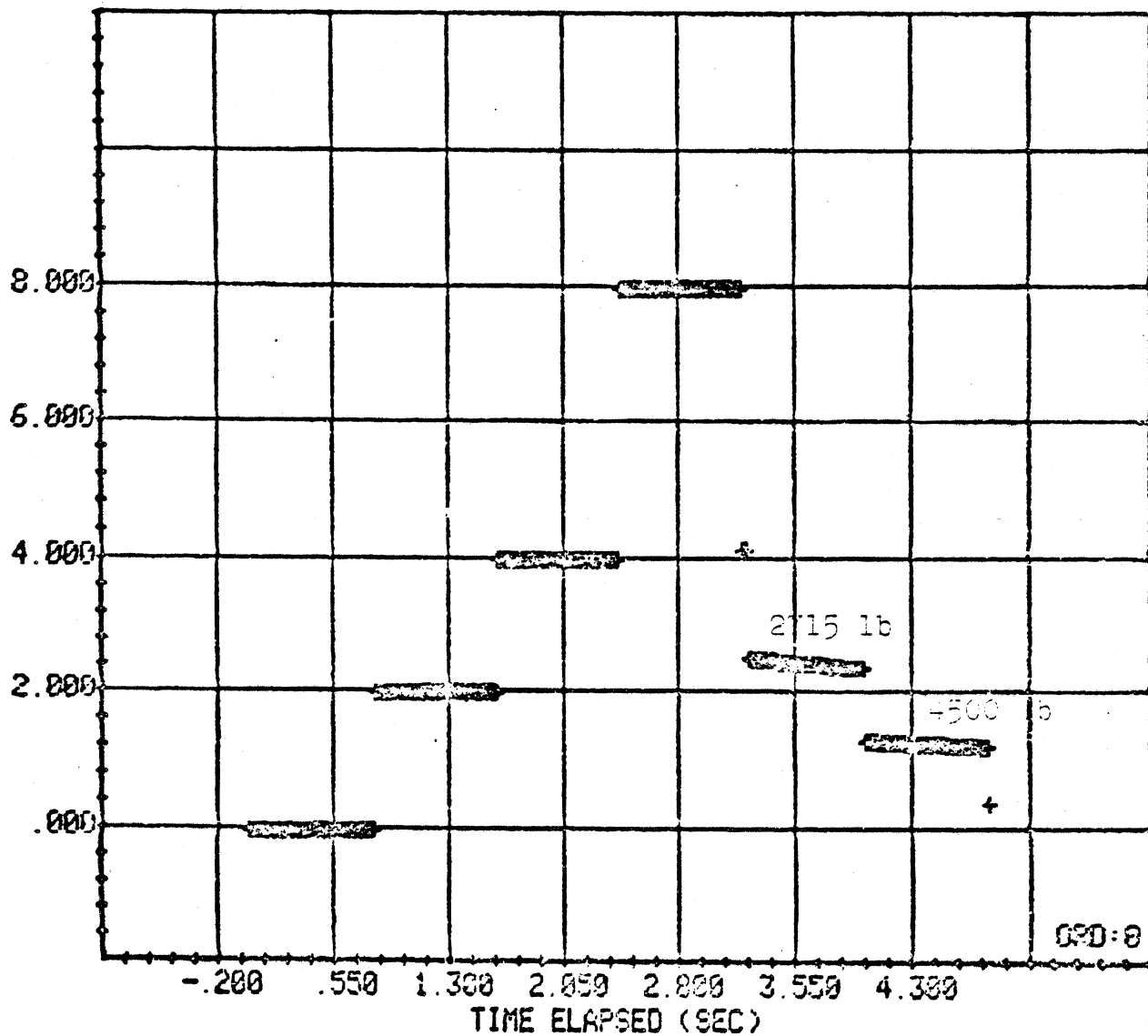
1: NORM. TRACTIVE FORCE

RUN 25- 1-32



1: SLIP ANGLE (DEG)

RUN 26- 1-32



1: NORM. TRACTIVE FORCE

RUN 27- 1-32

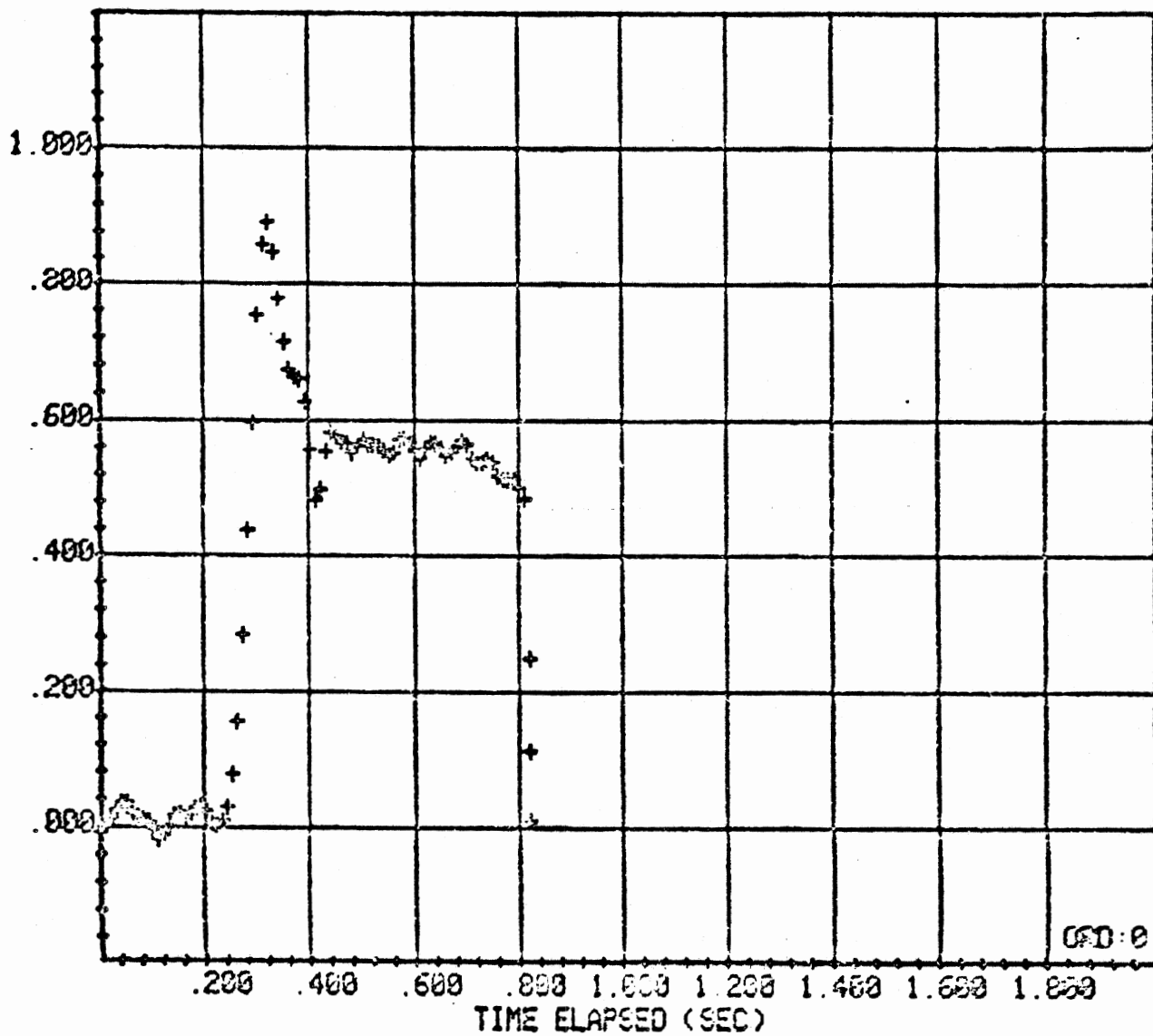


Table C-6

LISTED DATA SYMBOLS

| SYMBOLS | PARAMETERS | DIMENSIONS | |
|---------|----------------------------------------------|------------|--------|
| | | ENGLISH | S. I. |
| | <u>FORCES AND MOMENTS</u> | | |
| FX | LONGITUDINAL FORCE* | lb | N |
| FY | LATERAL FORCE* | lb | N |
| SFY | NEGATIVE LATERAL FORCE (-FY) | lb | N |
| FZ | NORMAL FORCE* | lb | N |
| AVL | ANALOG VERTICAL LOAD | lb | N |
| TF | (DEF. 1) | lb | N |
| FR | ROLLING RESISTANCE* (DEF. 2) | lb | N |
| MX | OVERTURNING MOMENT* | ft-lb | N-m |
| MY | ROLLING RESISTANCE MOMENT* | ft-lb | N-m |
| MZ | ALIGNING TORQUE* | ft-lb | N-m |
| HT | TRANSMISSION OUTPUT TORQUE (DEF. 3) | ft-lb | N-m |
| T | WHEEL TORQUE* | ft-lb | N-m |
| BFT | BEARING FRICTION TORQUE (DEF. 4) | ft-lb | N-m |
| | <u>PRESSURE</u> | | |
| P | INFLATION PRESSURE | psi | bar |
| | <u>SPEEDS</u> | | |
| RS | ROAD SPEED | mph | km/h |
| N | WHEEL ROTATIONS PER MINUTE | rpm | rpm |
| R | WHEEL ROTATIONS PER MILE (OR km) (DEF. 5) | rev/mi | rev/km |
| | <u>LONGITUDINAL SLIP</u> | | |
| SR | (DEF. 6) | - | - |
| LS | (DEF. 7) | - | - |
| | <u>ANGLES</u> | | |
| SA | SLIP ANGLE* | deg | deg |
| IA | INCLINATION ANGLE* | deg | deg |

Table C-6
LIST DATA SYMBOLS (Cont'd)

| SYMBOLS | PARAMETERS | DIMENSIONS | |
|---------|-----------------------------|------------|-------|
| | | ENGLISH | S. I. |
| | <u>TIRE RADII</u> | | |
| RH | RADIUS-LOADED* | in | cm |
| RE | RADIUS-EFFECTIVE* (DEF. 8) | in | cm |
| | <u>TIME</u> | | |
| TE | TIME ELAPSED | sec | sec |
| | <u>TIRE COEFFICIENTS</u> | | |
| NFX | FX/FZ | - | - |
| NFY | FY/FZ | - | - |
| NMY | MY/FZ | - | - |
| NMZ | MZ/FZ | - | - |
| F | GM f-FUNCTION | - | - |
| G | GM g-FUNCTION | - | - |
| H | GM h-FUNCTION | - | - |
| A | GM ALIGNING TORQUE FUNCTION | ft | cm |

* DEFINED ACCORDING TO SAE J670c

Table C-7
 SYMBOL DEFINITIONS

| NO. | DEFINITION |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | $TF = FX - \frac{BFT}{RH} \times 12 \text{ (FOR PROGRAM CHECKOUT)}$ |
| 2 | $FR = -FX \text{ FOR FREE-ROLLING TIRE (T=0)}$ |
| 3 | $HI = T - BFT; \text{ (FOR PROGRAM CHECKOUT)}$ |
| 4 | $BFT \text{ IS NEGATIVE}$ |
| 5 | $R = 60 \frac{N}{RS}$ |
| 6 | $SR = \frac{N \times RH}{k^* \times RS} - 1; \quad k^* = \begin{matrix} 168.07 \text{ FOR ENGLISH SYSTEM} \\ 265.26 \text{ FOR S.I. SYSTEM} \end{matrix}$ |
| 7 | $LS = \frac{N}{RS} \left(\frac{RS}{N} \right) - 1$ <p style="text-align: center;">FREE ROLLING</p> |
| 8 | $RE = k \frac{*RS}{N}$ |

TABLE V
TABULATED DATA

| RS | SA | F2 | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|-------|--------|--------|-------|-------|------|------|
| 20.17 | 0.00 | -2707.31 | -43.37 | -7.14 | 0.07 | -4.27 | 7.86 | 20.07 | 0.02 | 0.00 |
| 20.17 | 1.00 | -2705.42 | -405.06 | -0.42 | 29.84 | -16.12 | 49.14 | 20.03 | 0.15 | 2.00 |
| 20.21 | 1.99 | -2763.85 | -723.72 | -0.85 | 57.24 | -20.19 | 74.92 | 20.06 | 0.26 | 3.00 |
| 20.21 | 4.00 | -2700.37 | -1227.64 | -4.50 | 93.56 | -12.24 | 98.06 | 20.04 | 0.45 | 5.00 |
| 20.21 | 8.01 | -2708.54 | -1754.64 | -2.16 | 122.58 | -22.65 | 56.18 | 20.03 | 0.65 | 7.00 |
| 20.17 | 12.01 | -2750.84 | -1678.54 | -2.22 | 120.55 | -21.65 | 10.05 | 20.05 | 0.68 | 9.00 |

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TABLE V
TABULATED DATA

RUN: 12- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|------|-------|
| 40.41 | -0.01 | -6984.35 | -78.11 | -41.04 | 47.05 | 39.77 | 15.21 | 19.44 | 0.01 | 0.0 |
| 40.37 | 1.00 | -7040.94 | -743.32 | -41.55 | 146.81 | 38.69 | 154.05 | 19.47 | 0.11 | 2.00 |
| 40.33 | 1.99 | -6996.19 | -1332.64 | -46.70 | 240.87 | 44.70 | 254.97 | 19.46 | 0.19 | 4.00 |
| 40.37 | 4.00 | -6954.48 | -2375.64 | -51.92 | 433.81 | 49.78 | 371.74 | 19.40 | 0.34 | 6.00 |
| 40.29 | 8.01 | -7000.39 | -3505.04 | -72.16 | 653.25 | 79.29 | 281.14 | 19.33 | 0.50 | 8.00 |
| 40.29 | 12.03 | -6988.46 | -3702.49 | -63.07 | 724.20 | 61.54 | 102.59 | 19.29 | 0.54 | 10.00 |

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TABLE V
TABULATED DATA

RUN: 13- 1-52

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|--------|--------|-------|------|-------|
| 55.73 | 0.0 | -5421.20 | -49.52 | -26.40 | 23.96 | 20.94 | 12.48 | 19.71 | 0.01 | 0.0 |
| 55.73 | 1.00 | -5433.19 | -623.75 | -27.74 | 100.10 | 19.91 | 119.13 | 19.70 | 0.11 | 2.00 |
| 55.73 | 1.99 | -5416.25 | -1147.79 | -31.44 | 161.75 | 23.98 | 191.25 | 19.71 | 0.21 | 3.00 |
| 55.69 | 4.00 | -5433.58 | -2054.97 | -40.38 | 272.36 | 34.66 | 279.26 | 19.70 | 0.38 | 5.00 |
| 55.65 | 8.01 | -5466.44 | -2967.59 | -45.64 | 422.13 | 40.84 | 187.77 | 19.65 | 0.55 | 7.00 |
| 55.69 | 12.03 | -5469.31 | -2135.11 | -39.89 | 455.40 | 30.98 | 65.68 | 19.63 | 0.58 | 9.00 |
| 55.85 | 0.01 | -7012.74 | -91.64 | -51.09 | 46.34 | 56.54 | 23.24 | 19.50 | 0.01 | 13.00 |
| 55.77 | 1.00 | -7008.72 | -662.37 | -48.11 | 133.91 | 50.47 | 151.80 | 19.50 | 0.09 | 15.00 |
| 55.69 | 1.99 | -6591.43 | -1146.92 | -44.51 | 239.03 | 41.22 | 250.44 | 19.48 | 0.18 | 17.00 |
| 55.69 | 3.98 | -6567.57 | -2275.93 | -51.03 | 398.27 | 45.39 | 372.95 | 19.45 | 0.33 | 18.00 |
| 55.61 | 8.03 | -6977.61 | -3446.37 | -72.19 | 647.77 | 78.01 | 304.21 | 19.37 | 0.49 | 21.00 |
| 57.06 | 12.03 | -6577.27 | -5757.17 | -81.89 | 720.26 | 93.07 | 135.93 | 19.34 | 0.54 | 23.00 |
| 54.17 | 0.01 | -2732.34 | -29.07 | -9.95 | 9.31 | -0.77 | 11.31 | 20.12 | 0.01 | 27.00 |
| 54.05 | 1.00 | -2733.53 | -365.73 | -12.85 | 35.52 | 1.74 | 53.65 | 20.12 | 0.13 | 29.00 |
| 55.46 | 1.99 | -2736.35 | -674.13 | -9.53 | 59.96 | -6.22 | 82.20 | 20.13 | 0.25 | 30.00 |
| 55.65 | 4.00 | -2710.64 | -1177.26 | -7.36 | 84.26 | -9.31 | 101.48 | 20.11 | 0.43 | 32.00 |
| 55.65 | 8.03 | -2720.95 | -1711.66 | -9.58 | 124.86 | -9.01 | 75.77 | 20.11 | 0.63 | 34.00 |
| 55.69 | 12.01 | -2708.16 | -1808.04 | -8.88 | 123.31 | -10.22 | 30.78 | 20.12 | 0.69 | 36.00 |

TABLE V
TABULATED DATA

RUN: 14-1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RM | NFY | TE |
|-------|-------|----------|----------|--------|--------|--------|--------|-------|-------|-------|
| 40.41 | -0.01 | -5421.62 | -2.35 | -23.51 | 35.13 | 15.41 | 9.06 | 19.68 | 0.00 | 1.00 |
| 40.33 | 1.00 | -5480.33 | -566.85 | -26.45 | 105.31 | 16.00 | 113.36 | 19.68 | 0.10 | 2.00 |
| 40.41 | 1.99 | -5471.73 | -1068.09 | -28.56 | 169.85 | 19.18 | 187.88 | 19.68 | 0.20 | 4.00 |
| 40.37 | 4.00 | -5367.05 | -1939.82 | -30.35 | 272.88 | 19.32 | 263.31 | 19.65 | 0.36 | 6.00 |
| 40.33 | 8.01 | -5396.61 | -2978.29 | -40.88 | 428.19 | 33.08 | 225.76 | 19.59 | 0.55 | 8.00 |
| 40.29 | 12.01 | -5423.52 | -3326.39 | -38.73 | 498.58 | 28.73 | 113.90 | 19.57 | 0.61 | 10.00 |
| 40.41 | 0.03 | -2755.51 | 6.32 | -6.39 | 17.64 | -9.66 | 8.99 | 20.09 | -0.00 | 14.00 |
| 40.41 | 0.98 | -2701.04 | -324.28 | -2.78 | 33.49 | -16.65 | 45.63 | 20.09 | 0.12 | 16.00 |
| 40.41 | 1.98 | -2697.65 | -621.61 | -4.51 | 65.06 | -14.20 | 74.23 | 20.06 | 0.23 | 18.00 |
| 40.41 | 4.00 | -2726.70 | -1137.77 | -8.13 | 90.61 | -9.69 | 100.32 | 20.09 | 0.42 | 19.00 |
| 40.37 | 8.00 | -2703.03 | -1692.28 | -7.20 | 140.60 | -11.79 | 79.28 | 20.05 | 0.63 | 22.00 |
| 40.37 | 12.03 | -2741.64 | -1959.67 | -10.17 | 137.87 | -10.41 | 44.46 | 20.08 | 0.71 | 24.00 |

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TABLE V
TABULATED DATA

RUN: 15- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|-------|-------|
| 20.24 | -0.01 | -5405.88 | 51.94 | -14.62 | 49.34 | 1.87 | 6.90 | 19.61 | -0.01 | 0.0 |
| 20.17 | 1.00 | -5504.02 | -507.72 | -19.88 | RR.34 | 7.62 | 107.71 | 19.66 | 0.09 | 2.00 |
| 20.21 | 1.99 | -5408.23 | -956.26 | -20.55 | 162.88 | 9.43 | 176.55 | 19.61 | 0.18 | 4.00 |
| 20.21 | 3.98 | -5378.56 | -1670.18 | -22.31 | 261.64 | 5.57 | 259.52 | 19.60 | 0.35 | 6.00 |
| 20.17 | 8.00 | -5350.77 | -2909.20 | -37.04 | 424.13 | 29.45 | 254.58 | 19.55 | 0.55 | 8.00 |
| 20.17 | 12.01 | -5340.07 | -3493.47 | -33.68 | 521.72 | 21.20 | 159.88 | 19.51 | 0.65 | 10.00 |
| 20.32 | 0.01 | -6974.20 | 46.34 | -31.34 | 33.60 | 25.80 | 14.22 | 19.41 | -0.01 | 14.00 |
| 20.21 | 1.00 | -6845.91 | -522.58 | -32.88 | 147.47 | 26.80 | 135.91 | 19.39 | 0.08 | 15.00 |
| 20.21 | 1.59 | -6839.45 | -1107.50 | -39.51 | 226.97 | 38.60 | 234.53 | 19.41 | 0.16 | 17.00 |
| 20.13 | 3.48 | -7047.95 | -2110.41 | -49.49 | 386.65 | 50.43 | 367.33 | 19.40 | 0.30 | 19.00 |
| 20.09 | 8.01 | -7035.31 | -3496.45 | -67.59 | 649.76 | 72.65 | 368.22 | 19.30 | 0.50 | 21.00 |
| 20.17 | 12.01 | -6967.19 | -4151.92 | -66.78 | 791.17 | 66.66 | 243.91 | 19.21 | 0.60 | 23.00 |

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TABLE V
TABULATED DATA

RUN: 16- I-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|------|------|
| 20.17 | -0.01 | -5501.93 | -41.71 | -26.39 | 0.89 | 23.51 | 12.46 | 19.66 | 0.01 | 0.0 |
| 20.17 | 1.00 | -5367.76 | -610.76 | -22.65 | 79.35 | 15.48 | 111.17 | 19.60 | 0.11 | 1.00 |
| 20.21 | 1.99 | -5486.70 | -1135.13 | -24.93 | 149.45 | 17.53 | 185.60 | 19.66 | 0.21 | 3.00 |
| 20.17 | 4.00 | -5391.20 | -2028.10 | -24.24 | 265.81 | 12.36 | 272.93 | 19.60 | 0.38 | 5.00 |
| 20.17 | 8.01 | -5377.62 | -2142.14 | -32.36 | 425.50 | 20.44 | 246.42 | 19.55 | 0.58 | 7.00 |
| 20.17 | 12.01 | -5422.75 | -3586.06 | -28.14 | 509.77 | 9.63 | 137.91 | 19.54 | 0.66 | 9.00 |

TABLE V
TABULATED DATA

RUN: 17- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|-------|--------|--------|-------|-------|------|-------|
| 40.41 | -0.01 | -2755.72 | -9.72 | -1.99 | -3.25 | -14.62 | 7.88 | 20.09 | 0.00 | 0.00 |
| 40.41 | 1.01 | -2674.50 | -377.43 | -4.89 | 23.80 | -12.95 | 50.20 | 20.06 | 0.14 | 2.00 |
| 40.41 | 1.59 | -2715.15 | -690.03 | -0.78 | 43.89 | -20.22 | 79.94 | 20.07 | 0.25 | 4.00 |
| 40.33 | 4.00 | -2652.78 | -1168.97 | -9.70 | 74.51 | -7.37 | 97.97 | 20.07 | 0.44 | 6.00 |
| 40.37 | 8.01 | -2704.86 | -1723.40 | -5.45 | 118.06 | -15.60 | 66.56 | 20.06 | 0.64 | 8.00 |
| 40.33 | 12.03 | -2745.04 | -1920.28 | -9.83 | 109.90 | -10.58 | 29.51 | 20.09 | 0.70 | 10.00 |

TABLE V
TABULATED DATA

RUN: 18-1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NEY | TE |
|-------|-------|----------|----------|--------|--------|--------|--------|-------|-------|-------|
| 55.61 | 0.0 | -7000.91 | -12.62 | -49.74 | 22.22 | 54.10 | 17.46 | 19.49 | 0.00 | 0.0 |
| 55.65 | 1.01 | -7024.33 | -662.66 | -37.93 | 130.24 | 30.24 | 151.75 | 19.49 | 0.09 | 2.00 |
| 55.77 | 1.99 | -6929.88 | -1248.51 | -53.27 | 208.87 | 54.48 | 252.65 | 19.49 | 0.18 | 4.00 |
| 55.73 | 4.00 | -6985.21 | -2266.57 | -52.67 | 375.84 | 48.95 | 370.55 | 19.46 | 0.32 | 5.00 |
| 58.58 | 8.01 | -6975.75 | -3496.40 | -75.21 | 627.11 | 81.72 | 330.58 | 19.38 | 0.50 | 8.00 |
| 56.67 | 12.03 | -6965.11 | -4051.22 | -59.37 | 742.65 | 53.65 | 193.23 | 19.32 | 0.58 | 10.00 |
| 56.90 | 0.01 | -2724.86 | 58.47 | -47.41 | -1.82 | 60.47 | 8.84 | 20.12 | -0.02 | 14.00 |
| 55.22 | 1.00 | -2705.88 | -284.48 | 18.67 | 16.69 | -49.79 | 46.95 | 20.12 | 0.11 | 16.00 |
| 54.91 | 2.01 | -2696.86 | -591.78 | -19.15 | 33.31 | 10.08 | 75.29 | 20.12 | 0.22 | 17.00 |
| 55.69 | 4.00 | -2695.59 | -1080.75 | -15.52 | 65.01 | 1.65 | 96.83 | 20.12 | 0.40 | 19.00 |
| 56.39 | 8.03 | -2682.00 | -1668.05 | 31.14 | 107.11 | -75.59 | 82.94 | 20.10 | 0.62 | 21.00 |
| 55.46 | 12.04 | -2717.81 | -1945.24 | -32.23 | 135.44 | 26.53 | 42.06 | 20.09 | 0.72 | 23.00 |
| 53.58 | 0.03 | -5443.96 | 115.37 | -14.47 | 20.50 | -1.30 | 14.89 | 19.69 | -0.02 | 28.00 |
| 54.56 | 1.00 | -5385.77 | -405.47 | -57.22 | 57.73 | 69.01 | 105.30 | 19.70 | 0.08 | 29.00 |
| 55.42 | 1.99 | -5382.52 | -509.46 | -39.56 | 115.87 | 58.58 | 178.73 | 19.71 | 0.17 | 31.00 |
| 55.69 | 4.00 | -5439.69 | -1776.41 | -34.59 | 238.14 | 25.91 | 264.50 | 19.70 | 0.33 | 32.00 |
| 55.73 | 8.01 | -5435.78 | -2953.92 | -44.14 | 407.83 | 36.37 | 267.13 | 19.64 | 0.54 | 35.00 |
| 57.53 | 12.03 | -5434.15 | -3422.95 | -57.25 | 482.31 | 57.03 | 140.16 | 19.61 | 0.63 | 37.00 |

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TABLE V
TABULATED DATA

RUN: 19- 1-32

| NS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|-------|-------|
| 40.41 | -0.01 | -6964.05 | 224.41 | -45.96 | -11.86 | 50.70 | 7.33 | 19.44 | -0.03 | 0.00 |
| 40.41 | 1.00 | -7054.14 | -415.08 | -46.68 | 90.50 | 50.36 | 138.14 | 19.48 | 0.06 | 1.00 |
| 40.37 | 1.99 | -6988.42 | -1001.66 | -48.84 | 140.49 | 48.40 | 243.62 | 19.46 | 0.14 | 3.00 |
| 40.37 | 4.00 | -6959.33 | -2059.36 | -57.97 | 360.65 | 59.26 | 377.62 | 19.39 | 0.29 | 5.00 |
| 40.33 | 8.03 | -6944.05 | -3470.59 | -78.89 | 630.43 | 89.00 | 401.97 | 19.31 | 0.50 | 7.00 |
| 40.33 | 12.03 | -6946.44 | -4161.94 | -71.53 | 778.54 | 74.93 | 243.88 | 19.24 | 0.60 | 9.00 |
| 40.49 | 0.01 | -551.61 | 229.57 | -27.57 | -10.79 | 21.60 | 10.33 | 19.64 | -0.04 | 13.00 |
| 40.33 | 1.01 | -5457.38 | -294.79 | -21.82 | 53.33 | 13.49 | 104.43 | 19.66 | 0.05 | 15.00 |
| 40.33 | 1.99 | -5456.31 | -806.84 | -29.16 | 113.10 | 23.21 | 173.86 | 15.66 | 0.15 | 17.00 |
| 40.37 | 4.00 | -5356.17 | -1683.24 | -41.00 | 223.08 | 39.21 | 262.28 | 19.62 | 0.31 | 19.00 |
| 40.25 | 6.01 | -5404.13 | -2885.30 | -41.68 | 404.72 | 33.90 | 270.67 | 19.58 | 0.53 | 21.00 |
| 40.25 | 12.03 | -5451.95 | -3498.61 | -42.00 | 488.64 | 31.76 | 163.20 | 19.56 | 0.64 | 23.00 |

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TABLE V
TABULATED DATA

RUN# 20- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|--------|--------|-------|-------|-------|
| 20.24 | -0.01 | -7018.85 | 315.10 | -26.10 | -7.36 | 18.37 | 6.34 | 19.39 | -0.04 | 0.0 |
| 20.17 | 1.00 | -7070.85 | -325.07 | -39.33 | 79.17 | 40.77 | 133.65 | 19.42 | 0.05 | 2.00 |
| 20.21 | 1.99 | -6972.52 | -904.23 | -37.02 | 196.40 | 31.48 | 238.05 | 19.36 | 0.13 | 4.00 |
| 20.21 | 3.98 | -6926.58 | -1450.52 | -55.44 | 345.06 | 59.09 | 381.20 | 19.34 | 0.28 | 6.00 |
| 20.13 | 8.01 | -6984.46 | -3487.73 | -72.86 | 615.44 | 79.43 | 434.19 | 19.28 | 0.50 | 8.00 |
| 20.13 | 12.03 | -6961.13 | -4294.64 | -75.61 | 789.68 | 80.91 | 300.14 | 19.19 | 0.62 | 10.00 |
| 20.21 | 0.03 | -2765.54 | 210.50 | 1.09 | -7.32 | -20.65 | 4.56 | 20.05 | -0.08 | 14.00 |
| 20.21 | 1.00 | -2663.24 | -121.97 | -3.91 | 18.08 | -10.36 | 43.54 | 19.55 | 0.05 | 16.00 |
| 20.17 | 1.99 | -2778.73 | -439.79 | -7.93 | 21.94 | -6.65 | 76.59 | 20.05 | 0.16 | 18.00 |
| 20.17 | 4.00 | -2758.42 | -976.04 | -12.78 | 69.55 | 1.55 | 108.48 | 20.04 | 0.35 | 19.00 |
| 20.13 | 8.01 | -2752.15 | -1700.01 | -15.50 | 87.98 | 3.27 | 105.64 | 20.02 | 0.62 | 22.00 |
| 20.17 | 12.01 | -2641.08 | -1997.29 | -8.89 | 131.27 | -11.84 | 61.72 | 19.55 | 0.76 | 24.00 |

TABLE V
TABULATED DATA

RUN: 21- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|------|------|
| 20.17 | -0.01 | -6930.57 | -57.83 | -46.78 | 15.15 | 52.97 | 14.10 | 19.35 | 0.01 | 0.0 |
| 20.21 | 1.00 | -6950.15 | -72.97 | -43.93 | 131.30 | 44.79 | 142.00 | 19.35 | 0.10 | 1.00 |
| 20.17 | 1.59 | -7089.65 | -1302.80 | -58.72 | 189.74 | 67.55 | 244.52 | 15.43 | 0.18 | 3.00 |
| 20.21 | 3.97 | -7004.43 | -2340.56 | -60.11 | 388.62 | 64.74 | 367.07 | 19.36 | 0.53 | 5.00 |
| 20.13 | 8.01 | -6930.77 | -3710.41 | -83.89 | 663.58 | 99.71 | 363.85 | 19.22 | 0.54 | 7.00 |
| 20.13 | 12.01 | -6920.56 | -4357.21 | -80.03 | 818.48 | 97.44 | 222.93 | 19.13 | 0.63 | 9.00 |

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RUN: 22-1-32

TABLE V
TABULATED DATA

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | TE |
|-------|-------|----------|----------|--------|--------|-------|--------|-------|------|------|
| 40.41 | -0.03 | -5540.43 | -29.12 | -35.97 | 5.59 | 36.99 | 13.52 | 19.68 | 0.01 | 0.0 |
| 40.33 | 1.00 | -5445.75 | -613.39 | -38.19 | 80.70 | 39.04 | 111.02 | 19.67 | 0.11 | 1.00 |
| 40.33 | 1.99 | -5427.91 | -1132.42 | -37.62 | 143.06 | 32.44 | 181.98 | 19.65 | 0.21 | 3.00 |
| 40.37 | 3.98 | -5492.11 | -2029.98 | -42.97 | 243.06 | 38.45 | 267.65 | 19.66 | 0.37 | 5.00 |
| 40.33 | 8.01 | -5458.01 | -3073.37 | -53.11 | 406.58 | 52.84 | 215.22 | 19.58 | 0.57 | 7.00 |
| 40.33 | 12.03 | -5492.21 | -3547.24 | -50.74 | 485.74 | 44.89 | 119.32 | 19.57 | 0.65 | 9.00 |

TABLE V
TABULATED DATA

RUN: 23- 1-32

| RS | SA | FZ | FY | FX | MX | MY | MZ | RH | NEY | TE |
|-------|-------|----------|----------|--------|--------|--------|-------|-------|-------|-------|
| 55.77 | -0.03 | -2741.05 | 23.55 | -13.71 | 3.28 | 5.43 | 5.55 | 20.12 | -0.01 | 1.00 |
| 55.64 | 1.01 | -2775.97 | -259.78 | -6.95 | 36.21 | -8.03 | 54.81 | 20.15 | 0.13 | 2.00 |
| 55.72 | 1.54 | -2746.97 | -690.67 | -8.00 | 30.21 | -7.21 | 84.50 | 20.14 | 0.25 | 4.00 |
| 55.73 | 4.00 | -2716.77 | -1204.14 | -14.96 | 69.22 | -0.63 | 97.88 | 20.12 | 0.44 | 6.00 |
| 55.64 | 8.01 | -2746.55 | -1786.30 | -16.77 | 128.18 | 2.93 | 69.83 | 20.11 | 0.65 | 8.00 |
| 55.65 | 12.03 | -2765.96 | -2104.00 | -11.20 | 139.13 | -11.76 | 43.15 | 20.12 | 0.76 | 10.00 |

TABLE V
TABULATED DATA

RUN: 24- 1-32

TABLE V
TABULATED DATA

| TE | MS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|--------|----------|--------|----------|---------|-------|-------|------|
| 3.43 | 21.49 | -0.03 | 0.29 | -2445.89 | -73.86 | -59.21 | -3.93 | -522.32 | 22.53 | 20.03 | 0.03 | 0.02 |
| 3.44 | 21.40 | -0.03 | 0.28 | -2440.21 | -63.81 | -94.26 | -16.46 | -1059.42 | 24.59 | 20.02 | 0.03 | 0.04 |
| 3.45 | 21.40 | -0.03 | 0.29 | -2528.10 | -68.77 | -125.20 | 31.38 | -1906.64 | 33.86 | 20.01 | 0.03 | 0.05 |
| 3.46 | 21.49 | -0.03 | 0.29 | -2652.41 | -43.45 | -232.44 | 22.39 | -2627.96 | 43.78 | 20.00 | 0.02 | 0.09 |
| 3.47 | 21.40 | -0.04 | 0.28 | -2783.65 | -27.72 | -503.16 | 122.42 | -2175.94 | 44.26 | 19.99 | 0.01 | 0.18 |
| 3.48 | 21.40 | -0.05 | 0.28 | -2859.42 | -31.84 | -866.52 | 79.50 | -1566.20 | 33.41 | 19.99 | 0.01 | 0.30 |
| 3.49 | 21.40 | -0.05 | 0.28 | -2881.43 | -45.70 | -1320.19 | -13.86 | -811.55 | 6.08 | 19.99 | 0.02 | 0.46 |
| 3.50 | 21.40 | -0.06 | 0.28 | -2872.91 | -34.16 | -1774.27 | -46.27 | -70.81 | -35.69 | 19.99 | 0.01 | 0.62 |
| 3.51 | 21.40 | -0.08 | 0.28 | -2852.87 | -2.49 | -2173.00 | -14.92 | 577.09 | -96.64 | 20.00 | 0.00 | 0.78 |
| 3.52 | 21.40 | -0.10 | 0.28 | -2827.26 | 13.51 | -2404.30 | 5.85 | 966.21 | -152.33 | 20.00 | -0.00 | 0.85 |
| 3.53 | 20.81 | -0.14 | 0.26 | -2830.41 | -1.86 | -2348.89 | 5.22 | 2228.89 | -171.54 | 20.00 | 0.00 | 0.83 |
| 3.54 | 20.32 | -0.19 | 0.25 | -2866.38 | -12.63 | -2155.73 | 30.99 | 4788.75 | -163.46 | 20.00 | 0.00 | 0.75 |
| 3.55 | 19.83 | -0.27 | 0.25 | -2872.75 | -33.64 | -1917.74 | 30.91 | 176.65 | -128.82 | 20.01 | 0.01 | 0.67 |
| 3.56 | 19.25 | -0.37 | 0.25 | -2853.99 | -54.56 | -1694.20 | -5.66 | -203.28 | -84.76 | 20.01 | 0.02 | 0.59 |
| 3.57 | 18.86 | -0.48 | 0.25 | -2841.57 | -70.07 | -1535.33 | -25.53 | 1909.61 | -19.65 | 20.02 | 0.02 | 0.54 |
| 3.58 | 18.76 | -0.57 | 0.26 | -2810.65 | -44.80 | -1483.09 | 6.75 | 1252.85 | -1.69 | 20.02 | 0.02 | 0.53 |
| 3.59 | 19.15 | -0.67 | 0.26 | -2777.94 | 6.15 | -1567.02 | 81.47 | -383.52 | -40.54 | 20.02 | -0.00 | 0.56 |
| 3.60 | 19.74 | -0.74 | 0.26 | -2766.09 | 31.43 | -1572.55 | 113.62 | -5.94 | -64.54 | 20.02 | -0.01 | 0.57 |
| 3.61 | 20.42 | -0.80 | 0.26 | -2756.25 | 26.13 | -1482.28 | 106.73 | 1709.34 | -31.80 | 20.02 | -0.01 | 0.54 |
| 3.62 | 20.81 | -0.84 | 0.26 | -2741.65 | 6.11 | -1498.81 | 50.93 | -510.47 | -6.87 | 20.02 | -0.00 | 0.52 |
| 3.63 | 20.81 | -0.87 | 0.26 | -2725.25 | -24.07 | -1546.07 | 42.94 | -428.59 | -16.45 | 20.02 | 0.01 | 0.57 |
| 3.64 | 20.42 | -0.89 | 0.26 | -2728.03 | -49.35 | -1562.56 | 1.13 | 1410.25 | -29.09 | 20.02 | 0.02 | 0.57 |
| 3.65 | 19.83 | -0.91 | 0.28 | -2700.54 | -54.49 | -1524.66 | -15.07 | 105.53 | -31.31 | 20.02 | 0.02 | 0.56 |
| 3.66 | 19.35 | -0.92 | 0.28 | -2695.64 | -24.18 | -1517.15 | 33.10 | -494.01 | -41.84 | 20.02 | 0.01 | 0.56 |
| 3.67 | 19.15 | -0.94 | 0.28 | -2712.54 | 6.29 | -1549.02 | 81.64 | 550.46 | -37.88 | 20.02 | -0.00 | 0.57 |
| 3.68 | 19.35 | -0.95 | 0.28 | -2701.55 | 6.30 | -1532.12 | 72.15 | 511.38 | -20.32 | 20.02 | -0.00 | 0.57 |
| 3.69 | 19.44 | -0.96 | 0.28 | -2690.78 | -3.71 | -1547.40 | 59.44 | -421.88 | -18.63 | 20.02 | 0.00 | 0.58 |
| 3.70 | 19.44 | -0.97 | 0.29 | -2700.73 | -8.83 | -1557.76 | 52.81 | 47.59 | -34.73 | 20.02 | 0.00 | 0.58 |
| 3.71 | 19.15 | -0.98 | 0.28 | -2710.87 | -13.99 | -1551.75 | 46.13 | 516.93 | -41.59 | 20.01 | 0.01 | 0.57 |
| 3.72 | 18.86 | -0.98 | 0.28 | -2705.22 | -23.83 | -1614.52 | 33.76 | -319.92 | -42.37 | 20.02 | 0.01 | 0.60 |
| 3.73 | 18.76 | -0.98 | 0.28 | -2709.07 | -28.80 | -1650.50 | 17.93 | 44.61 | -43.18 | 20.02 | 0.01 | 0.61 |
| 3.74 | 18.66 | -0.98 | 0.28 | -2714.56 | -18.66 | -1654.51 | 30.93 | 893.39 | -35.43 | 20.01 | 0.01 | 0.61 |
| 3.75 | 18.47 | -0.99 | 0.28 | -2716.17 | -8.72 | -1597.13 | 53.04 | -352.39 | -23.83 | 20.01 | 0.00 | 0.59 |
| 3.76 | 18.27 | -0.99 | 0.28 | -2727.34 | -8.97 | -1546.79 | 52.56 | -375.19 | -24.52 | 20.02 | 0.00 | 0.57 |
| 3.77 | 18.17 | -0.99 | 0.28 | -2726.55 | -18.97 | -1579.68 | 50.34 | 575.25 | -30.06 | 20.01 | 0.01 | 0.58 |
| 3.78 | 18.08 | -0.99 | 0.28 | -2715.59 | -23.92 | -1597.23 | 24.09 | -239.09 | -32.02 | 20.01 | 0.01 | 0.59 |
| 3.79 | 17.88 | -0.99 | 0.28 | -2727.21 | -18.82 | -1612.54 | 40.20 | -316.87 | -31.86 | 20.01 | 0.01 | 0.59 |
| 3.80 | 17.78 | -1.00 | 0.25 | -2732.65 | -13.94 | -1570.78 | 46.30 | 366.60 | -23.94 | 20.01 | 0.01 | 0.57 |

TABLE V
TABULATED DATA

RUN: 24-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|--------|----------|--------|---------|--------|-------|-------|------|
| 3.81 | 17.68 | -1.00 | 0.26 | -2722.04 | -3.89 | -1541.40 | 59.06 | -298.90 | -16.97 | 20.01 | 0.00 | 0.57 |
| 3.82 | 17.59 | -1.00 | 0.26 | -2726.97 | 1.41 | -1607.29 | 65.98 | -331.58 | -23.83 | 20.01 | -0.00 | 0.59 |
| 3.83 | 17.49 | -1.00 | 0.26 | -2737.15 | -3.58 | -1642.74 | 59.66 | 431.90 | -32.25 | 20.01 | 0.00 | 0.60 |
| 3.84 | 17.39 | -1.00 | 0.26 | -2725.35 | -13.59 | -1662.41 | 37.41 | -18.12 | -30.31 | 20.01 | 0.00 | 0.61 |
| 3.85 | 17.29 | -1.00 | 0.26 | -2730.60 | -28.91 | -1634.79 | 17.77 | -291.94 | -26.52 | 20.01 | 0.01 | 0.60 |
| 3.86 | 17.20 | -1.00 | 0.26 | -2736.07 | -34.12 | -1601.18 | 11.01 | 345.07 | -23.12 | 20.01 | 0.01 | 0.59 |
| 3.87 | 17.10 | -1.00 | 0.26 | -2725.74 | -28.89 | -1626.37 | 17.82 | 42.61 | -22.34 | 20.01 | 0.01 | 0.60 |
| 3.88 | 17.00 | -1.00 | 0.26 | -2732.08 | -13.67 | -1633.63 | 45.83 | -282.00 | -25.11 | 20.01 | 0.01 | 0.60 |
| 3.89 | 17.00 | -1.00 | 0.26 | -2732.08 | -3.57 | -1637.47 | 59.69 | 312.97 | -31.93 | 20.01 | 0.00 | 0.60 |
| 3.90 | 16.90 | -1.00 | 0.26 | -2721.47 | 6.44 | -1602.47 | 72.37 | 3.84 | -32.52 | 20.01 | -0.00 | 0.59 |
| 3.91 | 16.81 | -1.00 | 0.26 | -2721.45 | 6.35 | -1581.36 | 72.18 | -264.91 | -30.94 | 20.01 | -0.00 | 0.58 |
| 3.92 | 16.81 | -1.00 | 0.26 | -2732.26 | -8.76 | -1604.56 | 52.98 | 402.37 | -28.66 | 20.01 | 0.00 | 0.59 |
| 3.93 | 16.71 | -1.00 | 0.26 | -2726.37 | -23.92 | -1604.37 | 24.12 | 106.78 | -28.02 | 20.01 | 0.00 | 0.59 |
| 3.94 | 16.61 | -1.00 | 0.26 | -2726.59 | -24.07 | -1596.30 | 11.15 | -252.79 | -30.79 | 20.01 | 0.01 | 0.59 |
| 3.95 | 16.61 | -1.00 | 0.26 | -2732.05 | -29.21 | -1556.38 | 17.21 | 127.89 | -32.68 | 20.01 | 0.01 | 0.57 |
| 3.96 | 16.51 | -1.00 | 0.26 | -2727.77 | -19.16 | -1529.27 | 39.53 | -171.00 | -29.80 | 20.01 | 0.01 | 0.56 |
| 3.97 | 16.51 | -1.00 | 0.26 | -2727.59 | -8.85 | -1573.63 | 52.83 | -307.35 | -27.20 | 20.01 | 0.00 | 0.56 |
| 3.98 | 16.41 | -1.00 | 0.26 | -2727.18 | -3.67 | -1602.09 | 59.51 | 278.92 | -24.87 | 20.01 | 0.00 | 0.55 |
| 3.99 | 16.41 | -1.00 | 0.26 | -2716.41 | -3.57 | -1616.59 | 59.71 | 158.94 | -23.46 | 20.01 | 0.00 | 0.60 |
| 4.00 | 16.32 | -1.00 | 0.26 | -2721.67 | -3.72 | -1588.41 | 59.38 | -149.72 | -26.47 | 20.01 | 0.00 | 0.58 |
| 4.01 | 16.32 | -1.00 | 0.26 | -2727.14 | -13.99 | -1558.61 | 46.18 | 190.19 | -28.29 | 20.01 | 0.01 | 0.57 |
| 4.02 | 21.40 | -0.03 | 0.16 | -4719.05 | -41.62 | -44.41 | 15.55 | 54.66 | 46.04 | 19.76 | 0.01 | 0.01 |
| 4.03 | 21.40 | -0.03 | 0.16 | -4653.29 | -56.71 | -19.78 | -12.93 | 5.44 | 44.84 | 19.76 | 0.01 | 0.00 |
| 4.04 | 21.40 | -0.03 | 0.16 | -4605.71 | -41.24 | -43.86 | 16.14 | 34.71 | 39.16 | 19.77 | 0.01 | 0.01 |
| 4.05 | 21.40 | -0.03 | 0.16 | -4596.37 | -15.79 | -67.40 | 67.26 | 75.41 | 34.46 | 19.77 | 0.00 | 0.01 |
| 4.06 | 21.40 | -0.03 | 0.16 | -4614.32 | -0.55 | -63.45 | 105.53 | 127.78 | 33.27 | 19.77 | 0.00 | 0.01 |
| 4.07 | 21.40 | -0.03 | 0.16 | -4637.96 | -0.63 | -72.41 | 124.51 | 103.77 | 34.53 | 19.77 | 0.00 | 0.01 |
| 4.08 | 21.40 | -0.03 | 0.16 | -4647.67 | -16.05 | -33.33 | 95.41 | -2.05 | 32.23 | 19.77 | 0.00 | 0.01 |
| 4.09 | 21.40 | -0.03 | 0.16 | -4612.66 | -46.30 | -44.27 | 28.82 | 29.50 | 31.00 | 19.78 | 0.01 | 0.01 |
| 4.10 | 21.40 | -0.03 | 0.16 | -4567.67 | -66.36 | -58.04 | -15.37 | 77.41 | 33.20 | 19.78 | 0.01 | 0.01 |
| 4.11 | 21.40 | -0.03 | 0.16 | -4519.46 | -50.96 | -65.69 | 4.11 | 87.08 | 36.81 | 19.78 | 0.01 | 0.01 |
| 4.12 | 21.40 | -0.03 | 0.16 | -4489.96 | -15.43 | -46.73 | 77.42 | 51.73 | 34.29 | 19.78 | 0.00 | 0.01 |
| 4.13 | 21.40 | -0.03 | 0.16 | -4452.89 | 9.91 | -23.31 | 118.76 | 9.30 | 39.31 | 19.78 | -0.00 | 0.01 |
| 4.14 | 21.40 | -0.03 | 0.16 | -4407.92 | -0.03 | -42.58 | 87.27 | 35.86 | 33.52 | 19.78 | 0.00 | 0.01 |
| 4.15 | 21.40 | -0.03 | 0.16 | -4383.50 | -25.24 | -65.36 | 26.99 | 72.78 | 21.88 | 19.78 | 0.01 | 0.01 |
| 4.16 | 21.40 | -0.03 | 0.16 | -4399.39 | -30.30 | -86.90 | 20.66 | 111.57 | 12.52 | 19.77 | 0.01 | 0.01 |
| 4.17 | 21.40 | -0.03 | 0.16 | -4416.29 | -20.22 | -90.80 | 42.82 | 126.58 | 6.70 | 19.77 | 0.00 | 0.01 |
| 4.18 | 21.40 | -0.03 | 0.16 | -4415.22 | -15.30 | -66.13 | 39.35 | 62.15 | 5.56 | 19.76 | 0.00 | 0.01 |

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TABLE V
TABULATED DATA

RUN: 24- 1-32

| TE | KS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|----------|---------|-------|-------|------|
| 4.19 | 21.40 | -0.03 | 0.16 | -4385.68 | -5.12 | -69.60 | 23.52 | 60.00 | 7.96 | 19.76 | 0.00 | 0.02 |
| 4.20 | 21.40 | -0.03 | 0.16 | -4358.21 | 10.15 | -64.76 | 53.19 | 56.94 | 15.04 | 19.76 | -0.00 | 0.01 |
| 4.21 | 21.40 | -0.03 | 0.16 | -4365.76 | 35.51 | -65.05 | 84.12 | 46.09 | 22.16 | 19.75 | -0.01 | 0.01 |
| 4.22 | 21.40 | -0.03 | 0.16 | -4379.25 | 45.64 | -65.03 | 125.41 | -174.12 | 17.96 | 19.74 | -0.01 | 0.01 |
| 4.23 | 21.40 | -0.03 | 0.16 | -4345.62 | 15.25 | -45.90 | 77.70 | -635.36 | 9.34 | 19.74 | -0.00 | 0.01 |
| 4.24 | 21.40 | -0.03 | 0.16 | -4287.62 | 30.04 | -85.91 | -17.10 | -1234.79 | 1.03 | 14.74 | 0.01 | 0.04 |
| 4.25 | 21.40 | -0.04 | 0.16 | -4300.41 | -44.95 | -184.26 | -54.69 | -1992.02 | 0.64 | 19.73 | 0.01 | 0.04 |
| 4.26 | 21.40 | -0.04 | 0.16 | -4432.12 | -14.22 | -372.82 | 41.36 | -2396.87 | 3.21 | 19.72 | 0.00 | 0.08 |
| 4.27 | 21.40 | -0.04 | 0.16 | -4567.56 | 31.89 | -649.15 | 147.10 | -1950.58 | 3.44 | 19.71 | -0.01 | 0.14 |
| 4.28 | 21.40 | -0.05 | 0.15 | -4692.21 | 42.92 | -1017.49 | 151.83 | -1359.71 | 3.89 | 19.71 | -0.01 | 0.22 |
| 4.29 | 21.40 | -0.06 | 0.15 | -4716.66 | 29.28 | -1523.66 | 59.22 | -524.30 | -3.38 | 19.71 | -0.01 | 0.32 |
| 4.30 | 21.30 | -0.06 | 0.15 | -4689.74 | 26.20 | -2109.11 | -19.99 | 441.42 | -3.38 | 19.72 | -0.01 | 0.45 |
| 4.31 | 21.20 | -0.08 | 0.15 | -4636.86 | 53.68 | -2709.34 | -22.75 | 1425.00 | -70.91 | 19.72 | -0.01 | 0.58 |
| 4.32 | 21.01 | -0.09 | 0.15 | -4578.56 | 96.04 | -3205.25 | 31.20 | 2251.56 | -124.14 | 19.73 | -0.02 | 0.70 |
| 4.33 | 20.71 | -0.11 | 0.15 | -4531.73 | 102.08 | -3452.92 | 58.26 | 2619.49 | -165.38 | 19.73 | -0.02 | 0.76 |
| 4.34 | 16.52 | -0.13 | 0.15 | -4519.65 | 61.75 | -3458.13 | 46.07 | 2635.69 | -173.38 | 19.73 | -0.01 | 0.77 |
| 4.35 | 14.53 | -0.17 | 0.15 | -4551.37 | -4.70 | -3244.52 | 19.94 | 2255.55 | -145.24 | 19.73 | 0.00 | 0.71 |
| 4.36 | 14.44 | -0.22 | 0.15 | -4583.30 | -71.30 | -2985.29 | -16.04 | 3507.62 | -119.58 | 19.73 | 0.02 | 0.65 |
| 4.37 | 14.05 | -0.29 | 0.15 | -4584.64 | -102.25 | -2794.91 | -26.45 | 1579.17 | -115.18 | 19.73 | 0.02 | 0.61 |
| 4.38 | 16.76 | -0.29 | 0.15 | -4582.02 | -97.64 | -2671.98 | -11.42 | 1368.20 | -122.45 | 19.73 | 0.02 | 0.58 |
| 4.39 | 16.76 | -0.50 | 0.15 | -4550.45 | -67.40 | -2546.71 | 16.90 | 1251.44 | -94.09 | 19.73 | 0.01 | 0.57 |
| 4.40 | 16.65 | -0.60 | 0.15 | -4518.24 | -26.92 | -2548.48 | 58.07 | 2173.55 | -61.98 | 19.73 | 0.01 | 0.56 |
| 4.41 | 14.55 | -0.68 | 0.15 | -4503.68 | 23.75 | -2548.18 | 131.12 | 1162.55 | -59.56 | 19.73 | -0.01 | 0.57 |
| 4.42 | 14.74 | -0.75 | 0.15 | -4521.71 | 53.96 | -2507.18 | 187.93 | 1108.16 | -59.69 | 19.73 | -0.01 | 0.55 |
| 4.43 | 14.83 | -0.80 | 0.15 | -4522.67 | 38.48 | -2417.17 | 168.39 | 1222.86 | -32.16 | 19.73 | -0.01 | 0.53 |
| 4.44 | 14.54 | -0.84 | 0.15 | -4505.19 | -6.83 | -2465.34 | 102.28 | 1036.04 | -27.36 | 19.73 | 0.00 | 0.55 |
| 4.45 | 14.05 | -0.88 | 0.15 | -4476.68 | -46.91 | -2592.01 | 42.71 | 1245.97 | -64.04 | 19.73 | 0.01 | 0.56 |
| 4.46 | 16.56 | -0.88 | 0.15 | -4500.14 | -72.12 | -2640.43 | 1.62 | 1322.95 | -82.92 | 19.73 | 0.02 | 0.59 |
| 4.47 | 16.47 | -0.91 | 0.15 | -4501.55 | -77.43 | -2566.01 | -5.16 | 1197.60 | -70.92 | 19.73 | 0.02 | 0.57 |
| 4.48 | 11.27 | -0.92 | 0.15 | -4509.68 | -62.59 | -2472.60 | 22.79 | 1038.10 | -61.09 | 19.73 | 0.01 | 0.55 |
| 4.49 | 16.08 | -0.94 | 0.15 | -4516.64 | -32.37 | -2425.81 | 70.13 | 968.54 | -52.49 | 19.73 | 0.01 | 0.54 |
| 4.50 | 17.78 | -0.95 | 0.15 | -4517.86 | -17.38 | -2368.13 | 88.85 | 1073.36 | -43.12 | 19.73 | 0.00 | 0.52 |
| 4.51 | 17.39 | -0.96 | 0.15 | -4507.11 | -17.46 | -2342.40 | 79.15 | 943.52 | -50.48 | 19.73 | 0.00 | 0.52 |
| 4.52 | 17.55 | -0.97 | 0.15 | -4519.13 | -12.60 | -2306.31 | 94.64 | 776.89 | -65.28 | 19.73 | 0.00 | 0.51 |
| 4.53 | 17.10 | -0.97 | 0.15 | -4548.01 | -13.04 | -2211.13 | 103.36 | 785.93 | -60.55 | 19.73 | 0.00 | 0.45 |
| 4.54 | 17.00 | -0.97 | 0.15 | -4532.56 | -28.36 | -2148.72 | 74.61 | 512.68 | -63.53 | 19.73 | 0.01 | 0.47 |
| 4.55 | 16.81 | -0.98 | 0.15 | -4536.89 | -43.66 | -2113.15 | 55.42 | 459.46 | -36.31 | 19.73 | 0.01 | 0.47 |
| 4.56 | 16.61 | -0.98 | 0.15 | -4532.58 | -48.67 | -2124.10 | 39.63 | 481.53 | -37.49 | 19.73 | 0.01 | 0.47 |

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TABLE V
TABULATED DATA

RUN: 24- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | MFY | MFY |
|------|-------|-------|------|----------|--------|----------|-------|---------|--------|-------|------|------|
| 4.57 | 16.51 | -0.99 | 0.15 | -4521.38 | -38.46 | -2142.60 | 52.44 | 510.56 | -42.23 | 19.73 | 0.01 | 0.57 |
| 4.58 | 16.32 | -0.99 | 0.15 | -4514.03 | -33.31 | -2171.70 | 58.90 | 546.61 | -47.23 | 19.73 | 0.01 | 0.57 |
| 4.59 | 16.22 | -0.99 | 0.15 | -4507.90 | -27.88 | -2266.41 | 65.90 | 706.71 | -51.30 | 19.73 | 0.01 | 0.57 |
| 4.60 | 16.02 | -0.99 | 0.15 | -4500.97 | -27.54 | -2353.76 | 66.51 | 851.58 | -51.91 | 19.73 | 0.01 | 0.57 |
| 4.61 | 15.93 | -0.99 | 0.15 | -4488.96 | -22.14 | -2433.03 | 73.45 | 987.09 | -55.85 | 19.73 | 0.01 | 0.57 |
| 4.62 | 15.73 | -1.00 | 0.15 | -4474.45 | -22.06 | -2460.44 | 83.13 | 1025.92 | -58.46 | 19.73 | 0.01 | 0.57 |
| 4.63 | 15.63 | -1.00 | 0.15 | -4499.31 | -22.09 | -2464.54 | 89.69 | 1023.91 | -64.39 | 19.73 | 0.01 | 0.57 |
| 4.64 | 15.53 | -1.00 | 0.15 | -4498.93 | -16.87 | -2508.50 | 89.69 | 1102.27 | -69.16 | 19.72 | 0.01 | 0.57 |
| 4.65 | 15.34 | -1.00 | 0.15 | -4497.69 | -21.85 | -2530.32 | 73.95 | 1142.22 | -63.56 | 19.73 | 0.01 | 0.57 |
| 4.66 | 15.24 | -1.00 | 0.15 | -4491.38 | -31.86 | -2549.71 | 51.96 | 1181.32 | -54.41 | 19.73 | 0.01 | 0.57 |
| 4.67 | 15.14 | -1.00 | 0.15 | -4496.24 | -41.97 | -2560.96 | 39.31 | 1191.65 | -55.77 | 19.72 | 0.01 | 0.57 |
| 4.68 | 15.05 | -1.00 | 0.15 | -4500.90 | -36.95 | -2568.95 | 45.52 | 1193.38 | -67.52 | 19.72 | 0.01 | 0.57 |
| 4.69 | 14.95 | -1.00 | 0.15 | -4506.04 | -26.69 | -2615.53 | 67.99 | 1274.86 | -93.86 | 19.72 | 0.01 | 0.57 |
| 4.70 | 14.75 | -1.00 | 0.15 | -4506.46 | -26.62 | -2638.50 | 68.10 | 1317.00 | -95.46 | 19.72 | 0.01 | 0.57 |
| 4.71 | 14.66 | -1.00 | 0.15 | -4500.76 | -26.67 | -2618.34 | 58.49 | 1288.72 | -80.33 | 19.72 | 0.01 | 0.57 |
| 4.72 | 14.56 | -1.00 | 0.15 | -4513.36 | -16.77 | -2556.28 | 80.32 | 1182.28 | -71.81 | 19.72 | 0.01 | 0.57 |
| 4.73 | 14.46 | -1.00 | 0.15 | -4514.02 | -11.89 | -2514.41 | 86.33 | 1104.15 | -62.45 | 19.72 | 0.01 | 0.57 |
| 4.74 | 14.36 | -1.00 | 0.15 | -4518.63 | -16.78 | -2556.11 | 80.32 | 1179.95 | -63.79 | 19.72 | 0.01 | 0.57 |
| 4.75 | 14.17 | -1.00 | 0.15 | -4506.23 | -31.74 | -2610.46 | 52.16 | 1275.02 | -68.74 | 19.72 | 0.01 | 0.57 |
| 4.76 | 14.07 | -1.00 | 0.15 | -4505.21 | -36.56 | -2675.14 | 46.27 | 1384.79 | -73.77 | 19.72 | 0.01 | 0.57 |
| 4.77 | 13.97 | -1.00 | 0.15 | -4505.65 | -36.50 | -2699.59 | 46.35 | 1415.62 | -71.81 | 19.72 | 0.01 | 0.57 |
| 4.78 | 13.87 | -1.00 | 0.15 | -4508.89 | -36.51 | -2700.46 | 46.31 | 1405.10 | -65.12 | 19.72 | 0.01 | 0.57 |
| 4.79 | 13.78 | -1.00 | 0.15 | -4509.42 | -31.22 | -2750.09 | 62.62 | 1494.83 | -63.03 | 19.72 | 0.01 | 0.57 |
| 4.80 | 13.58 | -1.00 | 0.15 | -4503.53 | -20.92 | -2753.33 | 75.62 | 1571.68 | -66.67 | 19.72 | 0.01 | 0.57 |
| 4.81 | 2.54 | -1.00 | 0.09 | -18.47 | 10.34 | -6.40 | 24.03 | 4.06 | 5.74 | 23.51 | 0.00 | 0.56 |

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TABLE V
TABULATED DATA

RUN: 25- 1-32

| TE | KS | SK | SA | FZ | FY | FX | MX | MY | MZ | RH | NEY | NFA |
|------|-------|-------|-------|----------|--------|----------|--------|----------|---------|-------|-------|-------|
| 0.00 | 41.04 | -0.02 | -0.01 | -4526.28 | -71.56 | -26.59 | 8.29 | 20.02 | 26.60 | 19.82 | 0.02 | 0.01 |
| 0.01 | 40.55 | -0.02 | -0.01 | -4546.26 | -15.20 | -25.73 | 108.22 | 17.16 | 12.04 | 19.81 | 0.00 | 0.01 |
| 0.02 | 40.55 | -0.02 | -0.01 | -4598.45 | -9.91 | -36.73 | 124.53 | 37.90 | 10.84 | 19.81 | 0.00 | 0.01 |
| 0.03 | 40.64 | -0.02 | -0.01 | -443.25 | -30.10 | -14.52 | 89.54 | -6.22 | 6.09 | 19.80 | 0.01 | 0.00 |
| 0.04 | 40.64 | -0.02 | -0.01 | -424.30 | -65.51 | -16.12 | 16.39 | -10.39 | 5.70 | 19.79 | 0.02 | 0.00 |
| 0.05 | 40.64 | -0.02 | -0.01 | -4298.59 | -75.80 | -46.90 | -6.07 | 51.54 | 3.49 | 19.78 | 0.02 | 0.01 |
| 0.06 | 40.64 | -0.02 | -0.01 | -419.09 | -55.86 | -65.00 | 38.03 | 77.41 | 6.99 | 19.77 | 0.01 | 0.01 |
| 0.07 | 40.55 | -0.02 | -0.01 | -4556.48 | -25.91 | -67.46 | 164.12 | 84.47 | 8.12 | 19.75 | 0.01 | 0.02 |
| 0.08 | 40.55 | -0.02 | -0.01 | -4596.71 | -28.73 | -43.45 | 54.65 | 50.37 | 9.14 | 19.77 | 0.01 | 0.01 |
| 0.09 | 40.55 | -0.03 | -0.01 | -4612.70 | -66.95 | -39.94 | -33.65 | 35.26 | 6.74 | 19.77 | 0.01 | 0.01 |
| 0.10 | 40.55 | -0.02 | -0.01 | -4671.12 | -82.26 | -63.41 | -62.46 | 74.19 | 2.07 | 19.77 | 0.02 | 0.01 |
| 0.11 | 40.55 | -0.03 | -0.01 | -4758.24 | -67.23 | -75.95 | -34.30 | 99.47 | -1.41 | 19.78 | 0.01 | 0.02 |
| 0.12 | 40.55 | -0.03 | -0.01 | -4635.59 | -42.27 | -74.41 | 16.19 | 101.21 | 0.94 | 19.78 | 0.01 | 0.02 |
| 0.13 | 40.55 | -0.02 | -0.01 | -4846.32 | -27.29 | -35.73 | 34.84 | 15.91 | 5.63 | 19.79 | 0.01 | 0.01 |
| 0.14 | 40.55 | -0.02 | -0.01 | -4821.31 | -27.19 | -24.71 | 54.08 | -7.47 | 6.86 | 19.80 | 0.01 | 0.01 |
| 0.15 | 40.55 | -0.02 | -0.01 | -4724.48 | -36.86 | -43.38 | 42.13 | 42.61 | 9.20 | 19.81 | 0.01 | 0.01 |
| 0.16 | 40.55 | -0.02 | -0.01 | -4567.60 | -46.41 | -48.15 | 20.81 | 59.60 | 9.35 | 19.82 | 0.01 | 0.01 |
| 0.17 | 40.55 | -0.02 | -0.01 | -4449.18 | -56.11 | -42.88 | 8.76 | 39.13 | 9.45 | 19.82 | 0.01 | 0.01 |
| 0.18 | 40.64 | -0.03 | -0.01 | -4380.17 | -50.95 | -1.24 | 24.80 | -40.00 | 10.76 | 19.82 | 0.01 | 0.00 |
| 0.19 | 40.55 | -0.02 | -0.01 | -4334.41 | -25.45 | 4.72 | 85.67 | -43.59 | 12.00 | 19.81 | 0.01 | -0.00 |
| 0.20 | 40.64 | -0.03 | -0.01 | -4282.14 | -9.90 | -25.08 | 124.53 | -20.06 | 13.18 | 19.80 | 0.00 | 0.01 |
| 0.21 | 40.64 | -0.03 | -0.01 | -4227.21 | -24.82 | -46.25 | 96.34 | -164.82 | 12.31 | 19.80 | 0.01 | 0.01 |
| 0.22 | 40.55 | -0.02 | -0.01 | -4224.24 | -60.26 | -57.34 | 23.16 | -520.87 | 11.65 | 19.79 | 0.01 | 0.01 |
| 0.23 | 40.55 | -0.03 | -0.01 | -4303.86 | -75.60 | -48.25 | -6.07 | -1055.29 | 11.20 | 19.78 | 0.02 | 0.01 |
| 0.24 | 40.55 | -0.03 | -0.01 | -4429.66 | -58.27 | -162.62 | 27.59 | -1720.66 | 15.13 | 19.77 | 0.01 | 0.02 |
| 0.25 | 40.55 | -0.03 | -0.01 | -4556.38 | -35.40 | -252.92 | 73.47 | -2446.93 | 22.08 | 19.76 | 0.01 | 0.06 |
| 0.26 | 40.64 | -0.04 | -0.01 | -4608.80 | -29.71 | -492.11 | 52.34 | -2201.08 | 24.13 | 19.76 | 0.01 | 0.11 |
| 0.27 | 40.64 | -0.04 | -0.01 | -4630.22 | -38.84 | -821.31 | -6.36 | -1660.77 | 21.55 | 19.77 | 0.01 | 0.16 |
| 0.28 | 40.55 | -0.04 | -0.01 | -4680.56 | -40.10 | -1218.45 | -33.96 | -1020.54 | 16.90 | 19.77 | 0.01 | 0.26 |
| 0.29 | 40.55 | -0.04 | -0.01 | -4761.58 | -21.01 | -1712.24 | -1.66 | -213.32 | 13.40 | 19.77 | 0.00 | 0.36 |
| 0.30 | 40.45 | -0.05 | -0.01 | -4758.53 | 1.20 | -2275.82 | -10.91 | 717.08 | 15.05 | 19.78 | -0.00 | 0.48 |
| 0.31 | 40.35 | -0.06 | -0.01 | -4690.57 | 18.49 | -2815.91 | -26.32 | 1610.85 | 7.60 | 19.78 | -0.00 | 0.60 |
| 0.32 | 40.66 | -0.07 | -0.01 | -4572.01 | 50.85 | -3281.60 | -3.77 | 2377.13 | -23.47 | 19.79 | -0.01 | 0.72 |
| 0.33 | 39.67 | -0.08 | -0.01 | -4432.27 | 72.45 | -3549.11 | 33.47 | 2801.77 | -71.65 | 19.79 | -0.02 | 0.80 |
| 0.34 | 39.68 | -0.09 | -0.01 | -4287.36 | 47.89 | -3619.14 | 21.98 | 2915.42 | -107.85 | 19.79 | -0.01 | 0.84 |
| 0.35 | 38.20 | -0.10 | -0.01 | -4158.09 | -12.67 | -3514.63 | -25.39 | 2756.42 | -112.65 | 19.79 | 0.00 | 0.85 |
| 0.36 | 37.32 | -0.11 | -0.01 | -4086.45 | -63.58 | -3309.91 | -41.72 | 2429.48 | -105.17 | 19.78 | 0.02 | 0.81 |
| 0.37 | 36.83 | -0.14 | -0.01 | -4045.68 | -84.24 | -3116.37 | -29.63 | 2115.52 | -98.98 | 19.77 | -0.02 | 0.77 |

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TABLE V
TABULATED DATA

RUN: 25- I-32

| TE | RS | SK | SA | FZ | FY | FX | MX | MY | MZ | RII | NFY | NFX |
|------|-------|-------|-------|----------|--------|----------|--------|---------|--------|-------|-------|------|
| 0.38 | 36.93 | -0.20 | -0.01 | -4034.93 | -64.55 | -2942.57 | 23.44 | 1815.40 | -98.95 | 19.76 | 0.02 | 0.73 |
| 0.39 | 37.23 | -0.26 | -0.01 | -4026.82 | -34.48 | -2849.93 | 70.61 | 1658.65 | -98.17 | 19.74 | 0.01 | 0.71 |
| 0.40 | 37.42 | -0.32 | -0.01 | -4033.36 | 4.25 | -2814.38 | 108.43 | 1607.36 | -98.82 | 19.73 | 0.00 | 0.70 |
| 0.41 | 37.23 | -0.38 | -0.01 | -4061.24 | 15.77 | -2774.42 | 133.39 | 1543.27 | -92.67 | 19.72 | -0.00 | 0.68 |
| 0.42 | 36.83 | -0.45 | -0.01 | -4104.16 | 0.27 | -2730.87 | 104.30 | 2973.81 | -83.62 | 19.70 | -0.00 | 0.67 |
| 0.43 | 36.74 | -0.52 | -0.01 | -4140.54 | -25.40 | -2681.09 | 52.95 | 1373.86 | -75.02 | 19.69 | 0.01 | 0.65 |
| 0.44 | 36.83 | -0.60 | -0.01 | -4219.67 | -51.03 | -2675.85 | 1.79 | 1361.52 | -67.02 | 19.67 | 0.01 | 0.63 |
| 0.45 | 36.93 | -0.67 | -0.01 | -4295.13 | -56.37 | -2648.04 | -14.42 | 1322.60 | -25.29 | 19.66 | 0.01 | 0.62 |
| 0.46 | 36.64 | -0.73 | -0.01 | -4352.86 | -51.51 | -2641.13 | -27.47 | 2108.35 | 6.76 | 15.66 | 0.01 | 0.61 |
| 0.47 | 36.25 | -0.78 | -0.01 | -4387.86 | -31.25 | -2706.20 | -21.30 | 1428.10 | -12.91 | 19.66 | 0.01 | 0.60 |
| 0.48 | 35.56 | -0.83 | -0.01 | -4440.71 | 8.95 | -2707.42 | 28.55 | 1406.15 | -37.35 | 19.55 | -0.00 | 0.61 |
| 0.49 | 35.96 | -0.86 | -0.01 | -4431.29 | 33.72 | -2618.83 | 87.81 | 1919.50 | -20.58 | 19.65 | -0.01 | 0.59 |
| 0.50 | 36.35 | -0.89 | -0.01 | -4572.26 | 23.24 | -2534.97 | 84.21 | 1138.34 | -1.30 | 19.65 | -0.01 | 0.55 |
| 0.51 | 37.03 | -0.51 | -0.01 | -4587.96 | -7.25 | -2526.41 | 26.62 | 1129.34 | -11.60 | 19.65 | 0.00 | 0.55 |
| 0.52 | 37.42 | -0.53 | -0.01 | -4597.73 | -32.61 | -2528.82 | -4.55 | 1132.14 | -15.16 | 19.65 | 0.01 | 0.55 |
| 0.53 | 37.13 | -0.54 | -0.01 | -4602.75 | -32.69 | -2510.46 | -4.72 | 1089.18 | -2.59 | 19.65 | 0.01 | 0.55 |
| 0.54 | 36.35 | -0.55 | -0.01 | -4550.74 | -17.23 | -2580.29 | 14.68 | 1206.93 | -7.65 | 19.66 | 0.00 | 0.56 |
| 0.55 | 35.66 | -0.56 | -0.01 | -4590.34 | 3.33 | -2669.34 | 50.02 | 1341.17 | -12.74 | 19.66 | -0.00 | 0.56 |
| 0.56 | 35.37 | -0.57 | -0.01 | -4585.04 | 3.39 | -2662.09 | 50.15 | 1346.77 | -0.04 | 19.66 | -0.00 | 0.56 |
| 0.57 | 35.17 | -0.57 | -0.01 | -4559.63 | -1.60 | -2645.71 | 53.54 | 1326.09 | 1.34 | 19.67 | 0.00 | 0.58 |
| 0.58 | 34.68 | -0.58 | -0.01 | -4543.34 | -16.90 | -2613.45 | 24.32 | 1260.97 | -11.35 | 19.67 | 0.00 | 0.58 |
| 0.59 | 34.49 | -0.58 | -0.01 | -4534.00 | -22.00 | -2585.44 | 37.50 | 1214.79 | -7.69 | 19.67 | 0.00 | 0.57 |
| 0.60 | 34.29 | -0.59 | -0.01 | -4507.36 | -26.90 | -2552.40 | 31.48 | 1234.78 | -3.00 | 19.67 | 0.01 | 0.56 |
| 0.61 | 34.20 | -0.59 | -0.01 | -4465.21 | -16.56 | -2636.96 | 44.48 | 1315.93 | -19.54 | 19.67 | 0.00 | 0.55 |
| 0.62 | 34.20 | -0.59 | -0.01 | -4468.74 | -6.36 | -2654.06 | 57.21 | 1340.02 | -34.39 | 19.67 | 0.00 | 0.55 |
| 0.63 | 33.50 | -0.59 | -0.01 | -4464.01 | 3.49 | -2578.61 | 65.31 | 1202.66 | -28.29 | 19.67 | -0.00 | 0.58 |
| 0.64 | 33.61 | -1.00 | -0.01 | -4459.34 | -1.65 | -2548.21 | 62.89 | 1153.82 | -21.12 | 19.66 | 0.00 | 0.57 |
| 0.65 | 33.51 | -1.00 | -0.01 | -4459.36 | -6.64 | -2565.01 | 56.72 | 1187.55 | -23.45 | 19.66 | 0.00 | 0.58 |
| 0.66 | 33.51 | -1.00 | -0.01 | -4476.51 | -21.78 | -2584.11 | 47.43 | 1225.52 | -25.25 | 19.66 | 0.00 | 0.58 |
| 0.67 | 33.41 | -1.00 | -0.01 | -4464.07 | -37.05 | -2565.20 | 9.25 | 1191.99 | -31.51 | 19.66 | 0.01 | 0.57 |
| 0.68 | 33.32 | -1.00 | -0.01 | -4462.62 | -42.34 | -2511.02 | -7.04 | 1093.37 | -26.70 | 19.66 | 0.01 | 0.56 |
| 0.69 | 33.22 | -1.00 | -0.01 | -4475.42 | -22.18 | -2494.87 | 27.58 | 1063.10 | -25.44 | 19.66 | 0.00 | 0.56 |
| 0.70 | 33.22 | -1.00 | -0.01 | -4487.45 | 3.16 | -2503.52 | 68.76 | 1084.27 | -22.98 | 19.65 | -0.00 | 0.56 |
| 0.71 | 33.22 | -1.00 | -0.01 | -4504.14 | 8.09 | -2476.12 | 74.86 | 1046.06 | -15.87 | 19.66 | -0.00 | 0.55 |
| 0.72 | 33.12 | -1.00 | -0.01 | -4510.05 | 2.74 | -2468.15 | 58.52 | 934.23 | -10.72 | 19.66 | -0.00 | 0.55 |
| 0.73 | 33.12 | -1.00 | -0.01 | -4517.18 | -17.97 | -2496.21 | 32.42 | 731.59 | -10.05 | 19.66 | 0.00 | 0.51 |
| 0.74 | 33.02 | -1.00 | -0.01 | -4530.22 | -23.27 | -2224.62 | 35.25 | 626.85 | -3.78 | 19.66 | 0.01 | 0.45 |
| 0.75 | 33.02 | -1.00 | -0.01 | -4525.21 | -26.25 | -2246.53 | 19.58 | 608.50 | 1.90 | 19.66 | 0.01 | 0.50 |

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RUN: 25- 1-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | KH | NFY | NFX |
|------|-------|-------|-------|----------|----------|----------|--------|----------|---------|-------|------|-------|
| 0.76 | 33.02 | -1.00 | -0.01 | -4516.80 | -22.78 | -2351.50 | 26.01 | 846.98 | -10.27 | 19.66 | 0.01 | 0.52 |
| 0.77 | 35.02 | -1.00 | -0.01 | -4497.85 | -17.34 | -2454.09 | 24.00 | 1012.06 | -26.03 | 19.66 | 0.00 | 0.55 |
| 0.78 | 32.93 | -1.00 | -0.01 | -4497.39 | -7.20 | -2464.12 | 46.14 | 1006.62 | -25.24 | 19.66 | 0.00 | 0.55 |
| 0.79 | 32.93 | -1.00 | -0.01 | -4491.89 | -2.05 | -2478.66 | 52.61 | 1036.80 | -24.13 | 19.66 | 0.00 | 0.55 |
| 0.80 | 32.93 | -1.00 | -0.01 | -4492.96 | -1.98 | -2493.33 | 62.30 | 1068.26 | -31.00 | 19.66 | 0.00 | 0.55 |
| 0.81 | 32.93 | -1.00 | -0.01 | -4468.10 | -7.05 | -2482.12 | 56.00 | 1055.54 | -29.67 | 19.66 | 0.00 | 0.55 |
| 0.82 | 40.64 | -0.03 | 1.99 | -4825.23 | -1130.69 | -42.37 | 141.24 | 25.49 | 220.29 | 19.78 | 0.23 | 0.01 |
| 0.83 | 40.64 | -0.03 | 1.99 | -4836.61 | -1146.01 | -19.43 | 130.50 | -13.86 | 216.70 | 19.79 | 0.24 | 0.00 |
| 0.84 | 40.55 | -0.02 | 1.99 | -4795.36 | -1160.83 | -55.03 | 130.25 | 51.88 | 216.67 | 19.80 | 0.24 | 0.01 |
| 0.85 | 40.64 | -0.02 | 1.99 | -4682.26 | -1165.45 | -66.83 | 123.69 | 66.85 | 206.37 | 19.81 | 0.25 | 0.01 |
| 0.86 | 40.55 | -0.02 | 1.99 | -4556.50 | -1160.00 | -70.72 | 110.66 | 80.52 | 192.60 | 19.82 | 0.25 | 0.02 |
| 0.87 | 40.55 | -0.02 | 1.99 | -4441.90 | -1139.61 | -27.27 | 117.21 | -0.65 | 173.32 | 19.82 | 0.26 | 0.01 |
| 0.88 | 40.64 | -0.03 | 1.99 | -4381.82 | -1074.07 | 12.17 | 164.97 | -72.11 | 171.23 | 19.82 | 0.25 | -0.00 |
| 0.89 | 40.55 | -0.02 | 1.99 | -4317.29 | -1050.75 | -7.12 | 203.57 | -22.72 | 172.54 | 19.81 | 0.24 | 0.00 |
| 0.90 | 40.55 | -0.02 | 1.99 | -4265.79 | -1032.84 | -28.32 | 215.37 | 18.23 | 171.31 | 19.80 | 0.24 | 0.01 |
| 0.91 | 40.55 | -0.02 | 1.99 | -4207.98 | -1042.76 | -57.92 | 164.79 | 61.99 | 157.36 | 19.80 | 0.25 | 0.01 |
| 0.92 | 40.55 | -0.02 | 1.99 | -4214.62 | -1063.19 | -49.04 | 101.60 | 37.41 | 147.93 | 19.79 | 0.25 | 0.01 |
| 0.93 | 40.64 | -0.03 | 1.99 | -4317.77 | -1073.75 | -27.38 | 98.51 | -11.42 | 150.14 | 19.78 | 0.25 | 0.01 |
| 0.94 | 40.55 | -0.03 | 1.99 | -4478.81 | -1074.08 | -46.59 | 147.51 | 29.55 | 167.40 | 19.76 | 0.24 | 0.01 |
| 0.95 | 40.64 | -0.03 | 1.99 | -4593.61 | -1079.41 | -63.05 | 159.87 | 55.47 | 181.15 | 19.76 | 0.23 | 0.01 |
| 0.96 | 40.55 | -0.03 | 1.99 | -4617.79 | -1109.80 | -88.47 | 93.13 | 113.18 | 188.99 | 19.76 | 0.24 | 0.02 |
| 0.97 | 40.55 | -0.03 | 1.99 | -4626.72 | -1140.30 | -74.00 | 35.68 | 95.86 | 187.74 | 19.76 | 0.25 | 0.02 |
| 0.98 | 40.64 | -0.03 | 1.99 | -4699.57 | -1145.71 | -36.21 | 56.42 | -6.60 | 191.28 | 19.77 | 0.24 | 0.01 |
| 0.99 | 40.55 | -0.03 | 1.99 | -4784.29 | -1135.70 | -51.20 | 107.18 | 23.14 | 199.40 | 19.77 | 0.24 | 0.01 |
| 1.00 | 40.64 | -0.03 | 1.99 | -4630.34 | -1140.76 | -65.44 | 128.61 | 8.71 | 208.72 | 19.78 | 0.24 | 0.01 |
| 1.01 | 40.64 | -0.03 | 1.99 | -4843.01 | -1145.75 | -80.71 | 140.57 | -180.26 | 209.11 | 19.79 | 0.24 | 0.02 |
| 1.02 | 40.64 | -0.03 | 1.99 | -4861.48 | -1150.71 | -60.45 | 153.44 | -614.05 | 209.77 | 19.79 | 0.24 | 0.01 |
| 1.03 | 40.55 | -0.02 | 1.99 | -4688.95 | -1160.47 | -47.51 | 149.88 | -1276.66 | 207.41 | 19.80 | 0.25 | 0.01 |
| 1.04 | 40.55 | -0.03 | 1.99 | -4547.91 | -1162.15 | -127.96 | 130.20 | -1579.14 | 202.35 | 19.81 | 0.26 | 0.05 |
| 1.05 | 40.64 | -0.03 | 1.99 | -4461.43 | -1153.92 | -259.50 | 119.79 | -2586.96 | 190.86 | 19.81 | 0.26 | 0.06 |
| 1.06 | 40.55 | -0.03 | 1.99 | -4377.07 | -1112.44 | -493.20 | 124.69 | -2198.61 | 177.73 | 19.81 | 0.25 | 0.11 |
| 1.07 | 40.55 | -0.03 | 1.99 | -4323.58 | -1040.41 | -820.75 | 177.72 | -1667.46 | 154.54 | 19.81 | 0.24 | 0.19 |
| 1.08 | 40.55 | -0.04 | 1.99 | -4254.56 | -968.08 | -1239.69 | 203.36 | -991.42 | 124.81 | 19.80 | 0.23 | 0.29 |
| 1.09 | 40.45 | -0.05 | 1.99 | -4159.10 | -910.51 | -1776.85 | 172.42 | -101.88 | 78.35 | 19.79 | 0.22 | 0.43 |
| 1.10 | 40.45 | -0.06 | 1.99 | -4071.15 | -852.99 | -2339.69 | 111.91 | 850.42 | 8.63 | 19.79 | 0.21 | 0.57 |
| 1.11 | 40.25 | -0.07 | 1.99 | -4071.34 | -780.71 | -2862.89 | 89.44 | 1721.02 | -85.18 | 19.78 | 0.19 | 0.71 |
| 1.12 | 40.06 | -0.09 | 1.99 | -4144.77 | -683.97 | -3265.05 | 107.22 | 2324.95 | -164.17 | 19.76 | 0.17 | 0.79 |
| 1.13 | 39.77 | -0.10 | 1.99 | -4226.93 | -598.10 | -3417.10 | 100.69 | 2560.07 | -195.46 | 19.75 | 0.14 | 0.81 |

TABLE V
TABULATED DATA

RUN: 25-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|---------|-------|------|------|
| 1.14 | 39.18 | -0.12 | 1.99 | -4261.90 | -532.70 | -3433.67 | 39.79 | 2600.22 | -174.64 | 19.74 | 0.12 | 0.81 |
| 1.15 | 38.40 | -0.14 | 1.99 | -4277.11 | -467.60 | -3338.32 | -21.79 | 2451.60 | -139.25 | 19.73 | 0.11 | 0.78 |
| 1.16 | 37.42 | -0.16 | 1.99 | -4291.82 | -387.23 | -3240.21 | -16.88 | 2304.05 | -115.22 | 19.73 | 0.09 | 0.75 |
| 1.17 | 36.83 | -0.19 | 1.99 | -4307.93 | -296.90 | -3109.20 | 19.69 | 2079.31 | -102.75 | 19.72 | 0.07 | 0.72 |
| 1.18 | 36.74 | -0.24 | 1.99 | -4354.41 | -206.51 | -2993.62 | 44.39 | 1879.69 | -90.37 | 19.71 | 0.05 | 0.69 |
| 1.19 | 36.93 | -0.30 | 1.99 | -4424.82 | -136.08 | -2953.41 | 172.88 | 1821.63 | -84.02 | 19.70 | 0.03 | 0.67 |
| 1.20 | 37.23 | -0.37 | 1.99 | -4482.18 | -121.24 | -2922.45 | 162.55 | 1776.24 | -83.72 | 19.70 | 0.03 | 0.65 |
| 1.21 | 37.13 | -0.43 | 1.99 | -4487.41 | -157.01 | -2886.44 | 50.93 | 1722.49 | -83.52 | 19.70 | 0.03 | 0.64 |
| 1.22 | 36.83 | -0.49 | 1.99 | -4516.21 | -193.01 | -2790.56 | -42.13 | 3158.60 | -80.29 | 19.70 | 0.04 | 0.62 |
| 1.23 | 36.74 | -0.56 | 1.99 | -4542.54 | -183.26 | -2732.79 | -49.26 | 1454.77 | -82.60 | 19.70 | 0.04 | 0.60 |
| 1.24 | 36.74 | -0.63 | 1.99 | -4592.13 | -137.85 | -2739.09 | 17.03 | 1476.05 | -84.87 | 19.70 | 0.03 | 0.60 |
| 1.25 | 36.83 | -0.70 | 1.99 | -4587.20 | -117.74 | -2676.79 | 32.61 | 1375.60 | -45.15 | 19.70 | 0.03 | 0.58 |
| 1.26 | 36.64 | -0.76 | 1.99 | -4564.75 | -122.82 | -2635.12 | 7.13 | 1775.75 | -6.48 | 19.71 | 0.03 | 0.58 |
| 1.27 | 36.35 | -0.80 | 1.99 | -4520.16 | -102.42 | -2653.11 | 23.13 | 1344.28 | -17.32 | 19.71 | 0.02 | 0.59 |
| 1.28 | 35.96 | -0.84 | 1.99 | -4532.79 | -72.08 | -2662.14 | 89.62 | 1343.93 | -38.26 | 19.71 | 0.02 | 0.59 |
| 1.29 | 35.86 | -0.87 | 1.99 | -4551.33 | -61.97 | -2650.43 | 121.40 | 1569.61 | -21.20 | 19.71 | 0.01 | 0.58 |
| 1.30 | 36.25 | -0.90 | 1.99 | -4524.27 | -82.13 | -2635.79 | 86.73 | 1317.54 | -6.71 | 19.71 | 0.01 | 0.58 |
| 1.31 | 36.83 | -0.92 | 1.99 | -4517.98 | -102.36 | -2642.68 | 51.88 | 1331.32 | -17.14 | 19.71 | 0.02 | 0.58 |
| 1.32 | 37.42 | -0.93 | 1.99 | -4518.77 | -122.80 | -2566.48 | 26.04 | 1194.21 | -9.92 | 19.71 | 0.02 | 0.57 |
| 1.33 | 37.23 | -0.95 | 1.99 | -4502.61 | -133.29 | -2472.71 | -6.22 | 1032.11 | 15.93 | 19.71 | 0.03 | 0.55 |
| 1.34 | 36.54 | -0.96 | 1.99 | -4491.27 | -123.00 | -2505.49 | 6.77 | 1098.07 | 12.46 | 19.71 | 0.03 | 0.56 |
| 1.35 | 35.76 | -0.96 | 1.99 | -4485.39 | -107.70 | -2543.34 | 25.95 | 1163.98 | -6.13 | 19.71 | 0.02 | 0.57 |
| 1.36 | 35.37 | -0.97 | 1.99 | -4452.12 | -92.60 | -2522.72 | 54.35 | 1130.70 | -5.93 | 19.71 | 0.02 | 0.56 |
| 1.37 | 35.17 | -0.98 | 1.99 | -4482.34 | -87.79 | -2450.90 | 60.23 | 1006.50 | -5.49 | 19.71 | 0.02 | 0.55 |
| 1.38 | 34.98 | -0.98 | 1.99 | -4477.66 | -88.04 | -2386.87 | 59.71 | 891.80 | -16.69 | 19.71 | 0.02 | 0.55 |
| 1.39 | 34.49 | -0.98 | 1.99 | -4450.53 | -88.07 | -2372.37 | 69.26 | 881.13 | -10.59 | 19.71 | 0.02 | 0.55 |
| 1.40 | 34.29 | -0.99 | 1.99 | -4484.41 | -93.15 | -2355.66 | 53.38 | 855.76 | 6.81 | 19.71 | 0.02 | 0.53 |
| 1.41 | 34.29 | -0.99 | 1.99 | -4478.53 | -92.92 | -2409.11 | 53.81 | 953.09 | 3.13 | 19.71 | 0.02 | 0.54 |
| 1.42 | 34.20 | -0.99 | 1.99 | -4470.74 | -92.86 | -2444.48 | 44.30 | 955.56 | -11.22 | 19.71 | 0.02 | 0.55 |
| 1.43 | 34.00 | -0.99 | 1.99 | -4480.87 | -94.00 | -2436.99 | 37.79 | 972.26 | -10.29 | 19.71 | 0.02 | 0.54 |
| 1.44 | 33.71 | -1.00 | 1.99 | -4481.10 | -102.92 | -2464.65 | 31.84 | 1026.46 | -3.35 | 19.70 | 0.02 | 0.55 |
| 1.45 | 33.61 | -1.00 | 1.99 | -4480.92 | -112.89 | -2497.57 | 19.49 | 1088.21 | 1.13 | 19.70 | 0.02 | 0.56 |
| 1.46 | 33.61 | -1.00 | 1.99 | -4491.30 | -117.87 | -2527.58 | 13.33 | 1140.49 | 2.10 | 19.70 | 0.03 | 0.56 |
| 1.47 | 33.61 | -1.00 | 1.99 | -4480.48 | -112.90 | -2498.56 | 19.44 | 1061.99 | -0.16 | 19.70 | 0.03 | 0.56 |
| 1.48 | 33.51 | -1.00 | 1.99 | -4486.79 | -92.80 | -2474.83 | 54.01 | 1034.21 | -10.44 | 19.70 | 0.02 | 0.55 |
| 1.49 | 33.32 | -1.00 | 1.99 | -4492.94 | -77.46 | -2513.56 | 82.82 | 1106.10 | -15.12 | 19.70 | 0.02 | 0.56 |
| 1.50 | 33.32 | -1.00 | 1.99 | -4492.95 | -72.32 | -2531.62 | 89.32 | 1144.49 | -11.67 | 19.70 | 0.02 | 0.56 |
| 1.51 | 33.32 | -1.00 | 1.99 | -4486.64 | -87.43 | -2543.67 | 60.95 | 1169.16 | -7.12 | 19.70 | 0.02 | 0.57 |

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|-------|
| 1.52 | 33.32 | -1.00 | 1.99 | -4480.29 | -107.80 | -2512.64 | 25.83 | 1106.22 | -5.99 | 19.70 | 0.02 | 0.56 |
| 1.53 | 33.22 | -1.00 | 1.99 | -4485.36 | -123.08 | -2499.87 | 6.66 | 1074.32 | -9.57 | 19.70 | 0.03 | 0.56 |
| 1.54 | 33.12 | -1.00 | 1.99 | -4497.01 | -122.98 | -2531.45 | 16.40 | 1135.82 | -18.84 | 19.70 | 0.03 | 0.56 |
| 1.55 | 33.12 | -1.00 | 1.99 | -4502.94 | -123.00 | -2526.07 | 16.39 | 1135.30 | -18.66 | 19.70 | 0.03 | 0.56 |
| 1.56 | 33.12 | -1.00 | 1.99 | -4497.02 | -118.00 | -2560.49 | 13.07 | 1100.12 | -9.29 | 19.70 | 0.03 | 0.56 |
| 1.57 | 33.12 | -1.00 | 1.99 | -4492.11 | -92.83 | -2467.00 | 44.45 | 1004.57 | -6.71 | 19.70 | 0.02 | 0.55 |
| 1.58 | 33.12 | -1.00 | 1.99 | -4498.38 | -72.75 | -2429.62 | 78.96 | 960.17 | -4.32 | 19.70 | 0.02 | 0.54 |
| 1.59 | 33.02 | -1.00 | 1.99 | -4504.59 | -67.72 | -2425.79 | 65.27 | 960.36 | 1.59 | 19.70 | 0.02 | 0.54 |
| 1.60 | 33.02 | -1.00 | 1.99 | -4504.33 | -72.85 | -2401.30 | 69.30 | 931.58 | -0.35 | 19.70 | 0.02 | 0.53 |
| 1.61 | 33.02 | -1.00 | 1.99 | -4516.18 | -88.23 | -2358.78 | 49.99 | 866.47 | -5.75 | 19.70 | 0.02 | 0.52 |
| 1.62 | 40.55 | -0.02 | 3.98 | -4335.20 | -100.41 | 0.91 | 288.98 | -64.00 | 216.82 | 19.79 | 0.42 | -0.00 |
| 1.63 | 40.55 | -0.02 | 3.98 | -4283.70 | -1789.04 | -25.58 | 279.55 | -10.31 | 207.52 | 19.79 | 0.42 | 0.01 |
| 1.64 | 40.55 | -0.02 | 3.98 | -4218.53 | -1869.08 | -59.59 | 195.95 | 53.52 | 194.62 | 19.79 | 0.43 | 0.01 |
| 1.65 | 40.55 | -0.03 | 3.98 | -4245.55 | -1834.43 | -77.60 | 147.48 | 66.94 | 197.94 | 19.78 | 0.43 | 0.02 |
| 1.66 | 40.55 | -0.03 | 3.98 | -4377.70 | -1829.76 | -65.11 | 202.44 | 62.44 | 209.53 | 19.77 | 0.42 | 0.01 |
| 1.67 | 40.55 | -0.03 | 3.98 | -4528.73 | -1825.21 | -31.43 | 268.66 | -14.31 | 222.24 | 19.76 | 0.40 | 0.01 |
| 1.68 | 40.64 | -0.03 | 3.98 | -4604.85 | -1845.58 | -57.67 | 250.65 | 44.57 | 228.94 | 19.76 | 0.40 | 0.01 |
| 1.69 | 40.55 | -0.03 | 3.98 | -4596.48 | -1901.15 | -81.61 | 152.37 | 93.16 | 239.04 | 19.76 | 0.41 | 0.02 |
| 1.70 | 40.55 | -0.03 | 3.98 | -4618.28 | -1936.59 | -85.68 | 107.93 | 99.68 | 248.24 | 19.76 | 0.42 | 0.02 |
| 1.71 | 40.55 | -0.03 | 3.98 | -4693.22 | -1936.80 | -64.25 | 153.76 | 52.01 | 257.59 | 19.77 | 0.41 | 0.01 |
| 1.72 | 40.55 | -0.03 | 3.98 | -4761.61 | -1926.99 | -27.88 | 204.10 | -25.59 | 258.83 | 19.77 | 0.40 | 0.01 |
| 1.73 | 40.55 | -0.03 | 3.98 | -4785.05 | -1932.02 | -40.12 | 215.36 | 3.59 | 263.42 | 19.78 | 0.40 | 0.01 |
| 1.74 | 40.55 | -0.03 | 3.98 | -4781.65 | -1942.02 | -54.52 | 221.97 | 37.86 | 259.98 | 19.78 | 0.41 | 0.01 |
| 1.75 | 40.55 | -0.03 | 3.98 | -4723.78 | -1946.84 | -60.56 | 224.01 | 66.06 | 255.39 | 19.79 | 0.41 | 0.01 |
| 1.76 | 40.55 | -0.03 | 3.98 | -4619.30 | -1941.51 | -52.18 | 210.12 | 42.39 | 237.09 | 19.80 | 0.42 | 0.01 |
| 1.77 | 40.55 | -0.03 | 3.98 | -4514.03 | -1926.22 | -19.98 | 260.69 | -32.01 | 216.45 | 19.80 | 0.43 | 0.00 |
| 1.78 | 40.55 | -0.03 | 3.98 | -4435.04 | -1890.65 | -20.22 | 205.69 | -37.89 | 200.48 | 19.81 | 0.43 | 0.00 |
| 1.79 | 40.55 | -0.03 | 3.98 | -4367.62 | -1839.84 | -28.67 | 242.58 | -21.78 | 202.92 | 19.80 | 0.42 | 0.01 |
| 1.80 | 40.55 | -0.03 | 3.98 | -4317.54 | -1799.15 | -46.56 | 278.25 | -1.22 | 206.50 | 19.79 | 0.42 | 0.01 |
| 1.81 | 40.55 | -0.03 | 3.98 | -4277.40 | -1778.83 | -49.71 | 262.70 | -237.05 | 202.25 | 19.79 | 0.42 | 0.01 |
| 1.82 | 40.55 | -0.03 | 3.98 | -4225.29 | -1794.05 | -37.92 | 215.73 | -627.69 | 190.66 | 19.79 | 0.42 | 0.01 |
| 1.83 | 40.55 | -0.03 | 3.98 | -4253.08 | -1819.38 | -72.57 | 156.71 | -1149.03 | 185.68 | 19.78 | 0.43 | 0.02 |
| 1.84 | 40.55 | -0.03 | 3.98 | -4379.70 | -1824.51 | -142.76 | 189.99 | -1883.79 | 196.51 | 19.77 | 0.42 | 0.03 |
| 1.85 | 40.55 | -0.03 | 3.98 | -4528.72 | -1819.33 | -270.76 | 256.90 | -2572.45 | 213.41 | 19.75 | 0.40 | 0.06 |
| 1.86 | 40.55 | -0.03 | 3.97 | -4595.41 | -1828.87 | -487.46 | 254.81 | -2221.09 | 218.58 | 19.75 | 0.40 | 0.11 |
| 1.87 | 40.55 | -0.04 | 3.97 | -4589.75 | -1853.19 | -798.14 | 177.05 | -1721.40 | 205.61 | 19.75 | 0.40 | 0.17 |
| 1.88 | 40.55 | -0.05 | 3.97 | -4557.84 | -1841.63 | -1244.33 | 114.37 | -986.28 | 165.40 | 19.76 | 0.40 | 0.27 |
| 1.89 | 40.55 | -0.05 | 3.97 | -4567.66 | -1759.11 | -1784.47 | 142.26 | -90.60 | 91.37 | 19.76 | 0.39 | 0.39 |

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|---------|---------|-------|------|------|
| 1.90 | 40.45 | -0.07 | 3.98 | -4577.18 | -1615.99 | -2352.74 | 198.30 | 841.66 | -9.43 | 19.76 | 0.35 | 0.51 |
| 1.91 | 40.35 | -0.08 | 3.97 | -4564.18 | -1448.05 | -2833.29 | 207.60 | 1622.10 | -116.64 | 19.77 | 0.32 | 0.64 |
| 1.92 | 40.16 | -0.10 | 3.98 | -4451.02 | -1275.78 | -3109.39 | 146.92 | 2062.05 | -185.61 | 19.77 | 0.28 | 0.69 |
| 1.93 | 39.86 | -0.12 | 3.97 | -4445.07 | -1083.82 | -3193.81 | 72.58 | 2205.65 | -197.59 | 19.77 | 0.24 | 0.72 |
| 1.94 | 39.57 | -0.15 | 3.98 | -4375.56 | -871.99 | -3193.80 | 51.72 | 2119.25 | -177.22 | 19.77 | 0.20 | 0.72 |
| 1.95 | 38.69 | -0.18 | 3.98 | -4330.83 | -665.29 | -3028.46 | 101.29 | 1957.00 | -165.61 | 19.76 | 0.15 | 0.76 |
| 1.96 | 37.71 | -0.20 | 3.98 | -4274.57 | -488.99 | -2878.24 | 159.69 | 1710.34 | -163.12 | 19.76 | 0.11 | 0.67 |
| 1.97 | 36.93 | -0.25 | 3.98 | -4227.53 | -353.19 | -2706.94 | 205.75 | 1420.69 | -159.47 | 19.75 | 0.08 | 0.64 |
| 1.98 | 36.64 | -0.30 | 3.98 | -4181.59 | -282.81 | -2602.74 | 188.54 | 1254.16 | -149.32 | 19.74 | 0.07 | 0.62 |
| 1.99 | 36.83 | -0.38 | 3.98 | -4153.41 | -262.71 | -2584.76 | 157.50 | 1232.45 | -145.59 | 19.73 | 0.06 | 0.62 |
| 2.00 | 37.23 | -0.46 | 3.98 | -4151.89 | -267.83 | -2615.80 | 64.82 | 3466.66 | -157.81 | 19.72 | 0.06 | 0.63 |
| 2.01 | 37.23 | -0.54 | 3.98 | -4168.50 | -262.97 | -2620.56 | 23.25 | 1286.64 | -160.56 | 19.71 | 0.06 | 0.63 |
| 2.02 | 37.03 | -0.61 | 3.98 | -4322.09 | -239.22 | -2538.76 | 35.19 | 1134.82 | -137.55 | 19.69 | 0.06 | 0.60 |
| 2.03 | 36.83 | -0.69 | 3.98 | -4303.45 | -218.53 | -2429.04 | 50.25 | 1463.58 | -61.17 | 19.68 | 0.01 | 0.56 |
| 2.04 | 36.83 | -0.74 | 3.97 | -4334.55 | -203.61 | -2380.70 | 40.19 | 1094.29 | -46.68 | 19.68 | 0.01 | 0.55 |
| 2.05 | 37.03 | -0.80 | 3.98 | -4352.84 | -178.33 | -2422.88 | 43.08 | 966.91 | -63.78 | 19.67 | 0.04 | 0.51 |
| 2.06 | 37.03 | -0.84 | 3.98 | -4400.85 | -153.24 | -2427.94 | 74.37 | 965.15 | -70.87 | 19.67 | 0.03 | 0.55 |
| 2.07 | 36.74 | -0.87 | 3.98 | -4461.65 | -143.57 | -2356.20 | 95.85 | 1653.47 | -67.38 | 19.66 | 0.03 | 0.55 |
| 2.08 | 36.44 | -0.89 | 3.98 | -4517.87 | -138.60 | -2365.12 | 121.15 | 858.07 | -61.16 | 19.66 | 0.03 | 0.52 |
| 2.09 | 36.15 | -0.91 | 3.97 | -4565.93 | -169.01 | -2402.12 | 63.24 | 922.33 | -70.66 | 19.66 | 0.04 | 0.53 |
| 2.10 | 36.25 | -0.93 | 3.98 | -4580.16 | -214.62 | -2402.59 | 7.26 | 1046.42 | -65.29 | 19.66 | 0.05 | 0.52 |
| 2.11 | 36.74 | -0.94 | 3.97 | -4574.44 | -234.96 | -2370.26 | -27.85 | 870.55 | -53.38 | 19.67 | 0.05 | 0.52 |
| 2.12 | 37.32 | -0.95 | 3.98 | -4579.29 | -214.78 | -2365.98 | -2.76 | 859.78 | -60.41 | 19.67 | 0.05 | 0.52 |
| 2.13 | 37.71 | -0.96 | 3.98 | -4585.21 | -184.30 | -2402.94 | 44.87 | 917.93 | -63.96 | 19.67 | 0.04 | 0.52 |
| 2.14 | 37.23 | -0.97 | 3.98 | -4591.93 | -169.16 | -2385.66 | 73.31 | 916.39 | -55.45 | 19.67 | 0.04 | 0.52 |
| 2.15 | 36.54 | -0.98 | 3.98 | -4571.41 | -159.00 | -2365.98 | 85.93 | 874.28 | -47.25 | 19.68 | 0.03 | 0.51 |
| 2.16 | 35.66 | -0.98 | 3.98 | -4567.13 | -159.09 | -2335.53 | 95.30 | 816.64 | -47.14 | 19.68 | 0.03 | 0.51 |
| 2.17 | 35.66 | -0.98 | 3.98 | -4556.52 | -174.44 | -2285.13 | 75.99 | 850.06 | -48.43 | 19.68 | 0.04 | 0.51 |
| 2.18 | 35.47 | -0.99 | 3.98 | -4523.59 | -185.46 | -2301.22 | 47.79 | 757.93 | -57.35 | 19.68 | 0.04 | 0.51 |
| 2.19 | 35.17 | -0.99 | 3.98 | -4524.23 | -184.32 | -2322.72 | 63.79 | 754.55 | -66.66 | 19.68 | 0.04 | 0.51 |
| 2.20 | 34.78 | -0.99 | 3.98 | -4513.64 | -174.14 | -2320.82 | 76.55 | 795.26 | -56.21 | 19.68 | 0.04 | 0.51 |
| 2.21 | 34.68 | -0.99 | 3.98 | -4492.65 | -174.18 | -2278.54 | 76.48 | 722.45 | -38.69 | 19.68 | 0.04 | 0.51 |
| 2.22 | 34.68 | -1.00 | 3.98 | -4475.52 | -179.28 | -2264.92 | 60.51 | 650.66 | -41.06 | 19.68 | 0.04 | 0.51 |
| 2.23 | 34.59 | -1.00 | 3.98 | -4469.24 | -179.10 | -2314.57 | 60.82 | 775.91 | -54.02 | 19.68 | 0.04 | 0.52 |
| 2.24 | 34.29 | -1.00 | 3.98 | -4475.16 | -184.08 | -2359.53 | 64.20 | 818.24 | -61.09 | 19.68 | 0.04 | 0.52 |
| 2.25 | 34.10 | -1.00 | 3.98 | -4475.39 | -184.02 | -2350.55 | 64.32 | 844.10 | -62.18 | 19.68 | 0.04 | 0.53 |
| 2.26 | 34.10 | -1.00 | 3.98 | -4481.07 | -189.25 | -2315.82 | 57.69 | 776.79 | -60.90 | 19.68 | 0.04 | 0.52 |
| 2.27 | 34.10 | -1.00 | 3.98 | -4481.86 | -189.53 | -2240.61 | 57.15 | 645.94 | -58.24 | 19.68 | 0.04 | 0.50 |

RUN: 25-1-32

RUN: 25- 1-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|------|
| 2.28 | 34.10 | -1.00 | 3.98 | -4465.38 | -174.32 | -2232.09 | 66.63 | 641.14 | -53.39 | 19.68 | 0.04 | 0.50 |
| 2.29 | 34.00 | -1.00 | 3.97 | -4470.47 | -164.11 | -2258.97 | 79.46 | 689.15 | -47.75 | 19.68 | 0.04 | 0.51 |
| 2.30 | 33.90 | -1.00 | 3.97 | -4470.07 | -153.82 | -2299.12 | 92.52 | 759.88 | -46.75 | 19.67 | 0.03 | 0.51 |
| 2.31 | 33.80 | -1.00 | 3.97 | -4486.55 | -153.81 | -2317.02 | 102.07 | 783.59 | -50.43 | 19.67 | 0.03 | 0.52 |
| 2.32 | 33.70 | -1.00 | 3.97 | -4502.19 | -174.17 | -2309.47 | 76.58 | 758.16 | -54.10 | 19.67 | 0.04 | 0.51 |
| 2.33 | 33.81 | -1.00 | 3.97 | -4489.36 | -204.44 | -2331.53 | 19.78 | 798.34 | -56.58 | 19.67 | 0.05 | 0.52 |
| 2.34 | 33.81 | -1.00 | 3.97 | -4494.89 | -214.48 | -2351.85 | 7.32 | 841.25 | -56.59 | 19.67 | 0.05 | 0.52 |
| 2.25 | 33.61 | -1.00 | 3.97 | -4505.87 | -204.60 | -2348.68 | 19.90 | 839.10 | -51.89 | 19.67 | 0.05 | 0.52 |
| 2.36 | 33.81 | -1.00 | 3.98 | -4507.09 | -179.21 | -2316.39 | 60.79 | 780.38 | -44.39 | 19.67 | 0.04 | 0.51 |
| 2.37 | 33.81 | -1.00 | 3.98 | -4513.59 | -154.08 | -2277.60 | 101.55 | 706.92 | -52.66 | 19.67 | 0.03 | 0.50 |
| 2.38 | 33.61 | -1.00 | 3.98 | -4507.48 | -143.94 | -2283.51 | 104.69 | 722.55 | -53.73 | 19.67 | 0.03 | 0.51 |
| 2.39 | 33.71 | -1.00 | 3.97 | -4512.99 | -148.97 | -2291.56 | 98.45 | 740.43 | -50.27 | 19.67 | 0.03 | 0.51 |
| 2.40 | 33.71 | -1.00 | 3.97 | -4507.52 | -169.08 | -2318.42 | 73.47 | 792.68 | -52.68 | 19.67 | 0.04 | 0.51 |
| 2.41 | 33.71 | -1.00 | 3.97 | -4501.62 | -189.26 | -2331.96 | 48.29 | 809.54 | -57.51 | 19.67 | 0.04 | 0.52 |
| 2.42 | 40.55 | -0.04 | 7.96 | -4234.09 | -2399.26 | -40.74 | 263.84 | 16.27 | 92.98 | 19.76 | 0.57 | 0.01 |
| 2.43 | 40.55 | -0.04 | 7.98 | -4234.30 | -2434.54 | -69.17 | 238.73 | 56.90 | 73.23 | 19.76 | 0.57 | 0.02 |
| 2.44 | 40.55 | -0.04 | 7.98 | -4347.54 | -2454.96 | -88.21 | 274.37 | 91.39 | 75.43 | 19.74 | 0.56 | 0.02 |
| 2.45 | 40.55 | -0.04 | 7.98 | -4502.34 | -2465.41 | -80.98 | 358.63 | 72.13 | 78.50 | 19.73 | 0.55 | 0.02 |
| 2.46 | 40.55 | -0.04 | 7.98 | -4591.29 | -2496.11 | -56.24 | 348.67 | 26.38 | 85.73 | 19.73 | 0.54 | 0.01 |
| 2.47 | 40.55 | -0.04 | 7.98 | -4594.73 | -2551.72 | -75.52 | 257.94 | 63.61 | 98.18 | 19.74 | 0.56 | 0.02 |
| 2.48 | 40.55 | -0.04 | 7.98 | -4581.27 | -2597.21 | -82.00 | 172.35 | 84.20 | 108.44 | 19.74 | 0.57 | 0.02 |
| 2.49 | 40.55 | -0.04 | 7.98 | -4625.66 | -2582.13 | -85.38 | 200.78 | 94.52 | 110.88 | 19.74 | 0.56 | 0.02 |
| 2.50 | 40.55 | -0.04 | 7.98 | -4713.04 | -2562.06 | -75.71 | 292.71 | 76.73 | 117.89 | 19.74 | 0.54 | 0.02 |
| 2.51 | 40.55 | -0.04 | 7.98 | -4754.59 | -2577.42 | -40.60 | 309.46 | 2.18 | 124.87 | 19.75 | 0.54 | 0.01 |
| 2.52 | 40.55 | -0.04 | 7.98 | -4758.30 | -2597.54 | -43.20 | 322.93 | 14.56 | 136.37 | 19.75 | 0.55 | 0.01 |
| 2.53 | 40.55 | -0.04 | 7.98 | -4732.50 | -2607.50 | -48.54 | 317.55 | 30.02 | 135.27 | 19.76 | 0.55 | 0.01 |
| 2.54 | 40.55 | -0.04 | 7.98 | -4653.30 | -2587.03 | -65.87 | 303.04 | 59.62 | 124.93 | 19.77 | 0.56 | 0.01 |
| 2.55 | 40.55 | -0.04 | 7.98 | -4553.25 | -2516.17 | -59.25 | 303.94 | 40.41 | 96.26 | 19.78 | 0.55 | 0.01 |
| 2.56 | 40.55 | -0.04 | 7.98 | -4469.64 | -2460.63 | -15.43 | 287.63 | -38.87 | 95.00 | 19.78 | 0.55 | 0.00 |
| 2.57 | 40.55 | -0.04 | 7.98 | -4421.32 | -2404.98 | -7.18 | 302.17 | -53.02 | 89.79 | 19.77 | 0.54 | 0.00 |
| 2.58 | 40.55 | -0.04 | 7.98 | -4387.90 | -2354.22 | -19.85 | 356.44 | -32.35 | 101.37 | 19.77 | 0.54 | 0.00 |
| 2.59 | 40.55 | -0.04 | 7.98 | -4343.55 | -2359.06 | -47.96 | 340.91 | 20.91 | 85.71 | 19.77 | 0.54 | 0.01 |
| 2.60 | 40.55 | -0.04 | 7.98 | -4260.52 | -2389.11 | -68.74 | 284.23 | 32.74 | 81.50 | 19.77 | 0.56 | 0.02 |
| 2.61 | 40.55 | -0.04 | 7.98 | -4256.75 | -2429.61 | -51.86 | 235.27 | -230.04 | 69.10 | 19.76 | 0.57 | 0.01 |
| 2.62 | 40.55 | -0.04 | 7.98 | -4324.30 | -2455.03 | -61.84 | 253.12 | -622.93 | 77.86 | 19.75 | 0.57 | 0.01 |
| 2.63 | 40.55 | -0.04 | 7.98 | -4456.49 | -2460.22 | -81.94 | 334.56 | -1234.04 | 95.09 | 19.74 | 0.55 | 0.02 |
| 2.64 | 40.55 | -0.04 | 7.98 | -4568.08 | -2480.48 | -142.62 | 358.99 | -2013.61 | 105.48 | 19.73 | 0.54 | 0.03 |
| 2.65 | 40.55 | -0.04 | 7.98 | -4586.56 | -2520.64 | -251.31 | 297.30 | -2611.13 | 112.81 | 19.74 | 0.55 | 0.05 |

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TABLE V
TABULATED DATA

RUN: 25-1-32

| TE | RS | SK | SA | FZ | FY | FX | MX | MY | MZ | IRH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|---------|-------|------|------|
| 2.66 | 40.55 | -0.04 | 7.98 | -4560.98 | -2550.48 | -422.42 | 202.84 | -2341.95 | 102.00 | 19.74 | 0.56 | 0.04 |
| 2.67 | 40.55 | -0.05 | 7.98 | -4565.52 | -2529.46 | -705.07 | 162.74 | -1874.17 | 76.89 | 19.74 | 0.55 | 0.15 |
| 2.68 | 40.55 | -0.06 | 7.98 | -4569.25 | -2432.33 | -1090.07 | 208.54 | -1236.54 | 36.24 | 19.74 | 0.52 | 0.24 |
| 2.69 | 40.55 | -0.07 | 7.98 | -4626.35 | -2294.62 | -1571.59 | 246.03 | -439.61 | -41.95 | 19.74 | 0.50 | 0.34 |
| 2.70 | 40.45 | -0.09 | 7.98 | -4621.23 | -2085.29 | -2059.49 | 278.32 | 351.23 | -152.59 | 19.75 | 0.44 | 0.44 |
| 2.71 | 40.35 | -0.11 | 7.98 | -4585.99 | -1822.86 | -2434.70 | 274.34 | 950.22 | -247.53 | 19.75 | 0.52 | 0.52 |
| 2.72 | 40.16 | -0.13 | 7.98 | -4524.55 | -1534.63 | -2658.35 | 214.16 | 1322.22 | -276.62 | 19.76 | 0.59 | 0.59 |
| 2.73 | 39.96 | -0.17 | 7.98 | -4452.15 | -1241.69 | -2720.72 | 180.38 | 1434.55 | -247.95 | 19.76 | 0.61 | 0.61 |
| 2.74 | 39.67 | -0.21 | 7.98 | -4375.38 | -974.20 | -2806.46 | 172.89 | 1566.25 | -204.74 | 19.75 | 0.22 | 0.61 |
| 2.75 | 39.18 | -0.26 | 7.98 | -4314.60 | -742.32 | -2572.20 | 195.59 | 1200.78 | -179.47 | 19.75 | 0.17 | 0.60 |
| 2.76 | 38.50 | -0.31 | 7.98 | -4255.76 | -556.06 | -2404.91 | 218.51 | 922.18 | -166.59 | 19.75 | 0.13 | 0.57 |
| 2.77 | 37.58 | -0.37 | 7.98 | -4224.51 | -435.28 | -2303.02 | 217.16 | 3463.38 | -164.75 | 19.74 | 0.10 | 0.55 |
| 2.78 | 36.83 | -0.45 | 7.98 | -4197.58 | -364.68 | -2292.92 | 181.69 | 1112.59 | -161.27 | 19.73 | 0.09 | 0.55 |
| 2.79 | 36.64 | -0.53 | 7.98 | -4195.86 | -344.62 | -2299.88 | 121.07 | 768.66 | -148.06 | 19.72 | 0.08 | 0.55 |
| 2.80 | 36.93 | -0.62 | 7.98 | -4229.22 | -365.39 | -2185.45 | 47.42 | 571.80 | -91.07 | 19.71 | 0.09 | 0.52 |
| 2.81 | 37.32 | -0.70 | 7.98 | -4267.36 | -376.13 | -2032.74 | 14.94 | 2268.31 | -33.83 | 19.70 | 0.09 | 0.48 |
| 2.82 | 37.42 | -0.76 | 7.98 | -4289.52 | -343.51 | -2039.78 | 35.29 | 333.43 | -33.46 | 19.69 | 0.08 | 0.40 |
| 2.83 | 37.23 | -0.80 | 7.98 | -4355.05 | -287.70 | -2109.73 | 108.89 | 448.28 | -69.49 | 19.64 | 0.07 | 0.40 |
| 2.84 | 37.03 | -0.84 | 7.98 | -4416.55 | -265.18 | -2112.11 | 144.29 | 1135.20 | -74.31 | 19.68 | 0.06 | 0.40 |
| 2.85 | 37.13 | -0.87 | 7.98 | -4415.29 | -270.32 | -2086.41 | 118.78 | 410.12 | -49.86 | 19.68 | 0.06 | 0.47 |
| 2.86 | 37.32 | -0.90 | 7.98 | -4446.57 | -295.66 | -2105.67 | 87.35 | 426.79 | -39.94 | 19.67 | 0.07 | 0.47 |
| 2.87 | 37.42 | -0.92 | 7.98 | -4508.30 | -310.63 | -2194.49 | 107.28 | 577.04 | -42.80 | 19.66 | 0.07 | 0.49 |
| 2.88 | 37.42 | -0.93 | 7.98 | -4551.68 | -335.73 | -2282.97 | 94.94 | 1138.72 | -53.45 | 19.67 | 0.07 | 0.50 |
| 2.89 | 37.23 | -0.95 | 7.98 | -4539.70 | -370.82 | -2376.83 | 41.78 | 685.79 | -70.66 | 19.67 | 0.08 | 0.52 |
| 2.90 | 37.23 | -0.95 | 7.98 | -4542.35 | -391.05 | -2401.73 | 6.97 | 919.39 | -92.84 | 19.67 | 0.09 | 0.53 |
| 2.91 | 37.42 | -0.97 | 7.98 | -4570.80 | -386.53 | -2526.94 | 22.22 | 920.36 | -75.52 | 19.67 | 0.08 | 0.51 |
| 2.92 | 37.81 | -0.97 | 7.98 | -4567.56 | -361.07 | -2291.34 | 63.30 | 734.64 | -57.49 | 19.67 | 0.08 | 0.50 |
| 2.93 | 37.91 | -0.98 | 7.98 | -4556.98 | -335.71 | -2295.49 | 94.72 | 748.97 | -56.21 | 19.68 | 0.07 | 0.50 |
| 2.94 | 37.52 | -0.98 | 7.98 | -4540.09 | -325.52 | -2300.43 | 97.93 | 763.00 | -56.13 | 19.68 | 0.07 | 0.51 |
| 2.95 | 36.53 | -0.98 | 7.98 | -4535.62 | -325.55 | -2286.68 | 107.41 | 735.24 | -58.41 | 19.68 | 0.07 | 0.50 |
| 2.96 | 36.44 | -0.99 | 7.98 | -4513.43 | -325.51 | -2292.56 | 107.42 | 734.56 | -74.73 | 19.68 | 0.07 | 0.51 |
| 2.97 | 36.15 | -0.99 | 7.98 | -4504.07 | -322.86 | -2331.75 | 100.41 | 803.03 | -67.41 | 19.68 | 0.07 | 0.52 |
| 2.98 | 36.05 | -0.99 | 7.98 | -4514.09 | -350.65 | -2326.35 | 85.66 | 786.24 | -79.52 | 19.68 | 0.08 | 0.52 |
| 2.99 | 35.76 | -0.99 | 7.98 | -4498.63 | -360.72 | -2309.47 | 73.19 | 776.60 | -62.01 | 19.68 | 0.08 | 0.51 |
| 3.00 | 35.47 | -1.00 | 7.98 | -4487.00 | -355.66 | -2300.52 | 69.94 | 760.65 | -56.21 | 19.68 | 0.08 | 0.51 |
| 3.01 | 35.27 | -1.00 | 7.98 | -4486.75 | -345.69 | -2271.60 | 82.27 | 698.40 | -58.53 | 19.68 | 0.08 | 0.51 |
| 3.02 | 35.27 | -1.00 | 7.98 | -4471.48 | -337.91 | -2295.75 | 84.60 | 744.99 | -64.14 | 19.68 | 0.08 | 0.51 |
| 3.03 | 35.17 | -1.00 | 7.98 | -4475.80 | -335.35 | -2516.95 | 95.30 | 785.46 | -65.52 | 19.68 | 0.07 | 0.52 |

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RUN: 25-1-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | F2 | FY | FX | MX | MY | M2 | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|--------|-------|--------|-------|
| 3.04 | 34.98 | -1.00 | 7.98 | -4480.78 | -335.41 | -2304.91 | 95.21 | 765.46 | -55.09 | 19.68 | 0.07 | 0.51 |
| 3.05 | 34.78 | -1.00 | 7.98 | -4482.09 | -335.49 | -2270.71 | 95.10 | 711.05 | -42.15 | 19.68 | 0.07 | 0.51 |
| 3.06 | 34.78 | -1.00 | 7.98 | -4487.55 | -345.76 | -2233.54 | 82.13 | 638.34 | -37.80 | 19.68 | 0.08 | 0.50 |
| 3.07 | 34.68 | -1.00 | 7.98 | -4480.84 | -340.62 | -2263.00 | 79.07 | 689.40 | -45.72 | 19.68 | 0.08 | 0.51 |
| 3.08 | 34.68 | -1.00 | 7.98 | -4480.65 | -330.40 | -2293.85 | 92.17 | 745.49 | -53.85 | 19.67 | 0.07 | 0.51 |
| 3.09 | 34.59 | -1.00 | 7.98 | -4486.79 | -320.17 | -2320.14 | 114.55 | 794.26 | -55.07 | 19.67 | 0.07 | 0.52 |
| 3.10 | 34.49 | -1.00 | 7.98 | -4503.26 | -325.32 | -2307.06 | 117.61 | 763.90 | -50.53 | 19.67 | 0.07 | 0.51 |
| 3.11 | 34.49 | -1.00 | 7.98 | -4492.23 | -340.65 | -2264.70 | 89.83 | 684.82 | -48.12 | 19.67 | 0.08 | 0.50 |
| 3.12 | 34.49 | -1.00 | 7.98 | -4496.92 | -360.92 | -2266.16 | 54.00 | 691.86 | -50.41 | 19.67 | 0.08 | 0.50 |
| 3.13 | 34.49 | -1.00 | 7.98 | -4501.82 | -361.00 | -2257.51 | 44.30 | 682.71 | -60.63 | 19.67 | 0.08 | 0.50 |
| 3.14 | 34.39 | -1.00 | 7.98 | -4502.47 | -345.85 | -2249.99 | 63.22 | 679.93 | -64.98 | 19.67 | 0.08 | 0.50 |
| 3.15 | 34.39 | -1.00 | 7.98 | -4508.97 | -335.81 | -2225.70 | 85.23 | 635.24 | -59.10 | 19.67 | 0.07 | 0.49 |
| 3.16 | 34.39 | -1.00 | 7.98 | -4503.43 | -325.80 | -2196.50 | 97.63 | 574.48 | -53.32 | 19.67 | 0.07 | 0.49 |
| 3.17 | 34.35 | -1.00 | 7.98 | -4477.16 | -312.86 | -2234.53 | 106.44 | 644.74 | -56.73 | 19.67 | 0.07 | 0.50 |
| 3.18 | 34.39 | -1.00 | 7.98 | -4492.69 | -315.31 | -2278.61 | 120.48 | 721.03 | -61.74 | 19.67 | 0.07 | 0.51 |
| 3.19 | 34.39 | -1.00 | 7.98 | -4497.58 | -330.39 | -2310.99 | 101.73 | 775.84 | -64.29 | 19.67 | 0.07 | 0.51 |
| 3.20 | 34.39 | -1.00 | 7.98 | -4492.08 | -345.57 | -2306.75 | 82.78 | 765.18 | -65.50 | 19.67 | 0.08 | 0.51 |
| 3.21 | 34.39 | -1.00 | 7.98 | -4491.23 | -360.92 | -2270.36 | 93.95 | 694.05 | -64.32 | 19.67 | 0.08 | 0.51 |
| 3.22 | 40.55 | -0.27 | 0.0 | -0.64 | 6.46 | 5.02 | 2.60 | -36.65 | -0.01 | 20.85 | -10.01 | -7.76 |
| 3.23 | 40.55 | -0.27 | 0.0 | -15.66 | 5.01 | -5.22 | 6.69 | -15.61 | -0.06 | 20.85 | -0.32 | 0.33 |
| 3.24 | 40.55 | -0.27 | 0.0 | -5.94 | 6.42 | 5.48 | 2.51 | -35.30 | -6.96 | 20.85 | -1.08 | -0.92 |
| 3.25 | 40.55 | -0.27 | 0.0 | -10.14 | -0.25 | 35.73 | -0.57 | -54.31 | -15.02 | 20.85 | 0.02 | -3.52 |
| 3.26 | 40.55 | -0.02 | 0.0 | -2783.14 | -9.60 | -55.38 | 69.76 | 63.38 | 4.32 | 20.05 | 0.00 | 0.02 |
| 3.27 | 40.55 | -0.02 | 0.0 | -2799.74 | -24.94 | -65.04 | 2.33 | 5.27 | 5.27 | 20.05 | 0.01 | 0.02 |
| 3.28 | 40.55 | -0.02 | 0.0 | -2812.27 | -45.45 | -32.26 | -62.27 | 24.32 | 8.68 | 20.05 | 0.02 | 0.01 |
| 3.29 | 40.55 | -0.01 | 0.0 | -2879.04 | -40.64 | -14.62 | -37.15 | -24.85 | 12.27 | 20.06 | 0.01 | 0.01 |
| 3.30 | 40.55 | -0.02 | 0.0 | -2949.88 | -25.59 | -40.95 | -8.36 | 26.72 | 11.04 | 20.06 | 0.01 | 0.01 |
| 3.31 | 40.55 | -0.01 | 0.0 | -3004.86 | -20.66 | -49.57 | 7.47 | 49.65 | 13.37 | 20.07 | 0.01 | 0.02 |
| 3.32 | 40.55 | -0.02 | 0.0 | -3032.75 | -25.79 | -50.35 | 10.42 | 57.21 | 12.20 | 20.07 | 0.01 | 0.02 |
| 3.33 | 40.55 | -0.02 | 0.0 | -2990.84 | -35.87 | -16.83 | 7.00 | -12.82 | 8.90 | 20.08 | 0.01 | 0.01 |
| 3.34 | 40.55 | -0.02 | 0.0 | -2882.99 | -45.67 | -5.32 | -5.49 | -35.60 | 3.16 | 20.09 | 0.02 | 0.00 |
| 3.35 | 40.55 | -0.02 | 0.0 | -2765.41 | -40.09 | -23.46 | 11.43 | 14.57 | -1.40 | 20.10 | 0.01 | 0.01 |
| 3.36 | 40.64 | -0.02 | 0.0 | -2680.39 | -29.61 | -29.30 | 34.61 | 18.52 | -3.52 | 20.10 | 0.01 | 0.01 |
| 3.37 | 40.55 | -0.02 | 0.0 | -2621.17 | -9.17 | -26.09 | 60.90 | 2.41 | -5.70 | 20.10 | 0.00 | 0.01 |
| 3.38 | 40.55 | -0.02 | 0.0 | -2578.80 | 0.99 | 7.49 | 82.43 | -67.14 | -1.05 | 20.09 | -0.00 | -0.00 |
| 3.39 | 40.55 | -0.02 | 0.0 | -2536.48 | 1.14 | 12.55 | 93.22 | -71.07 | -1.08 | 20.09 | -0.00 | -0.00 |
| 3.40 | 40.55 | -0.01 | 0.0 | -2481.56 | -18.76 | -28.22 | 58.37 | -26.68 | -1.13 | 20.08 | 0.01 | 0.01 |
| 3.41 | 40.55 | -0.01 | 0.0 | -2479.52 | -38.95 | -51.03 | 13.43 | -221.56 | -4.32 | 20.08 | 0.02 | 0.02 |

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TABLE V
TABULATED DATA

RUN: 25- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | MFY | MA |
|------|-------|-------|-----|----------|--------|----------|--------|----------|---------|-------|-------|------|
| 3.42 | 40.55 | -0.02 | 0.0 | -2549.52 | -49.28 | -59.81 | 0.20 | -587.86 | -1.42 | 20.06 | 0.02 | 0.02 |
| 3.43 | 40.55 | -0.02 | 0.0 | -2680.55 | -39.67 | -37.89 | 31.37 | -1323.37 | 10.13 | 20.06 | 0.01 | 0.01 |
| 3.44 | 40.55 | -0.02 | 0.0 | -2766.84 | -17.43 | -82.28 | 52.88 | -2122.52 | 19.98 | 20.05 | 0.01 | 0.03 |
| 3.45 | 40.55 | -0.02 | 0.0 | -2804.63 | -17.01 | -245.29 | 25.02 | -2603.09 | 23.57 | 20.05 | 0.01 | 0.03 |
| 3.46 | 40.55 | -0.02 | 0.0 | -2832.98 | -33.62 | -499.54 | -27.07 | -2175.80 | 18.85 | 20.05 | 0.01 | 0.10 |
| 3.47 | 40.55 | -0.03 | 0.0 | -2896.61 | -22.48 | -848.63 | -12.25 | -1591.56 | 9.35 | 20.05 | 0.01 | 0.29 |
| 3.48 | 40.55 | -0.04 | 0.0 | -2954.30 | -3.98 | -1231.92 | 4.99 | -967.20 | 2.50 | 20.06 | 0.00 | 0.42 |
| 3.49 | 40.55 | -0.05 | 0.0 | -2976.12 | 7.59 | -1673.03 | 1.42 | -237.87 | -6.50 | 20.06 | -0.00 | 0.50 |
| 3.50 | 40.45 | -0.06 | 0.0 | -2943.66 | 14.28 | -2122.94 | -17.80 | 521.09 | -29.15 | 20.07 | -0.00 | 0.72 |
| 3.51 | 40.35 | -0.08 | 0.0 | -2865.23 | 18.33 | -2412.99 | -24.21 | 1006.65 | -80.93 | 20.08 | -0.01 | 0.84 |
| 3.52 | 40.06 | -0.10 | 0.0 | -2757.45 | 13.74 | -2459.86 | -20.41 | 1083.11 | -128.45 | 20.08 | -0.00 | 0.84 |
| 3.53 | 39.77 | -0.13 | 0.0 | -2639.74 | -11.86 | -2257.09 | -24.82 | 738.97 | -146.59 | 20.09 | 0.00 | 0.60 |
| 3.54 | 39.18 | -0.17 | 0.0 | -2518.60 | -32.54 | -1987.89 | -22.91 | 294.39 | -142.11 | 20.08 | 0.01 | 0.79 |
| 3.55 | 38.50 | -0.23 | 0.0 | -2435.33 | -48.04 | -1779.46 | -4.73 | 1212.74 | -139.06 | 20.08 | 0.02 | 0.95 |
| 3.56 | 37.62 | -0.30 | 0.0 | -2370.73 | -38.02 | -1667.69 | 36.73 | 4554.99 | -154.61 | 20.07 | 0.02 | 0.70 |
| 3.57 | 37.13 | -0.39 | 0.0 | -2346.38 | -27.88 | -1639.98 | 68.81 | -261.36 | -158.39 | 20.06 | 0.01 | 0.70 |
| 3.58 | 37.13 | -0.49 | 0.0 | -2346.09 | -33.22 | -1561.07 | 52.29 | -409.38 | -131.61 | 20.05 | 0.01 | 0.57 |
| 3.59 | 37.52 | -0.59 | 0.0 | -2341.31 | -41.53 | -1465.82 | 15.81 | 509.42 | -59.20 | 20.03 | 0.02 | 0.63 |
| 3.60 | 37.81 | -0.67 | 0.0 | -2366.87 | -23.29 | -1468.58 | 36.52 | 1929.73 | -12.12 | 20.02 | 0.01 | 0.62 |
| 3.61 | 37.81 | -0.74 | 0.0 | -2397.21 | 17.54 | -1603.15 | 88.80 | -325.40 | -53.74 | 20.01 | -0.01 | 0.67 |
| 3.62 | 37.62 | -0.79 | 0.0 | -2447.46 | 37.97 | -1758.18 | 105.31 | -106.67 | -75.09 | 20.00 | -0.02 | 0.71 |
| 3.63 | 37.62 | -0.83 | 0.0 | -2492.96 | 22.57 | -1749.07 | 66.41 | 1766.83 | -78.94 | 19.99 | -0.01 | 0.70 |
| 3.64 | 37.71 | -0.86 | 0.0 | -2523.05 | -2.76 | -1779.69 | 15.08 | 110.45 | -68.05 | 19.98 | 0.00 | 0.71 |
| 3.65 | 37.71 | -0.89 | 0.0 | -2588.65 | -15.81 | -1851.87 | 1.20 | 69.63 | -76.30 | 19.98 | 0.01 | 0.72 |
| 3.66 | 37.52 | -0.91 | 0.0 | -2657.60 | -33.24 | -1867.80 | -14.14 | 475.46 | -70.19 | 19.97 | 0.01 | 0.70 |
| 3.67 | 37.32 | -0.93 | 0.0 | -2678.93 | -43.54 | -1831.13 | -36.83 | 1250.36 | -47.34 | 19.97 | 0.02 | 0.68 |
| 3.68 | 37.23 | -0.94 | 0.0 | -2694.78 | -23.41 | -1825.65 | -11.32 | 21.59 | -52.06 | 19.97 | 0.01 | 0.66 |
| 3.69 | 37.32 | -0.95 | 0.0 | -2734.14 | 19.28 | -1889.60 | 55.18 | 125.34 | -78.92 | 19.97 | -0.01 | 0.69 |
| 3.70 | 37.81 | -0.96 | 0.0 | -2782.13 | 27.22 | -1919.67 | 81.76 | 1057.67 | -86.50 | 19.97 | -0.01 | 0.69 |
| 3.71 | 38.30 | -0.97 | 0.0 | -2759.34 | 1.97 | -1911.18 | 30.59 | 173.48 | -73.20 | 19.97 | -0.00 | 0.69 |
| 3.72 | 38.69 | -0.97 | 0.0 | -2755.11 | -11.05 | -1911.69 | 7.15 | 176.60 | -66.26 | 19.97 | 0.00 | 0.69 |
| 3.73 | 38.59 | -0.98 | 0.0 | -2781.68 | -18.46 | -1876.73 | 14.04 | 580.61 | -60.29 | 19.97 | 0.01 | 0.67 |
| 3.74 | 38.10 | -0.98 | 0.0 | -2776.19 | -23.48 | -1862.65 | 7.67 | 363.38 | -61.09 | 19.97 | 0.01 | 0.68 |
| 3.75 | 37.42 | -0.99 | 0.0 | -2750.03 | -16.02 | -1931.10 | 10.38 | 205.26 | -72.24 | 19.98 | 0.01 | 0.70 |
| 3.76 | 36.93 | -0.99 | 0.0 | -2755.94 | -0.78 | -1948.83 | 59.35 | 422.26 | -76.09 | 19.98 | 0.00 | 0.71 |
| 3.77 | 36.74 | -0.99 | 0.0 | -2755.67 | 7.10 | -1906.42 | 56.27 | 824.22 | -59.43 | 19.98 | -0.00 | 0.69 |
| 3.78 | 36.54 | -0.99 | 0.0 | -2735.29 | 1.81 | -1819.53 | 49.41 | 10.81 | -42.78 | 19.97 | -0.00 | 0.67 |
| 3.79 | 36.15 | -1.00 | 0.0 | -2730.42 | -13.45 | -1755.83 | 29.95 | -31.36 | -42.61 | 19.98 | 0.00 | 0.68 |

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TABLE V
TABULATED DATA

RUN: 25- 1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-----|----------|--------|----------|--------|---------|--------|-------|-------|-------|
| 3.60 | 35.96 | -1.00 | 0.0 | -2736.77 | -13.37 | -1812.13 | 39.64 | 567.19 | -48.22 | 19.98 | 0.00 | 0.66 |
| 3.61 | 35.86 | -1.00 | 0.0 | -2715.63 | -13.19 | -1842.99 | 39.99 | 64.47 | -55.37 | 19.98 | 0.00 | 0.66 |
| 3.62 | 35.86 | -1.00 | 0.0 | -2705.11 | -11.01 | -1852.75 | 35.66 | 60.24 | -62.34 | 19.98 | 0.00 | 0.68 |
| 3.63 | 35.76 | -1.00 | 0.0 | -2714.78 | -18.43 | -1806.98 | 33.15 | 642.06 | -63.49 | 19.98 | 0.01 | 0.67 |
| 3.64 | 35.56 | -1.00 | 0.0 | -2699.13 | -13.36 | -1789.68 | 39.61 | -37.67 | -59.81 | 19.98 | 0.00 | 0.66 |
| 3.65 | 35.47 | -1.00 | 0.0 | -2699.34 | -8.27 | -1792.56 | 46.13 | -28.08 | -56.28 | 19.98 | 0.00 | 0.66 |
| 3.67 | 35.47 | -1.00 | 0.0 | -2705.25 | -3.30 | -1770.39 | 52.42 | 338.65 | -54.48 | 19.98 | 0.00 | 0.65 |
| 3.68 | 35.37 | -1.00 | 0.0 | -2695.31 | -13.45 | -1748.08 | 39.51 | -92.64 | -51.18 | 19.98 | 0.00 | 0.65 |
| 3.69 | 35.37 | -1.00 | 0.0 | -2694.03 | -13.55 | -1725.10 | 29.65 | -144.97 | -54.72 | 19.98 | 0.01 | 0.64 |
| 3.70 | 35.37 | -1.00 | 0.0 | -2678.40 | -11.37 | -1742.93 | 25.61 | 275.28 | -59.00 | 19.98 | 0.00 | 0.65 |
| 3.71 | 35.37 | -1.00 | 0.0 | -2682.66 | -13.35 | -1774.35 | 30.11 | -46.85 | -59.59 | 19.98 | 0.00 | 0.66 |
| 3.72 | 35.37 | -1.00 | 0.0 | -2687.53 | -13.25 | -1807.85 | 30.29 | 1.07 | -56.35 | 19.98 | 0.00 | 0.67 |
| 3.73 | 35.37 | -1.00 | 0.0 | -2692.41 | -3.05 | -1833.60 | 43.31 | 453.59 | -57.26 | 19.98 | 0.00 | 0.68 |
| 3.74 | 35.27 | -1.00 | 0.0 | -2681.39 | 1.95 | -1815.62 | 49.60 | 2.45 | -60.02 | 19.98 | -0.00 | 0.66 |
| 3.75 | 35.27 | -1.00 | 0.0 | -2688.98 | -1.01 | -1809.68 | 48.48 | -6.97 | -58.79 | 19.97 | 0.00 | 0.67 |
| 3.76 | 35.27 | -1.00 | 0.0 | -2703.58 | -8.28 | -1799.06 | 36.57 | 294.80 | -51.17 | 19.98 | 0.00 | 0.67 |
| 3.77 | 35.27 | -1.00 | 0.0 | -2693.03 | -13.25 | -1810.65 | 30.31 | 8.78 | -52.86 | 19.98 | 0.00 | 0.67 |
| 3.78 | 35.27 | -1.00 | 0.0 | -2698.12 | -18.29 | -1824.81 | 23.91 | 29.98 | -58.75 | 19.97 | 0.01 | 0.68 |
| 3.79 | 35.27 | -1.00 | 0.0 | -2714.16 | -18.51 | -1790.03 | 23.47 | 103.74 | -60.16 | 19.97 | 0.01 | 0.66 |
| 3.79 | 35.47 | -1.00 | 0.0 | -2694.07 | -11.26 | -1781.65 | 25.83 | -51.66 | -55.15 | 19.97 | 0.00 | 0.66 |
| 4.00 | 35.47 | -1.00 | 0.0 | -2703.60 | -3.19 | -1807.94 | 43.06 | -2.24 | -56.36 | 19.97 | 0.00 | 0.67 |
| 4.01 | 40.55 | -0.03 | 0.0 | -4598.59 | -31.13 | -78.93 | 87.96 | 103.63 | 4.58 | 19.76 | 0.01 | 0.02 |
| 4.02 | 40.55 | -0.03 | 0.0 | -4626.99 | -41.57 | -51.68 | 36.45 | 48.94 | 4.47 | 19.77 | 0.01 | 0.01 |
| 4.03 | 40.55 | -0.03 | 0.0 | -4627.75 | -66.94 | -61.94 | -43.18 | 65.45 | 4.55 | 19.77 | 0.01 | 0.01 |
| 4.04 | 40.55 | -0.03 | 0.0 | -4691.65 | -67.15 | -70.59 | -53.05 | 64.89 | 6.69 | 19.77 | 0.01 | 0.02 |
| 4.05 | 40.55 | -0.03 | 0.0 | -4775.79 | -47.13 | -78.49 | -8.93 | 87.26 | 10.17 | 19.78 | 0.01 | 0.02 |
| 4.06 | 40.55 | -0.02 | 0.0 | -4829.23 | -27.00 | -69.58 | 25.72 | 90.18 | 15.94 | 19.79 | 0.01 | 0.01 |
| 4.07 | 40.55 | -0.02 | 0.0 | -4834.69 | -27.23 | -36.72 | 25.42 | 28.81 | 19.46 | 19.79 | 0.01 | 0.01 |
| 4.08 | 40.55 | -0.02 | 0.0 | -4771.02 | -26.95 | -42.46 | 35.44 | 59.13 | 18.37 | 19.80 | 0.01 | 0.01 |
| 4.09 | 40.55 | -0.02 | 0.0 | -4641.84 | -36.57 | -51.16 | 23.54 | 54.18 | 12.69 | 19.81 | 0.01 | 0.01 |
| 4.10 | 40.55 | -0.02 | 0.0 | -4507.14 | -51.26 | -52.56 | 5.23 | 52.39 | 10.44 | 19.82 | 0.01 | 0.01 |
| 4.11 | 40.55 | -0.02 | 0.0 | -4411.52 | -50.96 | -31.85 | 15.28 | 14.26 | 10.68 | 19.82 | 0.01 | 0.01 |
| 4.12 | 40.55 | -0.02 | 0.0 | -4359.39 | -30.65 | 6.14 | 59.95 | -57.07 | 14.25 | 19.81 | 0.01 | -0.00 |
| 4.13 | 40.64 | -0.03 | 0.0 | -4324.23 | -0.00 | -14.97 | 127.31 | -9.95 | 13.10 | 15.81 | 0.00 | 0.00 |
| 4.14 | 40.55 | -0.02 | 0.0 | -4271.18 | -4.73 | -46.52 | 131.07 | 44.01 | 3.84 | 19.80 | 0.00 | 0.01 |
| 4.15 | 40.55 | -0.02 | 0.0 | -4230.46 | -34.96 | -66.51 | 64.49 | 66.87 | -3.22 | 19.79 | 0.01 | 0.02 |
| 4.16 | 40.55 | -0.02 | 0.0 | -4239.41 | -67.99 | -62.38 | -13.14 | 60.96 | -4.51 | 19.79 | 0.02 | 0.01 |
| 4.17 | 40.55 | -0.03 | 0.0 | -4351.46 | -71.00 | -37.58 | -9.73 | 19.70 | 2.33 | 19.78 | 0.02 | 0.01 |

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TABLE V
TABULATED DATA

RUN: 25- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-----|----------|---------|----------|---------|----------|---------|-------|-------|------|
| 4.18 | 40.64 | -0.03 | 0.0 | -4489.06 | -46.09 | -43.22 | 50.11 | 20.10 | 9.30 | 19.77 | 0.01 | 0.01 |
| 4.19 | 40.55 | -0.03 | 0.0 | -4608.32 | -26.16 | -66.58 | 84.60 | 67.67 | 12.64 | 19.76 | 0.01 | 0.01 |
| 4.20 | 40.55 | -0.03 | 0.0 | -4626.19 | -36.35 | -86.99 | 33.61 | 66.64 | 12.62 | 19.76 | 0.01 | 0.01 |
| 4.21 | 40.55 | -0.03 | 0.0 | -4644.05 | -71.92 | -85.59 | -49.28 | -161.68 | 15.20 | 19.77 | 0.02 | 0.02 |
| 4.22 | 40.55 | -0.03 | 0.0 | -4707.90 | -77.39 | -46.94 | -65.97 | -673.89 | 20.63 | 19.77 | 0.01 | 0.01 |
| 4.23 | 40.55 | -0.03 | 0.0 | -4750.33 | -57.29 | -73.84 | -21.65 | -1264.24 | 27.44 | 19.77 | 0.01 | 0.01 |
| 4.24 | 40.55 | -0.03 | 0.0 | -4843.02 | -36.93 | -151.37 | 3.98 | -2008.29 | 35.55 | 19.74 | 0.01 | 0.01 |
| 4.25 | 40.64 | -0.03 | 0.0 | -4863.77 | -16.13 | -306.74 | 49.53 | -2505.02 | 41.54 | 19.79 | 0.00 | 0.00 |
| 4.26 | 40.55 | -0.03 | 0.0 | -4827.70 | -4.98 | -548.40 | 73.61 | -2109.23 | 39.75 | 19.76 | 0.00 | 0.00 |
| 4.27 | 40.55 | -0.03 | 0.0 | -4706.70 | -8.49 | -679.51 | 60.39 | -1575.56 | 26.73 | 19.80 | 0.00 | 0.00 |
| 4.28 | 40.55 | -0.04 | 0.0 | -4554.78 | -11.34 | -1369.01 | 29.26 | -764.22 | 5.08 | 19.81 | 0.00 | 0.00 |
| 4.29 | 40.55 | -0.05 | 0.0 | -4417.28 | -3.80 | -1949.00 | 11.33 | 154.65 | -20.24 | 19.81 | 0.00 | 0.00 |
| 4.30 | 40.45 | -0.06 | 0.0 | -4275.29 | 24.00 | -2520.81 | 28.45 | 1136.96 | -41.68 | 19.81 | -0.01 | 0.01 |
| 4.31 | 40.35 | -0.07 | 0.0 | -4154.71 | 61.50 | -2978.27 | 95.75 | 1878.01 | -60.12 | 19.81 | -0.01 | 0.01 |
| 4.32 | 40.06 | -0.09 | 0.0 | -4054.12 | 82.97 | -3222.24 | 142.24 | 2259.53 | -80.51 | 19.79 | -0.02 | 0.02 |
| 4.33 | 39.77 | -0.11 | 0.0 | -3951.19 | 48.03 | -3260.66 | 98.54 | 2326.14 | -92.28 | 19.79 | -0.01 | 0.01 |
| 4.34 | 39.18 | -0.13 | 0.0 | -3860.91 | -33.06 | -3136.67 | -22.49 | 2135.97 | -83.19 | 19.78 | 0.01 | 0.01 |
| 4.35 | 38.50 | -0.16 | 0.0 | -3818.85 | -104.35 | -2973.93 | -140.74 | 1878.01 | -77.28 | 19.76 | 0.03 | 0.03 |
| 4.36 | 37.52 | -0.19 | 0.0 | -3865.11 | -115.08 | -2956.22 | -144.89 | 1681.29 | -92.55 | 19.75 | 0.03 | 0.03 |
| 4.37 | 36.83 | -0.23 | 0.0 | -3964.86 | -65.19 | -2775.98 | -63.58 | 1531.80 | -125.44 | 19.73 | 0.02 | 0.02 |
| 4.38 | 36.64 | -0.30 | 0.0 | -4084.56 | -5.10 | -2733.62 | 11.35 | 1463.68 | -146.79 | 19.71 | 0.00 | 0.00 |
| 4.39 | 36.93 | -0.37 | 0.0 | -4204.22 | 34.82 | -2691.78 | 61.00 | 1398.16 | -145.18 | 19.70 | -0.01 | 0.01 |
| 4.40 | 37.23 | -0.45 | 0.0 | -4334.26 | 39.34 | -2665.08 | 66.36 | 2202.38 | -137.42 | 19.64 | -0.01 | 0.01 |
| 4.41 | 37.13 | -0.52 | 0.0 | -4420.14 | 13.86 | -2696.49 | 34.54 | 1408.65 | -129.10 | 19.64 | -0.00 | 0.00 |
| 4.42 | 36.93 | -0.60 | 0.0 | -4458.44 | -31.72 | -2758.29 | -60.59 | 1456.46 | -113.85 | 19.64 | 0.01 | 0.01 |
| 4.43 | 36.83 | -0.67 | 0.0 | -4484.80 | -71.94 | -2846.83 | -148.72 | 1643.52 | -77.75 | 19.67 | 0.02 | 0.02 |
| 4.44 | 36.83 | -0.73 | 0.0 | -4519.94 | -66.66 | -2935.85 | -151.52 | 2319.55 | -58.64 | 19.67 | 0.01 | 0.01 |
| 4.45 | 36.83 | -0.79 | 0.0 | -4564.77 | -10.84 | -3015.43 | -53.15 | 1930.60 | -77.59 | 19.68 | 0.00 | 0.00 |
| 4.46 | 36.74 | -0.83 | 0.0 | -4611.20 | 29.40 | -2974.36 | 25.54 | 1858.48 | -77.26 | 19.68 | -0.01 | 0.01 |
| 4.47 | 36.35 | -0.86 | 0.0 | -4618.87 | 18.76 | -2818.52 | 12.06 | 1552.35 | -34.89 | 19.68 | -0.00 | 0.00 |
| 4.48 | 36.05 | -0.88 | 0.0 | -4586.11 | -16.69 | -2774.33 | -51.24 | 1532.07 | -14.08 | 19.64 | 0.00 | 0.00 |
| 4.49 | 35.96 | -0.91 | 0.0 | -4586.19 | -26.60 | -2841.13 | -53.56 | 1647.85 | -46.35 | 19.64 | 0.01 | 0.01 |
| 4.50 | 36.35 | -0.93 | 0.0 | -4592.97 | -16.39 | -2871.90 | -22.11 | 1701.59 | -69.53 | 19.64 | 0.00 | 0.00 |
| 4.51 | 37.03 | -0.94 | 0.0 | -4585.10 | -16.58 | -2814.66 | -12.92 | 1597.43 | -66.95 | 19.64 | 0.00 | 0.00 |
| 4.52 | 37.42 | -0.95 | 0.0 | -4551.23 | -21.74 | -2758.38 | -29.60 | 1501.59 | -67.77 | 19.60 | 0.00 | 0.00 |
| 4.53 | 37.23 | -0.96 | 0.0 | -4530.07 | -6.51 | -2746.40 | -9.95 | 1485.63 | -65.28 | 19.69 | 0.00 | 0.00 |
| 4.54 | 36.54 | -0.97 | 0.0 | -4527.25 | 3.64 | -2722.67 | 21.89 | 1452.63 | -45.40 | 19.69 | -0.00 | 0.00 |
| 4.55 | 35.76 | -0.97 | 0.0 | -4510.98 | -6.32 | -2746.10 | 9.57 | 1497.21 | -42.03 | 19.64 | -0.00 | 0.00 |

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RUN: 15-1-32

TABLE V
TABULATED DATA

| TE | MS | SR | SA | F2 | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-----|----------|--------|----------|--------|---------|--------|-------|-------|------|
| 4.56 | 35.37 | -0.98 | 0.0 | -4481.04 | -16.28 | -2785.43 | -21.96 | 1561.66 | -60.90 | 19.69 | 0.00 | 0.62 |
| 4.57 | 35.17 | -0.98 | 0.0 | -4470.01 | -21.44 | -2760.54 | -28.91 | 1499.33 | -63.25 | 19.69 | 0.00 | 0.62 |
| 4.58 | 34.88 | -0.95 | 0.0 | -4471.87 | -26.54 | -2730.56 | -25.41 | 1457.46 | -49.10 | 19.69 | 0.00 | 0.61 |
| 4.59 | 34.49 | -0.95 | 0.0 | -4473.85 | -16.43 | -2717.67 | -3.08 | 1445.89 | -45.36 | 19.69 | 0.00 | 0.61 |
| 4.60 | 34.10 | -0.95 | 0.0 | -4473.95 | -1.25 | -2707.00 | 15.88 | 1432.71 | -37.11 | 19.69 | 0.00 | 0.61 |
| 4.61 | 34.00 | -0.99 | 0.0 | -4474.73 | 3.62 | -2649.34 | 21.88 | 1333.18 | -15.50 | 19.69 | -0.10 | 0.59 |
| 4.62 | 34.00 | -1.00 | 0.0 | -4480.81 | -6.75 | -2586.16 | 8.79 | 1220.45 | -8.86 | 19.69 | 0.00 | 0.58 |
| 4.63 | 33.81 | -1.00 | 0.0 | -4486.12 | -6.70 | -2606.05 | 8.69 | 1258.40 | -15.82 | 19.69 | 0.00 | 0.58 |
| 4.64 | 33.91 | -1.00 | 0.0 | -4456.52 | -16.73 | -2666.63 | -3.59 | 1319.80 | -21.78 | 19.69 | 0.00 | 0.59 |
| 4.65 | 33.41 | -1.00 | 0.0 | -4489.79 | -26.76 | -2686.33 | -29.61 | 1363.29 | -21.98 | 19.69 | 0.01 | 0.59 |
| 4.66 | 33.41 | -1.00 | 0.0 | -4483.24 | -31.83 | -2662.42 | -41.51 | 1353.35 | -17.46 | 19.69 | 0.01 | 0.59 |
| 4.67 | 33.22 | -1.00 | 0.0 | -4494.00 | -26.94 | -2634.41 | -35.54 | 1295.03 | -19.72 | 19.69 | 0.01 | 0.59 |
| 4.68 | 33.22 | -1.00 | 0.0 | -4506.66 | -6.67 | -2646.28 | 8.91 | 1318.92 | -30.03 | 19.69 | 0.00 | 0.59 |
| 4.69 | 33.62 | -1.00 | 0.0 | -4507.12 | -1.61 | -2647.79 | 15.24 | 1350.13 | -40.23 | 19.69 | 0.00 | 0.59 |
| 4.70 | 33.02 | -1.00 | 0.0 | -4507.95 | -6.75 | -2618.86 | 8.79 | 1288.33 | -35.33 | 19.69 | 0.00 | 0.58 |
| 4.71 | 32.62 | -1.00 | 0.0 | -4502.65 | -16.94 | -2591.52 | -3.96 | 1259.49 | -24.86 | 19.69 | 0.00 | 0.58 |
| 4.72 | 32.93 | -1.00 | 0.0 | -4496.70 | -16.91 | -2605.10 | -3.93 | 1246.33 | -25.12 | 19.69 | 0.00 | 0.58 |
| 4.73 | 32.93 | -1.00 | 0.0 | -4490.40 | -16.71 | -2656.00 | -3.60 | 1336.26 | -37.00 | 19.69 | 0.00 | 0.59 |
| 4.74 | 32.93 | -1.00 | 0.0 | -4495.52 | -16.60 | -2688.98 | -3.39 | 1394.31 | -40.58 | 19.68 | 0.00 | 0.60 |
| 4.75 | 32.83 | -1.00 | 0.0 | -4489.19 | -21.60 | -2701.22 | -19.12 | 1418.55 | -36.01 | 19.68 | 0.00 | 0.60 |
| 4.76 | 32.83 | -1.00 | 0.0 | -4482.65 | -21.61 | -2701.33 | -20.71 | 1415.10 | -36.09 | 19.68 | 0.00 | 0.60 |
| 4.77 | 32.73 | -1.00 | 0.0 | -4483.25 | -21.66 | -2689.28 | -19.29 | 1384.62 | -40.78 | 19.68 | 0.00 | 0.60 |
| 4.78 | 32.73 | -1.00 | 0.0 | -4483.66 | -16.64 | -2675.06 | -13.02 | 1356.47 | -34.86 | 19.68 | 0.00 | 0.60 |
| 4.79 | 32.63 | -1.00 | 0.0 | -4490.61 | -6.52 | -2665.04 | 9.20 | 1366.48 | -27.70 | 19.68 | 0.00 | 0.59 |
| 4.80 | 22.83 | -1.00 | 0.0 | -1.07 | 1.47 | -1.67 | -3.69 | -2.21 | 12.76 | 23.51 | -1.37 | 1.56 |

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TABLE V
TABULATED DATA

RUN: 26-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-------|----------|--------|----------|--------|----------|---------|-------|-------|-------|
| 0.0 | 21.40 | -0.02 | -0.03 | -4544.79 | -15.94 | -13.72 | 97.55 | -3.76 | 53.46 | 19.69 | 0.00 | 0.00 |
| 0.01 | 21.30 | -0.03 | -0.04 | -4787.61 | -47.22 | -26.55 | 67.77 | 12.40 | 11.59 | 19.62 | 0.01 | 0.01 |
| 0.02 | 21.40 | -0.03 | -0.04 | -4793.96 | -47.14 | -44.07 | 77.43 | 44.68 | 8.14 | 19.63 | 0.01 | 0.01 |
| 0.03 | 21.40 | -0.03 | -0.04 | -4776.87 | -57.16 | -59.35 | 55.46 | 85.59 | 8.07 | 19.64 | 0.01 | 0.01 |
| 0.04 | 21.40 | -0.03 | -0.04 | -4748.96 | -67.27 | -41.82 | 33.25 | 50.27 | 11.52 | 19.65 | 0.01 | 0.01 |
| 0.05 | 21.40 | -0.03 | -0.04 | -4710.23 | -67.29 | -7.47 | 23.56 | -23.29 | 17.32 | 19.66 | 0.01 | 0.00 |
| 0.06 | 21.40 | -0.03 | -0.04 | -4689.71 | -56.99 | -26.19 | 46.08 | 13.35 | 19.68 | 19.66 | 0.01 | 0.01 |
| 0.07 | 21.40 | -0.03 | -0.04 | -4663.89 | -36.58 | -36.18 | 81.14 | 38.89 | 15.80 | 19.67 | 0.01 | 0.01 |
| 0.08 | 21.40 | -0.03 | -0.04 | -4642.33 | -26.34 | -44.80 | 93.97 | 54.70 | 22.13 | 19.68 | 0.01 | 0.01 |
| 0.09 | 21.40 | -0.03 | -0.04 | -4641.06 | -16.30 | -34.78 | 96.88 | 25.53 | 22.05 | 19.68 | 0.01 | 0.01 |
| 0.10 | 21.40 | -0.03 | -0.03 | -4641.04 | -11.35 | -10.85 | 102.96 | -15.28 | 19.77 | 19.68 | 0.00 | 0.00 |
| 0.11 | 21.40 | -0.03 | -0.04 | -4601.55 | -11.18 | -26.80 | 84.17 | 18.75 | 18.63 | 19.69 | 0.01 | 0.01 |
| 0.12 | 21.40 | -0.03 | -0.04 | -4529.92 | -26.12 | -32.46 | 46.54 | 25.68 | 17.56 | 19.69 | 0.01 | 0.01 |
| 0.13 | 21.40 | -0.03 | -0.04 | -4464.38 | -25.89 | -34.41 | 37.38 | 31.37 | 22.20 | 19.70 | 0.01 | 0.01 |
| 0.14 | 21.40 | -0.03 | -0.04 | -4412.27 | -20.69 | -9.44 | 63.02 | -10.49 | 29.17 | 19.69 | 0.00 | 0.00 |
| 0.15 | 21.40 | -0.03 | -0.04 | -4394.60 | -15.55 | 17.16 | 107.66 | -67.50 | 38.54 | 19.69 | 0.00 | -0.00 |
| 0.16 | 21.40 | -0.03 | -0.04 | -4407.87 | -25.53 | -9.00 | 123.96 | -19.63 | 45.32 | 19.68 | 0.01 | 0.00 |
| 0.17 | 21.40 | -0.03 | -0.04 | -4357.11 | -45.66 | -24.30 | 98.91 | 15.42 | 45.25 | 19.68 | 0.01 | 0.01 |
| 0.18 | 21.40 | -0.03 | -0.04 | -4341.57 | -75.83 | -32.35 | 42.26 | 32.45 | 40.64 | 19.68 | 0.01 | 0.01 |
| 0.19 | 21.40 | -0.03 | -0.04 | -4268.87 | -85.88 | -3.98 | 1.04 | -28.18 | 37.27 | 19.68 | 0.00 | 0.00 |
| 0.20 | 21.40 | -0.03 | -0.04 | -4233.05 | -70.66 | 28.20 | 39.17 | -170.24 | 39.84 | 19.67 | 0.02 | -0.01 |
| 0.21 | 21.40 | -0.03 | -0.04 | -4236.77 | -29.99 | 5.91 | 128.23 | -415.63 | 45.08 | 19.66 | 0.01 | -0.00 |
| 0.22 | 21.40 | -0.03 | -0.04 | -4249.21 | -14.70 | -18.08 | 166.47 | -777.44 | 48.06 | 19.65 | 0.00 | 0.00 |
| 0.23 | 21.40 | -0.03 | -0.04 | -4257.54 | -29.79 | -64.27 | 128.68 | -1308.03 | 48.84 | 19.64 | 0.01 | 0.02 |
| 0.24 | 21.40 | -0.03 | -0.04 | -4251.95 | -59.96 | -142.47 | 53.05 | -2087.78 | 48.48 | 19.63 | 0.01 | 0.03 |
| 0.25 | 21.40 | -0.03 | -0.04 | -4261.82 | -74.69 | -302.21 | 6.29 | -2534.25 | 48.30 | 19.63 | 0.02 | 0.07 |
| 0.26 | 21.40 | -0.04 | -0.03 | -4293.08 | -58.48 | -619.24 | 17.53 | -2008.74 | 48.40 | 19.62 | 0.01 | 0.14 |
| 0.27 | 21.49 | -0.05 | -0.03 | -4343.83 | -21.74 | -1034.58 | 54.41 | -1327.33 | 54.64 | 19.61 | 0.01 | 0.14 |
| 0.28 | 21.40 | -0.05 | -0.04 | -4391.50 | 15.41 | -1566.86 | 82.40 | -455.17 | 54.25 | 19.60 | -0.00 | 0.30 |
| 0.29 | 21.40 | -0.07 | -0.04 | -4420.19 | 42.62 | -2158.15 | 88.50 | 459.06 | 34.73 | 19.60 | -0.01 | 0.49 |
| 0.30 | 21.30 | -0.08 | -0.04 | -4408.57 | 54.75 | -2770.92 | 56.76 | 1481.69 | -9.28 | 19.60 | -0.01 | 0.62 |
| 0.31 | 21.10 | -0.10 | -0.04 | -4399.91 | 61.85 | -3380.76 | 37.90 | 2478.77 | -72.48 | 19.60 | -0.01 | 0.77 |
| 0.32 | 20.91 | -0.11 | -0.04 | -4410.33 | 63.21 | -3793.20 | 59.28 | 3148.51 | -138.80 | 19.59 | -0.01 | 0.80 |
| 0.33 | 20.71 | -0.14 | -0.04 | -4438.10 | 33.16 | -3906.52 | 50.79 | 3334.40 | -170.73 | 19.59 | -0.01 | 0.83 |
| 0.34 | 20.42 | -0.17 | -0.04 | -4447.72 | -38.36 | -3719.17 | -28.73 | 3024.34 | -158.06 | 19.59 | 0.01 | 0.84 |
| 0.35 | 20.22 | -0.23 | -0.04 | -4447.98 | -95.03 | -3418.07 | -99.54 | 3031.86 | -129.22 | 19.59 | 0.02 | 0.77 |
| 0.36 | 20.03 | -0.30 | -0.04 | -4471.53 | -90.63 | -3226.51 | -65.72 | 2957.89 | -125.97 | 19.59 | 0.02 | 0.72 |
| 0.37 | 19.93 | -0.59 | -0.04 | -4500.77 | -25.29 | -3104.32 | 62.93 | 2051.99 | -134.41 | 19.58 | 0.01 | 0.69 |

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TABLE V
TABULATED DATA

RUN: 26-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-------|----------|----------|----------|--------|----------|---------|-------|-------|-------|
| 0.76 | 13.19 | -1.00 | -0.04 | -4502.51 | -31.10 | -2882.64 | 36.30 | 1679.68 | -77.72 | 19.57 | 0.01 | 0.04 |
| 0.77 | 13.09 | -1.00 | -0.03 | -4497.03 | -25.91 | -2906.60 | 42.81 | 1725.62 | -75.46 | 19.57 | 0.01 | 0.03 |
| 0.78 | 12.99 | -1.00 | -0.03 | -4492.15 | -5.51 | -2938.06 | 77.73 | 1780.40 | -76.73 | 19.57 | 0.00 | 0.03 |
| 0.79 | 12.80 | -1.00 | -0.04 | -4480.93 | 14.74 | -2934.66 | 102.78 | 1765.39 | -79.12 | 19.57 | -0.00 | 0.03 |
| 0.80 | 12.70 | -1.00 | -0.03 | -4467.00 | 24.77 | -2915.16 | 124.67 | 1722.24 | -80.29 | 19.57 | -0.01 | 0.03 |
| 0.81 | 12.60 | -1.00 | -0.03 | -4486.22 | 14.74 | -2941.33 | 102.78 | 1776.72 | -81.46 | 19.57 | -0.00 | 0.03 |
| 0.82 | 21.40 | -0.03 | 1.98 | -4726.20 | -1059.80 | -37.45 | 168.39 | 23.55 | 204.34 | 19.61 | 0.22 | 0.01 |
| 0.83 | 21.40 | -0.03 | 1.98 | -4746.95 | -1064.98 | -55.10 | 151.50 | 17.04 | 203.20 | 19.62 | 0.22 | 0.01 |
| 0.84 | 21.40 | -0.03 | 1.98 | -4763.20 | -1070.23 | -0.26 | 144.85 | -34.99 | 206.69 | 19.62 | 0.22 | 0.00 |
| 0.85 | 21.40 | -0.03 | 1.98 | -4764.24 | -1075.24 | -5.77 | 147.33 | -39.12 | 205.04 | 19.63 | 0.23 | 0.00 |
| 0.86 | 21.40 | -0.03 | 1.98 | -4764.67 | -1085.26 | -25.07 | 143.60 | 4.75 | 207.74 | 19.64 | 0.23 | 0.01 |
| 0.87 | 21.40 | -0.03 | 1.98 | -4744.27 | -1090.15 | -42.55 | 146.30 | 49.06 | 204.29 | 19.65 | 0.23 | 0.01 |
| 0.88 | 21.40 | -0.03 | 1.98 | -4701.23 | -1095.07 | -38.96 | 140.21 | 40.11 | 202.00 | 19.65 | 0.23 | 0.01 |
| 0.89 | 21.40 | -0.03 | 1.58 | -4674.35 | -1095.10 | -5.12 | 139.22 | -31.15 | 200.94 | 19.66 | 0.23 | 0.00 |
| 0.90 | 21.40 | -0.02 | 1.98 | -4681.48 | -1094.97 | -8.39 | 170.08 | -27.36 | 202.09 | 19.67 | 0.23 | 0.00 |
| 0.91 | 21.40 | -0.02 | 1.98 | -4670.71 | -1074.72 | -29.47 | 162.95 | 17.92 | 200.94 | 19.67 | 0.23 | 0.01 |
| 0.92 | 21.40 | -0.02 | 1.98 | -4655.62 | -1069.58 | -41.15 | 179.00 | 35.53 | 198.64 | 19.68 | 0.23 | 0.01 |
| 0.93 | 21.40 | -0.03 | 1.98 | -4620.44 | -1064.47 | -52.40 | 175.84 | 16.93 | 196.39 | 19.68 | 0.23 | 0.01 |
| 0.94 | 21.40 | -0.03 | 1.98 | -4565.65 | -1059.41 | -5.36 | 171.68 | -47.02 | 191.86 | 19.69 | 0.23 | -0.00 |
| 0.95 | 21.40 | -0.03 | 1.58 | -4500.13 | -1049.05 | -4.63 | 175.17 | -30.47 | 183.87 | 19.69 | 0.23 | 0.00 |
| 0.96 | 21.40 | -0.03 | 1.98 | -4438.87 | -1038.69 | -25.51 | 169.12 | 2.79 | 175.78 | 19.69 | 0.23 | 0.01 |
| 0.97 | 21.40 | -0.03 | 1.98 | -4416.27 | -1033.56 | -32.92 | 166.01 | 14.09 | 172.30 | 19.69 | 0.23 | 0.01 |
| 0.98 | 21.40 | -0.03 | 1.98 | -4428.09 | -1018.41 | -30.02 | 195.28 | 22.06 | 168.90 | 19.68 | 0.23 | 0.01 |
| 0.99 | 21.40 | -0.03 | 1.98 | -4434.38 | -1018.55 | 0.51 | 204.55 | -49.63 | 168.96 | 19.68 | 0.22 | -0.00 |
| 1.00 | 21.40 | -0.03 | 1.98 | -4393.86 | -1028.55 | -9.68 | 163.48 | -90.80 | 169.02 | 19.68 | 0.23 | 0.00 |
| 1.01 | 21.40 | -0.03 | 1.98 | -4326.47 | -1038.45 | -18.27 | 122.59 | -366.31 | 171.83 | 19.68 | 0.24 | 0.00 |
| 1.02 | 21.40 | -0.03 | 1.98 | -4268.43 | -1028.11 | -20.90 | 126.88 | -783.66 | 176.15 | 19.67 | 0.24 | 0.00 |
| 1.03 | 21.40 | -0.03 | 1.58 | -4252.81 | -997.58 | -31.61 | 194.51 | -1422.91 | 184.25 | 19.66 | 0.23 | 0.01 |
| 1.04 | 21.40 | -0.03 | 1.98 | -4269.48 | -977.17 | -80.00 | 239.93 | -2222.51 | 186.84 | 19.65 | 0.23 | 0.02 |
| 1.05 | 21.40 | -0.03 | 1.98 | -4287.35 | -961.60 | -279.39 | 235.52 | -2568.91 | 183.93 | 19.64 | 0.23 | 0.07 |
| 1.06 | 21.40 | -0.04 | 1.98 | -4285.20 | -995.68 | -612.38 | 180.40 | -2016.95 | 167.70 | 19.64 | 0.23 | 0.19 |
| 1.07 | 21.40 | -0.05 | 1.98 | -4269.41 | -999.26 | -1055.80 | 120.21 | -1291.16 | 147.09 | 19.63 | 0.23 | 0.22 |
| 1.08 | 21.40 | -0.06 | 1.98 | -4253.74 | -967.13 | -1587.43 | 103.80 | -424.61 | 124.69 | 19.63 | 0.23 | 0.21 |
| 1.09 | 21.30 | -0.07 | 1.93 | -4235.55 | -904.55 | -2164.60 | 116.42 | 500.89 | 87.97 | 19.62 | 0.21 | 0.21 |
| 1.10 | 21.20 | -0.09 | 1.98 | -4204.38 | -811.53 | -2785.65 | 174.29 | 1505.65 | 15.42 | 19.61 | 0.19 | 0.20 |
| 1.11 | 21.01 | -0.10 | 1.93 | -4194.21 | -698.81 | -3312.16 | 174.29 | 2362.32 | -83.66 | 19.60 | 0.17 | 0.19 |
| 1.12 | 20.71 | -0.12 | 1.98 | -4212.29 | -602.40 | -3566.14 | 141.72 | 2773.19 | -158.23 | 19.59 | 0.14 | 0.22 |
| 1.13 | 20.42 | -0.15 | 1.99 | -4253.90 | -572.28 | -3520.02 | 50.13 | 2697.60 | -165.95 | 19.58 | 0.12 | 0.23 |

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TABLE V
TABULATED DATA

RUN: 26- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-------|----------|--------|----------|--------|---------|---------|-------|-------|------|
| 0.36 | 15.74 | -0.50 | -0.04 | -4521.54 | 19.81 | -2966.65 | 137.76 | 1831.84 | -104.44 | 19.58 | -0.00 | 0.66 |
| 0.39 | 19.54 | -0.58 | -0.04 | -4504.93 | 19.35 | -2812.53 | 108.33 | 2021.06 | -50.19 | 19.58 | -0.00 | 0.62 |
| 0.40 | 14.25 | -0.66 | -0.04 | -4470.89 | 14.25 | -2781.66 | 82.87 | 1514.77 | -41.25 | 19.58 | -0.00 | 0.62 |
| 0.41 | 19.05 | -0.72 | -0.03 | -4486.61 | 24.64 | -2377.00 | 105.43 | 1677.02 | -69.43 | 19.58 | -0.01 | 0.64 |
| 0.42 | 18.06 | -0.77 | -0.03 | -4504.36 | 29.76 | -2400.56 | 130.92 | 1718.05 | -74.13 | 19.58 | -0.01 | 0.64 |
| 0.43 | 18.56 | -0.82 | -0.03 | -4514.95 | 9.56 | -2918.60 | 105.92 | 1750.51 | -70.82 | 19.58 | -0.00 | 0.65 |
| 0.44 | 13.37 | -0.85 | -0.04 | -4502.32 | -15.69 | -2948.79 | 65.05 | 1787.95 | -69.64 | 19.58 | -0.00 | 0.65 |
| 0.45 | 18.17 | -0.87 | -0.04 | -4501.06 | -36.04 | -2928.95 | 30.15 | 1746.00 | -93.23 | 19.58 | -0.01 | 0.65 |
| 0.46 | 17.08 | -0.90 | -0.03 | -4507.38 | -51.28 | -2960.29 | 11.28 | 1707.12 | -73.36 | 19.58 | -0.01 | 0.64 |
| 0.47 | 17.68 | -0.92 | -0.03 | -4491.94 | -41.11 | -2890.56 | 23.96 | 1702.77 | -67.33 | 19.58 | -0.01 | 0.64 |
| 0.48 | 17.49 | -0.93 | -0.03 | -4499.11 | -15.72 | -2910.77 | 74.59 | 1740.41 | -74.21 | 19.58 | -0.00 | 0.65 |
| 0.49 | 17.29 | -0.94 | -0.04 | -4499.46 | 14.43 | -2856.56 | 111.83 | 1640.10 | -69.34 | 19.58 | -0.00 | 0.63 |
| 0.50 | 17.10 | -0.96 | -0.04 | -4489.27 | 19.31 | -2800.95 | 117.74 | 1541.02 | -70.21 | 19.58 | -0.00 | 0.62 |
| 0.51 | 16.90 | -0.97 | -0.03 | -4484.31 | 19.41 | -2828.18 | 117.93 | 1595.45 | -80.59 | 19.58 | -0.00 | 0.63 |
| 0.52 | 16.71 | -0.97 | -0.04 | -4494.20 | 4.11 | -2808.40 | 89.36 | 1564.05 | -81.63 | 19.58 | -0.00 | 0.62 |
| 0.53 | 16.51 | -0.97 | -0.04 | -4495.67 | -16.31 | -2752.96 | 63.98 | 1481.67 | -75.37 | 19.58 | -0.00 | 0.61 |
| 0.54 | 16.41 | -0.98 | -0.04 | -4490.15 | -21.63 | -2609.42 | 47.67 | 1370.73 | -79.65 | 19.58 | -0.00 | 0.60 |
| 0.55 | 16.22 | -0.98 | -0.04 | -4480.14 | -21.76 | -2664.21 | 47.59 | 1320.19 | -87.68 | 19.58 | -0.00 | 0.59 |
| 0.56 | 16.04 | -0.99 | -0.03 | -4485.49 | -16.51 | -2699.16 | 63.58 | 1386.05 | -86.61 | 19.58 | -0.00 | 0.60 |
| 0.57 | 15.93 | -0.99 | -0.03 | -4474.50 | -1.13 | -2730.55 | 82.78 | 1450.72 | -84.45 | 19.58 | -0.00 | 0.61 |
| 0.58 | 15.73 | -0.99 | -0.03 | -4467.98 | -0.92 | -2780.40 | 83.15 | 1520.16 | -82.52 | 19.58 | -0.00 | 0.62 |
| 0.59 | 15.53 | -0.99 | -0.03 | -4473.46 | -5.92 | -2810.74 | 86.51 | 1566.47 | -85.13 | 19.58 | -0.00 | 0.63 |
| 0.60 | 15.44 | -0.99 | -0.03 | -4472.81 | -0.90 | -2809.03 | 92.66 | 1550.71 | -89.93 | 19.58 | -0.00 | 0.63 |
| 0.61 | 15.24 | -1.00 | -0.03 | -4483.83 | -5.92 | -2823.43 | 86.49 | 1583.74 | -88.73 | 19.58 | -0.00 | 0.63 |
| 0.62 | 15.14 | -1.00 | -0.04 | -4478.13 | -16.08 | -2806.86 | 64.37 | 1562.87 | -79.33 | 19.58 | -0.00 | 0.63 |
| 0.63 | 14.95 | -1.00 | -0.04 | -4478.35 | -9.90 | -2819.37 | 77.03 | 1584.08 | -76.95 | 19.58 | -0.00 | 0.63 |
| 0.64 | 14.85 | -1.00 | -0.03 | -4483.20 | -0.88 | -2817.17 | 83.20 | 1575.17 | -79.41 | 19.57 | -0.00 | 0.63 |
| 0.65 | 14.75 | -1.00 | -0.04 | -4482.36 | -0.84 | -2834.42 | 83.24 | 1595.58 | -82.02 | 19.58 | -0.00 | 0.63 |
| 0.66 | 14.56 | -1.00 | -0.03 | -4480.53 | -15.76 | -2907.75 | 55.36 | 1723.98 | -84.75 | 19.58 | -0.00 | 0.65 |
| 0.67 | 14.36 | -1.00 | -0.03 | -4474.44 | -20.62 | -2955.45 | 49.45 | 1802.77 | -87.55 | 19.57 | -0.00 | 0.66 |
| 0.68 | 14.26 | -1.00 | -0.04 | -4491.36 | -25.62 | -2981.02 | 52.58 | 1849.91 | -87.46 | 19.57 | -0.01 | 0.66 |
| 0.69 | 14.07 | -1.00 | -0.04 | -4492.35 | -15.59 | -2953.21 | 74.78 | 1796.26 | -83.51 | 19.57 | -0.00 | 0.66 |
| 0.70 | 13.97 | -1.00 | -0.04 | -4492.32 | -0.52 | -2926.98 | 93.36 | 1743.79 | -82.70 | 19.57 | -0.00 | 0.65 |
| 0.71 | 13.78 | -1.00 | -0.03 | -4486.02 | 4.65 | -2951.65 | 90.31 | 1793.24 | -81.57 | 19.57 | -0.00 | 0.66 |
| 0.72 | 13.68 | -1.00 | -0.04 | -4486.03 | 9.76 | -2964.09 | 98.67 | 1818.16 | -85.02 | 19.57 | -0.00 | 0.66 |
| 0.73 | 13.58 | -1.00 | -0.04 | -4497.25 | 4.66 | -2959.55 | 90.34 | 1817.32 | -86.04 | 19.57 | -0.00 | 0.66 |
| 0.74 | 13.48 | -1.00 | -0.03 | -4508.43 | -5.69 | -2912.80 | 77.38 | 1731.93 | -84.73 | 19.57 | -0.00 | 0.65 |
| 0.75 | 13.29 | -1.00 | -0.04 | -4496.98 | -21.05 | -2864.60 | 48.67 | 1641.49 | -81.16 | 19.57 | -0.00 | 0.64 |

TABLE V
TABULATED DATA

RUN: 16- 1-32

| TE | KS | SR | SA | FZ | FY | FX | MX | MY | MZ | PH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|---------|-------|------|------|
| 1.14 | 19.74 | -0.19 | 1.96 | -4293.05 | -442.69 | -3304.69 | -42.47 | 2343.37 | -134.51 | 19.57 | 0.10 | 0.77 |
| 1.15 | 19.25 | -0.22 | 1.99 | -4358.77 | -327.41 | -3153.93 | -33.54 | 2613.17 | -116.78 | 19.56 | 0.08 | 0.72 |
| 1.16 | 18.76 | -0.34 | 1.99 | -4411.56 | -196.48 | -3095.42 | 42.36 | 2027.06 | -120.74 | 19.56 | 0.04 | 0.70 |
| 1.17 | 18.56 | -0.44 | 1.94 | -4439.52 | -100.78 | -3036.61 | 103.40 | 1454.82 | -101.70 | 19.56 | 0.02 | 0.68 |
| 1.18 | 18.56 | -0.55 | 1.56 | -4458.75 | -65.70 | -2560.33 | 106.52 | 2189.60 | -56.90 | 19.56 | 0.01 | 0.66 |
| 1.19 | 18.05 | -0.64 | 1.98 | -4462.11 | -55.72 | -2440.56 | 101.73 | 1767.64 | -49.33 | 19.55 | 0.01 | 0.66 |
| 1.20 | 19.35 | -0.72 | 1.58 | -4511.62 | -45.64 | -2487.04 | 133.25 | 1842.26 | -80.73 | 19.55 | 0.01 | 0.66 |
| 1.21 | 19.74 | -0.78 | 1.58 | -4568.26 | -71.23 | -2950.52 | 120.55 | 1785.71 | -87.37 | 19.55 | 0.02 | 0.65 |
| 1.22 | 19.83 | -0.82 | 1.98 | -4578.87 | -132.25 | -2875.82 | 25.81 | 1677.04 | -81.14 | 19.55 | 0.03 | 0.63 |
| 1.23 | 19.35 | -0.85 | 1.99 | -4566.89 | -182.95 | -2858.19 | -56.22 | 1648.18 | -94.85 | 19.56 | 0.04 | 0.63 |
| 1.24 | 18.76 | -0.16 | 1.58 | -4567.66 | -188.17 | -2820.59 | -53.28 | 1570.77 | -99.45 | 19.56 | 0.04 | 0.62 |
| 1.25 | 18.27 | -0.50 | 1.99 | -4570.11 | -152.77 | -2768.17 | 9.67 | 1518.33 | -73.80 | 19.56 | 0.03 | 0.61 |
| 1.26 | 18.08 | -0.91 | 1.99 | -4537.95 | -112.05 | -2807.82 | 60.27 | 1561.80 | -57.54 | 19.56 | 0.02 | 0.62 |
| 1.27 | 18.08 | -0.53 | 1.59 | -4515.55 | -76.37 | -2859.82 | 104.59 | 1649.47 | -58.93 | 19.56 | 0.02 | 0.63 |
| 1.28 | 17.78 | -0.94 | 1.99 | -4517.18 | -61.14 | -2861.94 | 142.57 | 1649.59 | -54.35 | 19.56 | 0.01 | 0.63 |
| 1.29 | 17.49 | -0.95 | 1.98 | -4506.17 | -71.29 | -2647.57 | 129.95 | 1616.60 | -55.58 | 19.56 | 0.02 | 0.63 |
| 1.30 | 17.20 | -0.56 | 1.99 | -4499.89 | -106.51 | -2902.32 | 86.43 | 1707.53 | -68.68 | 19.56 | 0.02 | 0.64 |
| 1.31 | 17.00 | -0.57 | 1.95 | -4486.85 | -141.78 | -2934.44 | 23.75 | 1763.59 | -63.20 | 19.56 | 0.03 | 0.65 |
| 1.32 | 16.71 | -0.97 | 1.99 | -4470.98 | -156.84 | -2938.16 | 5.10 | 1779.51 | -45.88 | 19.57 | 0.04 | 0.66 |
| 1.33 | 16.41 | -0.58 | 1.99 | -4465.27 | -146.64 | -2951.29 | 17.88 | 1797.26 | -42.51 | 19.56 | 0.03 | 0.66 |
| 1.34 | 16.22 | -0.98 | 1.99 | -4464.40 | -116.30 | -2960.57 | 55.40 | 1799.49 | -48.49 | 19.56 | 0.03 | 0.66 |
| 1.35 | 16.02 | -0.59 | 1.99 | -4465.02 | -95.96 | -2979.52 | 90.18 | 1831.31 | -46.26 | 19.56 | 0.02 | 0.67 |
| 1.36 | 15.83 | -0.59 | 1.55 | -4464.20 | -90.86 | -2992.94 | 87.01 | 1859.31 | -42.78 | 19.56 | 0.02 | 0.67 |
| 1.37 | 15.63 | -0.99 | 1.93 | -4458.92 | -100.93 | -2995.97 | 74.58 | 1868.37 | -40.47 | 19.56 | 0.02 | 0.67 |
| 1.38 | 15.44 | -0.50 | 1.99 | -4464.63 | -116.18 | -2979.81 | 55.65 | 1842.17 | -39.23 | 19.56 | 0.03 | 0.67 |
| 1.39 | 15.24 | -0.99 | 1.99 | -4487.41 | -121.51 | -2928.78 | 53.43 | 1746.23 | -39.08 | 19.56 | 0.03 | 0.65 |
| 1.40 | 15.05 | -0.99 | 1.95 | -4486.79 | -116.49 | -2921.24 | 55.10 | 1737.36 | -35.52 | 19.56 | 0.03 | 0.65 |
| 1.41 | 14.85 | -1.00 | 1.98 | -4485.97 | -111.38 | -2934.91 | 51.93 | 1766.87 | -33.19 | 19.56 | 0.02 | 0.65 |
| 1.42 | 14.66 | -1.00 | 1.98 | -4479.46 | -106.22 | -2961.22 | 48.92 | 1813.04 | -34.43 | 19.55 | 0.02 | 0.66 |
| 1.43 | 14.46 | -1.00 | 1.99 | -4484.53 | -101.19 | -2962.90 | 55.11 | 1810.29 | -36.63 | 19.55 | 0.02 | 0.66 |
| 1.44 | 14.26 | -1.00 | 1.99 | -4496.33 | -101.33 | -2954.60 | 64.37 | 1754.71 | -40.21 | 19.55 | 0.02 | 0.65 |
| 1.45 | 14.17 | -1.00 | 1.99 | -4496.35 | -106.39 | -2939.93 | 58.11 | 1766.32 | -46.28 | 19.55 | 0.02 | 0.65 |
| 1.46 | 14.07 | -1.00 | 1.99 | -4492.38 | -121.51 | -2955.46 | 39.43 | 1797.31 | -56.39 | 19.55 | 0.03 | 0.66 |
| 1.47 | 13.87 | -1.00 | 1.55 | -4496.61 | -126.56 | -2951.79 | 33.15 | 1794.04 | -58.63 | 19.55 | 0.03 | 0.66 |
| 1.48 | 13.78 | -1.00 | 1.93 | -4497.84 | -121.58 | -2933.53 | 48.86 | 1763.61 | -61.93 | 19.55 | 0.03 | 0.65 |
| 1.49 | 13.58 | -1.00 | 1.98 | -4498.23 | -106.59 | -2888.23 | 67.27 | 1681.21 | -62.86 | 19.55 | 0.02 | 0.64 |
| 1.50 | 13.39 | -1.00 | 1.98 | -4498.42 | -91.43 | -2860.72 | 86.03 | 1670.34 | -59.30 | 19.55 | 0.02 | 0.64 |
| 1.51 | 13.19 | -1.00 | 1.58 | -4492.32 | -86.35 | -2885.68 | 82.81 | 1684.41 | -59.23 | 19.55 | 0.02 | 0.64 |

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TABLE V
TABULATED DATA

RUN: 26-1-32

| TE | KS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|-------|
| 1.52 | 13.69 | -1.00 | 1.99 | -4492.34 | -91.36 | -2858.14 | 70.64 | 1709.32 | -62.71 | 19.55 | 0.02 | 0.65 |
| 1.53 | 12.60 | -1.00 | 1.99 | -4497.84 | -111.65 | -2888.72 | 51.49 | 1692.48 | -63.86 | 19.55 | 0.02 | 0.64 |
| 1.54 | 12.60 | -1.00 | 1.99 | -4498.02 | -132.08 | -2844.39 | 26.07 | 1607.78 | -66.09 | 19.55 | 0.03 | 0.63 |
| 1.55 | 12.70 | -1.00 | 1.99 | -4498.25 | -142.21 | -2839.97 | 13.53 | 1603.00 | -67.19 | 19.55 | 0.03 | 0.63 |
| 1.56 | 12.51 | -1.00 | 1.98 | -4504.79 | -137.10 | -2849.25 | 29.47 | 1625.69 | -65.96 | 19.55 | 0.03 | 0.63 |
| 1.57 | 12.41 | -1.00 | 1.99 | -4499.51 | -116.80 | -2849.60 | 54.64 | 1644.90 | -63.58 | 19.55 | 0.03 | 0.64 |
| 1.58 | 12.31 | -1.00 | 1.98 | -4495.02 | -96.55 | -2849.62 | 89.25 | 1628.53 | -58.91 | 19.55 | 0.02 | 0.63 |
| 1.59 | 12.22 | -1.00 | 1.99 | -4494.97 | -81.51 | -2816.78 | 167.75 | 1562.87 | -55.40 | 19.55 | 0.02 | 0.63 |
| 1.60 | 12.12 | -1.00 | 1.98 | -4489.48 | -86.48 | -2832.10 | 101.64 | 1591.45 | -55.46 | 19.55 | 0.02 | 0.63 |
| 1.61 | 11.92 | -1.00 | 1.98 | -4488.28 | -101.56 | -2865.12 | 73.52 | 1651.35 | -59.09 | 19.55 | 0.02 | 0.64 |
| 1.62 | 21.40 | -0.03 | 3.98 | -4369.01 | -1733.79 | -34.62 | 308.52 | 29.47 | 239.85 | 19.60 | 0.40 | 0.01 |
| 1.63 | 21.40 | -0.04 | 3.98 | -4428.02 | -1739.13 | -26.43 | 303.12 | -0.18 | 229.38 | 19.59 | 0.39 | 0.01 |
| 1.64 | 21.40 | -0.04 | 3.98 | -4486.20 | -1774.87 | -11.65 | 249.04 | -38.07 | 221.17 | 19.59 | 0.40 | 0.00 |
| 1.65 | 21.40 | -0.04 | 3.98 | -4528.35 | -1810.35 | -39.54 | 195.46 | 29.16 | 217.53 | 19.59 | 0.40 | 0.01 |
| 1.66 | 21.40 | -0.04 | 3.98 | -4589.66 | -1825.63 | -51.77 | 195.63 | 93.03 | 222.13 | 19.59 | 0.40 | 0.01 |
| 1.67 | 21.40 | -0.03 | 3.98 | -4669.91 | -1615.63 | -58.10 | 255.77 | 66.56 | 227.97 | 19.59 | 0.39 | 0.01 |
| 1.68 | 21.40 | -0.03 | 3.98 | -4709.27 | -1815.82 | -31.74 | 273.04 | 14.81 | 237.18 | 19.60 | 0.39 | 0.01 |
| 1.69 | 21.40 | -0.03 | 3.98 | -4714.84 | -1836.19 | -0.97 | 246.18 | -50.70 | 245.27 | 19.61 | 0.39 | 0.00 |
| 1.70 | 21.40 | -0.03 | 3.98 | -4737.46 | -1851.31 | -20.32 | 237.03 | -14.16 | 254.47 | 19.61 | 0.39 | 0.00 |
| 1.71 | 21.40 | -0.03 | 3.98 | -4755.41 | -1866.42 | -38.48 | 235.91 | 29.02 | 257.83 | 19.62 | 0.39 | 0.01 |
| 1.72 | 21.40 | -0.03 | 3.98 | -4745.69 | -1886.54 | -50.15 | 218.99 | 57.29 | 255.52 | 19.63 | 0.40 | 0.01 |
| 1.73 | 21.40 | -0.03 | 3.98 | -4729.38 | -1896.72 | -27.06 | 206.25 | 5.80 | 252.04 | 19.63 | 0.40 | 0.01 |
| 1.74 | 21.40 | -0.03 | 3.98 | -4708.82 | -1891.69 | 2.79 | 220.47 | -58.12 | 250.99 | 19.64 | 0.40 | -0.00 |
| 1.75 | 21.40 | -0.03 | 3.98 | -4681.98 | -1676.32 | -17.45 | 238.20 | -14.04 | 251.04 | 19.65 | 0.40 | 0.00 |
| 1.76 | 21.40 | -0.03 | 3.98 | -4666.74 | -1861.00 | -31.14 | 265.41 | 13.41 | 253.38 | 19.66 | 0.40 | 0.01 |
| 1.77 | 21.40 | -0.03 | 3.98 | -4672.02 | -1845.78 | -43.38 | 284.42 | 31.68 | 257.98 | 19.66 | 0.40 | 0.01 |
| 1.78 | 21.40 | -0.03 | 3.98 | -4677.49 | -1860.83 | -19.17 | 290.52 | -13.40 | 263.80 | 19.66 | 0.39 | 0.00 |
| 1.79 | 21.40 | -0.03 | 3.98 | -4631.63 | -1845.93 | 12.94 | 253.95 | -74.56 | 266.14 | 19.67 | 0.40 | -0.00 |
| 1.80 | 21.40 | -0.03 | 3.98 | -4553.68 | -1850.71 | -1.36 | 219.51 | -75.13 | 267.42 | 19.67 | 0.41 | 0.00 |
| 1.81 | 21.40 | -0.03 | 3.98 | -4498.12 | -1835.35 | -10.07 | 219.66 | -332.17 | 262.26 | 19.67 | 0.41 | 0.00 |
| 1.82 | 21.40 | -0.03 | 3.98 | -4453.95 | -1809.87 | -24.78 | 240.49 | -678.50 | 255.03 | 19.68 | 0.41 | 0.01 |
| 1.83 | 21.40 | -0.03 | 3.98 | -4437.23 | -1779.46 | -33.87 | 279.88 | -1347.60 | 251.37 | 19.67 | 0.40 | 0.01 |
| 1.84 | 21.40 | -0.04 | 3.98 | -4447.59 | -1774.24 | -84.73 | 296.00 | -2201.13 | 253.69 | 19.67 | 0.40 | 0.02 |
| 1.85 | 21.40 | -0.04 | 3.98 | -4454.28 | -1783.70 | -275.56 | 275.03 | -2572.67 | 252.46 | 19.67 | 0.40 | 0.06 |
| 1.86 | 21.40 | -0.04 | 3.98 | -4437.52 | -1802.85 | -564.21 | 242.18 | -2096.94 | 249.17 | 19.67 | 0.41 | 0.13 |
| 1.87 | 21.40 | -0.04 | 3.98 | -4362.34 | -1811.31 | -975.89 | 203.52 | -1419.21 | 230.62 | 19.67 | 0.42 | 0.22 |
| 1.88 | 21.40 | -0.06 | 3.98 | -4271.59 | -1779.15 | -1460.63 | 188.92 | -638.76 | 185.96 | 19.66 | 0.42 | 0.34 |
| 1.89 | 21.50 | -0.07 | 3.98 | -4199.14 | -1671.04 | -2022.98 | 248.06 | -270.02 | 94.27 | 19.66 | 0.40 | 0.46 |

TABLE V
TABULATED DATA

RUN: 26- 1-32

| TE | K5 | SR | SA | FZ | FY | FX | MX | MY | MZ | KH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|---------|---------|-------|------|------|
| 1.90 | 21.00 | -0.08 | 3.98 | -4151.45 | -1492.27 | -2629.79 | 320.01 | 1262.57 | -26.24 | 19.65 | 0.36 | 0.63 |
| 1.91 | 21.10 | -0.11 | 3.98 | -4112.48 | -1294.18 | -3066.09 | 310.19 | 1969.81 | -136.40 | 19.64 | 0.31 | 0.75 |
| 1.92 | 20.91 | -0.14 | 3.98 | -4077.65 | -1082.09 | -3224.07 | 192.84 | 2227.41 | -174.33 | 19.63 | 0.27 | 0.79 |
| 1.93 | 20.71 | -0.19 | 3.98 | -4072.66 | -845.69 | -3110.62 | 86.51 | 2034.59 | -142.40 | 19.61 | 0.21 | 0.76 |
| 1.94 | 20.62 | -0.26 | 3.98 | -4118.39 | -589.24 | -2949.85 | 70.61 | 3082.21 | -161.95 | 19.60 | 0.14 | 0.71 |
| 1.95 | 20.22 | -0.25 | 3.98 | -4162.57 | -352.35 | -2893.60 | 135.41 | 1696.39 | -94.01 | 19.59 | 0.08 | 0.70 |
| 1.96 | 20.03 | -0.45 | 3.98 | -4232.73 | -196.28 | -2630.28 | 204.98 | 1595.27 | -75.99 | 19.57 | 0.05 | 0.67 |
| 1.97 | 19.93 | -0.55 | 3.98 | -4281.19 | -141.20 | -2736.91 | 196.54 | 2380.68 | -25.04 | 19.57 | 0.03 | 0.64 |
| 1.98 | 19.74 | -0.65 | 3.98 | -4310.62 | -141.52 | -2699.09 | 157.94 | 1381.28 | -3.54 | 19.56 | 0.03 | 0.63 |
| 1.99 | 19.54 | -0.70 | 3.98 | -4355.14 | -156.96 | -2717.11 | 110.07 | 1398.83 | -36.28 | 19.55 | 0.04 | 0.62 |
| 2.00 | 19.44 | -0.77 | 3.98 | -4419.85 | -187.48 | -2735.53 | 72.27 | 1435.96 | -40.99 | 19.55 | 0.04 | 0.62 |
| 2.01 | 19.25 | -0.81 | 3.98 | -4486.04 | -223.09 | -2719.40 | 37.89 | 1412.08 | -16.72 | 19.54 | 0.05 | 0.61 |
| 2.02 | 19.05 | -0.84 | 3.98 | -4522.54 | -248.18 | -2808.42 | 16.55 | 1565.56 | -27.64 | 19.54 | 0.05 | 0.62 |
| 2.03 | 18.76 | -0.87 | 3.98 | -4536.73 | -258.19 | -2883.06 | -5.39 | 1673.80 | -54.92 | 19.54 | 0.06 | 0.64 |
| 2.04 | 18.56 | -0.89 | 3.98 | -4557.83 | -258.36 | -2862.72 | -5.71 | 1625.08 | -46.99 | 19.54 | 0.06 | 0.63 |
| 2.05 | 18.37 | -0.91 | 3.98 | -4559.68 | -233.02 | -2848.46 | 35.06 | 1617.47 | -25.89 | 19.55 | 0.05 | 0.62 |
| 2.06 | 18.17 | -0.93 | 3.98 | -4571.91 | -197.63 | -2837.68 | 88.43 | 1606.34 | -17.56 | 19.55 | 0.04 | 0.62 |
| 2.07 | 17.88 | -0.94 | 3.98 | -4573.55 | -187.54 | -2813.62 | 110.49 | 1572.61 | -4.59 | 19.55 | 0.04 | 0.62 |
| 2.08 | 17.68 | -0.95 | 3.98 | -4557.67 | -197.73 | -2782.94 | 97.93 | 1517.23 | -4.47 | 19.55 | 0.04 | 0.61 |
| 2.09 | 17.49 | -0.97 | 3.98 | -4546.69 | -207.74 | -2815.57 | 54.97 | 1559.65 | -30.22 | 19.55 | 0.05 | 0.62 |
| 2.10 | 17.29 | -0.97 | 3.98 | -4535.12 | -212.56 | -2873.75 | 88.96 | 1661.91 | -40.93 | 19.56 | 0.05 | 0.63 |
| 2.11 | 17.10 | -0.98 | 3.98 | -4546.51 | -227.83 | -2840.78 | 70.64 | 1620.34 | -23.47 | 19.56 | 0.05 | 0.63 |
| 2.12 | 16.90 | -0.97 | 3.98 | -4513.54 | -243.05 | -2803.66 | 32.10 | 1558.53 | -12.69 | 19.56 | 0.05 | 0.62 |
| 2.13 | 16.71 | -0.98 | 3.98 | -4496.05 | -238.18 | -2741.42 | 38.00 | 1448.21 | -11.22 | 19.56 | 0.05 | 0.61 |
| 2.14 | 16.51 | -0.98 | 3.98 | -4499.27 | -218.09 | -2700.49 | 72.32 | 1372.46 | -11.02 | 19.56 | 0.05 | 0.60 |
| 2.15 | 16.32 | -0.99 | 3.98 | -4488.51 | -202.74 | -2734.78 | 91.45 | 1441.65 | -16.77 | 19.56 | 0.05 | 0.61 |
| 2.16 | 16.12 | -0.99 | 3.98 | -4477.52 | -197.56 | -2758.38 | 97.91 | 1480.02 | -21.52 | 19.56 | 0.04 | 0.62 |
| 2.17 | 15.93 | -0.99 | 3.98 | -4472.04 | -202.56 | -2765.66 | 91.78 | 1496.24 | -16.90 | 19.56 | 0.05 | 0.62 |
| 2.18 | 15.73 | -0.99 | 3.98 | -4473.04 | -207.71 | -2736.17 | 94.89 | 1439.61 | -11.08 | 19.56 | 0.05 | 0.61 |
| 2.19 | 15.53 | -1.00 | 3.98 | -4472.81 | -212.84 | -2720.28 | 88.46 | 1403.67 | -10.00 | 19.56 | 0.05 | 0.61 |
| 2.20 | 15.34 | -1.00 | 3.98 | -4460.60 | -222.74 | -2769.94 | 66.80 | 1492.80 | -7.95 | 19.56 | 0.05 | 0.62 |
| 2.21 | 15.14 | -1.00 | 3.98 | -4460.02 | -227.59 | -2824.22 | 61.10 | 1586.81 | -12.63 | 19.55 | 0.05 | 0.63 |
| 2.22 | 14.95 | -1.00 | 3.98 | -4470.18 | -217.40 | -2858.12 | 73.75 | 1642.41 | -17.66 | 19.55 | 0.05 | 0.64 |
| 2.23 | 14.75 | -1.00 | 3.98 | -4481.56 | -217.58 | -2817.72 | 73.41 | 1569.87 | -10.57 | 19.55 | 0.05 | 0.63 |
| 2.24 | 14.55 | -1.00 | 3.98 | -4487.43 | -222.89 | -2753.60 | 66.70 | 1454.80 | 2.39 | 19.55 | 0.05 | 0.61 |
| 2.25 | 14.35 | -1.00 | 3.98 | -4481.74 | -227.93 | -2748.11 | 50.97 | 1457.35 | 9.49 | 19.55 | 0.05 | 0.61 |
| 2.26 | 14.16 | -1.00 | 3.98 | -4476.66 | -222.85 | -2744.12 | 57.30 | 1455.54 | 15.37 | 19.55 | 0.05 | 0.61 |
| 2.27 | 14.46 | -1.00 | 3.98 | -4488.08 | -207.56 | -2777.06 | 85.84 | 1515.36 | -11.82 | 19.55 | 0.05 | 0.62 |

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TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FV | FX | NX | MV | MZ | RH | NFY | MFY |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|------|
| 2.28 | 14.26 | -1.00 | 3.98 | -4493.15 | -197.37 | -2811.53 | 107.98 | 1559.68 | -1.27 | 19.55 | 0.04 | 0.63 |
| 2.29 | 14.17 | -1.00 | 3.98 | -4491.91 | -197.27 | -2851.12 | 108.10 | 1614.20 | -14.39 | 19.55 | 0.04 | 0.63 |
| 2.30 | 13.97 | -1.00 | 3.98 | -4479.30 | -212.17 | -2920.09 | 80.28 | 1733.68 | -16.27 | 19.55 | 0.05 | 0.65 |
| 2.31 | 13.67 | -1.00 | 3.98 | -4484.20 | -227.20 | -2961.88 | 61.78 | 1807.02 | -19.68 | 19.55 | 0.05 | 0.66 |
| 2.32 | 13.68 | -1.00 | 3.98 | -4500.91 | -242.29 | -2993.43 | 52.71 | 1861.96 | -21.03 | 19.55 | 0.05 | 0.67 |
| 2.33 | 13.58 | -1.00 | 3.98 | -4500.69 | -252.48 | -2981.35 | 40.03 | 1833.62 | -25.71 | 19.55 | 0.06 | 0.66 |
| 2.34 | 13.39 | -1.00 | 3.98 | -4500.67 | -252.59 | -2958.19 | 39.00 | 1787.26 | -29.14 | 19.55 | 0.06 | 0.66 |
| 2.35 | 13.29 | -1.00 | 3.98 | -4495.41 | -242.34 | -2981.27 | 52.59 | 1835.50 | -25.65 | 19.55 | 0.05 | 0.66 |
| 2.36 | 13.09 | -1.00 | 3.98 | -4484.61 | -227.06 | -2992.69 | 71.57 | 1858.57 | -19.88 | 19.55 | 0.05 | 0.67 |
| 2.37 | 12.99 | -1.00 | 3.98 | -4479.13 | -216.84 | -3012.31 | 84.29 | 1895.59 | -18.76 | 19.55 | 0.05 | 0.67 |
| 2.38 | 12.80 | -1.00 | 3.98 | -4478.89 | -206.80 | -2996.37 | 96.81 | 1857.20 | -17.63 | 19.54 | 0.05 | 0.67 |
| 2.39 | 12.70 | -1.00 | 3.98 | -4490.47 | -206.91 | -2974.56 | 106.13 | 1811.55 | -15.33 | 19.54 | 0.05 | 0.66 |
| 2.40 | 12.60 | -1.00 | 3.98 | -4495.79 | -216.92 | -3004.42 | 93.68 | 1871.66 | -14.28 | 19.55 | 0.05 | 0.67 |
| 2.41 | 12.41 | -1.00 | 3.98 | -4494.98 | -232.07 | -3014.57 | 65.60 | 1891.58 | -14.29 | 19.54 | 0.05 | 0.67 |
| 2.42 | 21.30 | -0.04 | 7.98 | -4474.14 | -2641.88 | -37.16 | 357.89 | 25.46 | 152.72 | 19.64 | 0.59 | 0.61 |
| 2.43 | 21.30 | -0.04 | 7.98 | -4444.56 | -2611.64 | -5.92 | 366.78 | -41.93 | 145.98 | 19.64 | 0.59 | 0.60 |
| 2.44 | 21.30 | -0.04 | 7.98 | -4459.60 | -2596.49 | -20.52 | 376.10 | -17.98 | 147.07 | 19.64 | 0.58 | 0.60 |
| 2.45 | 21.30 | -0.04 | 7.98 | -4480.96 | -2601.54 | -37.21 | 309.83 | 18.51 | 152.70 | 19.64 | 0.58 | 0.61 |
| 2.46 | 21.20 | -0.04 | 7.98 | -4457.55 | -2626.70 | -55.86 | 319.53 | 60.69 | 162.97 | 19.64 | 0.59 | 0.61 |
| 2.47 | 21.30 | -0.04 | 7.98 | -4384.85 | -2646.79 | -40.26 | 265.93 | 36.09 | 171.05 | 19.64 | 0.60 | 0.60 |
| 2.48 | 21.30 | -0.04 | 7.98 | -4342.07 | -2616.49 | 11.71 | 305.68 | -64.62 | 172.48 | 19.63 | 0.60 | 0.60 |
| 2.49 | 21.30 | -0.04 | 7.98 | -4332.53 | -2555.71 | 7.47 | 392.95 | -54.30 | 165.83 | 19.62 | 0.59 | 0.60 |
| 2.50 | 21.30 | -0.04 | 7.98 | -4329.64 | -2515.26 | -8.00 | 414.58 | -26.52 | 157.79 | 19.62 | 0.58 | 0.60 |
| 2.51 | 21.30 | -0.04 | 7.98 | -4307.59 | -2515.25 | -30.82 | 357.30 | 14.76 | 154.15 | 19.62 | 0.58 | 0.61 |
| 2.52 | 21.30 | -0.04 | 7.98 | -4280.53 | -2525.42 | -29.46 | 298.91 | 12.39 | 156.30 | 19.61 | 0.59 | 0.61 |
| 2.53 | 21.30 | -0.04 | 7.98 | -4280.16 | -2530.60 | 1.25 | 204.89 | -49.25 | 164.37 | 19.60 | 0.59 | 0.60 |
| 2.54 | 21.30 | -0.04 | 7.98 | -4293.02 | -2520.43 | -4.18 | 318.72 | -37.07 | 171.39 | 19.59 | 0.59 | 0.60 |
| 2.55 | 21.30 | -0.04 | 7.98 | -4304.85 | -2515.32 | -14.06 | 336.71 | -15.16 | 179.49 | 19.58 | 0.58 | 0.60 |
| 2.56 | 21.30 | -0.04 | 7.98 | -4327.45 | -2520.39 | -15.63 | 340.00 | -1.84 | 186.42 | 19.58 | 0.58 | 0.60 |
| 2.57 | 21.30 | -0.05 | 7.98 | -4361.66 | -2535.67 | -12.31 | 342.17 | -17.91 | 189.86 | 19.57 | 0.58 | 0.60 |
| 2.58 | 21.30 | -0.05 | 7.98 | -4417.24 | -2556.12 | -0.28 | 337.87 | -50.37 | 185.17 | 19.56 | 0.58 | 0.60 |
| 2.59 | 21.30 | -0.05 | 7.98 | -4506.86 | -2586.62 | -26.30 | 338.25 | -12.17 | 176.90 | 19.56 | 0.57 | 0.61 |
| 2.60 | 21.30 | -0.05 | 7.98 | -4558.02 | -2622.04 | -55.06 | 320.96 | -4.20 | 172.22 | 19.57 | 0.58 | 0.61 |
| 2.61 | 21.30 | -0.05 | 7.98 | -4595.30 | -2652.41 | -61.63 | 311.98 | -238.08 | 170.34 | 19.57 | 0.58 | 0.61 |
| 2.62 | 21.30 | -0.05 | 7.98 | -4656.44 | -2657.66 | -44.62 | 343.58 | -732.64 | 175.54 | 19.57 | 0.57 | 0.61 |
| 2.63 | 21.30 | -0.05 | 7.98 | -4702.03 | -2657.81 | -34.08 | 371.55 | -1419.70 | 175.79 | 19.57 | 0.57 | 0.61 |
| 2.64 | 21.30 | -0.04 | 7.98 | -4715.21 | -2675.06 | -124.23 | 360.21 | -2233.63 | 179.79 | 19.58 | 0.57 | 0.61 |
| 2.65 | 21.30 | -0.04 | 7.98 | -4721.20 | -2707.44 | -256.65 | 327.91 | -2540.31 | 175.60 | 19.58 | 0.57 | 0.60 |

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TABLE V
TABULATED DATA

RUN: 26- 1-32

| TE | KS | SK | SA | FZ | FY | FX | MX | MY | MZ | RH | RFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|---------|-------|------|------|
| 2.66 | 21.50 | -0.05 | 7.98 | -4711.82 | -2716.53 | -571.03 | 324.54 | -2089.13 | 163.26 | 19.59 | 0.58 | 0.12 |
| 2.67 | 21.50 | -0.06 | 7.98 | -4677.89 | -2685.01 | -922.44 | 304.71 | -1510.35 | 127.21 | 19.60 | 0.57 | 0.20 |
| 2.68 | 21.50 | -0.08 | 7.98 | -4628.74 | -2582.56 | -1373.41 | 298.74 | -797.16 | 56.94 | 19.60 | 0.54 | 0.30 |
| 2.69 | 21.20 | -0.09 | 7.98 | -4588.85 | -2309.00 | -1975.17 | 288.46 | 184.57 | -63.62 | 19.60 | 0.52 | 0.43 |
| 2.70 | 21.20 | -0.12 | 7.98 | -4546.12 | -2129.93 | -2538.82 | 258.22 | 1103.95 | -188.49 | 19.61 | 0.47 | 0.56 |
| 2.71 | 21.01 | -0.15 | 7.98 | -4527.05 | -1775.86 | -2383.05 | 220.49 | 1662.50 | -244.96 | 19.61 | 0.39 | 0.64 |
| 2.72 | 20.91 | -0.20 | 7.98 | -4527.82 | -1362.06 | -2562.57 | 208.83 | 1791.50 | -218.81 | 19.61 | 0.30 | 0.65 |
| 2.73 | 20.71 | -0.27 | 7.98 | -4543.66 | -543.70 | -2896.25 | 221.68 | 3730.51 | -176.91 | 19.61 | 0.21 | 0.64 |
| 2.74 | 20.52 | -0.35 | 7.98 | -4544.57 | -595.70 | -2865.12 | 261.52 | 1645.21 | -155.09 | 19.62 | 0.13 | 0.63 |
| 2.75 | 20.32 | -0.45 | 7.98 | -4549.40 | -379.12 | -2766.47 | 262.03 | 1496.52 | -133.32 | 19.62 | 0.08 | 0.61 |
| 2.76 | 20.12 | -0.55 | 7.98 | -4534.50 | -314.12 | -2594.85 | 228.84 | 2028.15 | -76.97 | 19.62 | 0.07 | 0.57 |
| 2.77 | 20.03 | -0.63 | 7.98 | -4481.89 | -329.59 | -2482.69 | 142.87 | 1049.36 | -37.84 | 19.62 | 0.07 | 0.55 |
| 2.78 | 19.85 | -0.71 | 7.98 | -4464.17 | -344.76 | -2488.63 | 114.20 | 1048.76 | -54.21 | 19.62 | 0.08 | 0.56 |
| 2.79 | 19.64 | -0.76 | 7.98 | -4475.80 | -359.79 | -2537.53 | 114.69 | 1126.27 | -66.13 | 19.62 | 0.08 | 0.57 |
| 2.80 | 19.54 | -0.80 | 7.98 | -4481.91 | -390.02 | -2556.84 | 87.06 | 1188.12 | -49.07 | 19.61 | 0.05 | 0.57 |
| 2.81 | 19.35 | -0.84 | 7.98 | -4465.04 | -420.07 | -2616.08 | 49.58 | 1265.23 | -45.94 | 19.62 | 0.09 | 0.59 |
| 2.82 | 19.15 | -0.87 | 7.98 | -4452.00 | -445.19 | -2671.79 | 8.66 | 1350.20 | -60.33 | 19.62 | 0.10 | 0.60 |
| 2.83 | 19.05 | -0.90 | 7.98 | -4440.56 | -450.28 | -2663.49 | 2.83 | 1318.95 | -62.84 | 19.61 | 0.10 | 0.60 |
| 2.84 | 18.76 | -0.91 | 7.98 | -4436.94 | -419.73 | -2694.74 | 60.60 | 1379.58 | -63.56 | 19.61 | 0.09 | 0.61 |
| 2.85 | 18.66 | -0.93 | 7.98 | -4455.29 | -374.03 | -2737.20 | 145.51 | 1452.53 | -66.39 | 19.61 | 0.08 | 0.61 |
| 2.86 | 18.47 | -0.94 | 7.98 | -4466.89 | -358.75 | -2760.15 | 174.14 | 1496.65 | -54.90 | 19.61 | 0.08 | 0.62 |
| 2.87 | 18.27 | -0.95 | 7.98 | -4448.53 | -384.00 | -2763.72 | 123.70 | 1497.61 | -44.73 | 19.61 | 0.09 | 0.62 |
| 2.88 | 18.08 | -0.96 | 7.98 | -4429.57 | -414.30 | -2787.93 | 66.94 | 1527.55 | -57.81 | 19.61 | 0.09 | 0.63 |
| 2.89 | 17.86 | -0.97 | 7.98 | -4463.20 | -424.35 | -2833.05 | 73.94 | 1603.43 | -71.88 | 19.60 | 0.10 | 0.63 |
| 2.90 | 17.78 | -0.98 | 7.98 | -4502.09 | -434.62 | -2820.52 | 70.67 | 1582.58 | -68.37 | 19.60 | 0.10 | 0.63 |
| 2.91 | 17.59 | -0.98 | 7.98 | -4512.89 | -459.77 | -2800.20 | 54.72 | 1560.44 | -61.15 | 19.60 | 0.10 | 0.62 |
| 2.92 | 17.39 | -0.98 | 7.98 | -4511.63 | -450.10 | -2755.39 | 22.70 | 1482.97 | -55.19 | 19.60 | 0.10 | 0.61 |
| 2.93 | 17.20 | -0.96 | 7.98 | -4499.55 | -445.30 | -2687.15 | 9.39 | 1358.53 | -44.56 | 19.60 | 0.10 | 0.60 |
| 2.94 | 17.10 | -0.94 | 7.96 | -4500.81 | -409.83 | -2695.01 | 63.02 | 1380.51 | -48.97 | 19.60 | 0.09 | 0.60 |
| 2.95 | 16.90 | -0.99 | 7.98 | -4507.78 | -369.24 | -2726.07 | 132.56 | 1436.63 | -65.11 | 19.60 | 0.08 | 0.60 |
| 2.96 | 16.71 | -0.95 | 7.98 | -4513.28 | -354.10 | -2725.46 | 151.33 | 1437.50 | -71.94 | 19.60 | 0.08 | 0.60 |
| 2.97 | 16.61 | -0.99 | 7.98 | -4513.06 | -364.42 | -2675.49 | 128.86 | 1351.71 | -65.93 | 19.60 | 0.08 | 0.59 |
| 2.98 | 16.41 | -0.99 | 7.98 | -4512.82 | -384.90 | -2615.38 | 93.74 | 1245.53 | -59.92 | 19.60 | 0.09 | 0.58 |
| 2.99 | 16.22 | -1.00 | 7.98 | -4513.06 | -410.16 | -2615.65 | 62.41 | 1258.13 | -56.76 | 19.60 | 0.09 | 0.58 |
| 3.00 | 16.12 | -1.00 | 7.98 | -4506.34 | -425.24 | -2649.91 | 34.20 | 1310.54 | -65.88 | 19.60 | 0.09 | 0.59 |
| 3.01 | 16.02 | -1.00 | 7.98 | -4506.79 | -430.11 | -2695.47 | 37.81 | 1391.53 | -73.01 | 19.60 | 0.10 | 0.60 |
| 3.02 | 15.93 | -1.00 | 7.98 | -4500.85 | -419.97 | -2699.30 | 50.38 | 1388.97 | -70.86 | 19.60 | 0.09 | 0.60 |
| 3.03 | 15.73 | -1.00 | 7.98 | -4495.72 | -404.95 | -2653.07 | 68.92 | 1302.47 | -62.62 | 19.60 | 0.09 | 0.59 |

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TABLE V
TABULATED DATA

RUN: 26- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|--------|-------|-------|--------|
| 3.04 | 15.63 | -1.00 | 7.98 | -4502.46 | -384.72 | -2646.18 | 103.60 | 1296.93 | -60.12 | 19.60 | 0.04 | 0.04 |
| 3.05 | 15.53 | -1.00 | 7.98 | -4491.28 | -374.59 | -2642.30 | 106.66 | 1299.41 | -62.22 | 19.60 | 0.04 | 0.04 |
| 3.06 | 15.34 | -1.00 | 7.98 | -4492.33 | -374.54 | -2649.60 | 116.31 | 1316.05 | -65.63 | 19.60 | 0.04 | 0.04 |
| 3.07 | 15.24 | -1.00 | 7.98 | -4486.84 | -384.68 | -2643.30 | 103.68 | 1301.27 | -71.44 | 19.60 | 0.04 | 0.04 |
| 3.08 | 15.14 | -1.00 | 7.98 | -4486.39 | -394.88 | -2630.57 | 90.93 | 1267.49 | -75.04 | 19.60 | 0.04 | 0.04 |
| 3.09 | 14.95 | -1.00 | 7.98 | -4490.68 | -409.99 | -2656.93 | 62.67 | 1316.26 | -76.34 | 19.60 | 0.04 | 0.04 |
| 3.10 | 14.85 | -1.00 | 7.98 | -4476.94 | -412.34 | -2675.85 | 52.41 | 1352.08 | -73.75 | 19.60 | 0.04 | 0.04 |
| 3.11 | 14.66 | -1.00 | 7.98 | -4485.20 | -419.94 | -2688.05 | 50.45 | 1376.60 | -69.52 | 19.60 | 0.04 | 0.04 |
| 3.12 | 14.56 | -1.00 | 7.98 | -4479.48 | -419.91 | -2691.80 | 50.49 | 1377.92 | -67.33 | 19.60 | 0.04 | 0.04 |
| 3.13 | 14.46 | -1.00 | 7.98 | -4479.66 | -414.84 | -2698.79 | 65.31 | 1377.54 | -69.86 | 19.60 | 0.04 | 0.04 |
| 3.14 | 14.36 | -1.00 | 7.98 | -4479.50 | -409.55 | -2754.62 | 82.55 | 1475.05 | -77.04 | 19.60 | 0.04 | 0.04 |
| 3.15 | 14.26 | -1.00 | 7.98 | -4479.29 | -404.36 | -2792.84 | 89.07 | 1539.40 | -80.73 | 19.60 | 0.04 | 0.04 |
| 3.16 | 14.07 | -1.00 | 7.98 | -4485.63 | -399.23 | -2808.09 | 105.04 | 1569.98 | -80.73 | 19.60 | 0.04 | 0.04 |
| 3.17 | 13.97 | -1.00 | 7.98 | -4491.32 | -395.33 | -2784.54 | 104.86 | 1528.95 | -76.00 | 19.60 | 0.04 | 0.04 |
| 3.18 | 13.87 | -1.00 | 7.98 | -4485.17 | -409.58 | -2750.88 | 82.50 | 1465.57 | -71.32 | 19.60 | 0.04 | 0.04 |
| 3.19 | 13.78 | -1.00 | 7.98 | -4484.98 | -419.59 | -2774.94 | 70.48 | 1507.42 | -69.14 | 19.59 | 0.04 | 0.04 |
| 3.20 | 13.68 | -1.00 | 7.98 | -4483.75 | -424.57 | -2759.04 | 54.46 | 1551.91 | -66.99 | 19.60 | 0.04 | 0.04 |
| 3.21 | 13.58 | -1.00 | 7.98 | -4495.37 | -424.51 | -2818.70 | 64.16 | 1589.29 | -65.89 | 19.60 | 0.04 | 0.04 |
| 3.22 | 66.44 | -0.08 | 4.10 | -1.97 | -5.21 | 59.75 | 12.07 | -142.78 | 44.06 | 20.70 | 2.64 | -30.27 |
| 3.23 | 66.54 | -0.08 | 4.10 | 16.40 | 4.83 | 73.12 | 6.24 | -176.99 | 33.62 | 20.70 | 0.24 | 4.46 |
| 3.24 | 66.44 | -0.08 | 4.10 | 5.35 | 5.02 | 11.17 | 16.16 | -56.61 | 17.18 | 20.70 | 0.54 | 4.05 |
| 3.25 | 66.54 | -0.08 | 4.10 | -0.62 | -15.06 | -36.13 | -0.96 | 14.58 | -0.29 | 20.70 | 24.44 | 29.75 |
| 3.26 | 57.16 | -0.02 | 2.49 | -2850.53 | -962.69 | -62.31 | 49.34 | 42.24 | 103.45 | 20.01 | 0.34 | 0.02 |
| 3.27 | 57.16 | -0.02 | 2.49 | -2914.65 | -937.68 | -10.70 | 128.86 | -63.34 | 119.87 | 20.01 | 0.32 | 0.00 |
| 3.28 | 57.16 | -0.02 | 2.48 | -2910.81 | -932.52 | -13.02 | 144.32 | -34.27 | 131.51 | 20.02 | 0.32 | 0.00 |
| 3.29 | 57.16 | -0.02 | 2.48 | -2860.52 | -947.51 | -19.67 | 106.21 | -28.68 | 144.16 | 20.02 | 0.33 | 0.01 |
| 3.30 | 57.16 | -0.02 | 2.48 | -2783.37 | -947.25 | -23.28 | 86.80 | -9.15 | 146.53 | 20.03 | 0.34 | 0.01 |
| 3.31 | 57.16 | -0.02 | 2.48 | -2679.55 | -926.81 | 8.41 | 93.87 | -43.49 | 147.91 | 20.03 | 0.35 | -0.00 |
| 3.32 | 57.16 | -0.02 | 2.48 | -2578.73 | -901.40 | 38.05 | 88.09 | -104.24 | 128.77 | 20.03 | 0.35 | -0.01 |
| 3.33 | 57.16 | -0.02 | 2.48 | -2527.21 | -870.85 | 10.83 | 98.55 | -70.57 | 128.40 | 20.03 | 0.34 | -0.00 |
| 3.34 | 57.16 | -0.02 | 2.46 | -2554.10 | -845.58 | -11.29 | 131.51 | -41.94 | 118.05 | 20.02 | 0.33 | 0.00 |
| 3.35 | 57.16 | -0.02 | 2.46 | -2637.28 | -845.73 | -35.72 | 160.61 | 4.37 | 112.13 | 20.01 | 0.32 | 0.01 |
| 3.36 | 57.16 | -0.02 | 2.46 | -2714.34 | -881.36 | -44.20 | 134.15 | 21.01 | 107.28 | 20.01 | 0.32 | 0.02 |
| 3.37 | 57.16 | -0.02 | 2.46 | -2749.71 | -932.21 | -36.23 | 50.02 | -1.02 | 96.60 | 20.01 | 0.34 | 0.01 |
| 3.38 | 57.16 | -0.02 | 2.46 | -2874.00 | -962.56 | -66.91 | 11.34 | 59.62 | 56.45 | 20.01 | 0.35 | 0.02 |
| 3.39 | 57.16 | -0.02 | 2.46 | -2850.47 | -957.67 | -59.74 | 46.20 | 56.82 | 114.96 | 20.01 | 0.33 | 0.02 |
| 3.40 | 57.16 | -0.02 | 2.46 | -2904.51 | -937.41 | -46.89 | 129.44 | -4.72 | 141.89 | 20.01 | 0.32 | 0.02 |
| 3.41 | 57.16 | -0.02 | 2.46 | -2900.42 | -937.50 | -7.76 | 138.07 | -309.35 | 155.16 | 20.02 | 0.32 | 0.00 |

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TABLE V
TABULATED DATA

RUN: 26- 1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | MH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|----------|---------|-------|------|-------|
| 3.42 | 57.16 | -0.02 | 2.46 | -2851.13 | -947.57 | 23.12 | 115.65 | -751.00 | 163.99 | 20.02 | 0.33 | -0.01 |
| 3.43 | 57.16 | -0.02 | 2.46 | -2768.29 | -927.14 | 4.83 | 109.24 | -1355.10 | 160.50 | 20.03 | 0.34 | -0.00 |
| 3.44 | 57.16 | -0.02 | 2.45 | -2666.90 | -921.50 | -47.82 | 91.25 | -2122.03 | 159.49 | 20.03 | 0.35 | 0.02 |
| 3.45 | 57.16 | -0.02 | 2.45 | -2558.16 | -900.61 | -154.96 | 70.50 | -2752.83 | 153.39 | 20.03 | 0.35 | 0.00 |
| 3.46 | 57.16 | -0.02 | 2.43 | -2524.40 | -864.58 | -329.00 | 80.13 | -2467.39 | 130.19 | 20.03 | 0.34 | 0.13 |
| 3.47 | 57.16 | -0.03 | 2.43 | -2537.61 | -813.21 | -615.59 | 126.07 | -2003.75 | 84.14 | 20.02 | 0.22 | 0.24 |
| 3.48 | 57.16 | -0.04 | 2.43 | -2602.46 | -741.24 | -1055.50 | 190.45 | -1268.69 | 17.75 | 20.01 | 0.28 | 0.40 |
| 3.49 | 57.06 | -0.04 | 2.43 | -2638.30 | -684.40 | -1527.58 | 168.04 | -477.63 | -49.07 | 20.01 | 0.26 | 0.53 |
| 3.50 | 56.98 | -0.06 | 2.43 | -2610.14 | -642.86 | -1959.88 | 68.70 | 205.81 | -107.52 | 20.01 | 0.25 | 0.74 |
| 3.51 | 56.80 | -0.08 | 2.43 | -2555.22 | -576.67 | -2164.49 | -27.71 | 566.40 | -145.12 | 20.00 | 0.23 | 0.85 |
| 3.52 | 56.67 | -0.10 | 2.43 | -2550.45 | -460.52 | -2222.35 | -23.03 | 654.65 | -162.86 | 20.00 | 0.10 | 0.87 |
| 3.53 | 56.28 | -0.13 | 2.43 | -2590.40 | -319.32 | -2203.63 | 61.53 | 630.26 | -165.04 | 19.99 | 0.12 | 0.65 |
| 3.54 | 55.59 | -0.17 | 2.42 | -2600.05 | -223.88 | -2157.81 | 97.41 | 532.14 | -167.31 | 19.98 | 0.09 | 0.82 |
| 3.55 | 54.62 | -0.21 | 2.42 | -2555.99 | -168.59 | -2050.61 | 61.67 | 396.34 | -167.62 | 19.98 | 0.07 | 0.60 |
| 3.56 | 53.93 | -0.26 | 2.42 | -2481.84 | -153.44 | -1960.59 | 43.25 | 243.25 | -170.46 | 19.98 | 0.06 | 0.75 |
| 3.57 | 53.95 | -0.33 | 2.42 | -2425.20 | -148.59 | -1882.38 | 11.17 | 102.78 | -175.79 | 19.97 | 0.06 | 0.78 |
| 3.58 | 54.23 | -0.41 | 2.42 | -2429.21 | -123.46 | -1845.67 | 33.51 | 2605.45 | -166.87 | 19.97 | 0.05 | 0.76 |
| 3.59 | 54.42 | -0.49 | 2.42 | -2454.16 | -98.38 | -1810.43 | 75.04 | 3336.78 | -197.02 | 19.96 | 0.04 | 0.74 |
| 3.60 | 54.52 | -0.57 | 2.42 | -2487.74 | -88.45 | -1771.38 | 87.69 | -63.40 | -171.00 | 19.95 | 0.04 | 0.71 |
| 3.61 | 54.52 | -0.64 | 2.42 | -2562.87 | -109.14 | -1646.46 | 32.60 | -280.04 | -105.88 | 19.95 | 0.04 | 0.68 |
| 3.62 | 54.52 | -0.71 | 2.42 | -2560.04 | -134.84 | -1518.74 | -47.79 | 2258.17 | -26.12 | 19.94 | 0.05 | 0.61 |
| 3.63 | 54.42 | -0.77 | 2.42 | -2510.21 | -114.48 | -1547.08 | -31.27 | 464.08 | -4.28 | 19.93 | 0.05 | 0.62 |
| 3.64 | 54.52 | -0.81 | 2.42 | -2569.67 | -53.68 | -1641.22 | 65.02 | -283.33 | -36.58 | 19.92 | 0.02 | 0.64 |
| 3.65 | 54.23 | -0.85 | 2.42 | -2629.09 | -18.37 | -1676.19 | 119.27 | 618.74 | -52.15 | 19.92 | 0.01 | 0.64 |
| 3.66 | 54.52 | -0.88 | 2.42 | -2656.93 | -28.79 | -1668.88 | 105.92 | 1711.27 | -29.80 | 19.92 | 0.01 | 0.61 |
| 3.67 | 54.42 | -0.90 | 2.42 | -2655.28 | -59.26 | -1587.74 | 48.16 | -386.51 | -24.46 | 19.91 | 0.02 | 0.60 |
| 3.68 | 54.32 | -0.92 | 2.40 | -2680.32 | -69.52 | -1652.73 | 0.35 | -275.01 | -38.12 | 19.91 | 0.03 | 0.62 |
| 3.69 | 54.13 | -0.94 | 2.40 | -2724.30 | -109.85 | -1666.76 | -15.87 | 1556.15 | -38.02 | 19.91 | 0.04 | 0.61 |
| 3.70 | 54.13 | -0.95 | 2.40 | -2724.53 | -114.81 | -1677.96 | -22.07 | -221.56 | -30.12 | 19.91 | 0.04 | 0.62 |
| 3.71 | 54.62 | -0.96 | 2.40 | -2739.97 | -99.69 | -1691.03 | -2.98 | -209.30 | -41.85 | 19.91 | 0.04 | 0.62 |
| 3.72 | 55.11 | -0.97 | 2.40 | -2755.79 | -89.75 | -1666.52 | 9.46 | 1264.93 | -45.80 | 19.91 | 0.03 | 0.60 |
| 3.73 | 55.30 | -0.97 | 2.40 | -2751.54 | -74.63 | -1634.32 | 28.57 | 386.69 | -34.65 | 19.92 | 0.03 | 0.59 |
| 3.74 | 54.91 | -0.98 | 2.39 | -2753.40 | -64.56 | -1606.59 | 50.91 | -344.35 | -22.67 | 19.92 | 0.02 | 0.58 |
| 3.75 | 54.13 | -0.98 | 2.39 | -2753.60 | -64.51 | -1606.77 | 51.03 | 155.55 | -8.53 | 19.92 | 0.02 | 0.56 |
| 3.76 | 53.74 | -0.99 | 2.39 | -2743.21 | -74.57 | -1610.63 | 47.83 | 1282.95 | -8.44 | 19.92 | 0.03 | 0.59 |
| 3.77 | 53.54 | -0.99 | 2.39 | -2714.50 | -74.49 | -1633.65 | 58.36 | -312.26 | -32.30 | 19.92 | 0.03 | 0.60 |
| 3.78 | 53.25 | -0.99 | 2.37 | -2714.14 | -74.40 | -1664.43 | 58.50 | -247.90 | -55.49 | 19.92 | 0.03 | 0.62 |
| 3.79 | 52.86 | -0.99 | 2.37 | -2725.94 | -79.60 | -1626.18 | 31.87 | 886.68 | -38.85 | 19.92 | 0.03 | 0.60 |

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TABLE V
TABULATED DATA

RUN: 26- I-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|--------|-------|------|-------|
| 3.80 | 52.66 | -0.99 | 2.37 | -2705.78 | -84.71 | -1566.20 | 25.43 | -339.29 | -0.60 | 19.92 | 0.03 | 0.58 |
| 3.81 | 52.66 | -0.99 | 2.37 | -2695.18 | -89.80 | -1544.74 | 18.97 | -447.69 | 8.82 | 19.92 | 0.03 | 0.57 |
| 3.82 | 52.47 | -1.00 | 2.37 | -2694.13 | -84.72 | -1563.85 | 25.35 | 537.82 | -5.94 | 19.92 | 0.03 | 0.58 |
| 3.83 | 52.47 | -1.00 | 2.37 | -2677.49 | -79.39 | -1624.87 | 32.26 | 242.47 | -20.39 | 19.92 | 0.03 | 0.61 |
| 3.84 | 52.17 | -1.00 | 2.37 | -2671.60 | -69.15 | -1656.65 | 45.29 | 261.66 | -28.78 | 19.92 | 0.03 | 0.62 |
| 3.85 | 52.08 | -1.00 | 2.37 | -2694.19 | -64.15 | -1652.79 | 61.17 | 412.70 | -24.19 | 19.92 | 0.02 | 0.61 |
| 3.86 | 51.98 | -1.00 | 2.37 | -2695.19 | -64.37 | -1585.61 | 60.78 | 304.16 | -7.67 | 19.92 | 0.02 | 0.59 |
| 3.87 | 51.78 | -1.00 | 2.37 | -2678.67 | -74.64 | -1534.93 | 38.18 | -475.11 | 0.70 | 19.91 | 0.03 | 0.57 |
| 3.88 | 51.69 | -1.00 | 2.36 | -2677.66 | -79.65 | -1554.07 | 22.32 | 105.42 | -6.10 | 19.91 | 0.03 | 0.58 |
| 3.89 | 51.59 | -1.00 | 2.36 | -2682.98 | -74.54 | -1573.94 | 28.82 | 219.94 | -13.19 | 19.91 | 0.03 | 0.59 |
| 3.90 | 51.49 | -1.00 | 2.36 | -2654.62 | -64.35 | -1599.65 | 51.34 | -349.83 | -20.17 | 19.91 | 0.02 | 0.59 |
| 3.91 | 51.39 | -1.00 | 2.36 | -2704.96 | -69.53 | -1586.15 | 44.67 | 57.20 | -23.40 | 19.91 | 0.03 | 0.59 |
| 3.92 | 51.29 | -1.00 | 2.36 | -2698.81 | -84.84 | -1550.99 | 15.64 | 422.24 | -17.21 | 19.91 | 0.03 | 0.57 |
| 3.93 | 51.29 | -1.00 | 2.36 | -2687.43 | -89.81 | -1562.29 | -0.11 | -384.03 | -9.88 | 19.91 | 0.03 | 0.58 |
| 3.94 | 51.10 | -1.00 | 2.36 | -2710.03 | -79.72 | -1563.51 | 22.22 | -61.34 | -4.64 | 19.91 | 0.03 | 0.58 |
| 3.95 | 51.10 | -1.00 | 2.36 | -2722.06 | -64.55 | -1561.02 | 51.00 | 297.44 | -1.67 | 19.91 | 0.02 | 0.57 |
| 3.96 | 51.00 | -1.00 | 2.36 | -2711.25 | -54.49 | -1541.40 | 63.69 | -309.61 | -1.76 | 19.91 | 0.02 | 0.57 |
| 3.97 | 51.00 | -1.00 | 2.34 | -2710.18 | -54.64 | -1512.45 | 53.81 | 73.67 | -4.88 | 19.91 | 0.02 | 0.56 |
| 3.98 | 50.90 | -1.00 | 2.34 | -2710.52 | -59.66 | -1518.08 | 47.51 | 532.96 | -6.69 | 19.91 | 0.02 | 0.56 |
| 3.99 | 50.90 | -1.00 | 2.34 | -2705.98 | -69.82 | -1495.63 | 34.63 | -277.24 | -8.49 | 19.91 | 0.03 | 0.55 |
| 4.00 | 50.90 | -1.00 | 2.34 | -2700.30 | -80.01 | -1480.48 | 12.16 | -154.36 | -10.86 | 19.91 | 0.03 | 0.55 |
| 4.01 | 57.06 | -0.03 | 1.27 | -4294.82 | -725.73 | -18.79 | 136.35 | -37.65 | 147.15 | 19.74 | 0.17 | 0.00 |
| 4.02 | 57.06 | -0.03 | 1.27 | -4356.54 | -700.51 | -46.18 | 197.15 | 24.24 | 136.67 | 19.73 | 0.16 | 0.01 |
| 4.03 | 57.06 | -0.03 | 1.27 | -4438.18 | -700.65 | -77.63 | 207.07 | 94.17 | 135.39 | 19.72 | 0.16 | 0.02 |
| 4.04 | 57.06 | -0.03 | 1.27 | -4511.62 | -726.17 | -98.22 | 155.95 | 137.87 | 135.19 | 19.72 | 0.16 | 0.02 |
| 4.05 | 57.06 | -0.03 | 1.27 | -4567.12 | -751.79 | -91.80 | 85.54 | 123.33 | 137.35 | 19.72 | 0.16 | 0.02 |
| 4.06 | 57.06 | -0.03 | 1.27 | -4652.32 | -747.20 | -55.86 | 81.48 | 39.93 | 139.66 | 19.72 | 0.16 | 0.01 |
| 4.07 | 56.96 | -0.03 | 1.27 | -4701.96 | -722.06 | -50.60 | 121.86 | -13.78 | 153.68 | 19.73 | 0.15 | 0.01 |
| 4.08 | 57.06 | -0.03 | 1.27 | -4715.02 | -701.77 | -52.13 | 166.45 | 21.07 | 166.50 | 19.73 | 0.15 | 0.01 |
| 4.09 | 57.06 | -0.03 | 1.26 | -4667.62 | -711.67 | -47.96 | 163.15 | 31.16 | 180.36 | 19.74 | 0.15 | 0.01 |
| 4.10 | 57.06 | -0.03 | 1.26 | -4576.47 | -726.57 | -30.86 | 144.61 | 12.22 | 182.84 | 19.74 | 0.16 | 0.01 |
| 4.11 | 57.06 | -0.03 | 1.26 | -4473.26 | -736.53 | 11.29 | 121.58 | -56.12 | 177.17 | 19.75 | 0.16 | -0.00 |
| 4.12 | 56.96 | -0.02 | 1.26 | -4358.28 | -746.26 | 3.27 | 90.87 | -35.58 | 172.57 | 19.75 | 0.17 | -0.00 |
| 4.13 | 56.96 | -0.03 | 1.26 | -4293.39 | -735.82 | -23.97 | 104.69 | -13.60 | 162.20 | 19.74 | 0.17 | 0.01 |
| 4.14 | 56.96 | -0.03 | 1.26 | -4316.41 | -715.52 | -54.92 | 149.27 | 58.34 | 154.04 | 19.74 | 0.17 | 0.01 |
| 4.15 | 56.96 | -0.03 | 1.26 | -4388.07 | -690.44 | -61.15 | 200.23 | 43.61 | 144.78 | 19.73 | 0.16 | 0.01 |
| 4.16 | 56.96 | -0.03 | 1.26 | -4467.81 | -690.84 | -47.07 | 190.51 | 27.66 | 135.45 | 19.72 | 0.15 | 0.01 |
| 4.17 | 56.96 | -0.03 | 1.26 | -4540.24 | -716.43 | -65.15 | 129.71 | 55.45 | 123.71 | 19.72 | 0.16 | 0.01 |

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TABLE V
TABULATED DATA

RUN: 26- 1-32

| TE | KS | SR | SA | FZ | FV | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|----------|---------|-------|------|------|
| 4.18 | 57.06 | -0.03 | 1.26 | -4612.64 | -731.89 | -79.17 | 81.60 | 70.77 | 125.82 | 19.72 | 0.16 | 0.02 |
| 4.19 | 57.06 | -0.03 | 1.26 | -4617.57 | -728.86 | -95.64 | 87.17 | 104.17 | 131.63 | 19.73 | 0.16 | 0.02 |
| 4.20 | 57.06 | -0.03 | 1.26 | -4706.67 | -701.77 | -75.35 | 137.79 | 15.43 | 146.89 | 19.73 | 0.15 | 0.02 |
| 4.21 | 56.96 | -0.03 | 1.26 | -4698.11 | -691.76 | -20.93 | 169.33 | -319.16 | 160.22 | 19.73 | 0.15 | 0.00 |
| 4.22 | 56.96 | -0.03 | 1.26 | -4645.41 | -701.64 | -14.42 | 166.09 | -725.06 | 178.31 | 19.74 | 0.15 | 0.00 |
| 4.23 | 56.96 | -0.03 | 1.26 | -4560.17 | -716.38 | -34.45 | 157.42 | -1322.17 | 187.53 | 19.74 | 0.16 | 0.01 |
| 4.24 | 57.00 | -0.03 | 1.25 | -4444.98 | -735.97 | -99.61 | 123.03 | -2080.94 | 190.94 | 19.75 | 0.17 | 0.01 |
| 4.25 | 57.06 | -0.03 | 1.25 | -4321.98 | -755.17 | -231.11 | 95.77 | -2655.72 | 186.77 | 19.75 | 0.17 | 0.05 |
| 4.26 | 57.00 | -0.03 | 1.23 | -4276.94 | -714.08 | -449.53 | 104.04 | -2286.01 | 158.52 | 19.74 | 0.17 | 0.11 |
| 4.27 | 56.96 | -0.03 | 1.25 | -4310.10 | -664.84 | -831.10 | 159.45 | -1660.57 | 115.08 | 19.73 | 0.15 | 0.19 |
| 4.28 | 56.96 | -0.04 | 1.23 | -4382.84 | -610.34 | -1332.65 | 216.69 | -833.69 | 61.25 | 19.73 | 0.14 | 0.30 |
| 4.29 | 56.96 | -0.05 | 1.23 | -4431.52 | -578.37 | -1896.55 | 200.72 | 92.74 | 13.33 | 19.72 | 0.13 | 0.43 |
| 4.30 | 56.16 | -0.06 | 1.23 | -4427.61 | -551.40 | -2454.00 | 139.78 | 1001.61 | -34.42 | 19.72 | 0.12 | 0.55 |
| 4.31 | 56.67 | -0.07 | 1.23 | -4356.55 | -504.42 | -2935.41 | 94.15 | 1778.43 | -83.52 | 19.72 | 0.11 | 0.67 |
| 4.32 | 56.47 | -0.08 | 1.23 | -4368.32 | -442.62 | -3325.60 | 66.93 | 2413.32 | -142.77 | 19.72 | 0.10 | 0.76 |
| 4.33 | 56.18 | -0.10 | 1.23 | -4345.98 | -381.49 | -3459.68 | 57.96 | 2698.03 | -173.90 | 19.71 | 0.09 | 0.81 |
| 4.34 | 55.54 | -0.11 | 1.23 | -4302.96 | -341.15 | -3460.24 | 41.51 | 2643.49 | -168.80 | 19.71 | 0.08 | 0.80 |
| 4.35 | 54.71 | -0.13 | 1.23 | -4246.70 | -306.22 | -3294.81 | 27.91 | 2373.44 | -143.31 | 19.70 | 0.07 | 0.78 |
| 4.36 | 53.74 | -0.15 | 1.23 | -4219.16 | -261.33 | -3110.05 | 45.65 | 2062.79 | -126.99 | 19.69 | 0.06 | 0.74 |
| 4.37 | 53.15 | -0.16 | 1.23 | -4191.85 | -216.16 | -2993.36 | 73.42 | 1674.93 | -113.29 | 19.68 | 0.05 | 0.71 |
| 4.38 | 53.25 | -0.22 | 1.23 | -4154.38 | -170.85 | -2348.69 | 110.78 | 1727.65 | -102.01 | 19.68 | 0.04 | 0.70 |
| 4.39 | 53.44 | -0.27 | 1.23 | -4105.92 | -125.47 | -2809.75 | 148.46 | 1583.18 | -83.88 | 19.66 | 0.03 | 0.68 |
| 4.40 | 53.44 | -0.32 | 1.23 | -4078.61 | -100.38 | -2727.71 | 160.59 | 1446.92 | -68.26 | 19.65 | 0.02 | 0.67 |
| 4.41 | 53.35 | -0.36 | 1.23 | -4059.79 | -100.74 | -2635.81 | 121.82 | 1282.83 | -52.86 | 19.64 | 0.02 | 0.65 |
| 4.42 | 53.44 | -0.42 | 1.23 | -4063.00 | -111.04 | -2604.75 | 80.45 | 1228.69 | -44.61 | 19.62 | 0.03 | 0.64 |
| 4.43 | 53.44 | -0.47 | 1.23 | -4076.61 | -116.21 | -2606.95 | 45.42 | 1225.30 | -48.04 | 19.61 | 0.03 | 0.64 |
| 4.44 | 53.35 | -0.52 | 1.23 | -4112.83 | -111.33 | -2604.75 | 32.47 | 1233.13 | -52.54 | 19.59 | 0.03 | 0.63 |
| 4.45 | 53.05 | -0.57 | 1.23 | -4155.95 | -106.67 | -2547.54 | 28.60 | 1135.15 | -51.02 | 19.58 | 0.03 | 0.61 |
| 4.46 | 52.96 | -0.63 | 1.23 | -4214.50 | -97.21 | -2445.94 | 20.91 | 2336.12 | -54.17 | 19.57 | 0.02 | 0.58 |
| 4.47 | 53.15 | -0.68 | 1.23 | -4269.49 | -82.28 | -2425.77 | 39.41 | 921.16 | -52.45 | 19.56 | 0.02 | 0.57 |
| 4.48 | 53.04 | -0.74 | 1.23 | -4328.28 | -72.37 | -2417.74 | 42.14 | 921.84 | -32.74 | 19.55 | 0.02 | 0.56 |
| 4.49 | 54.13 | -0.79 | 1.23 | -4368.88 | -82.65 | -2406.29 | 0.76 | 2058.61 | 5.46 | 19.55 | 0.02 | 0.55 |
| 4.50 | 54.32 | -0.83 | 1.23 | -4394.11 | -77.68 | -2416.43 | -12.15 | 926.29 | 7.61 | 19.54 | 0.02 | 0.55 |
| 4.51 | 53.53 | -0.86 | 1.23 | -4459.01 | -42.63 | -2406.79 | 40.48 | 892.94 | -23.63 | 19.54 | 0.01 | 0.54 |
| 4.52 | 53.25 | -0.89 | 1.23 | -4521.73 | -17.55 | -2362.27 | 100.06 | 856.51 | -17.57 | 19.54 | 0.00 | 0.53 |
| 4.53 | 52.66 | -0.91 | 1.22 | -4548.54 | -22.77 | -2346.58 | 84.06 | 1021.74 | 20.31 | 19.54 | 0.01 | 0.52 |
| 4.54 | 52.37 | -0.93 | 1.22 | -4530.23 | -57.95 | -2393.91 | 21.61 | 890.34 | 26.21 | 19.54 | 0.01 | 0.53 |
| 4.55 | 51.98 | -0.94 | 1.22 | -4539.59 | -78.04 | -2456.29 | -3.19 | 986.32 | 9.49 | 19.54 | 0.02 | 0.54 |

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TABLE V
TABULATED DATA

RUN: 26-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|--------|----------|-------|---------|-------|-------|------|------|
| 4.56 | 51.59 | -0.95 | 1.22 | -4573.35 | -78.22 | -2436.18 | 15.55 | 1367.40 | 8.61 | 19.54 | 0.02 | 0.53 |
| 4.57 | 51.29 | -0.96 | 1.22 | -4563.83 | -78.13 | -2441.08 | 25.29 | 953.84 | 9.49 | 19.54 | 0.02 | 0.53 |
| 4.58 | 51.10 | -0.97 | 1.22 | -4546.95 | -73.04 | -2441.18 | 21.98 | 960.06 | 1.51 | 19.55 | 0.02 | 0.54 |
| 4.59 | 50.91 | -0.97 | 1.22 | -4548.79 | -63.04 | -2397.42 | 43.88 | 1011.17 | 13.20 | 19.55 | 0.01 | 0.53 |
| 4.60 | 50.61 | -0.98 | 1.22 | -4522.94 | -52.99 | -2342.59 | 56.29 | 603.77 | 26.55 | 19.55 | 0.01 | 0.52 |
| 4.61 | 50.42 | -0.98 | 1.22 | -4513.38 | -43.02 | -2298.35 | 73.04 | 721.26 | 16.37 | 19.55 | 0.01 | 0.51 |
| 4.62 | 50.22 | -0.99 | 1.22 | -4502.82 | -37.93 | -2297.69 | 64.35 | 723.96 | 9.55 | 19.55 | 0.01 | 0.51 |
| 4.63 | 50.12 | -0.99 | 1.22 | -4503.02 | -48.07 | -2289.47 | 71.81 | 711.61 | 14.21 | 19.55 | 0.01 | 0.51 |
| 4.64 | 49.93 | -0.99 | 1.22 | -4481.48 | -58.02 | -2310.58 | 59.60 | 753.70 | 13.02 | 19.55 | 0.01 | 0.52 |
| 4.65 | 49.83 | -0.99 | 1.22 | -4470.48 | -68.08 | -2315.04 | 47.17 | 758.43 | 14.08 | 19.55 | 0.02 | 0.52 |
| 4.66 | 49.73 | -0.99 | 1.20 | -4469.60 | -78.38 | -2271.80 | 24.75 | 674.01 | 25.64 | 19.55 | 0.02 | 0.51 |
| 4.67 | 49.54 | -0.99 | 1.20 | -4464.54 | -73.29 | -2271.61 | 31.08 | 679.77 | 25.76 | 19.55 | 0.02 | 0.51 |
| 4.68 | 49.44 | -1.00 | 1.20 | -4471.09 | -58.10 | -2276.78 | 59.44 | 694.22 | 17.81 | 19.55 | 0.01 | 0.51 |
| 4.69 | 49.34 | -1.00 | 1.20 | -4470.46 | -42.98 | -2264.12 | 68.58 | 675.15 | 21.40 | 19.55 | 0.01 | 0.51 |
| 4.70 | 49.24 | -1.00 | 1.20 | -4465.78 | -43.08 | -2227.86 | 68.43 | 616.97 | 29.74 | 19.55 | 0.01 | 0.50 |
| 4.71 | 49.15 | -1.00 | 1.20 | -4461.16 | -48.34 | -2177.53 | 61.79 | 522.65 | 28.78 | 19.54 | 0.01 | 0.49 |
| 4.72 | 48.95 | -1.00 | 1.20 | -4482.86 | -48.52 | -2149.77 | 61.49 | 477.45 | 24.37 | 19.54 | 0.01 | 0.48 |
| 4.73 | 48.55 | -1.00 | 1.19 | -4478.44 | -48.57 | -2129.13 | 61.42 | 454.56 | 16.65 | 19.54 | 0.01 | 0.48 |
| 4.74 | 48.85 | -1.00 | 1.19 | -4495.78 | -53.65 | -2131.31 | 64.68 | 463.05 | 13.26 | 19.54 | 0.01 | 0.47 |
| 4.75 | 48.75 | -1.00 | 1.19 | -4454.52 | -63.79 | -2134.32 | 42.59 | 462.94 | 16.57 | 19.54 | 0.01 | 0.47 |
| 4.76 | 48.66 | -1.00 | 1.19 | -4476.95 | -68.85 | -2121.87 | 26.74 | 429.81 | 27.94 | 19.54 | 0.02 | 0.47 |
| 4.77 | 48.56 | -1.00 | 1.19 | -4482.24 | -63.73 | -2136.46 | 33.13 | 461.04 | 33.65 | 19.54 | 0.01 | 0.40 |
| 4.78 | 48.46 | -1.00 | 1.19 | -4493.86 | -48.53 | -2152.47 | 61.50 | 487.04 | 27.89 | 19.54 | 0.01 | 0.48 |
| 4.79 | 48.46 | -1.00 | 1.19 | -4500.62 | -38.41 | -2151.68 | 83.57 | 493.67 | 21.16 | 19.54 | 0.01 | 0.48 |
| 4.80 | 2.54 | -0.93 | 0.37 | 5.33 | 0.03 | 9.33 | 0.09 | -16.36 | 37.01 | 23.51 | 0.01 | 1.75 |

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KUN: 26- 3-32

TABLE V
TABULATED DATA

| TE | KS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-------|----------|--------|----------|--------|----------|---------|-------|-------|------|
| 0.0 | 21.49 | -0.03 | -0.03 | -4702.76 | -16.58 | -25.80 | 115.46 | 15.54 | 4.82 | 19.70 | 0.00 | 0.01 |
| 0.01 | 21.40 | -0.03 | -0.03 | -4542.03 | -8.79 | -40.10 | 138.82 | 40.92 | 6.08 | 19.67 | 0.00 | 0.01 |
| 0.02 | 21.49 | -0.04 | -0.03 | -4607.25 | -46.77 | -9.86 | 39.68 | -20.55 | 5.87 | 19.67 | 0.01 | 0.00 |
| 0.03 | 21.40 | -0.05 | -0.03 | -4681.96 | -67.22 | -28.97 | 4.57 | 18.87 | 0.06 | 19.67 | 0.01 | 0.01 |
| 0.04 | 21.40 | -0.03 | -0.03 | -4741.23 | -57.24 | -43.72 | 26.47 | 43.01 | -6.83 | 19.68 | 0.01 | 0.01 |
| 0.05 | 21.40 | -0.03 | -0.03 | -4791.50 | -42.16 | -62.13 | 54.80 | 86.53 | -11.51 | 19.69 | 0.01 | 0.01 |
| 0.06 | 21.40 | -0.03 | -0.03 | -4797.81 | -32.08 | -52.69 | 76.89 | 70.47 | -12.63 | 19.69 | 0.01 | 0.01 |
| 0.07 | 21.40 | -0.03 | -0.03 | -4810.42 | -27.16 | -21.39 | 102.02 | -4.24 | -11.39 | 19.70 | 0.01 | 0.00 |
| 0.08 | 21.40 | -0.03 | -0.03 | -4799.09 | -34.52 | -33.11 | 85.30 | 13.46 | -13.72 | 19.71 | 0.01 | 0.01 |
| 0.09 | 21.40 | -0.03 | -0.03 | -4792.54 | -62.48 | -42.00 | 38.77 | 45.07 | -19.54 | 19.72 | 0.01 | 0.01 |
| 0.10 | 21.40 | -0.03 | -0.03 | -4759.19 | -72.43 | -64.92 | 16.79 | 91.97 | -31.14 | 19.73 | 0.02 | 0.01 |
| 0.11 | 21.40 | -0.03 | -0.03 | -4738.23 | -67.30 | -66.06 | 32.71 | 80.62 | -40.41 | 19.74 | 0.01 | 0.01 |
| 0.12 | 21.40 | -0.03 | -0.03 | -4711.13 | -57.18 | -44.20 | 45.35 | 31.44 | -38.08 | 19.74 | 0.01 | 0.01 |
| 0.13 | 21.40 | -0.03 | -0.03 | -4689.75 | -36.82 | -46.60 | 70.92 | 41.88 | -26.46 | 19.75 | 0.01 | 0.01 |
| 0.14 | 21.40 | -0.03 | -0.03 | -4685.48 | -6.37 | -48.22 | 118.72 | 49.34 | -13.65 | 19.75 | 0.00 | 0.01 |
| 0.15 | 21.40 | -0.03 | -0.03 | -4690.98 | 3.80 | -60.36 | 131.53 | 74.57 | -9.01 | 19.76 | -0.00 | 0.01 |
| 0.16 | 21.40 | -0.03 | -0.03 | -4662.04 | -6.34 | -45.17 | 99.67 | 46.19 | -9.07 | 19.77 | 0.00 | 0.01 |
| 0.17 | 21.45 | -0.03 | -0.03 | -4600.11 | -26.59 | -8.70 | 45.56 | -29.48 | -7.86 | 19.77 | 0.01 | 0.00 |
| 0.18 | 21.40 | -0.03 | -0.03 | -4540.91 | -26.28 | -25.91 | 46.09 | 1.15 | -3.21 | 19.78 | 0.01 | 0.00 |
| 0.19 | 21.49 | -0.03 | -0.03 | -4466.66 | -20.90 | -27.72 | 62.57 | 4.63 | 1.55 | 19.78 | 0.00 | 0.01 |
| 0.20 | 21.40 | -0.03 | -0.03 | -4414.82 | -15.55 | -36.19 | 88.55 | -2.36 | 4.01 | 19.78 | 0.00 | 0.01 |
| 0.21 | 21.49 | -0.03 | -0.03 | -4401.21 | -15.50 | -24.82 | 117.25 | -212.92 | -1.45 | 19.77 | 0.00 | 0.01 |
| 0.22 | 21.49 | -0.03 | -0.03 | -4418.92 | -25.69 | -17.12 | 123.49 | -562.95 | -4.41 | 19.77 | 0.01 | 0.00 |
| 0.23 | 21.40 | -0.03 | -0.03 | -4430.15 | -45.76 | -60.97 | 107.99 | -1006.50 | -0.29 | 19.76 | 0.01 | 0.01 |
| 0.24 | 21.49 | -0.02 | -0.03 | -4412.21 | -70.77 | -117.74 | 67.26 | -1679.28 | 15.65 | 19.76 | 0.02 | 0.03 |
| 0.25 | 21.49 | -0.04 | -0.03 | -4342.77 | -95.39 | -243.54 | 8.10 | -2606.31 | 28.34 | 19.76 | 0.02 | 0.02 |
| 0.26 | 21.75 | -0.04 | -0.03 | -4283.87 | -79.31 | -441.86 | 19.22 | -2286.64 | 30.26 | 19.75 | 0.02 | 0.10 |
| 0.27 | 21.49 | -0.05 | -0.03 | -4268.09 | -27.45 | -772.66 | 103.96 | -1754.70 | 25.43 | 19.75 | 0.01 | 0.18 |
| 0.28 | 21.40 | -0.05 | -0.03 | -4249.54 | 22.62 | -1285.74 | 179.46 | -906.29 | 22.78 | 19.73 | -0.01 | 0.30 |
| 0.29 | 21.40 | -0.06 | -0.03 | -4214.91 | 42.66 | -1503.94 | 194.08 | 110.09 | 24.22 | 19.73 | -0.01 | 0.45 |
| 0.30 | 21.40 | -0.07 | -0.03 | -4095.04 | 24.97 | -2535.83 | 115.91 | 1145.41 | 12.54 | 19.72 | -0.01 | 0.62 |
| 0.31 | 21.61 | -0.09 | -0.03 | -3965.83 | -3.36 | -3048.04 | 24.09 | 1967.10 | -34.23 | 19.71 | 0.00 | 0.77 |
| 0.32 | 20.62 | -0.10 | -0.03 | -3910.63 | -7.48 | -3308.01 | 9.73 | 2372.62 | -54.00 | 19.70 | 0.00 | 0.85 |
| 0.33 | 20.03 | -0.13 | -0.03 | -3541.70 | -2.38 | -3326.59 | 54.33 | 2410.65 | -114.57 | 19.68 | 0.00 | 0.84 |
| 0.34 | 19.44 | -0.17 | -0.03 | -4007.51 | -18.29 | -3152.43 | 62.84 | 3650.16 | -93.99 | 19.67 | 0.00 | 0.79 |
| 0.35 | 18.80 | -0.24 | -0.03 | -4066.42 | -44.23 | -2995.42 | 59.85 | 1954.03 | -63.24 | 19.66 | 0.01 | 0.74 |
| 0.36 | 18.06 | -0.34 | -0.03 | -4161.47 | -55.14 | -2854.02 | 35.52 | 1654.93 | -42.82 | 19.64 | 0.01 | 0.65 |
| 0.37 | 18.76 | -0.46 | -0.03 | -4238.54 | -55.73 | -2745.91 | 34.57 | 1469.02 | -3.03 | 19.63 | 0.01 | 0.65 |

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TABLE V
TABULATED DATA

RUN: 26-3-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | MFY | MFX |
|------|-------|-------|-------|----------|--------|----------|--------|---------|--------|-------|-------|------|
| 0.38 | 19.35 | -0.58 | -0.03 | -4312.61 | -40.58 | -2807.04 | 43.96 | 1890.49 | 4.24 | 19.62 | 0.01 | 0.05 |
| 0.39 | 20.03 | -0.67 | -0.01 | -4350.85 | -14.96 | -2975.00 | 56.84 | 1853.11 | -40.13 | 19.61 | 0.00 | 0.00 |
| 0.40 | 20.42 | -0.74 | -0.01 | -4395.99 | 5.31 | -3052.64 | 62.93 | 1878.46 | -56.84 | 19.61 | -0.00 | 0.00 |
| 0.41 | 20.32 | -0.75 | -0.01 | -4461.84 | 19.99 | -2956.94 | 80.93 | 1809.34 | -12.57 | 19.60 | -0.00 | 0.00 |
| 0.42 | 19.83 | -0.83 | -0.01 | -4528.99 | 39.92 | -2915.42 | 124.64 | 1728.81 | 3.85 | 19.60 | -0.01 | 0.00 |
| 0.43 | 19.15 | -0.86 | -0.01 | -4582.57 | 40.06 | -3010.76 | 134.44 | 1503.46 | -24.33 | 19.60 | -0.01 | 0.00 |
| 0.44 | 18.56 | -0.88 | -0.01 | -4596.41 | -51.10 | -3041.94 | 58.75 | 1948.55 | -35.02 | 19.60 | 0.00 | 0.00 |
| 0.45 | 18.47 | -0.90 | -0.01 | -4605.57 | -51.17 | -3043.46 | -10.95 | 1959.85 | -32.78 | 19.60 | 0.01 | 0.00 |
| 0.46 | 18.47 | -0.92 | -0.01 | -4623.10 | -41.27 | -2980.33 | 1.94 | 1955.02 | -50.20 | 19.61 | 0.01 | 0.00 |
| 0.47 | 18.37 | -0.94 | -0.01 | -4630.61 | -41.38 | -2913.74 | 33.21 | 1838.67 | -35.57 | 19.61 | 0.01 | 0.00 |
| 0.48 | 17.98 | -0.94 | -0.01 | -4621.87 | -20.99 | -2924.89 | 33.06 | 1744.46 | -8.95 | 19.62 | 0.01 | 0.00 |
| 0.49 | 17.68 | -0.95 | -0.01 | -4584.47 | -20.99 | -2924.89 | 58.40 | 1772.76 | -26.06 | 19.62 | 0.00 | 0.00 |
| 0.50 | 17.39 | -0.97 | -0.01 | -4580.25 | 14.60 | -2969.64 | 121.57 | 1848.05 | -55.01 | 19.62 | -0.00 | 0.00 |
| 0.51 | 17.20 | -0.98 | -0.01 | -4565.98 | 19.46 | -2886.40 | 137.32 | 1701.49 | -37.29 | 19.62 | -0.00 | 0.00 |
| 0.52 | 16.90 | -0.97 | -0.01 | -4533.16 | -6.08 | -2792.01 | 86.38 | 1541.42 | -11.46 | 19.62 | 0.00 | 0.00 |
| 0.53 | 16.61 | -0.98 | -0.01 | -4518.92 | -21.09 | -2824.21 | 67.82 | 1603.10 | -20.76 | 19.62 | 0.00 | 0.00 |
| 0.54 | 16.41 | -0.98 | -0.01 | -4512.48 | -26.08 | -2833.86 | 71.20 | 1622.34 | -27.08 | 19.62 | 0.01 | 0.00 |
| 0.55 | 16.22 | -0.99 | -0.01 | -4502.95 | -26.03 | -2829.34 | 80.85 | 1619.32 | -28.70 | 19.62 | 0.01 | 0.00 |
| 0.56 | 16.02 | -0.99 | -0.01 | -4480.12 | -31.11 | -2816.06 | 64.93 | 1590.38 | -34.57 | 19.62 | 0.01 | 0.00 |
| 0.57 | 15.83 | -0.99 | -0.01 | -4468.06 | -31.15 | -2804.25 | 55.27 | 1556.53 | -28.91 | 19.62 | 0.01 | 0.00 |
| 0.58 | 15.63 | -0.99 | -0.01 | -4462.98 | -20.50 | -2817.33 | 69.14 | 1569.02 | -10.38 | 19.62 | 0.00 | 0.00 |
| 0.59 | 15.44 | -0.99 | -0.01 | -4464.22 | -15.77 | -2821.99 | 84.15 | 1604.54 | -2.20 | 19.62 | 0.00 | 0.00 |
| 0.60 | 15.24 | -1.00 | -0.01 | -4474.61 | -0.50 | -2857.28 | 103.18 | 1667.24 | -9.25 | 19.62 | 0.00 | 0.00 |
| 0.61 | 15.05 | -1.00 | -0.01 | -4479.47 | -0.57 | -2854.24 | 102.99 | 1650.86 | -19.79 | 19.62 | 0.00 | 0.00 |
| 0.62 | 14.85 | -1.00 | -0.01 | -4476.01 | -15.84 | -2846.19 | 74.38 | 1628.43 | -25.76 | 19.62 | 0.00 | 0.00 |
| 0.63 | 14.75 | -1.00 | -0.01 | -4477.41 | -20.82 | -2863.83 | 58.72 | 1666.03 | -18.78 | 19.62 | 0.00 | 0.00 |
| 0.64 | 14.56 | -1.00 | -0.01 | -4454.93 | -20.87 | -2852.44 | 68.23 | 1649.14 | -9.41 | 19.61 | 0.00 | 0.00 |
| 0.65 | 14.46 | -1.00 | -0.01 | -4500.65 | -15.80 | -2855.82 | 74.57 | 1662.15 | -7.00 | 19.61 | 0.00 | 0.00 |
| 0.66 | 14.26 | -1.00 | -0.01 | -4511.40 | -16.00 | -2820.98 | 74.18 | 1592.31 | -8.12 | 19.61 | 0.00 | 0.00 |
| 0.67 | 14.17 | -1.00 | -0.01 | -4499.76 | -21.09 | -2814.79 | 58.24 | 1573.67 | -13.99 | 19.61 | 0.00 | 0.00 |
| 0.68 | 13.97 | -1.00 | -0.01 | -4504.28 | -20.90 | -2869.75 | 58.61 | 1673.69 | -19.98 | 19.61 | 0.00 | 0.00 |
| 0.69 | 13.87 | -1.00 | -0.01 | -4510.60 | -15.78 | -2881.20 | 74.58 | 1696.88 | -14.22 | 19.61 | 0.00 | 0.00 |
| 0.70 | 13.68 | -1.00 | -0.01 | -4511.02 | -10.70 | -2875.64 | 80.92 | 1653.78 | -6.00 | 19.61 | 0.00 | 0.00 |
| 0.71 | 13.48 | -1.00 | -0.01 | -4516.99 | -10.84 | -2846.63 | 80.64 | 1635.55 | -8.27 | 19.61 | 0.00 | 0.00 |
| 0.72 | 13.39 | -1.00 | -0.01 | -4510.56 | -15.98 | -2837.70 | 74.17 | 1609.39 | -17.62 | 19.61 | 0.00 | 0.00 |
| 0.73 | 13.29 | -1.00 | -0.01 | -4504.89 | -15.76 | -2835.17 | 74.56 | 1698.43 | -20.08 | 19.61 | 0.00 | 0.00 |
| 0.74 | 13.09 | -1.00 | -0.01 | -4504.91 | -15.68 | -2804.00 | 74.76 | 1736.22 | -17.90 | 19.61 | 0.00 | 0.00 |
| 0.75 | 12.89 | -1.00 | -0.01 | -4505.11 | -20.73 | -2898.58 | 68.50 | 1729.46 | -9.67 | 19.61 | 0.00 | 0.00 |

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RUN: 26- 3-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RM | MFY | NFX |
|------|-------|-------|-------|----------|----------|----------|--------|----------|---------|-------|------|-------|
| 0.76 | 12.40 | -1.00 | -0.01 | -4505.28 | -25.97 | -2895.49 | 61.87 | 1647.13 | -6.12 | 19.61 | 0.01 | 0.63 |
| 0.77 | 11.70 | -1.00 | -0.01 | -4499.76 | -21.00 | -2833.90 | 67.95 | 1601.71 | -11.87 | 19.61 | 0.00 | 0.63 |
| 0.78 | 12.00 | -1.00 | -0.01 | -4494.32 | -15.74 | -2878.44 | 74.62 | 1688.98 | -17.70 | 19.61 | 0.00 | 0.64 |
| 0.79 | 12.51 | -1.00 | -0.01 | -4494.33 | -15.65 | -2897.27 | 74.30 | 1726.77 | -15.41 | 19.61 | 0.00 | 0.64 |
| 0.80 | 12.41 | -1.00 | -0.01 | -4495.16 | -5.47 | -2906.72 | 97.04 | 1743.65 | -14.27 | 19.61 | 0.00 | 0.65 |
| 0.81 | 12.21 | -1.00 | -0.01 | -4488.79 | -10.69 | -2869.60 | 80.88 | 1689.14 | -11.95 | 19.61 | 0.00 | 0.64 |
| 0.82 | 21.49 | -0.04 | 1.98 | -4515.14 | -942.95 | -63.90 | 242.26 | 75.42 | 133.15 | 19.67 | 0.21 | 0.01 |
| 0.83 | 21.45 | -0.04 | 1.98 | -4582.42 | -688.94 | -28.17 | 156.02 | 11.45 | 141.08 | 19.67 | 0.22 | 0.01 |
| 0.84 | 21.40 | -0.03 | 1.98 | -4640.80 | -1029.76 | -37.89 | 95.38 | -50.93 | 142.16 | 19.67 | 0.22 | 0.00 |
| 0.85 | 21.40 | -0.03 | 1.98 | -4712.70 | -1034.87 | -52.45 | 107.30 | 14.79 | 142.08 | 19.68 | 0.22 | 0.01 |
| 0.86 | 21.40 | -0.03 | 1.98 | -4758.53 | -1024.78 | -58.70 | 148.55 | 56.83 | 143.20 | 19.68 | 0.22 | 0.01 |
| 0.87 | 21.40 | -0.03 | 1.98 | -4782.18 | -1019.71 | -68.63 | 173.20 | 76.57 | 149.04 | 19.64 | 0.21 | 0.01 |
| 0.88 | 21.40 | -0.03 | 1.98 | -4789.50 | -1019.84 | -71.39 | 169.29 | -8.02 | 151.46 | 19.69 | 0.21 | 0.00 |
| 0.89 | 21.40 | -0.03 | 1.98 | -4806.58 | -1030.13 | -81.10 | 187.78 | -70.79 | 150.53 | 19.70 | 0.21 | 0.00 |
| 0.90 | 21.49 | -0.03 | 1.98 | -4795.62 | -1055.26 | -91.47 | 146.09 | 0.08 | 147.95 | 19.71 | 0.22 | 0.00 |
| 0.91 | 21.49 | -0.03 | 1.98 | -4772.24 | -1080.40 | -101.10 | 164.53 | 59.00 | 144.30 | 19.72 | 0.23 | 0.01 |
| 0.92 | 21.40 | -0.03 | 1.98 | -4756.75 | -1080.26 | -109.25 | 113.25 | 81.55 | 141.92 | 19.73 | 0.23 | 0.01 |
| 0.93 | 21.40 | -0.03 | 1.98 | -4730.94 | -1065.09 | -124.45 | 141.75 | 20.48 | 142.08 | 19.73 | 0.23 | 0.01 |
| 0.94 | 21.40 | -0.03 | 1.98 | -4715.86 | -1049.99 | -138.24 | 169.29 | -50.63 | 143.40 | 19.74 | 0.22 | 0.00 |
| 0.95 | 21.40 | -0.03 | 1.98 | -4705.10 | -1029.58 | -152.16 | 194.15 | 6.39 | 144.57 | 19.75 | 0.22 | 0.01 |
| 0.96 | 21.40 | -0.03 | 1.98 | -4689.61 | -1014.30 | -166.24 | 213.38 | 51.31 | 144.54 | 19.75 | 0.22 | 0.01 |
| 0.97 | 21.49 | -0.03 | 1.98 | -4671.73 | -1009.12 | -180.52 | 209.57 | 65.88 | 144.55 | 19.76 | 0.22 | 0.01 |
| 0.98 | 21.40 | -0.03 | 1.98 | -4626.88 | -1019.30 | -195.24 | 176.77 | -14.98 | 144.55 | 19.77 | 0.22 | 0.00 |
| 0.99 | 21.40 | -0.03 | 1.98 | -4544.25 | -1029.29 | -210.16 | 145.15 | -72.36 | 137.78 | 19.77 | 0.23 | -1.00 |
| 1.00 | 21.49 | -0.03 | 1.98 | -4467.97 | -1023.86 | -224.76 | 142.81 | -30.78 | 128.63 | 19.77 | 0.23 | 0.01 |
| 1.01 | 21.49 | -0.03 | 1.98 | -4425.68 | -1003.38 | -239.24 | 177.99 | -162.81 | 116.30 | 19.77 | 0.23 | 0.01 |
| 1.02 | 21.49 | -0.03 | 1.98 | -4415.53 | -993.14 | -253.24 | 200.44 | -454.60 | 107.58 | 19.77 | 0.22 | 0.02 |
| 1.03 | 21.49 | -0.03 | 1.98 | -4432.20 | -993.26 | -267.24 | 210.54 | -1047.73 | 103.86 | 19.76 | 0.22 | 0.01 |
| 1.04 | 21.49 | -0.03 | 1.98 | -4459.84 | -1003.33 | -281.24 | 208.28 | -1914.22 | 108.54 | 19.75 | 0.23 | 0.02 |
| 1.05 | 21.49 | -0.04 | 1.98 | -4433.59 | -1017.88 | -295.24 | 170.51 | -2618.28 | 115.12 | 19.76 | 0.23 | 0.05 |
| 1.06 | 21.49 | -0.04 | 1.98 | -4377.96 | -1032.82 | -309.24 | 125.49 | -2205.73 | 112.18 | 19.75 | 0.24 | 0.11 |
| 1.07 | 21.49 | -0.05 | 1.98 | -4313.94 | -1010.25 | -323.24 | 124.91 | -1565.53 | 95.50 | 19.75 | 0.25 | 0.20 |
| 1.08 | 21.45 | -0.06 | 1.98 | -4260.38 | -942.67 | -337.24 | 192.17 | -750.92 | 68.64 | 19.74 | 0.22 | 0.32 |
| 1.09 | 21.40 | -0.07 | 1.98 | -4236.80 | -854.52 | -351.24 | 256.61 | -244.13 | 33.00 | 19.73 | 0.20 | 0.47 |
| 1.10 | 21.50 | -0.08 | 1.98 | -4144.56 | -771.27 | -365.24 | 256.93 | 1312.89 | -18.86 | 19.73 | 0.19 | 0.64 |
| 1.11 | 21.10 | -0.10 | 1.98 | -4038.01 | -678.77 | -379.24 | 202.02 | 2069.13 | -94.84 | 19.72 | 0.17 | 0.77 |
| 1.12 | 20.41 | -0.13 | 1.98 | -3950.59 | -567.21 | -393.24 | 141.55 | 2335.02 | -150.12 | 19.71 | 0.14 | 0.83 |
| 1.13 | 20.32 | -0.17 | 1.98 | -3916.65 | -436.54 | -407.24 | 104.60 | 3068.61 | -153.26 | 19.69 | 0.11 | 0.80 |

TABLE V
TABULATED DATA

RUN: 26-3-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|---------|-------|------|------|
| 1.14 | 19.83 | -0.24 | 1.98 | -3907.59 | -326.22 | -2988.82 | 60.73 | 2380.57 | -130.44 | 19.68 | 0.0K | 0.76 |
| 1.15 | 15.35 | -0.33 | 1.98 | -3934.87 | -235.83 | -2903.12 | 39.98 | 1734.27 | -108.91 | 19.66 | 0.06 | 0.74 |
| 1.16 | 16.86 | -0.42 | 1.99 | -3995.78 | -170.76 | -2782.32 | 54.13 | 1545.75 | -58.30 | 19.65 | 0.04 | 0.70 |
| 1.17 | 18.76 | -0.53 | 1.99 | -4064.45 | -120.60 | -2717.50 | 88.03 | 1522.44 | -7.90 | 19.63 | 0.03 | 0.67 |
| 1.18 | 18.76 | -0.62 | 1.99 | -4131.95 | -70.09 | -2781.93 | 141.30 | 1535.59 | -19.08 | 19.62 | 0.02 | 0.64 |
| 1.19 | 19.15 | -0.70 | 1.99 | -4237.75 | -24.50 | -2921.10 | 207.55 | 1751.23 | -51.22 | 19.60 | 0.01 | 0.69 |
| 1.20 | 19.54 | -0.77 | 1.99 | -4327.66 | -34.73 | -2971.31 | 185.32 | 1833.71 | -34.34 | 19.59 | 0.01 | 0.69 |
| 1.21 | 20.03 | -0.82 | 1.99 | -4405.58 | -85.42 | -3020.79 | 103.42 | 1916.57 | -16.38 | 19.58 | 0.02 | 0.65 |
| 1.22 | 20.13 | -0.85 | 2.01 | -4461.35 | -140.92 | -3146.51 | 15.60 | 2125.50 | -43.88 | 19.58 | 0.03 | 0.71 |
| 1.23 | 19.74 | -0.68 | 1.99 | -4524.19 | -171.55 | -3153.99 | -32.12 | 2122.30 | -54.65 | 19.58 | 0.04 | 0.70 |
| 1.24 | 19.05 | -0.90 | 1.99 | -4565.65 | -171.78 | -3131.75 | -13.40 | 2084.20 | -44.16 | 19.58 | 0.04 | 0.68 |
| 1.25 | 18.56 | -0.92 | 1.99 | -4610.27 | -151.39 | -3203.61 | 21.55 | 2214.36 | -60.54 | 19.58 | 0.03 | 0.69 |
| 1.26 | 18.47 | -0.93 | 1.99 | -4634.76 | -131.08 | -3234.64 | 56.32 | 2263.94 | -60.73 | 19.58 | 0.03 | 0.70 |
| 1.27 | 18.27 | -0.95 | 1.99 | -4636.15 | -126.21 | -3161.67 | 62.21 | 2149.20 | -27.94 | 19.59 | 0.03 | 0.68 |
| 1.28 | 17.98 | -0.95 | 2.01 | -4632.29 | -121.31 | -3110.43 | 77.72 | 2058.73 | -27.66 | 19.59 | 0.03 | 0.67 |
| 1.29 | 17.68 | -0.96 | 2.01 | -4616.25 | -111.04 | -3150.20 | 100.05 | 2121.79 | -56.71 | 19.59 | 0.02 | 0.68 |
| 1.30 | 17.39 | -0.97 | 1.99 | -4606.92 | -111.03 | -3133.87 | 109.54 | 2101.77 | -55.36 | 19.60 | 0.03 | 0.68 |
| 1.31 | 17.20 | -0.98 | 1.99 | -4580.06 | -131.27 | -3098.01 | 74.60 | 2052.80 | -40.06 | 19.61 | 0.03 | 0.68 |
| 1.32 | 16.90 | -0.98 | 2.01 | -4553.21 | -136.25 | -3095.14 | 68.54 | 2048.09 | -43.48 | 19.61 | 0.03 | 0.68 |
| 1.33 | 16.61 | -0.98 | 1.99 | -4538.51 | -131.37 | -3024.27 | 84.10 | 1924.66 | -36.34 | 19.61 | 0.03 | 0.67 |
| 1.34 | 16.32 | -0.98 | 2.01 | -4523.26 | -131.46 | -2980.52 | 83.97 | 1849.21 | -24.40 | 19.61 | 0.03 | 0.66 |
| 1.35 | 16.12 | -0.99 | 1.99 | -4490.11 | -131.31 | -2994.22 | 74.69 | 1878.97 | -30.13 | 19.61 | 0.03 | 0.67 |
| 1.36 | 15.93 | -0.99 | 2.01 | -4473.86 | -126.13 | -3015.60 | 81.20 | 1919.68 | -39.38 | 19.61 | 0.03 | 0.67 |
| 1.37 | 15.73 | -0.99 | 1.99 | -4475.07 | -116.05 | -2995.57 | 103.25 | 1865.68 | -32.31 | 19.61 | 0.03 | 0.67 |
| 1.38 | 15.53 | -0.99 | 1.99 | -4470.15 | -116.24 | -2937.56 | 102.97 | 1777.20 | -21.72 | 19.60 | 0.03 | 0.66 |
| 1.39 | 15.34 | -0.99 | 1.99 | -4470.36 | -121.32 | -2950.09 | 96.67 | 1766.32 | -18.20 | 19.60 | 0.03 | 0.66 |
| 1.40 | 15.14 | -1.00 | 1.99 | -4469.14 | -121.23 | -2958.75 | 87.28 | 1817.65 | -22.95 | 19.60 | 0.03 | 0.66 |
| 1.41 | 14.95 | -1.00 | 1.99 | -4467.93 | -121.13 | -2994.01 | 77.93 | 1882.22 | -30.60 | 19.60 | 0.03 | 0.67 |
| 1.42 | 14.75 | -1.00 | 1.99 | -4472.61 | -116.05 | -3009.11 | 84.23 | 1898.37 | -31.26 | 19.60 | 0.03 | 0.67 |
| 1.43 | 14.56 | -1.00 | 1.99 | -4468.83 | -111.13 | -2987.74 | 90.24 | 1857.51 | -27.89 | 19.60 | 0.02 | 0.67 |
| 1.44 | 14.46 | -1.00 | 1.99 | -4468.63 | -115.13 | -3001.61 | 84.07 | 1881.22 | -25.68 | 19.60 | 0.03 | 0.67 |
| 1.45 | 14.26 | -1.00 | 1.99 | -4487.62 | -131.20 | -3025.96 | 55.90 | 1936.02 | -22.34 | 19.60 | 0.02 | 0.66 |
| 1.46 | 14.17 | -1.00 | 1.99 | -4493.55 | -136.11 | -3067.33 | 59.45 | 2002.71 | -24.82 | 19.60 | 0.03 | 0.66 |
| 1.47 | 13.97 | -1.00 | 1.99 | -4504.24 | -125.91 | -3102.92 | 81.78 | 2053.09 | -32.04 | 19.59 | 0.03 | 0.69 |
| 1.48 | 13.78 | -1.00 | 1.98 | -4509.18 | -115.85 | -3099.62 | 94.10 | 2038.79 | -34.50 | 19.60 | 0.03 | 0.69 |
| 1.49 | 13.58 | -1.00 | 1.99 | -4500.77 | -125.87 | -3123.79 | 81.82 | 2076.49 | -32.38 | 19.59 | 0.03 | 0.69 |
| 1.50 | 13.39 | -1.00 | 1.98 | -4497.17 | -120.73 | -3137.46 | 78.72 | 2105.96 | -30.06 | 19.60 | 0.03 | 0.70 |
| 1.51 | 13.29 | -1.00 | 1.93 | -4509.41 | -110.63 | -3150.54 | 100.81 | 2102.42 | -27.54 | 19.59 | 0.02 | 0.66 |

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TABLE V
TABULATED DATA

RUN: 26-3-32

| TE | KS | SK | SA | FZ | FY | FX | MX | MY | MZ | MH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|-------|
| 1.52 | 13.09 | -1.00 | 1.98 | -4515.11 | -110.75 | -3104.94 | 160.59 | 2057.28 | -27.41 | 19.59 | 0.02 | 0.69 |
| 1.53 | 12.56 | -1.00 | 1.98 | -4504.17 | -121.08 | -3054.61 | 77.99 | 1967.08 | -28.41 | 19.60 | 0.03 | 0.60 |
| 1.54 | 12.60 | -1.00 | 1.98 | -4503.27 | -136.31 | -3034.16 | 46.61 | 1941.78 | -28.29 | 19.59 | 0.03 | 0.67 |
| 1.55 | 12.70 | -1.00 | 1.50 | -4510.02 | -136.52 | -3033.84 | 59.17 | 1939.31 | -28.13 | 19.59 | 0.03 | 0.67 |
| 1.56 | 12.51 | -1.00 | 1.98 | -4510.25 | -126.17 | -3038.79 | 71.70 | 1955.84 | -28.05 | 19.60 | 0.03 | 0.67 |
| 1.57 | 12.41 | -1.00 | 1.98 | -4505.14 | -121.17 | -3015.97 | 77.67 | 1916.24 | -24.46 | 19.60 | 0.03 | 0.67 |
| 1.58 | 12.31 | -1.00 | 1.99 | -4494.52 | -111.19 | -2972.84 | 90.23 | 1831.43 | -20.86 | 19.59 | 0.02 | 0.66 |
| 1.55 | 12.12 | -1.00 | 1.55 | -4500.86 | -95.99 | -2980.93 | 118.66 | 1647.66 | -25.43 | 19.59 | 0.02 | 0.66 |
| 1.60 | 12.02 | -1.00 | 1.58 | -4506.16 | -90.88 | -2997.76 | 125.03 | 1879.36 | -27.77 | 19.59 | 0.02 | 0.67 |
| 1.61 | 11.52 | -1.00 | 1.58 | -4474.57 | -105.94 | -3007.91 | 96.71 | 1904.16 | -27.79 | 19.60 | 0.02 | 0.67 |
| 1.62 | 21.40 | -0.03 | 3.97 | -4112.69 | -1728.32 | 5.64 | 205.90 | -56.31 | 207.88 | 19.70 | 0.42 | -0.60 |
| 1.63 | 21.40 | -0.03 | 3.97 | -4132.85 | -1703.02 | -55.25 | 229.34 | 21.74 | 184.67 | 19.69 | 0.41 | 0.01 |
| 1.64 | 21.40 | -0.03 | 3.97 | -4235.65 | -1677.95 | -76.78 | 272.83 | 100.77 | 168.33 | 19.67 | 0.40 | 0.02 |
| 1.65 | 21.40 | -0.03 | 3.97 | -4361.20 | -1683.53 | -51.61 | 285.04 | 38.71 | 168.23 | 19.66 | 0.39 | 0.01 |
| 1.66 | 21.40 | -0.03 | 3.97 | -4480.12 | -1719.49 | -17.21 | 250.52 | -31.26 | 181.98 | 19.66 | 0.38 | 0.00 |
| 1.67 | 21.40 | -0.03 | 3.97 | -4578.90 | -1775.29 | -45.02 | 190.55 | 32.44 | 195.84 | 19.66 | 0.39 | 0.01 |
| 1.68 | 21.40 | -0.03 | 3.97 | -4635.82 | -1815.80 | -58.87 | 168.75 | 67.89 | 203.69 | 19.66 | 0.39 | 0.01 |
| 1.69 | 21.40 | -0.03 | 3.97 | -4687.18 | -1831.04 | -72.14 | 178.40 | 82.92 | 199.07 | 19.66 | 0.39 | 0.02 |
| 1.70 | 21.40 | -0.03 | 3.97 | -4745.41 | -1821.15 | -46.34 | 238.31 | 29.38 | 192.14 | 19.66 | 0.38 | 0.01 |
| 1.71 | 21.49 | -0.04 | 3.97 | -4775.98 | -1816.19 | -29.08 | 281.13 | -0.05 | 187.55 | 19.67 | 0.38 | 0.01 |
| 1.72 | 21.40 | -0.03 | 3.97 | -4794.93 | -1816.03 | -64.69 | 308.65 | 67.17 | 187.55 | 19.68 | 0.38 | 0.01 |
| 1.73 | 21.40 | -0.03 | 3.97 | -4795.20 | -1831.20 | -61.57 | 288.25 | 60.62 | 192.20 | 19.69 | 0.38 | 0.01 |
| 1.74 | 21.40 | -0.03 | 3.97 | -4796.66 | -1851.42 | -50.15 | 271.09 | 55.21 | 201.55 | 19.70 | 0.39 | 0.01 |
| 1.75 | 21.40 | -0.03 | 3.97 | -4766.93 | -1871.72 | -13.46 | 236.12 | -17.63 | 210.82 | 19.70 | 0.39 | 0.00 |
| 1.76 | 21.40 | -0.03 | 3.97 | -4752.20 | -1881.84 | -2.06 | 221.89 | -56.81 | 212.95 | 19.71 | 0.40 | 0.00 |
| 1.77 | 21.40 | -0.03 | 3.97 | -4724.97 | -1891.62 | -58.96 | 208.34 | 44.17 | 211.63 | 19.72 | 0.40 | 0.01 |
| 1.78 | 21.49 | -0.02 | 3.97 | -4709.74 | -1891.48 | -74.21 | 218.63 | 73.34 | 211.63 | 19.73 | 0.40 | 0.02 |
| 1.79 | 21.40 | -0.04 | 3.97 | -4699.48 | -1881.28 | -75.40 | 239.00 | 73.35 | 217.47 | 19.73 | 0.40 | 0.02 |
| 1.80 | 21.40 | -0.03 | 3.97 | -4690.18 | -1871.26 | -35.13 | 259.50 | -27.78 | 224.53 | 19.74 | 0.40 | 0.01 |
| 1.81 | 21.40 | -0.03 | 3.97 | -4668.79 | -1866.21 | -10.08 | 265.80 | -241.35 | 231.85 | 19.74 | 0.40 | 0.00 |
| 1.82 | 21.40 | -0.02 | 3.97 | -4610.53 | -1860.88 | -39.75 | 252.04 | -512.28 | 233.60 | 19.75 | 0.40 | 0.01 |
| 1.83 | 21.40 | -0.03 | 3.97 | -4552.80 | -1840.34 | -62.35 | 268.38 | -1005.42 | 231.10 | 19.75 | 0.40 | 0.01 |
| 1.84 | 21.40 | -0.03 | 3.97 | -4490.70 | -1819.74 | -117.46 | 275.27 | -1771.72 | 220.55 | 19.75 | 0.41 | 0.03 |
| 1.85 | 21.40 | -0.04 | 3.97 | -4443.39 | -1804.15 | -208.97 | 275.88 | -2683.21 | 221.85 | 19.75 | 0.41 | 0.05 |
| 1.86 | 21.40 | -0.04 | 3.97 | -4420.11 | -1798.35 | -424.77 | 254.85 | -2534.03 | 205.15 | 19.75 | 0.41 | 0.10 |
| 1.87 | 21.40 | -0.02 | 3.97 | -4437.55 | -1776.85 | -822.54 | 255.19 | -1667.41 | 175.95 | 19.74 | 0.40 | 0.19 |
| 1.88 | 21.40 | -0.03 | 3.97 | -4445.13 | -1739.85 | -1325.99 | 254.70 | -838.56 | 134.26 | 19.74 | 0.39 | 0.30 |
| 1.89 | 21.40 | -0.07 | 3.97 | -4408.30 | -1687.36 | -1929.67 | 225.85 | 151.28 | 57.23 | 19.74 | 0.38 | 0.44 |

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TABLE V
TABULATED DATA

RUN: 26-3-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|---------|---------|-------|------|------|
| 1.90 | 21.30 | -0.08 | 3.97 | -4303.96 | -1589.48 | -2518.79 | 177.25 | 1097.36 | -59.13 | 19.74 | 0.37 | 0.55 |
| 1.91 | 21.10 | -0.10 | 3.97 | -4195.02 | -1401.22 | -2976.33 | 165.16 | 1836.16 | -185.70 | 19.74 | 0.33 | 0.71 |
| 1.92 | 20.91 | -0.14 | 3.97 | -4143.37 | -1107.79 | -3197.80 | 208.93 | 2206.41 | -250.19 | 19.73 | 0.27 | 0.77 |
| 1.93 | 20.71 | -0.18 | 3.97 | -4135.00 | -785.03 | -3167.45 | 240.75 | 2639.61 | -244.57 | 19.72 | 0.19 | 0.77 |
| 1.94 | 20.52 | -0.26 | 3.97 | -4145.73 | -513.05 | -3072.55 | 227.60 | 2739.70 | -210.58 | 19.71 | 0.12 | 0.74 |
| 1.95 | 20.22 | -0.35 | 3.98 | -4165.55 | -216.85 | -2956.03 | 215.09 | 1820.45 | -172.66 | 19.69 | 0.08 | 0.71 |
| 1.96 | 20.03 | -0.45 | 3.98 | -4218.54 | -211.50 | -2828.57 | 203.22 | 1610.55 | -111.81 | 19.68 | 0.05 | 0.67 |
| 1.97 | 19.93 | -0.56 | 3.98 | -4261.96 | -185.53 | -2790.77 | 167.65 | 2212.60 | -64.15 | 19.67 | 0.04 | 0.65 |
| 1.98 | 19.83 | -0.64 | 3.98 | -4278.61 | -186.39 | -2876.93 | 129.86 | 1708.44 | -77.34 | 19.66 | 0.04 | 0.67 |
| 1.99 | 19.74 | -0.71 | 3.98 | -4335.19 | -186.36 | -2969.01 | 120.34 | 1856.83 | -108.01 | 19.66 | 0.04 | 0.68 |
| 2.00 | 19.54 | -0.77 | 3.98 | -4389.05 | -196.84 | -2924.34 | 107.23 | 1765.01 | -94.19 | 19.65 | 0.04 | 0.67 |
| 2.01 | 19.35 | -0.81 | 3.98 | -4448.46 | -217.31 | -2910.16 | 81.63 | 1758.93 | -80.40 | 19.65 | 0.05 | 0.65 |
| 2.02 | 19.15 | -0.84 | 3.98 | -4491.26 | -227.21 | -3011.13 | 79.16 | 1912.76 | -101.69 | 19.64 | 0.05 | 0.67 |
| 2.03 | 18.86 | -0.87 | 3.98 | -4522.40 | -247.51 | -3034.77 | 44.15 | 1956.70 | -106.49 | 19.65 | 0.05 | 0.67 |
| 2.04 | 18.66 | -0.89 | 3.98 | -4550.91 | -257.79 | -3004.46 | 40.82 | 1906.23 | -99.36 | 19.65 | 0.06 | 0.66 |
| 2.05 | 18.57 | -0.91 | 3.98 | -4555.57 | -242.65 | -3016.24 | 59.60 | 1917.52 | -116.85 | 19.65 | 0.05 | 0.66 |
| 2.06 | 18.17 | -0.93 | 3.98 | -4578.57 | -222.46 | -3019.46 | 103.80 | 1915.88 | -121.53 | 19.65 | 0.05 | 0.66 |
| 2.07 | 17.98 | -0.94 | 3.98 | -4580.00 | -227.62 | -2969.15 | 97.39 | 1843.62 | -92.23 | 19.65 | 0.05 | 0.65 |
| 2.08 | 17.78 | -0.95 | 3.98 | -4552.55 | -227.51 | -2975.51 | 88.07 | 1864.49 | -94.40 | 19.65 | 0.05 | 0.65 |
| 2.09 | 17.49 | -0.96 | 3.98 | -4552.59 | -217.25 | -3022.48 | 110.42 | 1940.28 | -110.50 | 19.65 | 0.05 | 0.66 |
| 2.10 | 17.29 | -0.97 | 3.98 | -4564.55 | -217.51 | -2961.03 | 119.48 | 1823.01 | -110.67 | 19.65 | 0.05 | 0.65 |
| 2.11 | 17.10 | -0.97 | 3.98 | -4542.97 | -237.80 | -2918.62 | 84.45 | 1718.58 | -93.10 | 19.66 | 0.05 | 0.64 |
| 2.12 | 16.90 | -0.98 | 3.98 | -4519.99 | -252.73 | -2969.28 | 56.44 | 1849.99 | -100.27 | 19.66 | 0.06 | 0.66 |
| 2.13 | 16.71 | -0.98 | 3.98 | -4510.04 | -247.57 | -2980.25 | 72.46 | 1869.89 | -101.45 | 19.66 | 0.05 | 0.66 |
| 2.14 | 16.51 | -0.98 | 3.98 | -4511.67 | -232.47 | -2946.77 | 100.84 | 1817.01 | -89.62 | 19.66 | 0.05 | 0.65 |
| 2.15 | 16.32 | -0.99 | 3.98 | -4495.56 | -217.37 | -2916.14 | 119.58 | 1757.44 | -89.51 | 19.66 | 0.05 | 0.65 |
| 2.16 | 16.12 | -0.99 | 3.98 | -4483.53 | -207.19 | -2929.50 | 122.73 | 1778.14 | -94.22 | 19.66 | 0.05 | 0.65 |
| 2.17 | 15.93 | -0.99 | 3.98 | -4478.26 | -207.11 | -2941.66 | 122.91 | 1804.63 | -89.59 | 19.66 | 0.05 | 0.66 |
| 2.18 | 15.73 | -0.99 | 3.98 | -4478.48 | -217.17 | -2949.46 | 110.42 | 1824.40 | -86.10 | 19.66 | 0.05 | 0.66 |
| 2.19 | 15.53 | -0.99 | 3.98 | -4478.07 | -227.28 | -2957.09 | 97.80 | 1831.47 | -89.72 | 19.66 | 0.05 | 0.66 |
| 2.20 | 15.44 | -1.00 | 3.98 | -4483.33 | -232.45 | -2957.57 | 91.45 | 1787.80 | -90.90 | 19.65 | 0.05 | 0.66 |
| 2.21 | 15.24 | -1.00 | 3.98 | -4488.62 | -237.51 | -2941.97 | 85.15 | 1754.61 | -89.80 | 19.65 | 0.05 | 0.66 |
| 2.22 | 15.05 | -1.00 | 3.98 | -4493.93 | -237.42 | -2967.47 | 89.33 | 1843.83 | -89.86 | 19.65 | 0.05 | 0.66 |
| 2.23 | 14.95 | -1.00 | 3.97 | -4487.61 | -232.32 | -2976.12 | 82.17 | 1861.24 | -87.57 | 19.65 | 0.05 | 0.66 |
| 2.24 | 14.85 | -1.00 | 3.97 | -4482.32 | -232.30 | -2975.29 | 82.22 | 1861.62 | -86.38 | 19.65 | 0.05 | 0.66 |
| 2.25 | 14.66 | -1.00 | 3.97 | -4487.56 | -222.34 | -2942.53 | 94.49 | 1793.81 | -82.91 | 19.65 | 0.05 | 0.66 |
| 2.26 | 14.56 | -1.00 | 3.97 | -4459.17 | -207.15 | -2951.21 | 123.00 | 1809.27 | -80.61 | 19.65 | 0.05 | 0.66 |
| 2.27 | 14.36 | -1.00 | 3.97 | -4504.29 | -206.99 | -2995.12 | 123.29 | 1891.27 | -85.36 | 19.65 | 0.05 | 0.66 |

RUN: 26-3-32

TABLE V
TABULATED DATA

| TE | R5 | SR | SA | FZ | FV | FX | MX | MY | MZ | MH | NEV | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|--------|-------|------|-------|
| 2.28 | 14.17 | -1.00 | 3.97 | -4497.57 | -222.07 | -3023.87 | 95.02 | 1940.87 | -90.18 | 19.65 | 0.05 | 0.67 |
| 2.29 | 15.97 | -1.00 | 3.97 | -4502.87 | -237.27 | -3023.97 | 75.07 | 1938.99 | -90.25 | 19.65 | 0.05 | 0.67 |
| 2.30 | 13.87 | -1.00 | 3.97 | -4514.86 | -232.46 | -2941.56 | 91.50 | 1859.99 | -87.78 | 19.65 | 0.05 | 0.66 |
| 2.31 | 13.06 | -1.00 | 3.97 | -4520.35 | -232.44 | -2974.14 | 91.50 | 1847.18 | -84.29 | 19.65 | 0.05 | 0.66 |
| 2.32 | 13.48 | -1.00 | 3.97 | -4508.75 | -237.41 | -2988.52 | 75.82 | 1873.68 | -79.68 | 19.65 | 0.05 | 0.66 |
| 2.33 | 13.59 | -1.00 | 3.97 | -4503.27 | -237.31 | -3008.24 | 75.03 | 1915.64 | -82.04 | 19.65 | 0.05 | 0.67 |
| 2.34 | 13.79 | -1.00 | 3.97 | -4509.39 | -232.11 | -3015.69 | 104.51 | 1926.52 | -85.52 | 19.65 | 0.05 | 0.67 |
| 2.35 | 13.09 | -1.00 | 3.97 | -4515.48 | -217.15 | -2990.96 | 120.15 | 1884.77 | -87.86 | 19.65 | 0.05 | 0.66 |
| 2.36 | 12.99 | -1.00 | 3.97 | -4503.45 | -227.21 | -3009.61 | 98.03 | 1903.96 | -91.46 | 19.65 | 0.05 | 0.67 |
| 2.37 | 12.80 | -1.00 | 3.97 | -4508.97 | -232.22 | -3024.83 | 91.90 | 1936.61 | -91.45 | 19.65 | 0.05 | 0.67 |
| 2.38 | 12.70 | -1.00 | 3.97 | -4515.71 | -227.14 | -3021.55 | 107.81 | 1938.25 | -85.68 | 19.65 | 0.05 | 0.67 |
| 2.39 | 12.51 | -1.00 | 3.97 | -4521.41 | -222.16 | -3003.82 | 115.98 | 1908.80 | -83.10 | 19.65 | 0.05 | 0.66 |
| 2.40 | 12.41 | -1.00 | 3.97 | -4509.57 | -232.40 | -2975.65 | 91.56 | 1850.14 | -86.59 | 19.65 | 0.05 | 0.66 |
| 2.41 | 12.31 | -1.00 | 3.97 | -4497.75 | -232.36 | -2981.56 | 82.07 | 1859.93 | -87.79 | 19.65 | 0.05 | 0.66 |
| 2.42 | 11.40 | -0.04 | 7.98 | -4484.95 | -261.66 | -48.67 | 378.44 | 27.40 | 112.37 | 19.72 | 0.58 | 0.01 |
| 2.43 | 11.40 | -0.04 | 7.98 | -4517.07 | -2611.83 | -36.35 | 376.12 | 0.14 | 115.75 | 19.72 | 0.58 | 0.01 |
| 2.44 | 11.40 | -0.04 | 7.98 | -4471.08 | -2636.91 | -63.18 | 318.24 | 58.37 | 121.36 | 19.72 | 0.59 | 0.01 |
| 2.45 | 11.40 | -0.04 | 7.98 | -4404.08 | -2646.85 | -58.32 | 277.27 | 58.07 | 128.41 | 19.72 | 0.50 | 0.01 |
| 2.46 | 11.40 | -0.04 | 7.98 | -4342.58 | -2605.25 | -45.39 | 301.60 | 33.98 | 132.18 | 19.71 | 0.60 | 0.01 |
| 2.47 | 11.40 | -0.04 | 7.98 | -4341.69 | -2540.68 | -5.25 | 373.88 | 33.98 | 132.18 | 19.71 | 0.60 | 0.01 |
| 2.48 | 11.40 | -0.04 | 7.98 | -4333.25 | -2495.27 | 5.99 | 403.94 | -46.18 | 131.24 | 19.71 | 0.59 | 0.00 |
| 2.49 | 11.49 | -0.04 | 7.98 | -4297.81 | -2490.00 | -27.82 | 384.04 | -70.33 | 131.25 | 19.70 | 0.58 | -0.00 |
| 2.50 | 11.49 | -0.04 | 7.98 | -4219.43 | -2509.92 | -45.52 | 330.58 | -0.38 | 135.70 | 19.69 | 0.58 | 0.01 |
| 2.51 | 11.49 | -0.04 | 7.98 | -4152.27 | -2519.86 | -51.62 | 291.76 | 37.97 | 141.35 | 19.69 | 0.59 | 0.01 |
| 2.52 | 11.49 | -0.04 | 7.98 | -4146.11 | -2509.94 | -7.97 | 295.48 | 50.95 | 137.96 | 19.68 | 0.61 | 0.01 |
| 2.53 | 11.40 | -0.04 | 7.98 | -4235.07 | -2400.15 | 10.01 | 341.20 | -32.73 | 134.63 | 19.67 | 0.61 | 0.00 |
| 2.54 | 11.49 | -0.04 | 7.98 | -4340.77 | -2510.34 | -43.51 | 363.77 | -76.42 | 151.20 | 19.65 | 0.59 | -0.00 |
| 2.55 | 11.49 | -0.04 | 7.98 | -4441.13 | -2556.00 | -75.71 | 350.13 | 28.53 | 127.50 | 19.64 | 0.58 | 0.01 |
| 2.56 | 11.40 | -0.04 | 7.98 | -4525.91 | -2616.82 | -87.82 | 312.63 | 88.19 | 132.99 | 19.64 | 0.58 | 0.02 |
| 2.57 | 11.49 | -0.04 | 7.98 | -4578.24 | -2672.70 | -46.74 | 281.16 | 167.39 | 145.57 | 19.64 | 0.58 | 0.02 |
| 2.58 | 11.40 | -0.04 | 7.98 | -4626.31 | -2698.19 | -5.69 | 297.07 | 28.39 | 161.66 | 19.64 | 0.58 | 0.01 |
| 2.59 | 11.49 | -0.04 | 7.98 | -4674.45 | -2688.02 | -22.81 | 357.56 | -49.38 | 169.85 | 19.64 | 0.58 | 0.00 |
| 2.60 | 11.40 | -0.04 | 7.98 | -4709.52 | -2682.95 | -45.73 | 390.38 | -16.09 | 174.62 | 19.64 | 0.56 | 0.00 |
| 2.61 | 11.40 | -0.04 | 7.98 | -4732.58 | -2698.05 | -79.93 | 390.38 | -8.69 | 163.15 | 19.65 | 0.57 | 0.01 |
| 2.62 | 11.40 | -0.04 | 7.98 | -4744.81 | -2728.52 | -03.03 | 390.71 | -161.02 | 150.67 | 19.65 | 0.57 | 0.02 |
| 2.63 | 11.40 | -0.04 | 7.98 | -4774.44 | -2728.52 | -47.81 | 369.52 | -625.16 | 136.59 | 19.66 | 0.58 | 0.01 |
| 2.64 | 11.49 | -0.05 | 7.98 | -4776.41 | -2753.90 | -47.89 | 347.37 | -1324.54 | 139.71 | 19.66 | 0.58 | 0.01 |
| 2.65 | 11.49 | -0.05 | 7.98 | -4762.98 | -2773.81 | -122.36 | 339.64 | -2216.56 | 144.66 | 19.67 | 0.58 | 0.03 |
| 2.65 | 11.49 | -0.05 | 7.98 | -4727.35 | -2788.52 | -268.97 | 310.09 | -2578.57 | 148.21 | 19.68 | 0.55 | 0.06 |

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RUN: 26-3-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|----------|----------|--------|----------|---------|-------|------|------|
| 2.66 | 21.49 | -0.06 | 7.98 | -4705.52 | -2767.09 | -533.55 | 327.55 | -2140.72 | 134.84 | 19.68 | 0.59 | 0.11 |
| 2.67 | 21.49 | -0.06 | 7.98 | -4670.73 | -2710.25 | -901.59 | 339.52 | -1551.67 | 97.40 | 19.69 | 0.58 | 0.19 |
| 2.68 | 21.40 | -0.07 | 7.98 | -4621.39 | -2602.46 | -1419.87 | 348.55 | -711.74 | 25.54 | 19.70 | 0.56 | 0.31 |
| 2.69 | 21.40 | -0.07 | 7.98 | -4588.63 | -2408.61 | -2045.63 | 371.89 | 321.65 | -69.72 | 19.70 | 0.54 | 0.49 |
| 2.70 | 21.30 | -0.11 | 7.98 | -4582.64 | -2134.62 | -2564.80 | 370.80 | 1166.22 | -150.59 | 19.70 | 0.47 | 0.50 |
| 2.71 | 21.10 | -0.15 | 7.98 | -4584.37 | -1800.78 | -2506.70 | 320.00 | 1728.89 | -140.53 | 19.70 | 0.49 | 0.43 |
| 2.72 | 21.01 | -0.20 | 7.98 | -4576.77 | -1437.47 | -3025.63 | 228.03 | 1917.49 | -159.55 | 19.71 | 0.31 | 0.60 |
| 2.73 | 20.81 | -0.26 | 7.98 | -4585.71 | -1054.33 | -3044.96 | 187.89 | 3483.13 | -130.10 | 19.71 | 0.23 | 0.80 |
| 2.74 | 20.62 | -0.34 | 8.00 | -4526.64 | -711.03 | -3081.57 | 209.17 | 2029.65 | -114.24 | 19.71 | 0.16 | 0.87 |
| 2.75 | 20.42 | -0.44 | 8.00 | -4569.81 | -448.80 | -3073.87 | 270.04 | 1944.53 | -97.27 | 19.71 | 0.10 | 0.80 |
| 2.76 | 20.22 | -0.53 | 8.00 | -4542.86 | -339.20 | -2869.86 | 273.63 | 1701.20 | -42.95 | 19.71 | 0.07 | 0.83 |
| 2.77 | 20.03 | -0.62 | 8.00 | -4500.79 | -323.44 | -2729.51 | 224.68 | 1466.18 | -8.69 | 19.72 | 0.07 | 0.83 |
| 2.78 | 19.83 | -0.69 | 8.00 | -4483.71 | -229.63 | -2714.19 | 208.19 | 1435.14 | -31.71 | 19.72 | 0.07 | 0.81 |
| 2.79 | 19.74 | -0.75 | 8.00 | -4495.39 | -348.81 | -2745.52 | 193.21 | 1493.81 | -55.98 | 19.71 | 0.08 | 0.81 |
| 2.80 | 19.54 | -0.79 | 8.00 | -4502.56 | -399.49 | -2714.42 | 139.38 | 1665.81 | -48.11 | 19.71 | 0.09 | 0.80 |
| 2.81 | 19.35 | -0.84 | 8.00 | -4478.76 | -449.93 | -2747.04 | 57.27 | 1504.69 | -58.38 | 19.71 | 0.10 | 0.81 |
| 2.82 | 19.15 | -0.87 | 8.01 | -4477.30 | -480.41 | -2753.89 | 24.95 | 1343.93 | -54.75 | 19.71 | 0.11 | 0.81 |
| 2.83 | 18.95 | -0.89 | 8.01 | -4479.12 | -475.57 | -2663.18 | 69.71 | 1417.80 | -53.48 | 19.71 | 0.10 | 0.81 |
| 2.84 | 18.76 | -0.91 | 8.01 | -4457.78 | -439.92 | -2697.82 | 149.20 | 1523.25 | -72.21 | 19.71 | 0.09 | 0.82 |
| 2.85 | 18.56 | -0.92 | 8.01 | -4457.59 | -384.06 | -2761.36 | 196.73 | 1510.28 | -59.39 | 19.71 | 0.08 | 0.82 |
| 2.86 | 18.47 | -0.94 | 8.01 | -4464.09 | -353.70 | -2752.81 | 103.62 | 1393.59 | -39.58 | 19.71 | 0.08 | 0.80 |
| 2.87 | 18.27 | -0.95 | 8.00 | -4475.43 | -364.07 | -2686.70 | 149.13 | 1427.33 | -52.53 | 19.70 | 0.09 | 0.81 |
| 2.88 | 18.08 | -0.96 | 8.01 | -4468.51 | -384.26 | -2712.72 | 111.48 | 1520.57 | -62.11 | 19.70 | 0.09 | 0.81 |
| 2.89 | 17.88 | -0.97 | 8.01 | -4484.02 | -414.46 | -2770.16 | 67.33 | 1554.16 | -55.23 | 19.70 | 0.10 | 0.82 |
| 2.90 | 17.78 | -0.98 | 8.00 | -4495.03 | -449.84 | -2780.84 | 39.06 | 1627.21 | -59.02 | 19.70 | 0.10 | 0.83 |
| 2.91 | 17.59 | -0.98 | 8.00 | -4493.40 | -464.88 | -2824.26 | 57.83 | 1597.06 | -59.15 | 19.70 | 0.10 | 0.83 |
| 2.92 | 17.39 | -0.98 | 8.00 | -4498.23 | -449.79 | -2814.35 | 149.08 | 1490.98 | -37.70 | 19.70 | 0.09 | 0.81 |
| 2.93 | 17.20 | -0.98 | 8.00 | -4499.15 | -427.13 | -2754.43 | 149.08 | 1490.98 | -37.70 | 19.70 | 0.09 | 0.81 |
| 2.94 | 17.00 | -0.99 | 8.00 | -4505.94 | -404.41 | -2754.43 | 149.08 | 1490.98 | -37.70 | 19.70 | 0.09 | 0.81 |
| 2.95 | 16.90 | -0.99 | 8.00 | -4505.94 | -384.06 | -2754.43 | 149.08 | 1490.98 | -37.70 | 19.70 | 0.09 | 0.81 |
| 2.96 | 16.71 | -0.99 | 8.00 | -4500.46 | -379.00 | -2779.40 | 155.90 | 1553.65 | -33.18 | 19.70 | 0.09 | 0.81 |
| 2.97 | 16.51 | -0.99 | 8.00 | -4523.25 | -384.33 | -2720.85 | 158.61 | 1454.69 | -35.32 | 19.70 | 0.08 | 0.80 |
| 2.98 | 16.41 | -1.00 | 8.00 | -4522.42 | -399.59 | -2712.33 | 129.93 | 1426.89 | -36.47 | 19.70 | 0.09 | 0.80 |
| 2.99 | 16.22 | -1.00 | 8.00 | -4521.61 | -419.78 | -2723.79 | 95.21 | 1452.02 | -30.75 | 19.70 | 0.09 | 0.80 |
| 3.00 | 16.12 | -1.00 | 7.99 | -4515.92 | -429.88 | -2710.63 | 73.09 | 1449.49 | -20.20 | 19.70 | 0.10 | 0.80 |
| 3.01 | 15.93 | -1.00 | 7.99 | -4515.91 | -419.74 | -2720.17 | 85.78 | 1457.13 | -17.88 | 19.70 | 0.09 | 0.80 |
| 3.02 | 15.83 | -1.00 | 7.98 | -4516.50 | -409.71 | -2701.48 | 107.78 | 1413.32 | -20.24 | 19.70 | 0.08 | 0.80 |
| 3.03 | 15.63 | -1.00 | 7.98 | -4505.49 | -399.58 | -2698.00 | 120.42 | 1402.17 | -22.58 | 19.70 | 0.09 | 0.80 |

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RUN: 26-3-32

TABLE V
TABULATED DATA

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|------|----------|---------|----------|--------|---------|--------|-------|-------|--------|
| 3.04 | 15.53 | -1.00 | 7.93 | -4505.73 | -394.42 | -2718.98 | 126.95 | 1448.53 | -23.67 | 19.70 | 0.09 | 0.60 |
| 3.05 | 15.44 | -1.00 | 7.98 | -4512.27 | -389.35 | -2719.10 | 142.85 | 1450.85 | -22.43 | 19.70 | 0.09 | 0.60 |
| 3.06 | 15.34 | -1.00 | 7.98 | -4500.87 | -394.43 | -2707.00 | 126.96 | 1434.64 | -21.18 | 19.70 | 0.09 | 0.60 |
| 3.07 | 15.14 | -1.00 | 7.98 | -4489.23 | -399.65 | -2667.77 | 110.76 | 1357.65 | -23.42 | 19.70 | 0.09 | 0.59 |
| 3.08 | 14.95 | -1.00 | 7.98 | -4506.32 | -394.65 | -2662.67 | 126.52 | 1347.46 | -23.40 | 19.70 | 0.09 | 0.59 |
| 3.09 | 14.85 | -1.00 | 7.98 | -4500.84 | -389.46 | -2687.59 | 133.09 | 1355.18 | -22.30 | 19.70 | 0.09 | 0.60 |
| 3.10 | 14.75 | -1.00 | 7.93 | -4506.26 | -394.49 | -2696.01 | 126.85 | 1414.60 | -19.58 | 19.70 | 0.09 | 0.60 |
| 3.11 | 14.66 | -1.00 | 7.93 | -4494.74 | -404.61 | -2690.88 | 104.65 | 1406.28 | -19.97 | 19.70 | 0.09 | 0.60 |
| 3.12 | 14.56 | -1.00 | 7.98 | -4505.50 | -409.84 | -2661.14 | 97.99 | 1246.43 | -21.11 | 19.70 | 0.09 | 0.59 |
| 3.13 | 14.36 | -1.00 | 7.98 | -4511.62 | -409.82 | -2667.86 | 107.56 | 1355.83 | -23.48 | 19.70 | 0.09 | 0.59 |
| 3.14 | 14.26 | -1.00 | 7.98 | -4511.23 | -414.72 | -2708.80 | 101.56 | 1430.65 | -23.67 | 19.70 | 0.09 | 0.60 |
| 3.15 | 14.17 | -1.00 | 7.98 | -4505.54 | -414.57 | -2739.50 | 101.83 | 1465.66 | -23.81 | 19.70 | 0.09 | 0.61 |
| 3.16 | 14.07 | -1.00 | 7.98 | -4506.16 | -399.32 | -2754.69 | 130.47 | 1510.51 | -23.88 | 19.70 | 0.09 | 0.61 |
| 3.17 | 13.97 | -1.00 | 7.98 | -4505.91 | -394.36 | -2753.69 | 136.58 | 1464.13 | -22.77 | 19.70 | 0.09 | 0.61 |
| 3.18 | 13.87 | -1.00 | 7.98 | -4500.41 | -394.34 | -2734.70 | 136.60 | 1463.68 | -23.56 | 19.70 | 0.09 | 0.61 |
| 3.19 | 13.78 | -1.00 | 7.98 | -4505.74 | -394.23 | -2768.33 | 136.84 | 1529.34 | -20.63 | 19.70 | 0.09 | 0.61 |
| 3.20 | 13.66 | -1.00 | 7.98 | -4511.88 | -404.28 | -2786.77 | 133.86 | 1562.29 | -33.33 | 19.70 | 0.09 | 0.62 |
| 3.21 | 13.58 | -1.00 | 7.98 | -4505.56 | -424.52 | -2786.81 | 99.02 | 1562.54 | -33.39 | 19.70 | 0.09 | 0.62 |
| 3.22 | 65.27 | -0.68 | 0.0 | 0.43 | 4.95 | -9.35 | 6.51 | -1.64 | -13.95 | 20.73 | 11.52 | -21.71 |
| 3.23 | 65.07 | -0.68 | 0.0 | 0.41 | 5.01 | -21.81 | 6.61 | 22.16 | -17.41 | 20.73 | 12.14 | -22.85 |
| 3.24 | 64.97 | -0.68 | 0.0 | -4.86 | 4.92 | -8.13 | 6.43 | -12.99 | -19.73 | 20.74 | -1.61 | 1.67 |
| 3.25 | 64.78 | -0.68 | 0.0 | -4.83 | -0.30 | 25.21 | -0.67 | -78.60 | -23.16 | 20.73 | 0.06 | -5.22 |
| 3.26 | 57.06 | -0.02 | 0.0 | -2824.05 | -80.78 | -68.08 | -40.81 | 53.03 | -37.52 | 20.08 | 0.03 | 0.02 |
| 3.27 | 57.06 | -0.02 | 0.0 | -2899.49 | -50.82 | -35.79 | -2.61 | -25.61 | -27.05 | 20.08 | 0.02 | 0.01 |
| 3.28 | 57.06 | -0.02 | 0.0 | -2923.11 | -5.21 | -51.89 | 75.03 | 16.12 | -13.08 | 20.09 | 0.00 | 0.02 |
| 3.29 | 57.06 | -0.02 | 0.0 | -2913.55 | 15.12 | -46.86 | 110.72 | 25.21 | 2.02 | 20.09 | -0.01 | 0.02 |
| 3.30 | 57.06 | -0.02 | 0.0 | -2860.23 | 10.27 | -34.32 | 164.65 | 14.58 | 20.67 | 20.10 | -0.00 | 0.01 |
| 3.31 | 57.06 | -0.02 | 0.0 | -2780.45 | -9.82 | 4.46 | 88.44 | -67.13 | 25.38 | 20.10 | 0.00 | -0.00 |
| 3.32 | 57.06 | -0.02 | 0.0 | -2626.77 | -44.89 | 31.27 | 14.86 | -122.33 | 19.62 | 20.11 | 0.02 | -0.01 |
| 3.33 | 57.06 | -0.02 | 0.0 | -2517.94 | -69.68 | -7.68 | -26.27 | -45.38 | 6.84 | 20.11 | 0.03 | 0.00 |
| 3.34 | 57.06 | -0.02 | 0.0 | -2508.63 | -64.45 | -38.87 | -0.35 | 7.10 | -9.41 | 20.10 | 0.03 | 0.02 |
| 3.35 | 57.06 | -0.02 | 0.0 | -2565.89 | -49.30 | -67.79 | 57.32 | 47.50 | -22.16 | 20.09 | 0.02 | 0.03 |
| 3.36 | 57.06 | -0.02 | 0.0 | -2649.35 | -24.32 | -55.90 | 117.83 | 31.51 | -24.82 | 20.08 | 0.01 | 0.02 |
| 3.37 | 57.06 | -0.02 | 0.0 | -2741.73 | -24.72 | -38.77 | 126.65 | 7.49 | -39.52 | 20.08 | 0.01 | 0.01 |
| 3.38 | 57.06 | -0.02 | 0.0 | -2785.45 | -60.29 | -70.31 | 33.31 | 53.64 | -40.89 | 20.08 | 0.02 | 0.03 |
| 3.39 | 57.06 | -0.02 | 0.0 | -2840.13 | -80.76 | -85.46 | -40.73 | 64.66 | -32.93 | 20.08 | 0.03 | 0.03 |
| 3.40 | 57.06 | -0.02 | 0.0 | -2888.96 | -50.53 | -87.07 | -2.00 | 40.84 | -20.05 | 20.08 | 0.02 | 0.03 |
| 3.41 | 57.06 | -0.02 | 0.0 | -2918.84 | -0.12 | -42.11 | 91.12 | -248.97 | -5.63 | 20.09 | 0.00 | 0.01 |

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TABLE V
TABULATED DATA

RUN: 26- 3-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-----|----------|--------|----------|--------|----------|---------|-------|-------|------|
| 3.42 | 57.06 | -0.02 | 0.0 | -2908.22 | 14.97 | -4.58 | 110.39 | -683.60 | 5.53 | 20.09 | -0.01 | 0.00 |
| 3.43 | 57.06 | -0.02 | 0.0 | -2866.33 | 10.22 | -25.02 | 114.08 | -1266.03 | 21.71 | 20.10 | -0.00 | 0.01 |
| 3.44 | 57.06 | -0.02 | 0.0 | -2768.87 | -4.41 | -71.53 | 95.60 | -2063.36 | 30.00 | 20.10 | 0.00 | 0.01 |
| 3.45 | 57.06 | -0.02 | 0.0 | -2618.65 | -33.89 | -184.43 | 29.56 | -2655.05 | 30.66 | 20.10 | 0.01 | 0.07 |
| 3.46 | 57.06 | -0.02 | 0.0 | -2522.33 | -58.31 | -353.39 | -10.95 | -2423.84 | 15.36 | 20.10 | 0.02 | 0.14 |
| 3.47 | 57.06 | -0.02 | 0.0 | -2500.29 | -47.14 | -641.45 | 3.86 | -1951.30 | -9.95 | 20.10 | 0.02 | 0.00 |
| 3.48 | 57.06 | -0.03 | 0.0 | -2536.88 | -20.46 | -1062.79 | 48.39 | -1239.48 | -35.93 | 20.09 | 0.01 | 0.42 |
| 3.49 | 57.06 | -0.04 | 0.0 | -2544.21 | 16.33 | -1506.42 | 105.80 | -498.95 | -64.50 | 20.08 | -0.01 | 0.53 |
| 3.50 | 56.96 | -0.06 | 0.0 | -2616.15 | 32.78 | -1906.11 | 117.95 | 167.27 | -96.25 | 20.07 | -0.01 | 0.73 |
| 3.51 | 56.77 | -0.08 | 0.0 | -2576.52 | 3.27 | -2161.03 | 42.31 | 577.34 | -133.05 | 20.07 | -0.00 | 0.84 |
| 3.52 | 56.57 | -0.10 | 0.0 | -2533.55 | -41.86 | -2272.32 | -44.01 | 755.24 | -161.75 | 20.07 | 0.02 | 0.90 |
| 3.53 | 56.18 | -0.13 | 0.0 | -2541.16 | -36.69 | -2292.71 | -18.17 | 801.14 | -165.69 | 20.06 | 0.01 | 0.90 |
| 3.54 | 55.50 | -0.17 | 0.0 | -2584.78 | -1.64 | -2194.30 | 64.75 | 641.56 | -152.62 | 20.05 | 0.00 | 0.95 |
| 3.55 | 54.52 | -0.21 | 0.0 | -2612.10 | 13.13 | -2059.38 | 112.14 | 425.67 | -119.18 | 20.04 | -0.01 | 0.74 |
| 3.56 | 53.83 | -0.26 | 0.0 | -2580.51 | -2.51 | -1903.06 | 72.62 | 158.14 | -91.67 | 20.04 | 0.00 | 0.74 |
| 3.57 | 53.74 | -0.33 | 0.0 | -2512.88 | -43.29 | -1787.19 | -27.26 | -43.84 | -86.47 | 20.04 | 0.02 | 0.71 |
| 3.58 | 54.03 | -0.41 | 0.0 | -2474.66 | -58.57 | -1740.37 | -65.94 | 4360.61 | -108.98 | 20.04 | 0.02 | 0.70 |
| 3.59 | 54.13 | -0.50 | 0.0 | -2461.12 | -38.47 | -1665.40 | -30.75 | 1569.11 | -121.85 | 20.03 | 0.02 | 0.68 |
| 3.60 | 54.13 | -0.58 | 0.0 | -2503.51 | -13.54 | -1599.87 | 29.59 | -322.70 | -113.29 | 20.02 | 0.01 | 0.64 |
| 3.61 | 54.23 | -0.66 | 0.0 | -2540.48 | -4.08 | -1411.15 | 60.48 | -167.04 | -53.11 | 20.01 | 0.00 | 0.56 |
| 3.62 | 54.42 | -0.72 | 0.0 | -2564.01 | -14.62 | -1283.31 | 46.89 | 2344.22 | 3.80 | 20.00 | 0.01 | 0.50 |
| 3.63 | 54.42 | -0.78 | 0.0 | -2555.27 | -14.35 | -1266.03 | 18.79 | -724.90 | 0.04 | 20.00 | 0.01 | 0.53 |
| 3.64 | 54.32 | -0.82 | 0.0 | -2579.29 | -4.06 | -1470.13 | 22.34 | -553.74 | -41.05 | 20.00 | 0.00 | 0.57 |
| 3.65 | 54.32 | -0.86 | 0.0 | -2604.91 | 6.00 | -1466.39 | 25.62 | 1693.46 | -46.33 | 19.99 | -0.00 | 0.57 |
| 3.66 | 54.42 | -0.88 | 0.0 | -2650.27 | 20.92 | -1442.17 | 63.58 | 530.54 | -31.50 | 19.98 | -0.01 | 0.54 |
| 3.67 | 54.42 | -0.91 | 0.0 | -2700.12 | 25.83 | -1441.71 | 88.34 | -623.57 | -28.46 | 19.98 | -0.01 | 0.53 |
| 3.68 | 54.32 | -0.92 | 0.0 | -2719.87 | -14.62 | -1471.27 | 18.31 | 300.18 | -20.95 | 19.98 | 0.01 | 0.54 |
| 3.69 | 54.23 | -0.94 | 0.0 | -2713.14 | -55.11 | -1454.76 | -52.29 | 1259.98 | -5.36 | 19.98 | 0.02 | 0.54 |
| 3.70 | 54.32 | -0.95 | 0.0 | -2712.76 | -44.82 | -1506.77 | -39.09 | -408.86 | -11.45 | 19.98 | 0.02 | 0.50 |
| 3.71 | 54.81 | -0.96 | 0.0 | -2759.59 | -14.57 | -1517.93 | 8.85 | -482.12 | -27.85 | 19.98 | 0.01 | 0.55 |
| 3.72 | 55.40 | -0.97 | 0.0 | -2756.63 | 10.53 | -1477.70 | 50.23 | 1266.58 | -24.12 | 19.98 | -0.00 | 0.54 |
| 3.73 | 55.40 | -0.97 | 0.0 | -2741.42 | 15.73 | -1480.49 | 56.98 | -340.45 | -10.51 | 19.98 | -0.01 | 0.54 |
| 3.74 | 54.91 | -0.98 | 0.0 | -2736.35 | 15.76 | -1478.04 | 57.05 | -543.03 | -6.59 | 19.98 | -0.01 | 0.54 |
| 3.75 | 54.23 | -0.98 | 0.0 | -2742.04 | 0.51 | -1460.86 | 57.63 | 857.14 | 1.30 | 19.98 | -0.00 | 0.53 |
| 3.76 | 53.53 | -0.99 | 0.0 | -2726.36 | -14.80 | -1413.31 | 18.04 | 40.51 | 5.11 | 19.98 | 0.01 | 0.52 |
| 3.77 | 53.74 | -0.99 | 0.0 | -2752.07 | -19.89 | -1423.02 | 21.04 | -651.23 | -15.73 | 19.99 | 0.01 | 0.52 |
| 3.78 | 53.55 | -0.99 | 0.0 | -2736.78 | -14.64 | -1461.89 | 27.82 | 434.78 | -29.29 | 19.98 | 0.01 | 0.54 |
| 3.79 | 53.05 | -0.99 | 0.0 | -2720.08 | -14.60 | -1472.54 | 18.38 | 495.76 | -15.47 | 19.98 | 0.01 | 0.54 |

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TABLE V
TABULATED DATA

RUN: 27-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | RFY | RFX |
|------|-------|-------|-------|----------|--------|----------|--------|----------|---------|-------|-------|-------|
| 0.0 | 54.52 | -0.03 | -0.01 | -2677.31 | -24.43 | 27.89 | 60.44 | -76.12 | 45.08 | 20.13 | 0.01 | -0.01 |
| 0.01 | 55.89 | -0.01 | -0.01 | -2575.22 | -13.92 | -0.48 | 83.62 | -54.57 | 2.35 | 20.10 | 0.01 | 0.00 |
| 0.02 | 55.89 | -0.02 | -0.01 | -2685.36 | 6.04 | -22.36 | 137.73 | -9.32 | -15.08 | 20.09 | -0.00 | 0.01 |
| 0.03 | 55.89 | -0.02 | -0.01 | -2759.67 | -9.30 | -60.76 | 108.47 | 75.18 | -26.82 | 20.00 | 0.00 | 0.00 |
| 0.04 | 55.89 | -0.01 | -0.01 | -2791.35 | -44.88 | -92.70 | 5.45 | 130.70 | -36.39 | 20.10 | 0.02 | 0.00 |
| 0.05 | 55.89 | -0.01 | -0.01 | -2841.34 | -55.29 | -91.38 | -46.24 | 119.98 | -34.23 | 20.10 | 0.02 | 0.00 |
| 0.06 | 55.89 | -0.02 | -0.01 | -2896.23 | -20.21 | -48.82 | 8.13 | 22.17 | -25.69 | 20.10 | 0.01 | 0.00 |
| 0.07 | 55.89 | -0.01 | -0.01 | -2903.57 | 30.44 | -37.77 | 92.27 | 9.99 | -7.26 | 20.10 | -0.01 | 0.01 |
| 0.08 | 55.89 | -0.02 | -0.01 | -2889.11 | 45.70 | -26.09 | 121.52 | 4.55 | 10.19 | 20.11 | -0.02 | 0.01 |
| 0.09 | 55.89 | -0.02 | -0.01 | -2846.59 | 25.65 | -16.40 | 95.91 | -1.72 | 32.25 | 20.11 | -0.01 | 0.01 |
| 0.10 | 55.89 | -0.02 | -0.01 | -2782.27 | -4.57 | 12.52 | 57.18 | -45.83 | 45.02 | 20.12 | 0.00 | -0.01 |
| 0.11 | 55.98 | -0.02 | -0.01 | -2652.22 | -29.60 | 51.16 | 15.53 | -138.69 | 41.71 | 20.12 | 0.01 | -0.02 |
| 0.12 | 55.98 | -0.02 | -0.01 | -2548.65 | -49.44 | 34.04 | -19.56 | -101.68 | 31.22 | 20.12 | -0.01 | -0.01 |
| 0.13 | 55.65 | -0.02 | -0.01 | -2516.95 | -39.68 | -2.17 | 3.63 | -31.88 | 15.00 | 20.11 | 0.02 | 0.00 |
| 0.14 | 55.89 | -0.01 | -0.01 | -2579.51 | -13.80 | -38.50 | 74.29 | 23.64 | -1.24 | 20.11 | 0.01 | 0.01 |
| 0.15 | 55.89 | -0.01 | -0.01 | -2673.56 | 6.17 | -47.86 | 120.44 | 29.08 | -15.13 | 20.10 | -0.00 | 0.02 |
| 0.16 | 55.89 | -0.02 | -0.01 | -2754.12 | -4.34 | -29.28 | 114.73 | -1.50 | -17.59 | 20.00 | 0.00 | 0.01 |
| 0.17 | 55.98 | -0.02 | -0.01 | -2792.54 | -34.90 | -47.77 | 27.74 | 40.50 | -22.39 | 20.09 | 0.01 | 0.02 |
| 0.18 | 55.98 | -0.02 | -0.01 | -2837.27 | -55.29 | -72.61 | -36.66 | 76.55 | -21.37 | 20.10 | 0.02 | 0.03 |
| 0.19 | 55.98 | -0.02 | -0.01 | -2890.97 | -30.13 | -84.17 | -4.43 | 86.28 | -15.64 | 20.10 | 0.01 | 0.03 |
| 0.20 | 55.65 | -0.02 | -0.01 | -2893.20 | 15.40 | -58.68 | 73.08 | -10.32 | -0.30 | 20.10 | -0.01 | 0.02 |
| 0.21 | 55.89 | -0.02 | -0.01 | -2894.10 | 35.51 | -9.53 | 108.30 | -327.29 | 15.02 | 20.11 | -0.01 | 0.00 |
| 0.22 | 55.98 | -0.02 | -0.01 | -2851.65 | 25.53 | -0.79 | 95.65 | -734.52 | 26.49 | 20.11 | -0.01 | 0.00 |
| 0.23 | 55.89 | -0.02 | -0.01 | -2758.78 | 0.53 | -16.05 | 73.28 | -1302.80 | 32.17 | 20.12 | -0.00 | 0.01 |
| 0.24 | 55.89 | -0.02 | -0.01 | -2666.91 | -24.15 | -71.53 | 22.77 | -2088.60 | 29.98 | 20.12 | 0.01 | 0.03 |
| 0.25 | 55.89 | -0.02 | -0.01 | -2555.99 | -43.60 | -189.67 | -11.40 | -2689.98 | -22.46 | 20.12 | 0.02 | 0.07 |
| 0.26 | 55.98 | -0.02 | -0.01 | -2514.00 | -27.64 | -385.26 | 9.42 | -2378.44 | 1.28 | 20.12 | 0.01 | 0.15 |
| 0.27 | 55.98 | -0.03 | -0.01 | -2547.34 | 8.89 | -719.59 | 76.01 | -1815.50 | -19.55 | 20.11 | -0.00 | 0.23 |
| 0.28 | 55.09 | -0.03 | -0.03 | -2622.40 | 45.60 | -1145.14 | 142.90 | -1098.20 | -44.43 | 20.10 | -0.02 | 0.44 |
| 0.29 | 55.89 | -0.04 | -0.03 | -2666.04 | 57.10 | -1592.98 | 139.23 | -350.76 | -63.92 | 20.00 | -0.02 | 0.60 |
| 0.30 | 55.79 | -0.06 | -0.03 | -2642.70 | 28.15 | -1990.92 | 67.80 | 305.35 | -100.53 | 20.09 | -0.01 | 0.75 |
| 0.31 | 55.59 | -0.08 | -0.03 | -2577.22 | -11.68 | -2218.65 | -62.68 | 670.40 | -134.69 | 20.09 | 0.00 | 0.86 |
| 0.32 | 55.30 | -0.10 | -0.03 | -2559.95 | -26.56 | -2288.95 | -81.56 | 751.42 | -156.09 | 20.05 | 0.01 | 0.89 |
| 0.33 | 54.62 | -0.13 | -0.03 | -2601.03 | -16.69 | -2207.58 | -2.15 | 666.18 | -149.42 | 20.08 | 0.01 | 0.85 |
| 0.34 | 53.74 | -0.17 | -0.03 | -2626.29 | 3.07 | -2040.71 | 80.26 | 395.03 | -129.50 | 20.07 | -0.00 | 0.76 |
| 0.35 | 52.96 | -0.22 | -0.01 | -2600.41 | -2.46 | -1852.01 | 101.61 | 80.83 | -107.32 | 20.07 | 0.00 | 0.71 |
| 0.36 | 52.76 | -0.28 | -0.03 | -2487.22 | -53.12 | -1675.67 | 33.48 | -222.80 | -95.86 | 20.07 | 0.01 | 0.67 |
| 0.37 | 53.05 | -0.36 | -0.03 | -2384.05 | -58.44 | -1581.41 | -27.50 | 4185.25 | -100.98 | 20.06 | 0.02 | 0.65 |

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00

RUN: 27-1-32

TABLE V
TABULATED DATA

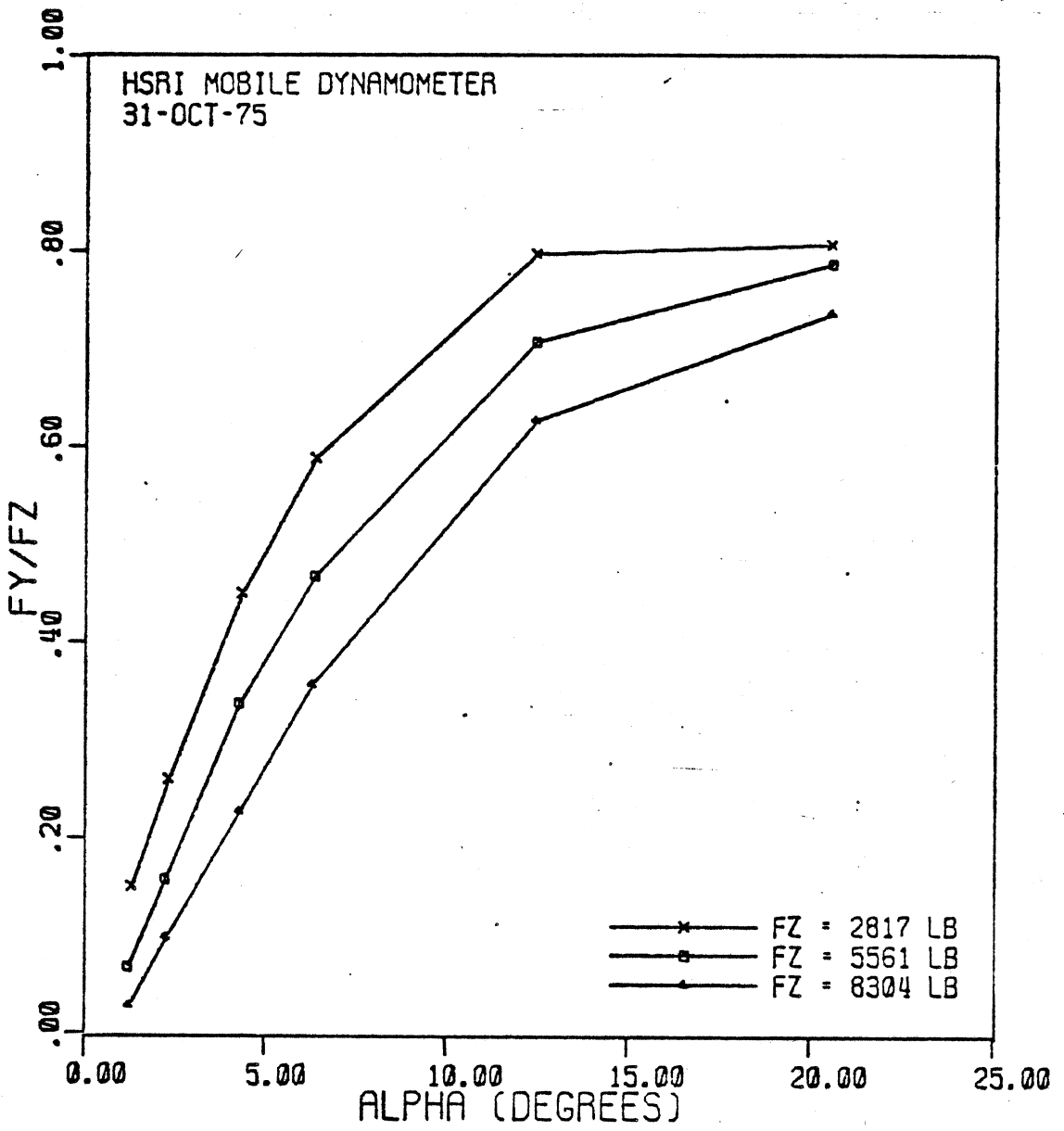
| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-------|-------|-------|----------|--------|----------|--------|---------|---------|-------|-------|------|
| 0.38 | 53.15 | -0.45 | -0.01 | -2331.62 | -43.23 | -1538.77 | -8.08 | 2255.98 | -110.85 | 20.05 | 0.02 | 0.66 |
| 0.39 | 53.15 | -0.54 | -0.01 | -2352.62 | -13.09 | -1474.56 | 59.03 | -539.82 | -101.92 | 20.04 | 0.01 | 0.63 |
| 0.40 | 53.15 | -0.63 | -0.01 | -2307.78 | 1.56 | -1323.94 | 87.10 | -796.69 | -44.46 | 20.03 | -0.00 | 0.55 |
| 0.41 | 53.44 | -0.70 | -0.01 | -2427.77 | -9.13 | -1167.46 | 13.25 | 2347.86 | 20.58 | 20.02 | 0.00 | 0.40 |
| 0.42 | 53.44 | -0.76 | -0.01 | -2454.44 | 1.12 | -1221.26 | 84.44 | -706.61 | 24.93 | 20.00 | -0.00 | 0.50 |
| 0.43 | 53.35 | -0.80 | -0.01 | -2496.22 | 6.42 | -1300.04 | 74.17 | -763.16 | -28.76 | 20.00 | -0.10 | 0.55 |
| 0.44 | 53.35 | -0.84 | -0.01 | -2501.35 | -3.62 | -1468.86 | 32.74 | 1192.83 | -49.95 | 19.99 | 0.00 | 0.58 |
| 0.45 | 53.54 | -0.87 | -0.01 | -2501.61 | -18.91 | -1471.39 | -5.85 | 1361.54 | -30.82 | 19.98 | 0.01 | 0.57 |
| 0.46 | 53.64 | -0.90 | -0.01 | -2616.75 | 1.20 | -1485.91 | 38.78 | -548.55 | -25.85 | 19.97 | -0.00 | 0.57 |
| 0.47 | 53.64 | -0.92 | -0.01 | -2698.78 | 16.29 | -1524.53 | 77.06 | -474.36 | -30.12 | 19.97 | -0.01 | 0.56 |
| 0.48 | 53.64 | -0.95 | -0.01 | -2735.97 | 0.97 | -1508.17 | 48.02 | 1697.79 | -1.73 | 19.97 | -0.00 | 0.55 |
| 0.49 | 53.83 | -1.04 | -0.01 | -2717.44 | -24.22 | -1524.32 | -12.56 | -462.36 | 16.07 | 19.97 | 0.01 | 0.56 |
| 0.50 | 54.23 | -0.92 | -0.01 | -2743.29 | 14.11 | -1565.59 | 0.25 | -400.81 | -7.37 | 19.97 | 0.01 | 0.57 |
| 0.51 | 54.52 | -0.97 | -0.03 | -2792.73 | 0.50 | -1572.41 | 38.29 | 1189.29 | -27.77 | 19.97 | -0.00 | 0.56 |
| 0.52 | 54.23 | -0.97 | -0.03 | -2788.69 | 6.01 | -1569.88 | 54.40 | 550.39 | -23.00 | 19.97 | -0.00 | 0.56 |
| 0.53 | 53.34 | -0.98 | -0.01 | -2789.11 | 0.96 | -1563.58 | 48.02 | -405.54 | -11.95 | 19.98 | -0.00 | 0.55 |
| 0.54 | 53.04 | -0.98 | -0.01 | -2789.50 | -4.12 | -1546.11 | 41.57 | 314.59 | 5.27 | 19.98 | 0.00 | 0.55 |
| 0.55 | 52.76 | -0.98 | -0.03 | -2785.44 | -14.26 | -1524.55 | 38.21 | 913.40 | 13.50 | 19.98 | 0.01 | 0.55 |
| 0.56 | 52.56 | -0.99 | -0.01 | -2708.75 | -9.19 | -1527.57 | 44.80 | -472.92 | -3.76 | 19.98 | 0.00 | 0.55 |
| 0.57 | 52.27 | -0.99 | -0.01 | -2756.35 | -3.59 | -1572.92 | 41.72 | -115.08 | -26.42 | 19.98 | 0.00 | 0.57 |
| 0.58 | 52.03 | -0.99 | -0.01 | -2746.59 | 1.15 | -1573.37 | 57.87 | 1045.61 | -21.53 | 19.98 | -0.00 | 0.57 |
| 0.59 | 51.98 | -0.99 | -0.01 | -2737.65 | 1.17 | -1544.65 | 67.50 | -376.45 | 0.87 | 19.98 | -0.00 | 0.56 |
| 0.60 | 51.88 | -0.99 | -0.01 | -2721.15 | -3.96 | -1512.03 | 51.41 | -466.30 | 11.56 | 19.98 | 0.00 | 0.56 |
| 0.61 | 51.69 | -0.99 | -0.01 | -2715.62 | -14.24 | -1473.69 | 38.16 | 755.40 | 5.73 | 19.98 | 0.01 | 0.54 |
| 0.62 | 51.39 | -1.00 | -0.01 | -2694.09 | -3.96 | -1498.79 | 51.33 | -137.44 | -7.55 | 19.98 | 0.00 | 0.56 |
| 0.63 | 51.39 | -1.00 | -0.03 | -2760.03 | 6.24 | -1528.47 | 73.01 | -463.36 | -20.82 | 19.98 | -0.00 | 0.57 |
| 0.64 | 51.29 | -1.00 | -0.01 | -2705.52 | 6.25 | -1530.48 | 73.94 | 599.47 | -18.08 | 19.98 | -0.00 | 0.57 |
| 0.65 | 51.20 | -1.00 | -0.01 | -2695.12 | -3.92 | -1499.26 | 60.97 | 129.34 | -1.07 | 19.98 | 0.00 | 0.56 |
| 0.66 | 51.10 | -1.00 | -0.01 | -2688.98 | -14.15 | -1469.17 | 38.32 | -569.75 | 7.06 | 19.98 | 0.01 | 0.55 |
| 0.67 | 51.00 | -1.00 | -0.01 | -2687.74 | -14.12 | -1466.13 | 28.83 | 357.07 | 3.02 | 19.98 | 0.01 | 0.55 |
| 0.68 | 50.96 | -1.00 | -0.03 | -2699.39 | -8.98 | -1512.61 | 44.98 | 312.45 | -6.07 | 19.97 | 0.00 | 0.56 |
| 0.69 | 50.81 | -1.00 | -0.01 | -2705.54 | 6.29 | -1541.40 | 74.02 | -436.18 | -17.34 | 19.97 | -0.00 | 0.57 |
| 0.70 | 50.81 | -1.00 | -0.03 | -2721.33 | 6.18 | -1532.17 | 73.79 | 356.74 | -20.06 | 19.97 | -0.00 | 0.56 |
| 0.71 | 50.71 | -1.00 | -0.03 | -2709.30 | -4.16 | -1470.33 | 41.41 | 379.51 | -3.96 | 19.97 | 0.00 | 0.54 |
| 0.72 | 50.61 | -1.00 | -0.03 | -2704.85 | -14.28 | -1450.53 | 28.58 | -508.48 | 11.73 | 19.97 | 0.01 | 0.54 |
| 0.73 | 50.51 | -1.00 | -0.03 | -2715.65 | -4.17 | -1457.12 | 41.45 | 85.39 | 8.40 | 19.97 | 0.00 | 0.54 |
| 0.74 | 50.51 | -1.00 | -0.01 | -2732.57 | 5.96 | -1475.76 | 63.89 | 586.77 | -5.16 | 19.97 | -0.00 | 0.54 |
| 0.75 | 50.51 | -1.00 | -0.01 | -2727.29 | 5.92 | -1466.52 | 63.80 | -239.06 | -12.88 | 19.97 | -0.00 | 0.54 |

TABLE V
TABULATED DATA

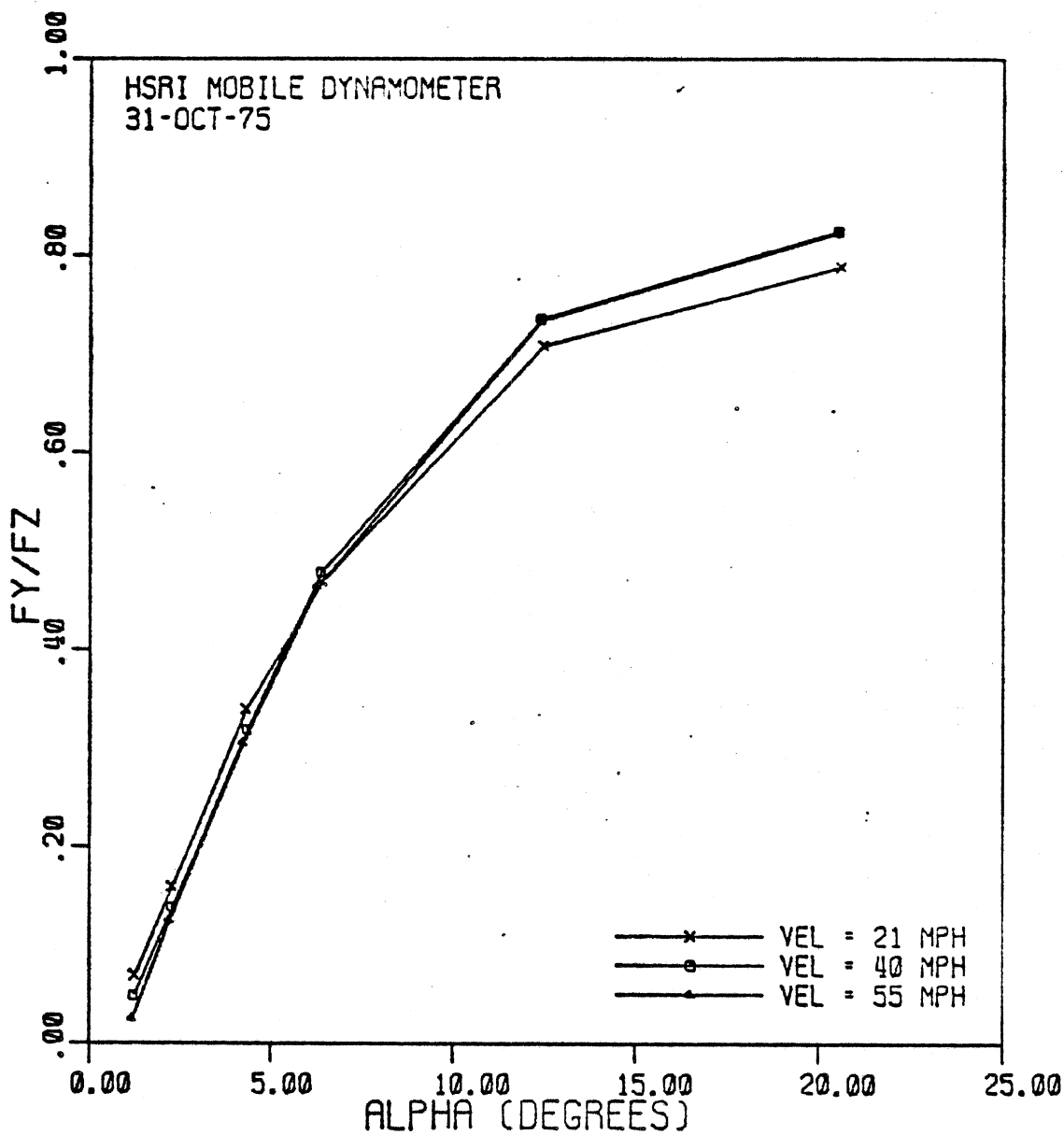
RUN: 27-1-32

| TE | RS | SR | SA | FZ | FY | FX | MX | MY | MZ | RH | NFY | NFX |
|------|-----|-------|-----|----------|--------|---------|---------|-------|----------|-------|------|-------|
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |
| 0.82 | 0.0 | -1.00 | 0.0 | -2961.02 | -53.09 | 9646.12 | -136.57 | ***** | -1111.83 | 23.50 | 0.02 | -3.26 |

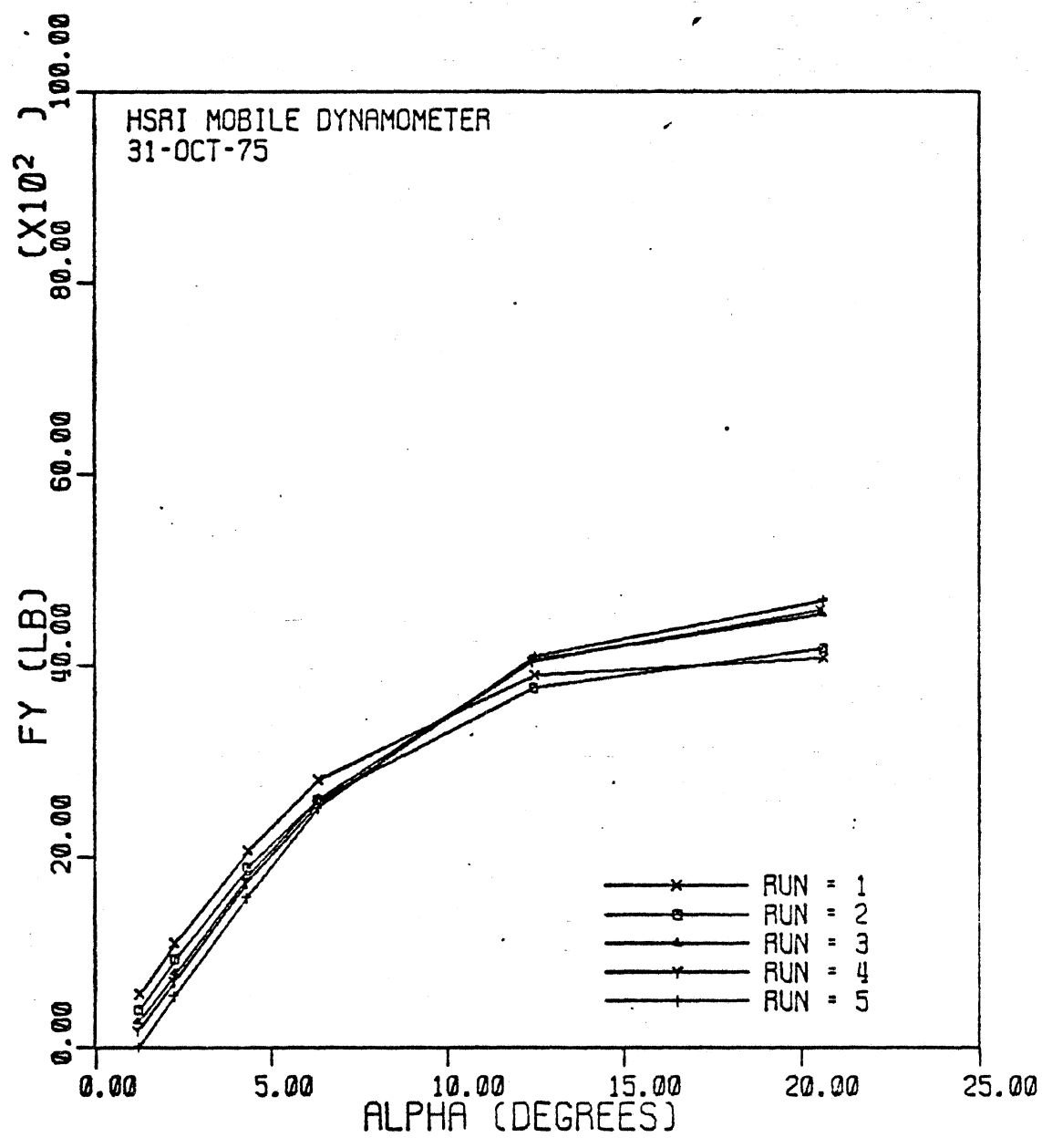
172



UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
VEL = 21 MPH

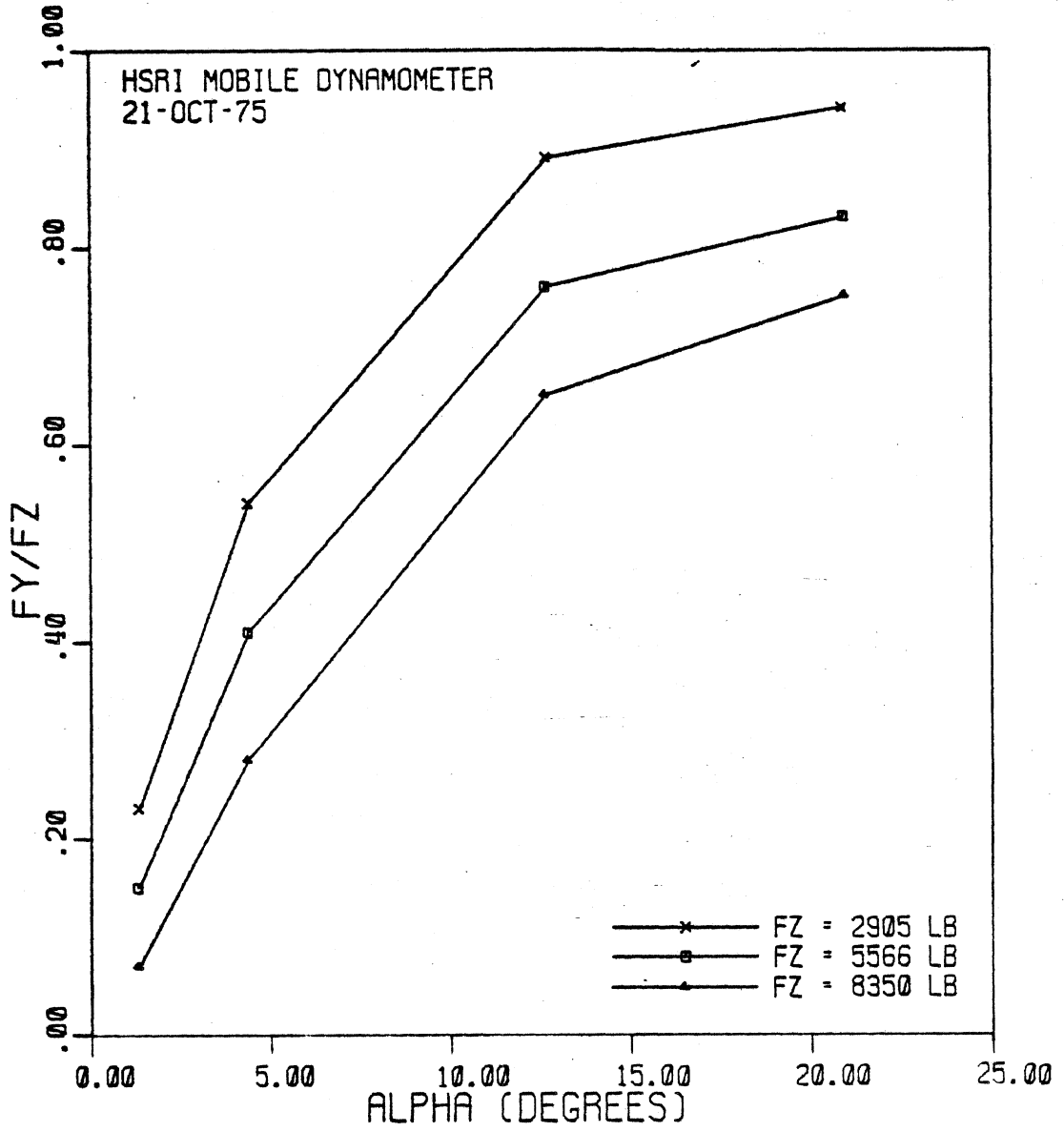


UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
FZ = 5561 LB

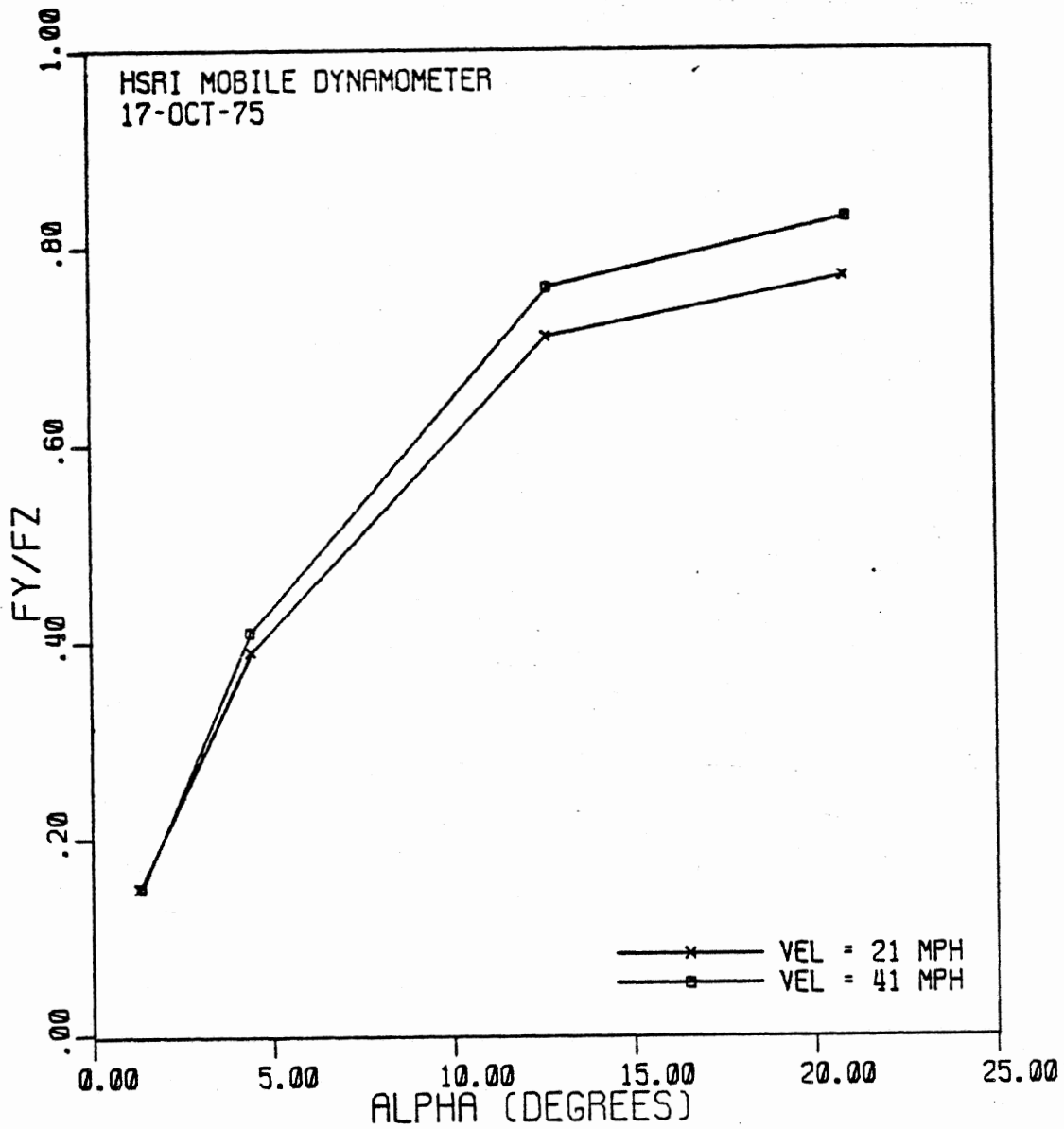


UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
FZ = 5575 LB VEL = 41 MPH

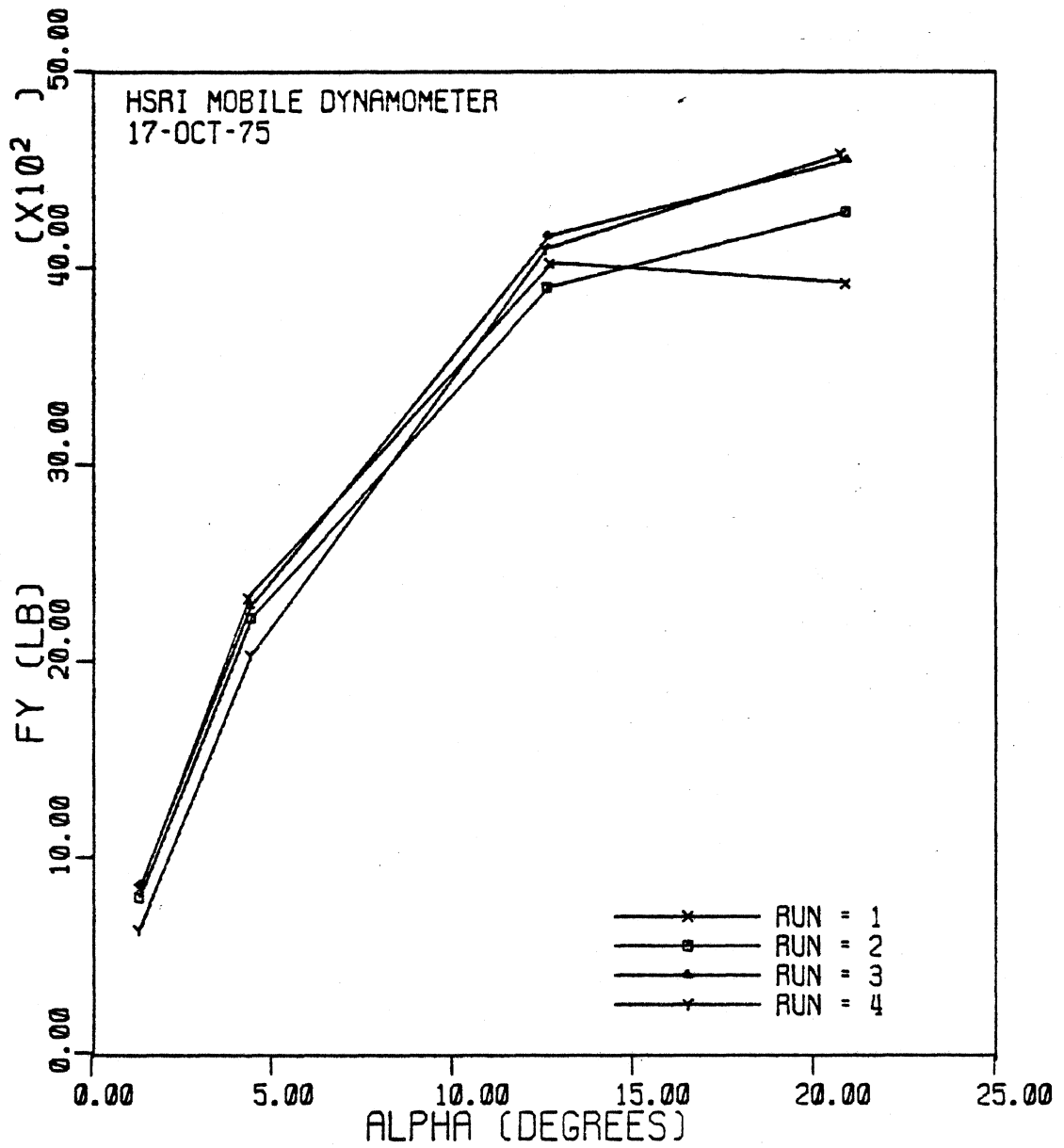
12



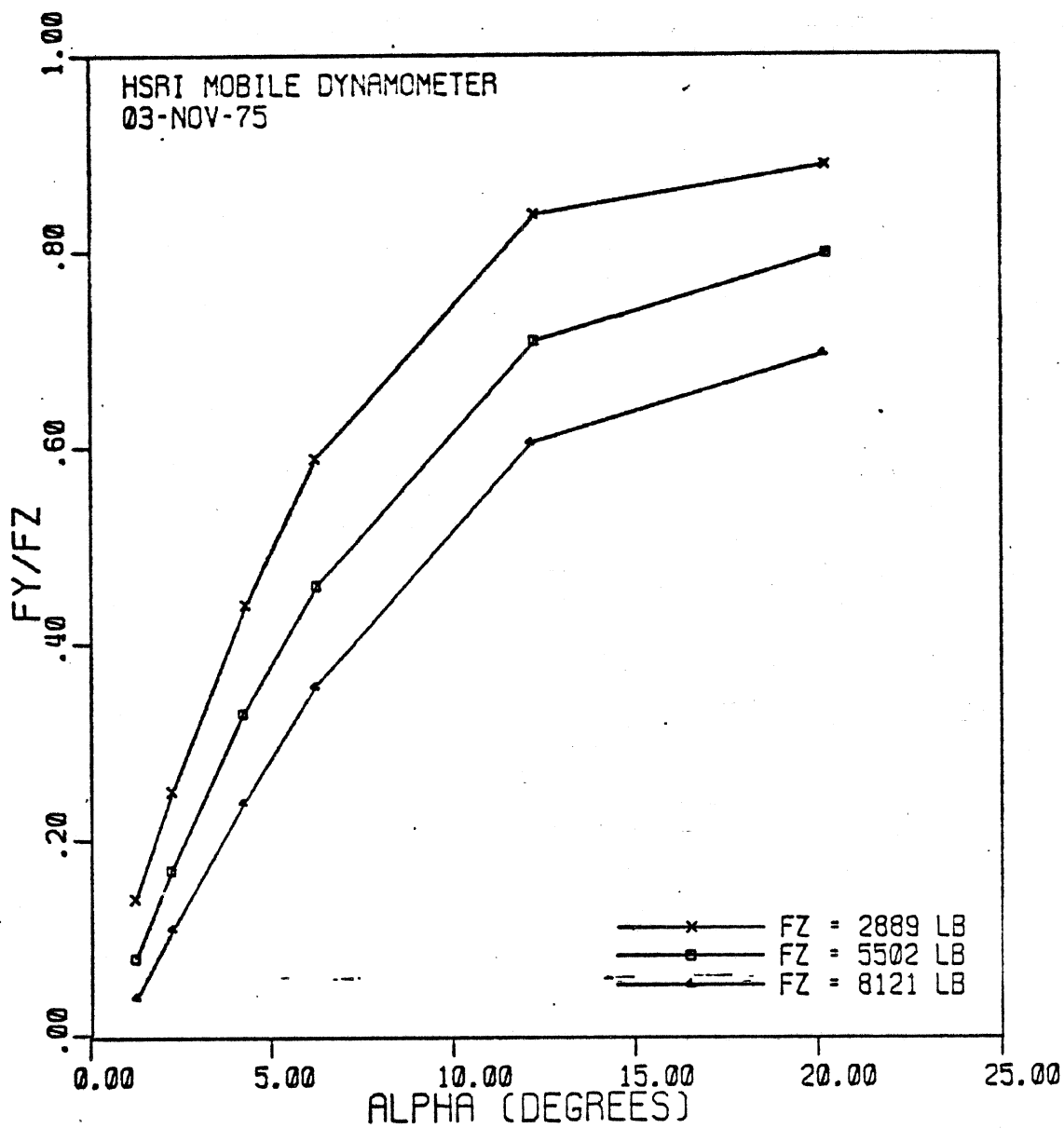
UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
VEL = 41 MPH
ASPHALT



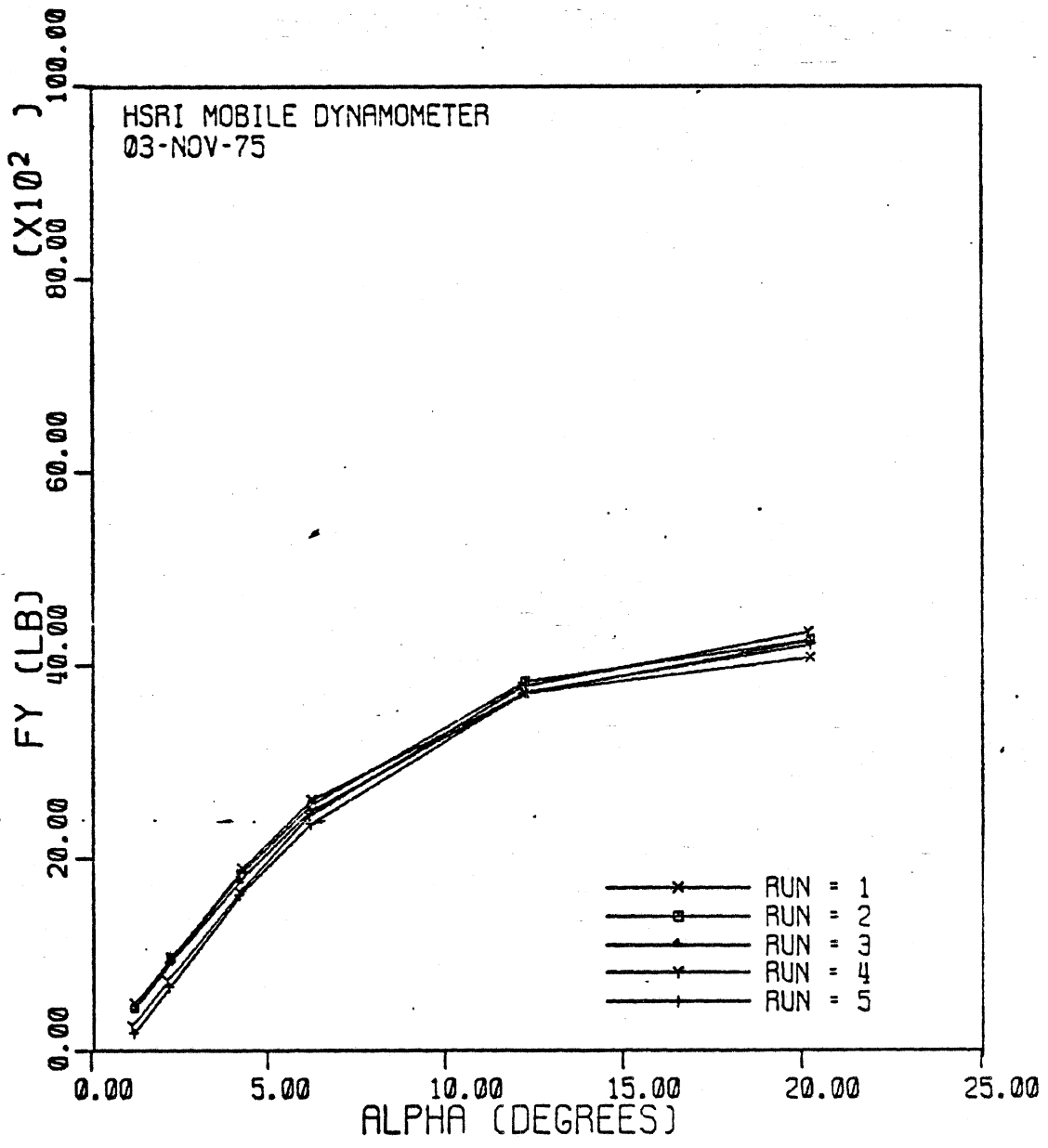
UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
FZ = 5473 LB
ASPHALT



UNIROYAL FLEETMASTER TRIPLE TREAD 10.00X20/F
FZ = 5490 LB VEL = 40 MPH
ASPHALT

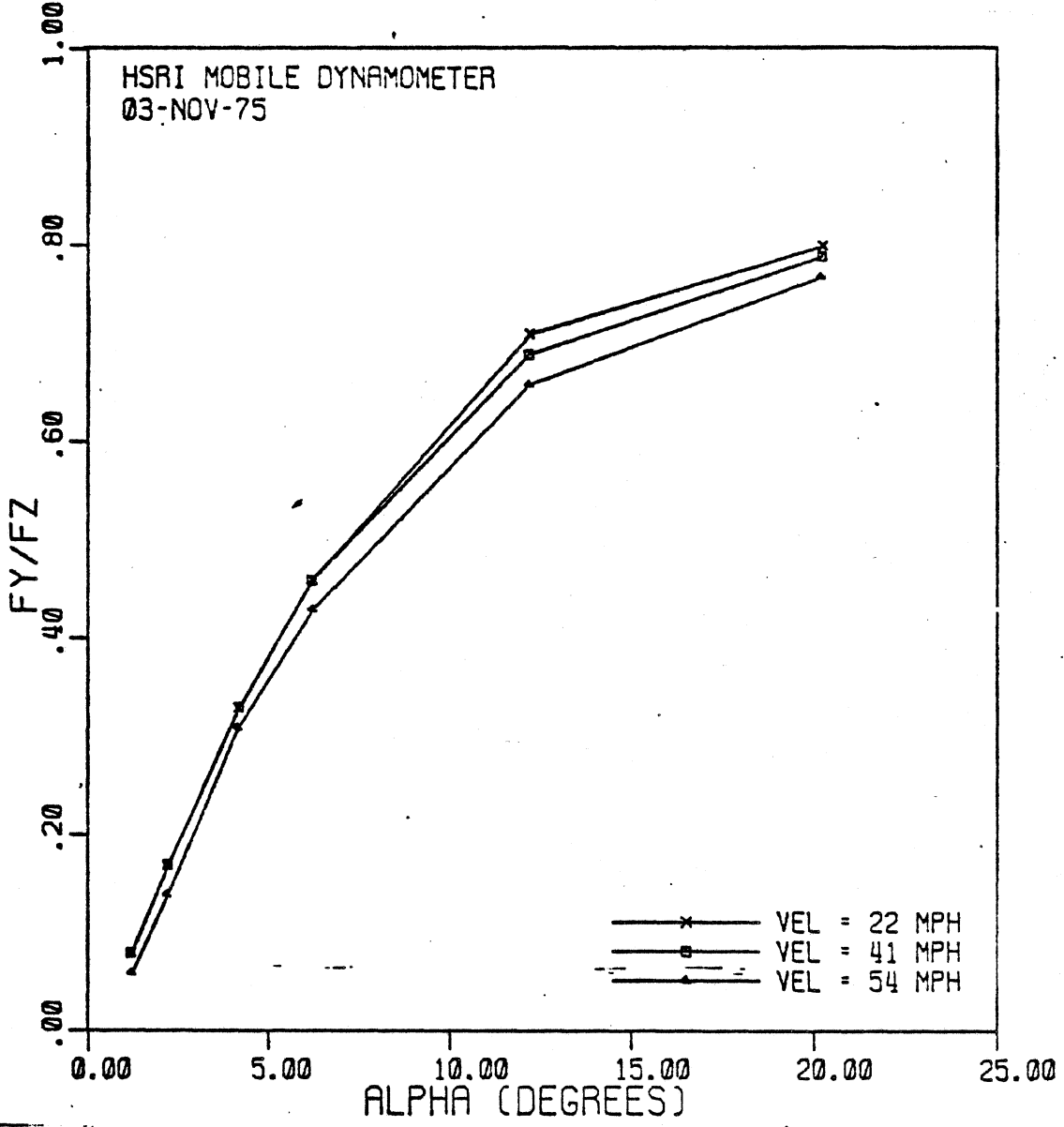


FIRESTONE POWER DRIVE 10.00X20/F
VEL = 22 MPH

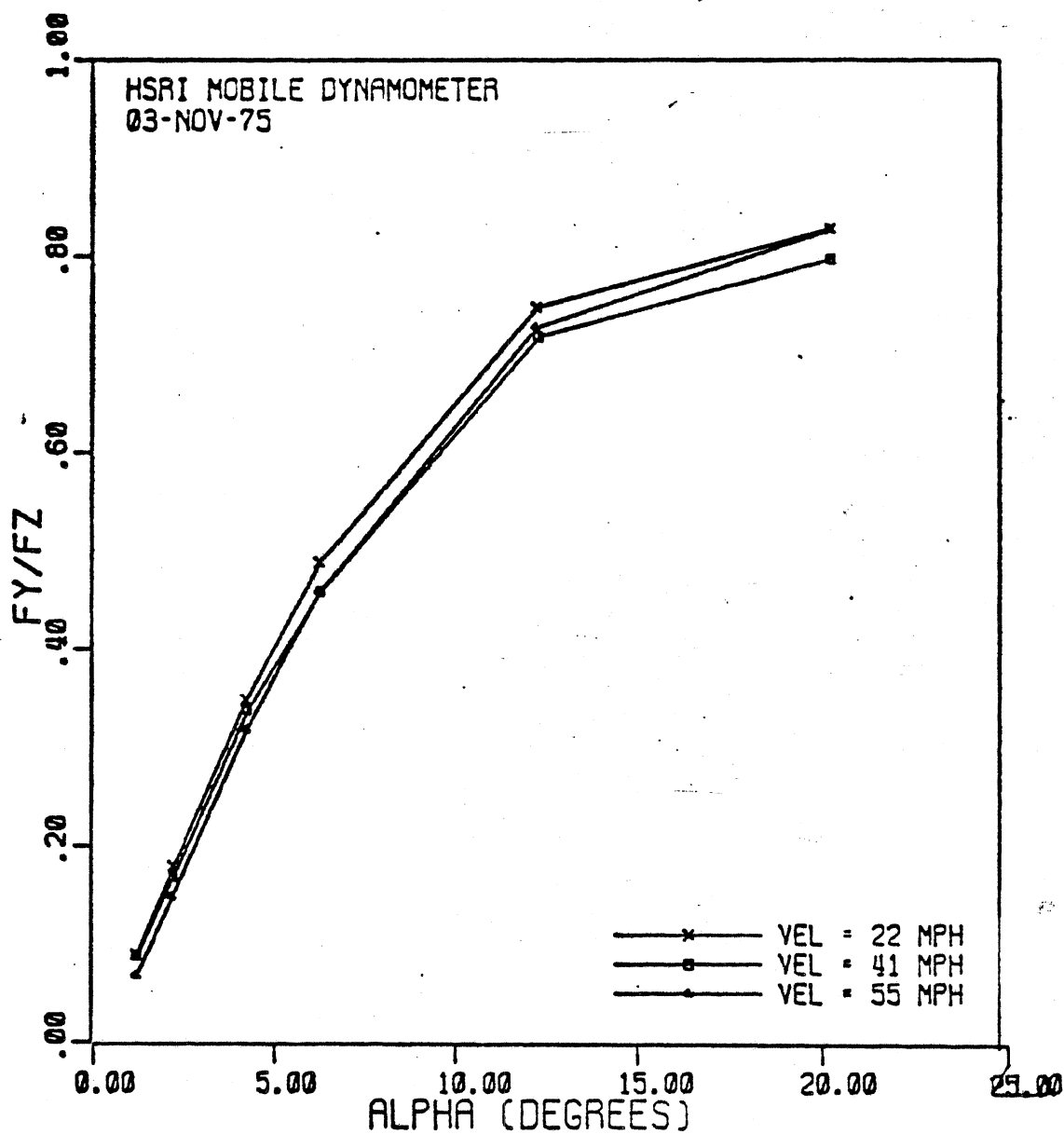


FIRESTONE POWER DRIVE 10.00X20/F
FZ = 5504 LB VEL = 41 MPH

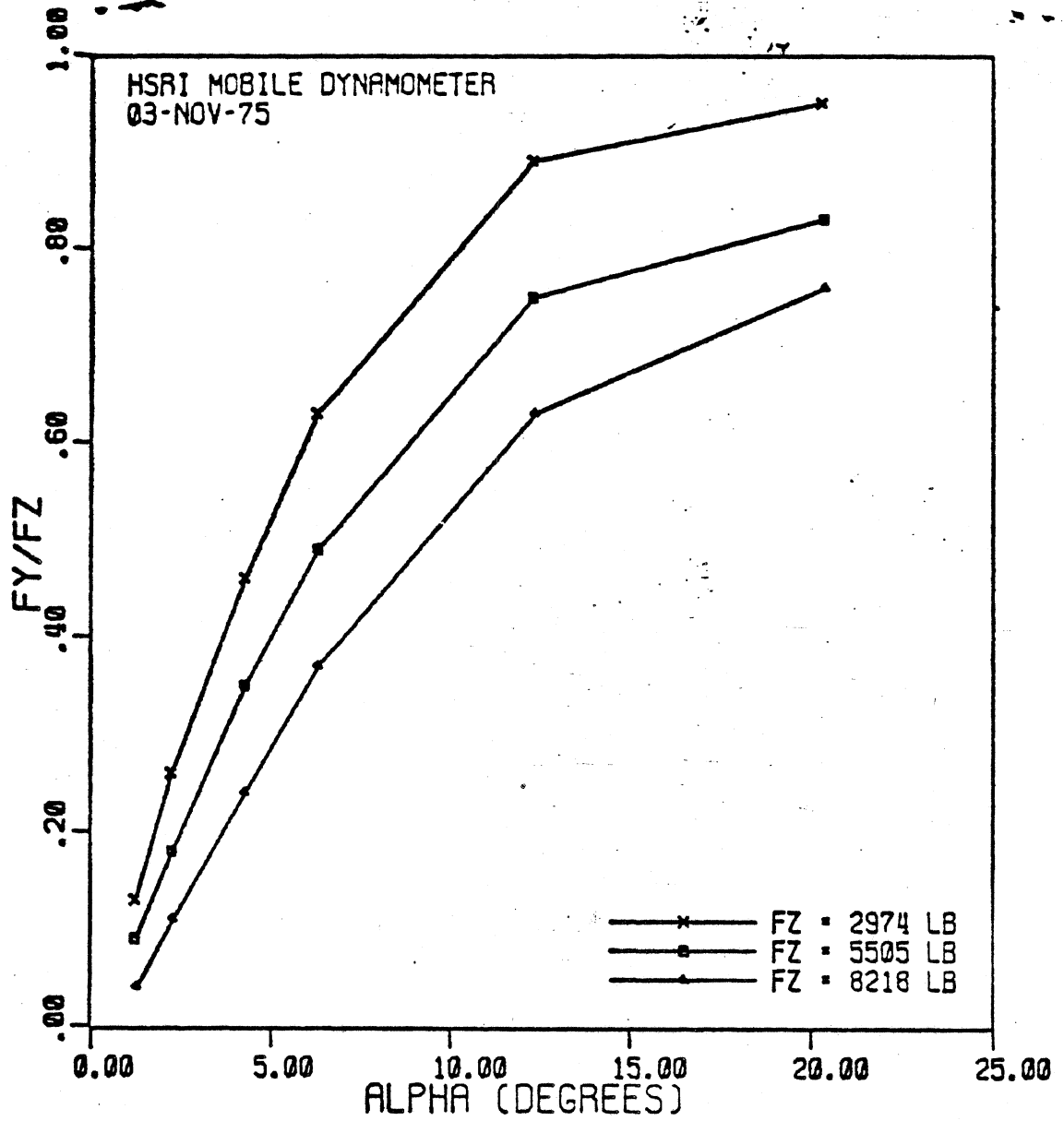
L



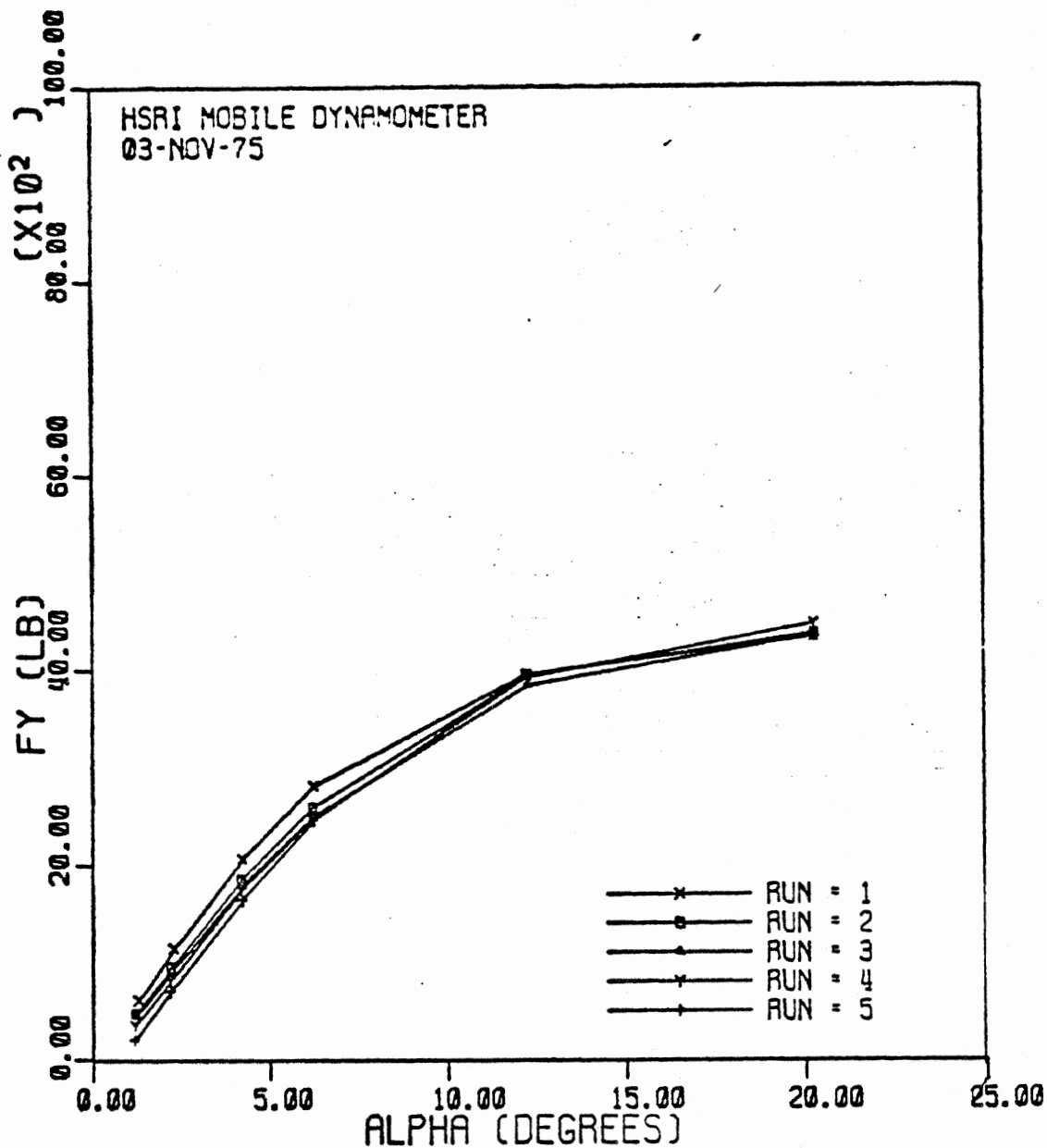
FIRESTONE POWER DRIVE 10.00X20/F
FZ = 5516 LB



UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
FZ = 5512 LB



UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
VEL = 21 MPH

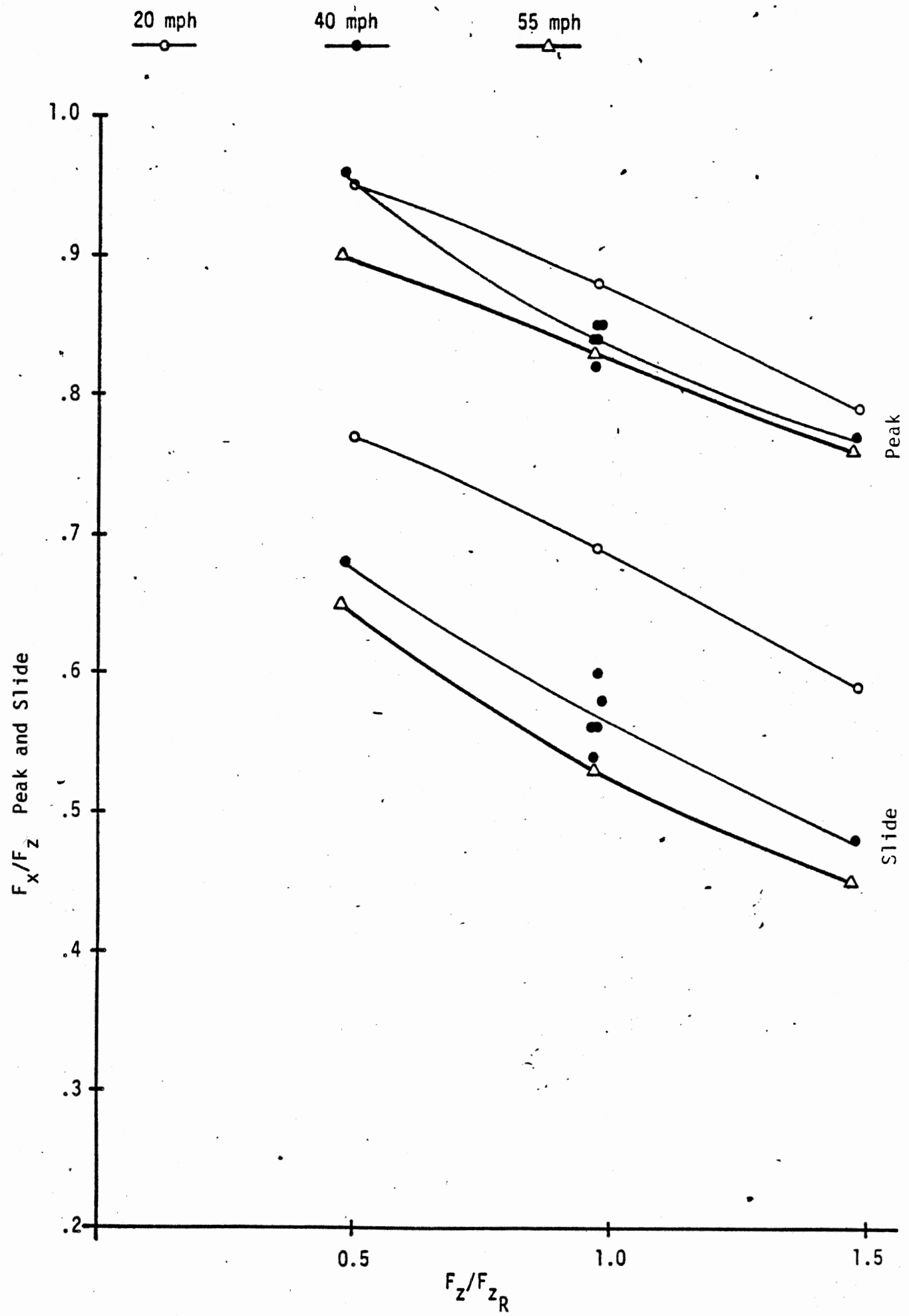


UNIROYAL FLEETMASTER SUPER LUG 10.00X20/F
FZ = 5523 LB VEL = 41 MPH

Measurements on each of eight tire specimens are provided in the following tabular and graphic forms, presenting, first, a summary of the peak and slide values of F_x/F_z at all load and velocity conditions. Next, each tire's run-by-run traction performance is represented in both tables and print-plots of F_x/F_z (labeled "MUX") versus longitudinal slip.

The following heavy tires are represented in this data set.

| <u>Tire Code</u> | <u>Manufacturer</u> | <u>Model</u> | <u>Size</u> |
|------------------|---------------------|----------------------------|--------------|
| H-1 | Uniroyal | Triple Tread | 10.00 x 20F |
| H-4 | B.F. Goodrich | Milesaver Radial H.D.R. | 10.00 R 20G |
| H-5 | B.F. Goodrich | Milesaver Radial H.D.B. | 10.00 R 20G |
| H-6 | Goodyear | Unisteel R-1 | 10.00 R 20G |
| H-8 | Firestone | Power Drive | 10.00 x 20F |
| H-12 | Firestone | Commercial Mileage | 12.5 x 22.5G |
| H-18 | Michelin | Radial XZA | 11 R 20H |
| H-19 | Michelin | Radial XZA | 11 R 22.5H |



Summary - Uniroyal Triple Tread - 10.00 x 20F

TEST SAMPLE 11A **
NEW FILE 13
UN. /AI FLFETMASTER TRIPLE-TREAD 10.0-20/F (DANA)

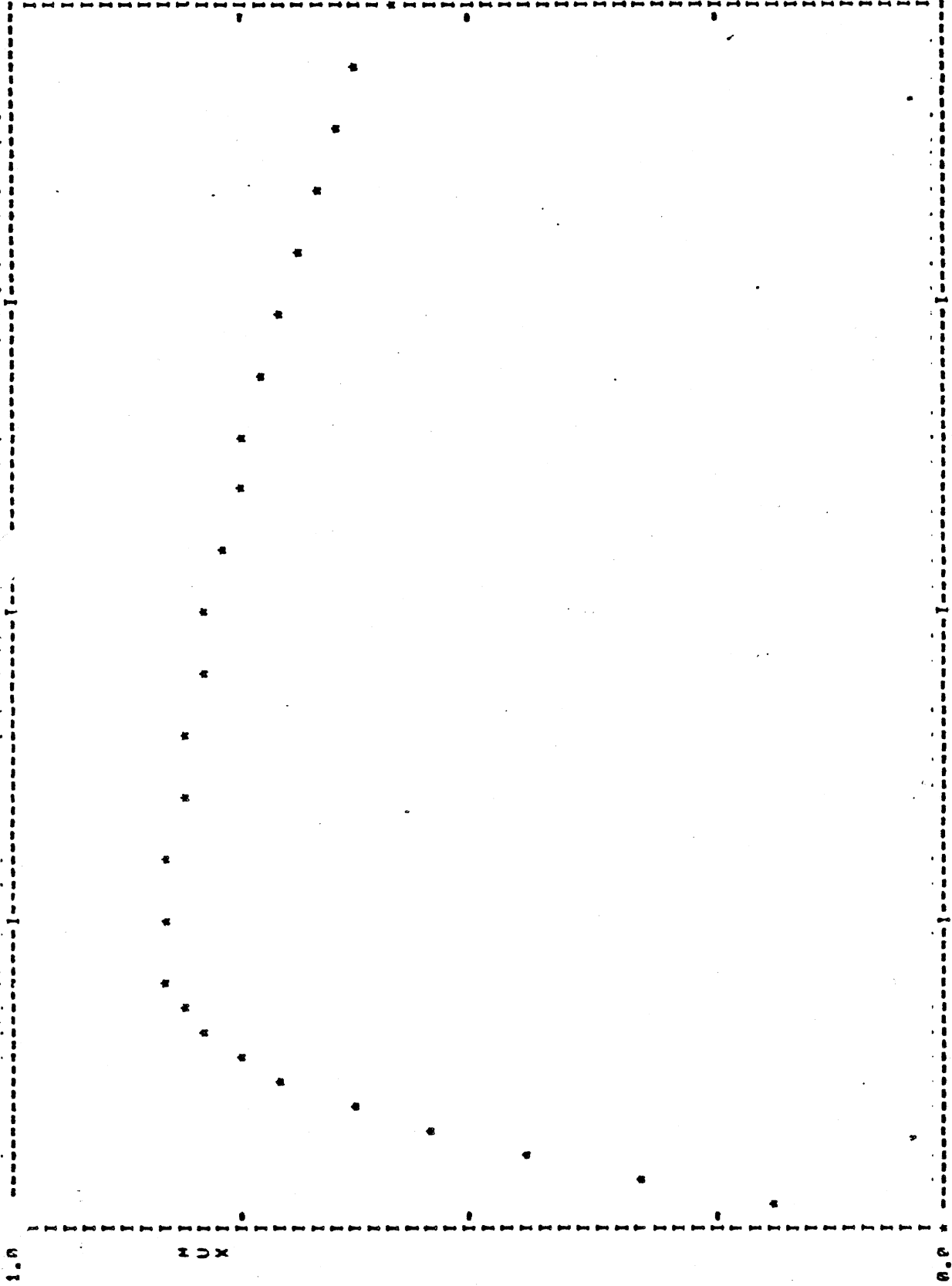
| SLIP | MIX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 14587.0 | 908.6 |
| 0.04 | 0.32 | 33522.0 | 1685.7 |
| 0.06 | 0.45 | 47097.5 | 2363.2 |
| 0.08 | 0.56 | 58549.2 | 2927.7 |
| 0.10 | 0.64 | 67766.3 | 3382.1 |
| 0.12 | 0.71 | 74875.6 | 3737.1 |
| 0.14 | 0.76 | 80350.0 | 4002.0 |
| 0.16 | 0.80 | 84222.7 | 4186.4 |
| 0.18 | 0.82 | 87082.1 | 4305.4 |
| 0.20 | 0.83 | 89030.2 | 4348.5 |
| 0.25 | 0.84 | 91626.6 | 4364.1 |
| 0.30 | 0.83 | 93522.1 | 4327.8 |
| 0.35 | 0.82 | 94890.3 | 4269.0 |
| 0.40 | 0.81 | 95889.4 | 4207.5 |
| 0.45 | 0.80 | 96763.2 | 4103.0 |
| 0.50 | 0.79 | 97645.3 | 4071.8 |
| 0.55 | 0.78 | 98525.7 | 3993.8 |
| 0.60 | 0.76 | 99287.1 | 3910.6 |
| 0.65 | 0.75 | 99536.8 | 3826.1 |
| 0.70 | 0.73 | 98511.0 | 3739.1 |
| 0.75 | 0.72 | 95587.2 | 3646.0 |
| 0.80 | 0.70 | 90564.3 | 3540.6 |
| 0.85 | 0.67 | 84284.6 | 3424.6 |
| 0.90 | 0.65 | 76950.5 | 3307.3 |
| 0.95 | 0.62 | 69668.3 | 3191.1 |
| 1.00 | 0.60 | 62275.0 | 3076.5 |

TOAV = 62275.0 LOAD = 5296.9 VEL = 40.0 MPH

MUPEAK = 0.84 MULOCK = 0.60 RATIO = 1.40

288

LONGITUDINAL FLEETMASTER TRIPLF-TREAD 10.0-21V (DANA)



LONGITUDINAL SLIP 100.00

FZ = 5298.9 VEL = 40.0 MULLOCK = 0.60 MUPEAK = 0.84 RATIO = 1.40 A-D FILE 27 NMFIL 13 SAMPLE 118

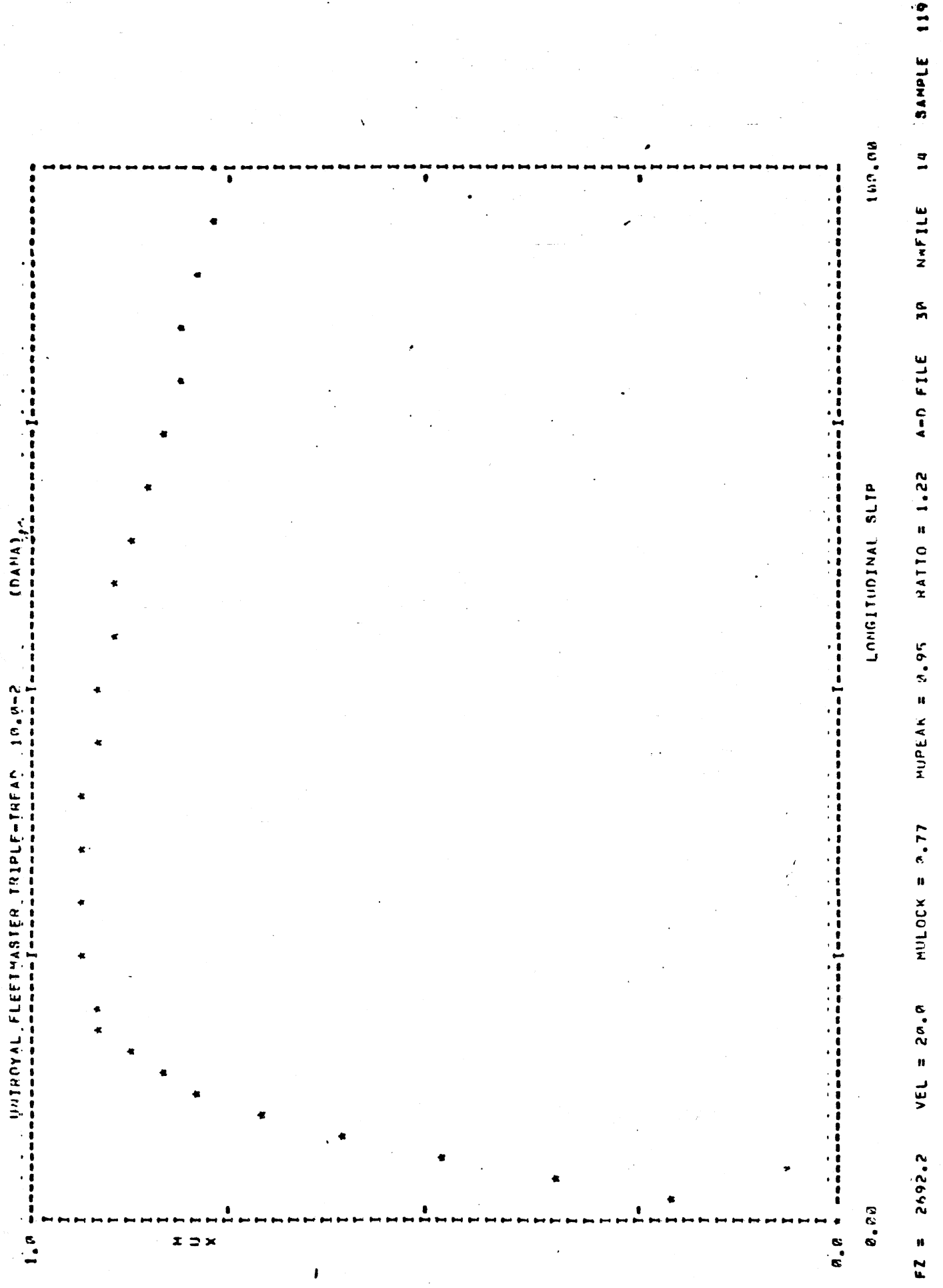
289

441

** A-D FILE 30 AVERAGE OF FILE 30 FOR 6 RECORDS. UNIROVAL FLEETMASTER TRIPLE-TREAD 10.0-20/F (DANA) ** FILE 1/4 TEST SAMPLE 119 **

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.20 | 11720.4 | 503.4 |
| 0.04 | 0.35 | 20240.6 | 955.2 |
| 0.06 | 0.49 | 28097.6 | 1324.3 |
| 0.08 | 0.62 | 34505.3 | 1640.1 |
| 0.10 | 0.72 | 39806.8 | 1895.1 |
| 0.12 | 0.79 | 44317.6 | 2088.8 |
| 0.14 | 0.84 | 47764.6 | 2234.9 |
| 0.16 | 0.88 | 50269.7 | 2342.2 |
| 0.18 | 0.91 | 52184.9 | 2416.0 |
| 0.20 | 0.93 | 53611.6 | 2453.5 |
| 0.25 | 0.94 | 56514.2 | 2490.8 |
| 0.30 | 0.95 | 59062.8 | 2510.6 |
| 0.35 | 0.94 | 61358.2 | 2509.2 |
| 0.40 | 0.94 | 63497.1 | 2495.8 |
| 0.45 | 0.93 | 65536.8 | 2469.4 |
| 0.50 | 0.92 | 67093.1 | 2437.9 |
| 0.55 | 0.90 | 67979.1 | 2404.1 |
| 0.60 | 0.89 | 67881.4 | 2346.9 |
| 0.65 | 0.87 | 66474.7 | 2327.3 |
| 0.70 | 0.86 | 63797.4 | 2273.9 |
| 0.75 | 0.84 | 60170.6 | 2220.9 |
| 0.80 | 0.82 | 56005.9 | 2183.0 |
| 0.85 | 0.81 | 52335.9 | 2146.1 |
| 0.90 | 0.80 | 48800.5 | 2111.0 |
| 0.95 | 0.78 | 45606.5 | 2076.8 |
| 1.00 | 0.77 | 42770.8 | 2043.7 |

TOAV = 42770.8 LOAD = 2692.2 VEL = 20.0 MPH.
MUPEAK = 0.95 MULOCK = 0.77 RATIO = 1.22



LONGITUDINAL SLTP 100.00

0.00

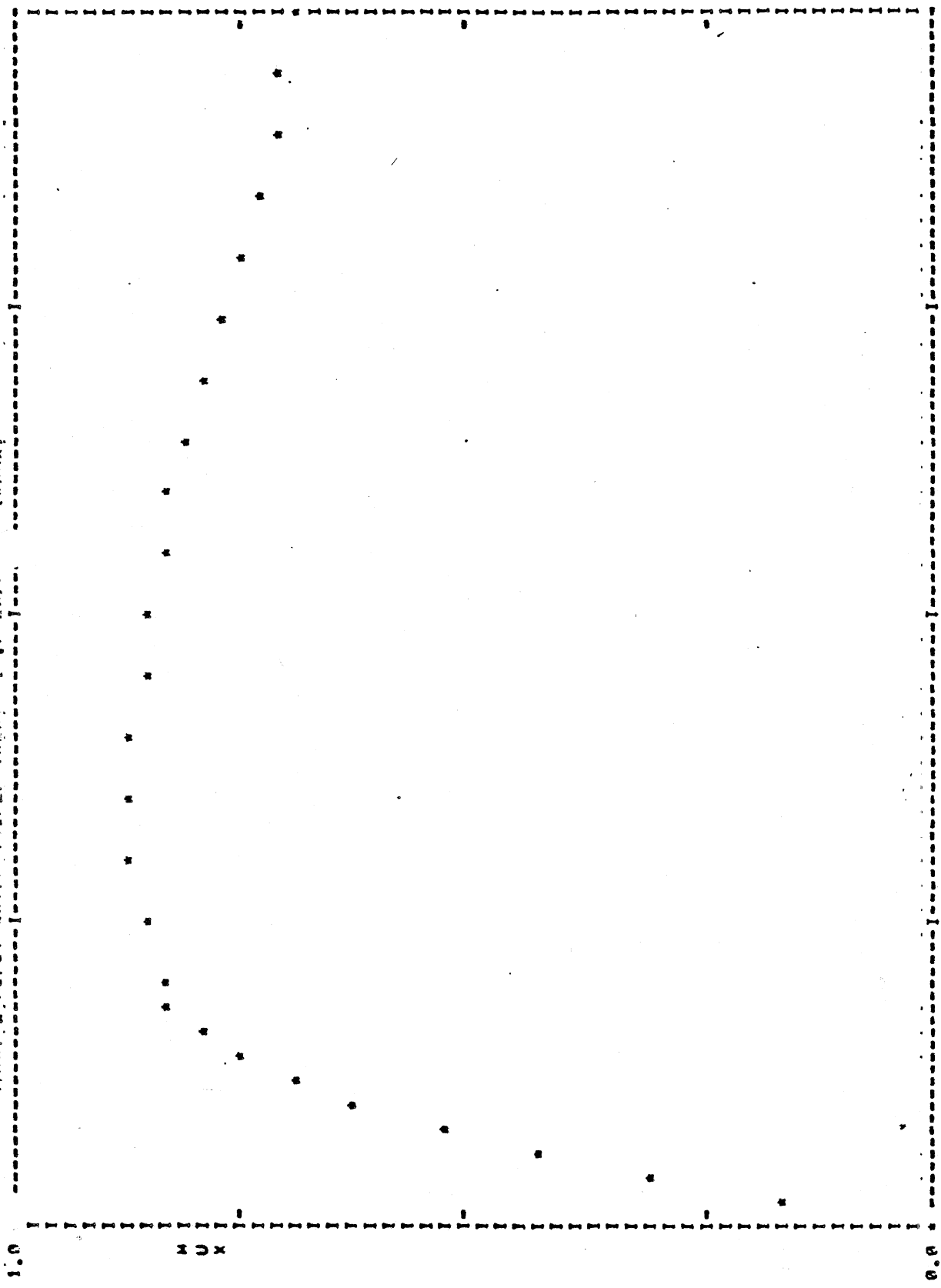
FZ = 2692.2 VEL = 20.0 MULLOCK = 3.77 MUPEAK = 0.95 RATIO = 1.22 A-D FILE 30 NWFILE 14 SAMPLE 119

** A-D FILE 31 ** A-D FILE 31 TEST SAMPLE 120 **
AVERAGE OF FILE 31 FOR 6 RECORDS. UNIROYAL FLEETMASTER TRIPLE-TREAD 10.0-20/F (DATA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 17690.1 | 872.9 |
| 0.04 | 0.32 | 33341.8 | 1670.6 |
| 0.06 | 0.44 | 46194.4 | 2314.4 |
| 0.08 | 0.54 | 56481.4 | 2832.3 |
| 0.10 | 0.63 | 65250.9 | 3265.1 |
| 0.12 | 0.70 | 72540.2 | 3635.0 |
| 0.14 | 0.76 | 78701.4 | 3933.3 |
| 0.16 | 0.80 | 83265.2 | 4154.9 |
| 0.18 | 0.83 | 86665.2 | 4306.5 |
| 0.20 | 0.85 | 88863.2 | 4389.0 |
| 0.25 | 0.87 | 92702.1 | 4493.0 |
| 0.30 | 0.88 | 95624.6 | 4544.1 |
| 0.35 | 0.88 | 97088.8 | 4554.5 |
| 0.40 | 0.88 | 100124.0 | 4533.3 |
| 0.45 | 0.87 | 102240.6 | 4486.6 |
| 0.50 | 0.86 | 103069.7 | 4424.5 |
| 0.55 | 0.84 | 104542.2 | 4353.7 |
| 0.60 | 0.83 | 103924.5 | 4270.5 |
| 0.65 | 0.81 | 102128.2 | 4197.2 |
| 0.70 | 0.82 | 98714.2 | 4108.9 |
| 0.75 | 0.78 | 93941.2 | 4014.3 |
| 0.80 | 0.76 | 88762.8 | 3918.7 |
| 0.85 | 0.74 | 84010.4 | 3824.5 |
| 0.90 | 0.72 | 79425.4 | 3730.4 |
| 0.95 | 0.71 | 75049.0 | 3630.3 |
| 1.00 | 0.69 | 71041.7 | 3547.5 |

TOAV = 71041.7 LOAD = 5293.9 VEL = 20.0 MPH
MUPEAK = 0.88 MULOCK = 0.69 RATIO = 1.20

UNIONVAL FLFETMASTER TRIPLE-THREAD 1" 0-20/F (DATA)



LONGITUDINAL SLIP 100.00

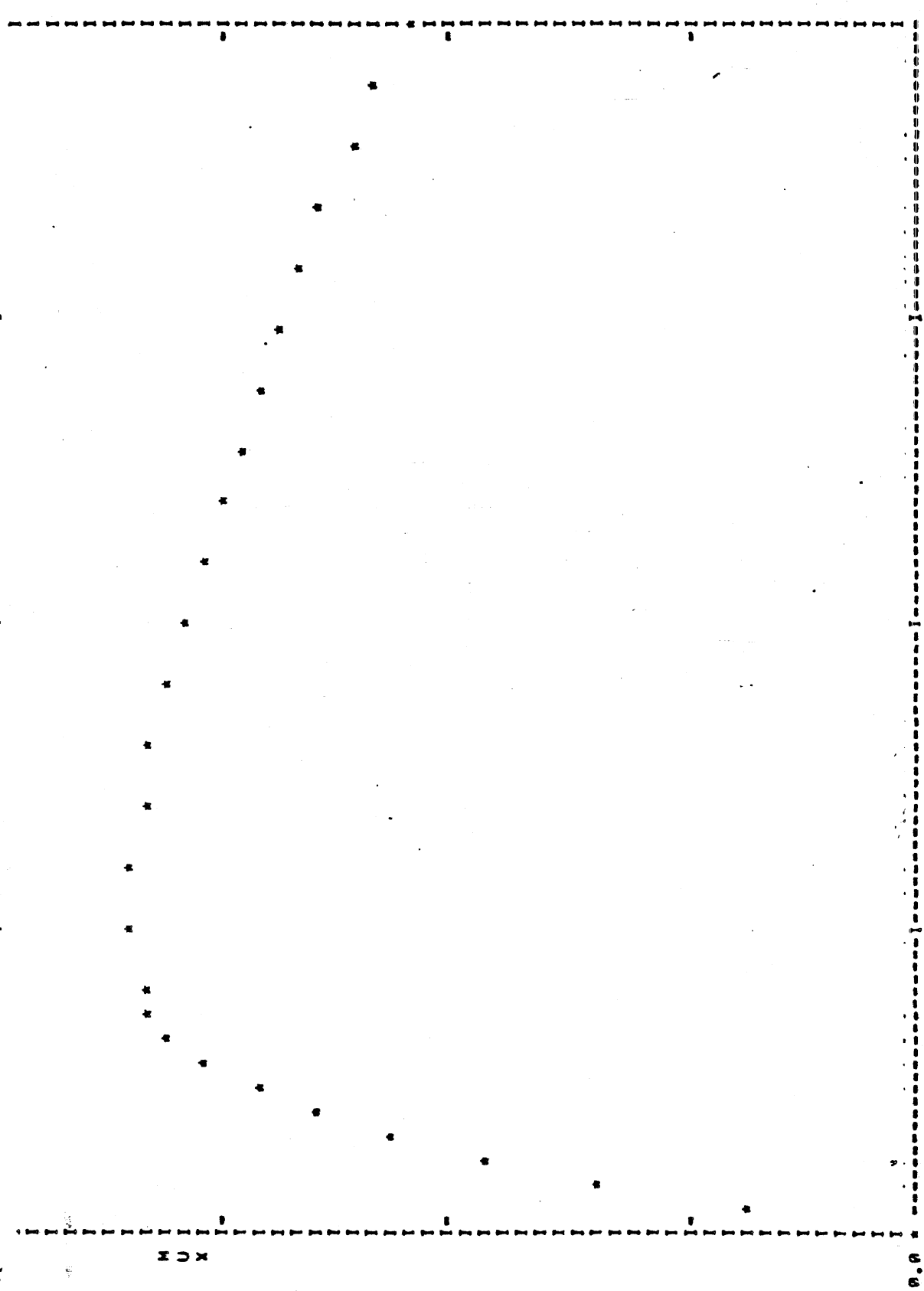
FZ = 5293.9 VFL = 20.0 HULOCK = 0.69 MUPEAK = 0.88 RATIO = 1.28 A-D FILE 31 HWFILE 15 SAMPLE 120

** A-D FILE 32 NEW FILE #16 TEST SAMPLE121 **
 AVERAGE OF FILE 32 FOR 5 RECORDS. UNIROVAL FLEETMASTER TRIPLE-TREAD 10.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.20 | 20194.0 | 1032.2 |
| 0.04 | 0.34 | 35226.3 | 1701.2 |
| 0.06 | 0.46 | 48225.0 | 2430.5 |
| 0.08 | 0.57 | 59101.9 | 2968.3 |
| 0.10 | 0.65 | 67641.3 | 3304.5 |
| 0.12 | 0.72 | 74506.7 | 3709.3 |
| 0.14 | 0.77 | 79990.7 | 3976.1 |
| 0.16 | 0.81 | 84550.7 | 4183.0 |
| 0.18 | 0.84 | 88053.3 | 4327.3 |
| 0.20 | 0.85 | 90353.2 | 4381.5 |
| 0.25 | 0.85 | 93667.8 | 4411.9 |
| 0.30 | 0.85 | 95934.5 | 4399.1 |
| 0.35 | 0.84 | 97775.2 | 4347.0 |
| 0.40 | 0.83 | 99401.1 | 4266.5 |
| 0.45 | 0.81 | 100718.7 | 4179.2 |
| 0.50 | 0.80 | 101680.8 | 4094.7 |
| 0.55 | 0.78 | 102396.2 | 4004.6 |
| 0.60 | 0.76 | 102727.5 | 3915.1 |
| 0.65 | 0.74 | 102213.5 | 3811.5 |
| 0.70 | 0.72 | 100300.2 | 3700.5 |
| 0.75 | 0.70 | 96257.1 | 3580.2 |
| 0.80 | 0.67 | 89648.2 | 3466.6 |
| 0.85 | 0.65 | 81333.3 | 3306.3 |
| 0.90 | 0.62 | 73000.6 | 3209.9 |
| 0.95 | 0.59 | 65827.3 | 3100.5 |
| 1.00 | 0.56 | 58625.0 | 2916.0 |

TQAV = 58625.0 LOAD = 5273.6 VFL = 40.0 MPH.
 MUPEAK = 0.65 MULOCK = 0.56 RATIO = 1.53

UNIROVAL FLEETMASTER TRIPLE-TREAD 14.0-20" (DANA)



FZ = 5273.6 VEL = 40.0 MULLOCK = 0.56 MUPEAK = 0.85 RATIO = 1.53 A-D FILE 32 NWFILE 16 SAMPLE 121
 LONGITUDINAL SLIP 100.00

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** A-D FILE 33
 AVERAGE OF FILE 33 FOR 6 RECORDS.

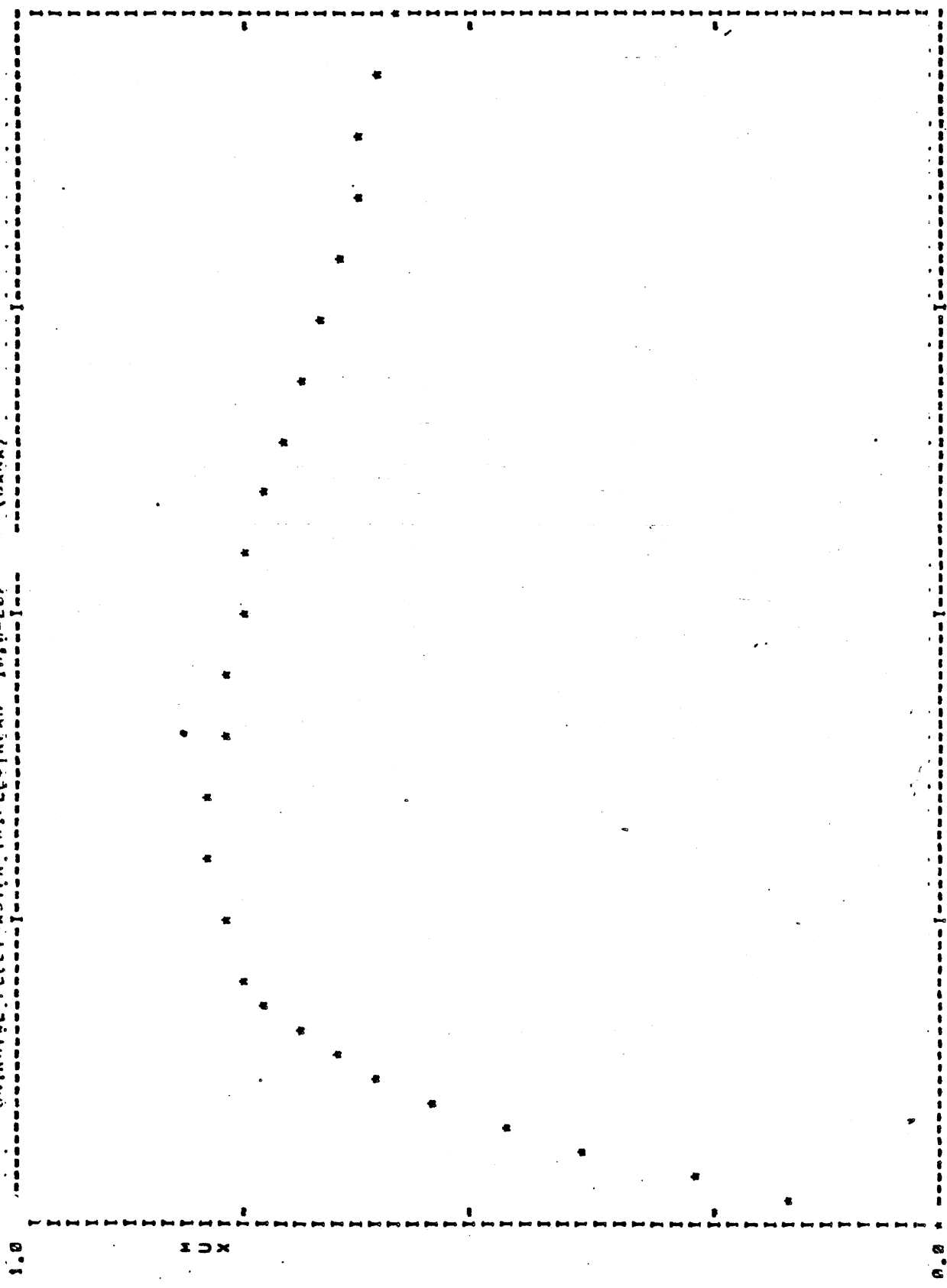
UNROYAL FLEETMASTER TRIPLE-TREAD 10.0-20/F (DANA)
 TEST SAMPLE 122 **

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 24419.9 | 1274.6 |
| 0.04 | 0.27 | 41699.6 | 2170.0 |
| 0.06 | 0.30 | 57809.0 | 3005.2 |
| 0.08 | 0.47 | 71493.9 | 3713.0 |
| 0.10 | 0.55 | 82870.0 | 4298.0 |
| 0.12 | 0.61 | 91877.0 | 4750.1 |
| 0.14 | 0.66 | 99112.5 | 5110.4 |
| 0.16 | 0.70 | 104055.9 | 5411.5 |
| 0.18 | 0.74 | 109684.8 | 5643.0 |
| 0.20 | 0.76 | 112764.8 | 5786.8 |
| 0.25 | 0.78 | 117539.6 | 5954.7 |
| 0.30 | 0.79 | 120912.1 | 6024.1 |
| 0.35 | 0.79 | 123277.4 | 6026.8 |
| 0.40 | 0.79 | 124982.0 | 5986.9 |
| 0.45 | 0.78 | 126253.5 | 5919.0 |
| 0.50 | 0.77 | 127078.4 | 5829.5 |
| 0.55 | 0.75 | 127073.6 | 5723.7 |
| 0.60 | 0.74 | 126063.5 | 5603.2 |
| 0.65 | 0.72 | 123863.7 | 5468.9 |
| 0.70 | 0.70 | 120051.8 | 5326.1 |
| 0.75 | 0.68 | 115154.0 | 5189.3 |
| 0.80 | 0.66 | 109929.5 | 5058.1 |
| 0.85 | 0.64 | 104744.5 | 4928.1 |
| 0.90 | 0.63 | 99177.7 | 4799.3 |
| 0.95 | 0.61 | 94317.9 | 4672.1 |
| 1.00 | 0.59 | 89270.8 | 4507.5 |

TOAV = 89270.8 LOAD = 8000.0 VEL = 20.0 MPH.
 MUPEAK = 0.79 MULOCK = 0.59 RATIO = 1.35

296

UNIONVAL FLEETMASTER TRIPLE TREAD 10.0-20 (DANA)



LONGITUDINAL SLIP 100.00

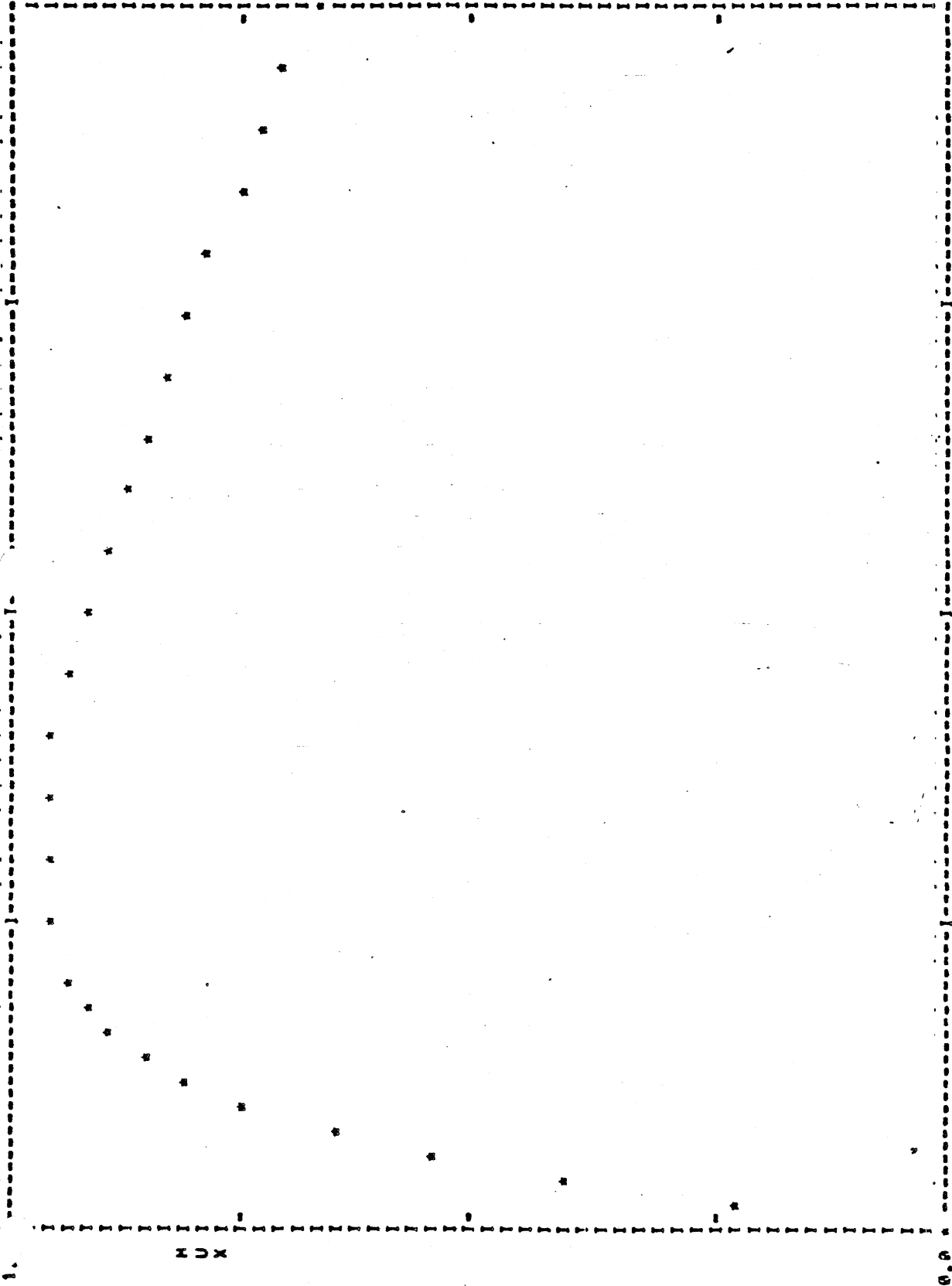
FZ = 0040.0 VFL = 20.0 MULOCK = 0.59 MUPEAK = 0.79 RATIO = 1.35 A-D FILE 33 NWFILE 17 SAMPLE 122

** A-D FILE 34 FOR 6 RECORDS. W FILE 1A TEST SAMPLE 123 **
UNIROYAL FLEETMASTER TRIPLE-TREAD, 10.0-20/P (DATA)

| SLIP | MUX | TORQUE | FX | TQAV = 35625.0 | LOAD = 2628.1 | VEL = 40.0 MPH | MUPEAK = 0.96 | MULOCK = 0.60 | RATIO = 1.41 |
|------|------|---------|--------|----------------|---------------|----------------|---------------|---------------|--------------|
| 0.00 | 0.00 | 0.0 | 0.0 | | | | | | |
| 0.02 | 0.23 | 12964.7 | 610.6 | | | | | | |
| 0.04 | 0.40 | 22834.5 | 1065.0 | | | | | | |
| 0.06 | 0.54 | 30590.9 | 1432.3 | | | | | | |
| 0.08 | 0.66 | 36872.3 | 1723.6 | | | | | | |
| 0.10 | 0.75 | 41884.1 | 1942.4 | | | | | | |
| 0.12 | 0.81 | 45902.7 | 2099.3 | | | | | | |
| 0.14 | 0.86 | 49111.8 | 2211.0 | | | | | | |
| 0.16 | 0.90 | 51679.0 | 2294.2 | | | | | | |
| 0.18 | 0.93 | 53777.8 | 2343.0 | | | | | | |
| 0.20 | 0.94 | 55399.2 | 2371.9 | | | | | | |
| 0.25 | 0.95 | 58796.6 | 2397.3 | | | | | | |
| 0.30 | 0.96 | 61737.0 | 2402.0 | | | | | | |
| 0.35 | 0.96 | 64172.6 | 2395.2 | | | | | | |
| 0.40 | 0.95 | 66210.0 | 2380.0 | | | | | | |
| 0.45 | 0.94 | 68044.9 | 2355.8 | | | | | | |
| 0.50 | 0.93 | 69860.8 | 2319.6 | | | | | | |
| 0.55 | 0.91 | 71637.2 | 2273.3 | | | | | | |
| 0.60 | 0.88 | 72917.7 | 2219.0 | | | | | | |
| 0.65 | 0.86 | 72971.0 | 2160.9 | | | | | | |
| 0.70 | 0.84 | 71421.7 | 2122.0 | | | | | | |
| 0.75 | 0.81 | 67578.7 | 2043.9 | | | | | | |
| 0.80 | 0.79 | 61341.0 | 1981.8 | | | | | | |
| 0.85 | 0.76 | 53682.5 | 1814.5 | | | | | | |
| 0.90 | 0.73 | 46945.6 | 1600.8 | | | | | | |
| 0.95 | 0.71 | 40950.0 | 1700.0 | | | | | | |
| 1.00 | 0.68 | 35625.0 | 1722.5 | | | | | | |

(DANA)

UNIROVAL FLEETMASTER TRIPLE-READ 10.0-2



0.00

100.00

FZ = 2600.1

VEL = 40.0

MILLOCK = 0.68

MUPEAK = 0.96

RATIO = 1.41

A-D FILE 34

NWFILE 1A

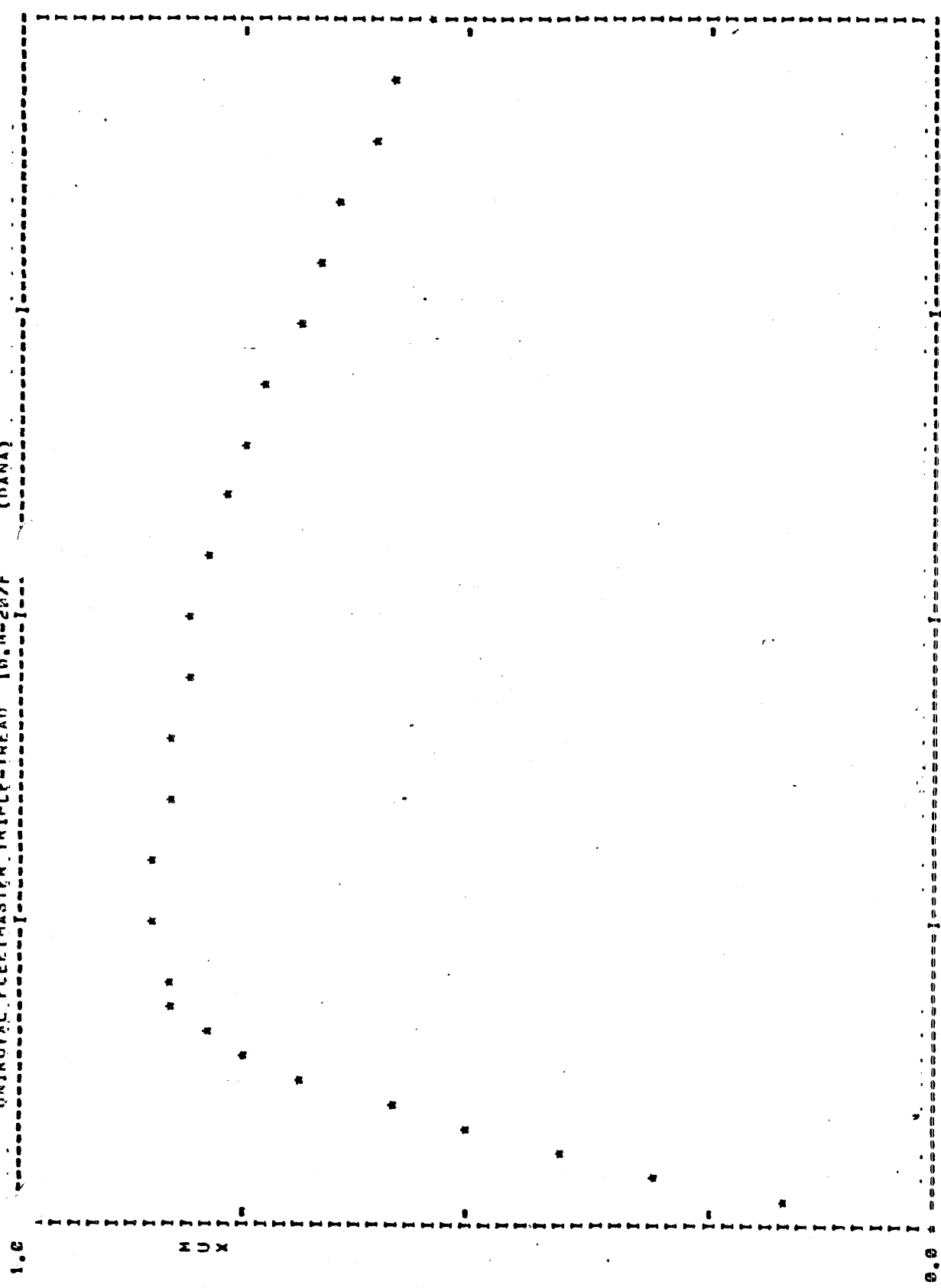
SAMPLE 123

** A-D FILE 35 FOR 5 RECORDS. W FILE 19 TEST SAMPLE 124 **
 UNIROVAL FLEETMASTER TRIPLE-TREAD. 1W.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 18486.4 | 932.2 |
| 0.04 | 0.31 | 31535.0 | 1600.2 |
| 0.06 | 0.41 | 42143.4 | 2156.6 |
| 0.08 | 0.50 | 50465.4 | 2602.0 |
| 0.10 | 0.59 | 58458.3 | 3033.5 |
| 0.12 | 0.69 | 70212.0 | 3559.6 |
| 0.14 | 0.76 | 79230.3 | 3951.5 |
| 0.16 | 0.80 | 85216.4 | 4200.2 |
| 0.18 | 0.83 | 89012.7 | 4349.3 |
| 0.20 | 0.84 | 91274.6 | 4392.5 |
| 0.25 | 0.85 | 95183.1 | 4400.8 |
| 0.30 | 0.85 | 97092.4 | 4383.0 |
| 0.35 | 0.85 | 100072.0 | 4346.9 |
| 0.40 | 0.84 | 101830.6 | 4289.8 |
| 0.45 | 0.83 | 103496.3 | 4211.7 |
| 0.50 | 0.81 | 105043.4 | 4117.9 |
| 0.55 | 0.79 | 106338.4 | 4015.6 |
| 0.60 | 0.77 | 106087.3 | 3911.1 |
| 0.65 | 0.75 | 105983.7 | 3810.1 |
| 0.70 | 0.73 | 102684.2 | 3708.2 |
| 0.75 | 0.70 | 97089.1 | 3593.2 |
| 0.80 | 0.68 | 89551.8 | 3457.6 |
| 0.85 | 0.65 | 81103.4 | 3311.8 |
| 0.90 | 0.62 | 72968.4 | 3168.9 |
| 0.95 | 0.59 | 65210.7 | 3020.6 |
| 1.00 | 0.56 | 57950.0 | 2895.4 |

TOAV = 57950.0 LOAD = 5269.4 VEL = 40.0 MPH.
 MUPEAK = 0.85 MULLOCK = 0.56 RATIO = 1.51

UNIROYAL FLEETMASTER TRIPLE-TRREAD 10.0-20/F (DANA)



LONGITUDINAL SLIP 100.00

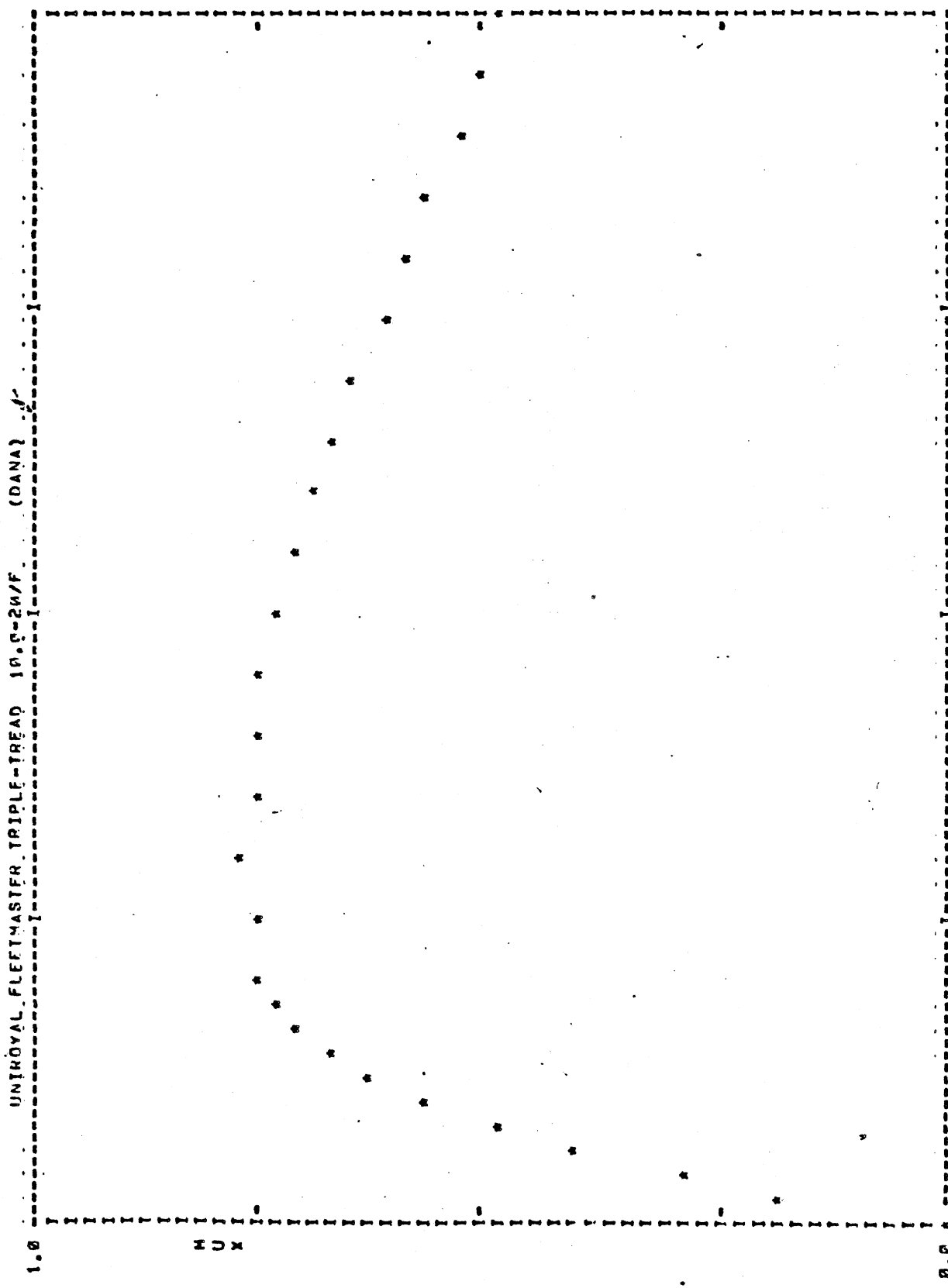
FZ = 5269.4 VFL = 40.0 MULOCK = 0.56 MUPEAK = 0.85 RATIO = 1.51 A-D FILE 35 NWFILE 19 SAMPLE 120

** A-D FILE 39 NE FILE 20* TEST SAMPLE 125 **
UNIROVAL FLFETHASTER TRIPLE-TREAD 10.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 27686.1 | 1432.6 |
| 0.04 | 0.30 | 45305.2 | 2347.7 |
| 0.06 | 0.40 | 61466.6 | 3178.0 |
| 0.08 | 0.49 | 75154.1 | 3870.4 |
| 0.10 | 0.57 | 86235.4 | 4402.3 |
| 0.12 | 0.63 | 94805.7 | 4891.0 |
| 0.14 | 0.60 | 101597.7 | 5229.3 |
| 0.16 | 0.71 | 106900.0 | 5490.4 |
| 0.18 | 0.73 | 111427.6 | 5697.4 |
| 0.20 | 0.75 | 113800.7 | 5790.5 |
| 0.25 | 0.76 | 117032.3 | 5877.5 |
| 0.30 | 0.77 | 119035.6 | 5915.5 |
| 0.35 | 0.77 | 120654.9 | 5889.4 |
| 0.40 | 0.76 | 121695.5 | 5839.3 |
| 0.45 | 0.75 | 122431.0 | 5774.9 |
| 0.50 | 0.74 | 123097.2 | 5688.0 |
| 0.55 | 0.72 | 123726.5 | 5572.9 |
| 0.60 | 0.70 | 124133.5 | 5430.7 |
| 0.65 | 0.68 | 123758.8 | 5259.3 |
| 0.70 | 0.65 | 121416.1 | 5067.1 |
| 0.75 | 0.62 | 116941.6 | 4862.0 |
| 0.80 | 0.60 | 109550.0 | 4647.1 |
| 0.85 | 0.57 | 100479.8 | 4426.9 |
| 0.90 | 0.54 | 91530.5 | 4211.4 |
| 0.95 | 0.51 | 82851.0 | 3996.3 |
| 1.00 | 0.48 | 74500.0 | 3787.5 |

TOAV = 74500.0 LOAD = 8025.1 VFL = 40.0 MPH.
MUPEAK = 0.77 MULOPEAK = 0.48 RATIO = 1.59

UNIROVAL_FLEETMASTER_TRIPLE_TREAD 10.0-20/F. (DANA) .4



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LONGITUDINAL SLIP 100.00

FZ = 8025.1 VFL = 40.0 MULOCK = 0.0P MOPEAR = 1.77 RATIO = 1.59 A-D FILE 39 H-FILE 20 SAMPLE 125

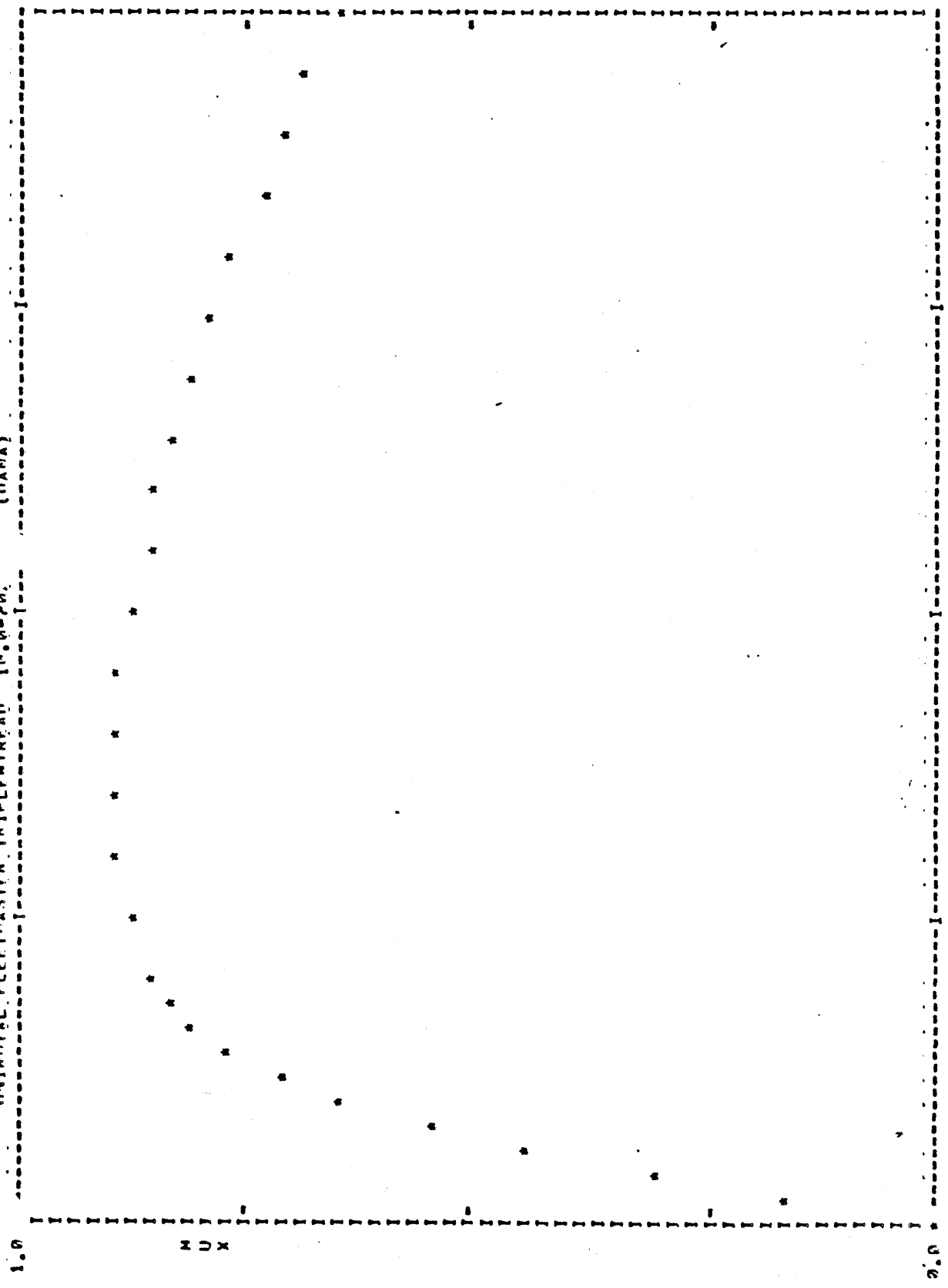
UJI 00

** A-D FILE 40 AVERAGE OF FILE 40 FOR 6 RECORDS. UNIROVAL FLFETMASTER TRIPLE-TREAD. 10.0-20/F (DANA) FILE 21 TEST SAMPLE 126 **

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 10615.9 | 417.3 |
| 0.04 | 0.31 | 20576.6 | 804.0 |
| 0.06 | 0.44 | 29135.9 | 1142.8 |
| 0.08 | 0.56 | 36252.3 | 1430.9 |
| 0.10 | 0.65 | 42175.2 | 1662.1 |
| 0.12 | 0.72 | 47152.4 | 1835.6 |
| 0.14 | 0.77 | 51017.7 | 1963.8 |
| 0.16 | 0.81 | 55176.0 | 2061.6 |
| 0.18 | 0.84 | 58315.5 | 2134.2 |
| 0.20 | 0.86 | 60771.6 | 2177.9 |
| 0.25 | 0.89 | 65895.9 | 2235.2 |
| 0.30 | 0.90 | 70651.7 | 2261.0 |
| 0.35 | 0.90 | 75194.1 | 2261.4 |
| 0.40 | 0.90 | 79649.3 | 2246.0 |
| 0.45 | 0.89 | 84090.0 | 2218.0 |
| 0.50 | 0.88 | 88135.2 | 2181.5 |
| 0.55 | 0.86 | 90766.5 | 2144.0 |
| 0.60 | 0.85 | 91788.0 | 2105.6 |
| 0.65 | 0.84 | 91339.1 | 2070.2 |
| 0.70 | 0.82 | 85913.8 | 2030.7 |
| 0.75 | 0.80 | 78524.9 | 1977.3 |
| 0.80 | 0.77 | 68626.4 | 1915.1 |
| 0.85 | 0.74 | 57902.9 | 1850.2 |
| 0.90 | 0.72 | 48953.8 | 1788.7 |
| 0.95 | 0.69 | 41000.3 | 1726.6 |
| 1.00 | 0.65 | 34345.8 | 1662.5 |

TOAV = 34395.8 LOAD = 2589.8 VFL = 55.0 MPH.
MUPEAK = 0.90 MULOCK = 0.65 RATIO = 1.30

UNIRoyal FLEETMASTER TRIPLE-TREAD 10.0-20.0 (DANA)



LONGITUDINAL SLIP 100.00

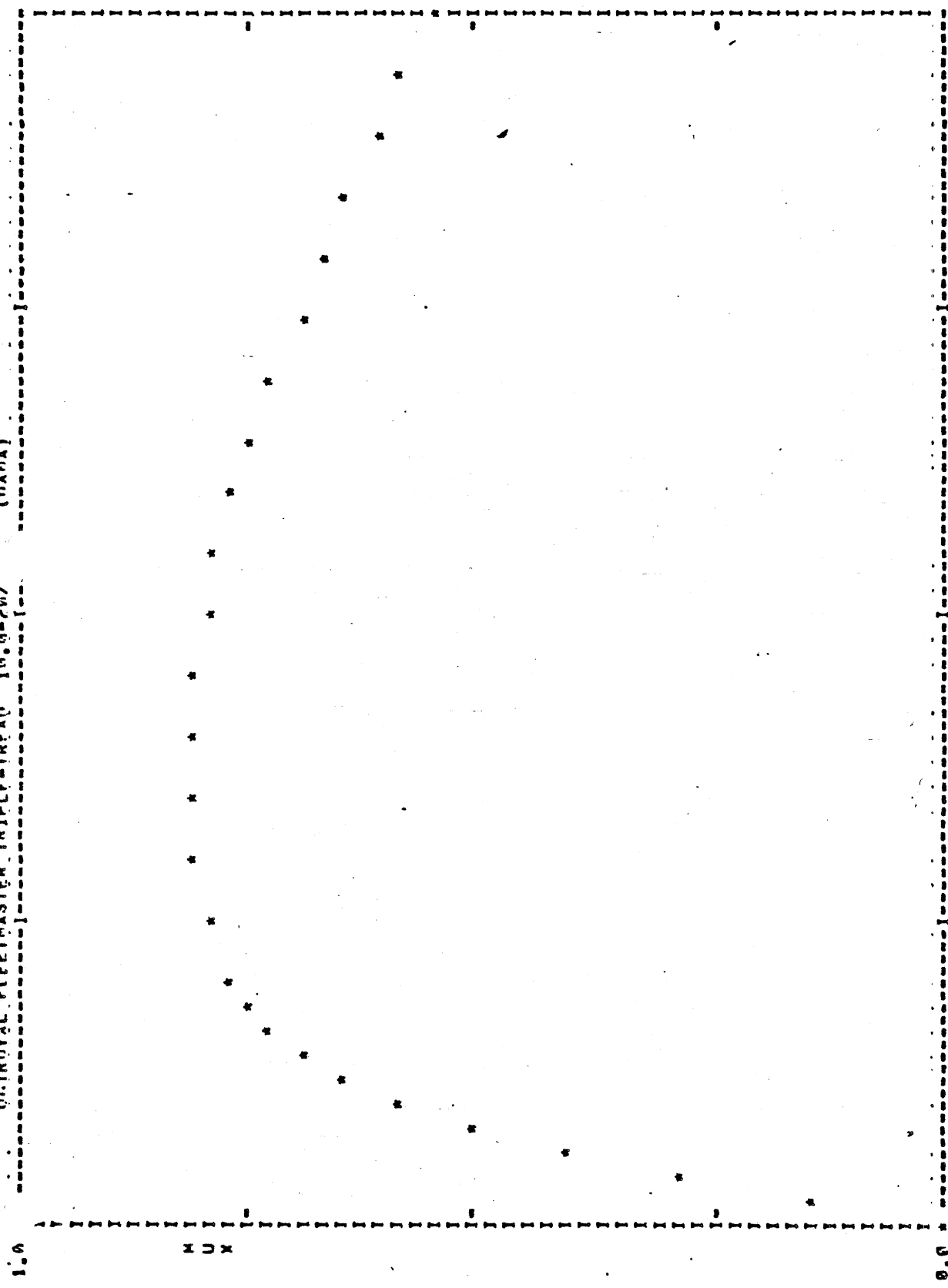
FZ = 2589.8 VEL = 55.0 MULOCK = 0.65 MUPEAK = 0.90 RATIO = 1.38 A-D FILE 40 HXFILE 21 SAMPLE 126

** A-D FILE 41 NEW FILE 22 TFST SAMPLE127 **
AVERAGE OF FILE 41 FOR 4 RECORDS. UNIROVAL FLEETMASTER TRIPLE-TREAD 10.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.20 | 0.20 | 0.0 | 0.0 |
| 0.02 | 0.15 | 16280.1 | 797.2 |
| 0.04 | 0.29 | 32069.9 | 1505.5 |
| 0.04 | 0.41 | 44744.3 | 2120.7 |
| 0.08 | 0.51 | 55555.0 | 2625.9 |
| 0.10 | 0.58 | 64469.9 | 3016.6 |
| 0.12 | 0.65 | 71599.4 | 3318.6 |
| 0.14 | 0.69 | 77351.3 | 3556.9 |
| 0.16 | 0.73 | 81868.3 | 3742.4 |
| 0.18 | 0.76 | 85574.9 | 3878.2 |
| 0.20 | 0.78 | 88595.5 | 3966.6 |
| 0.25 | 0.80 | 94922.3 | 4095.4 |
| 0.30 | 0.82 | 100487.8 | 4176.7 |
| 0.35 | 0.82 | 105397.8 | 4201.3 |
| 0.40 | 0.82 | 109856.9 | 4194.6 |
| 0.45 | 0.81 | 113864.9 | 4162.8 |
| 0.50 | 0.80 | 116974.1 | 4111.1 |
| 0.55 | 0.79 | 118154.7 | 4091.8 |
| 0.60 | 0.77 | 117033.2 | 3958.5 |
| 0.65 | 0.75 | 114077.4 | 3865.5 |
| 0.70 | 0.73 | 108292.9 | 3751.2 |
| 0.75 | 0.70 | 100015.3 | 3622.9 |
| 0.80 | 0.68 | 89680.9 | 3407.4 |
| 0.85 | 0.65 | 79686.7 | 3307.4 |
| 0.90 | 0.62 | 71531.1 | 3206.6 |
| 0.95 | 0.59 | 60854.5 | 3066.3 |
| 1.00 | 0.56 | 58468.7 | 2926.9 |

TDAY = 58068.7 LOAD = 5277.3 VEL = 40.0 MPH
MUPFAK = 0.82 MULOCK = 0.56 RATIO = 1.07

UNIROVAL FILEMASTER TRIPLE-TRFAD 10.0-20/ (DATA)



LONGITUDINAL SLIP 100.00

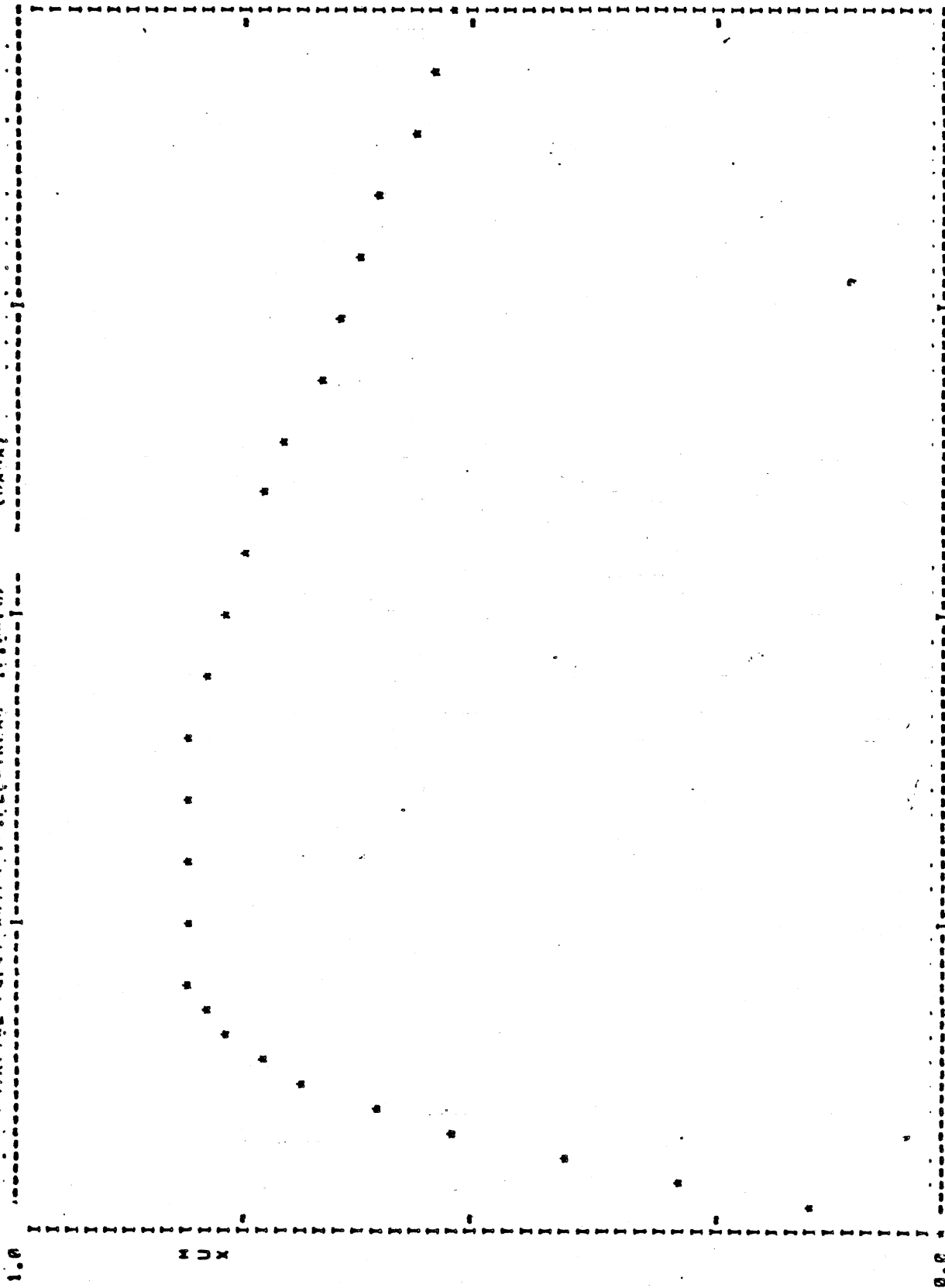
FZ = 5277.3 VFL = 40.0 M'JLOCK = 0.56 MUPEAK = 0.82 RATIO = 1.47 A-D FILE 41 NWFILE 27 SAMPLE 127

** A-D FILE 42 NEW FILE 23 TEST SAMPLE 12A **
 AVERAGE OF FILE 42 FOR 6 RECORDS. UNIROYAL FLEETMASTER TRIPLE-TREAD 1W.4-20/F (DANA)

| SLIP | MUX | TORQUE | FX | TQAV = 54375.0 | LOAD = 5276.9 | VEL = 55.0 MPH | MUPEAK = 0.83 | MULOCK = 0.53 | RATIO = 1.57 |
|------|------|----------|--------|----------------|---------------|----------------|---------------|---------------|--------------|
| 0.00 | 0.00 | 0.0 | 0.0 | | | | | | |
| 0.02 | 0.15 | 16799.7 | 772.0 | | | | | | |
| 0.04 | 0.29 | 32711.7 | 1504.1 | | | | | | |
| 0.06 | 0.42 | 46449.1 | 2153.7 | | | | | | |
| 0.08 | 0.53 | 58242.0 | 2709.0 | | | | | | |
| 0.10 | 0.62 | 67993.5 | 3164.1 | | | | | | |
| 0.12 | 0.69 | 75871.8 | 3521.2 | | | | | | |
| 0.14 | 0.74 | 82169.9 | 3790.4 | | | | | | |
| 0.16 | 0.78 | 87188.5 | 3983.0 | | | | | | |
| 0.18 | 0.80 | 91090.2 | 4110.0 | | | | | | |
| 0.20 | 0.82 | 93920.9 | 4167.9 | | | | | | |
| 0.25 | 0.83 | 99730.8 | 4272.5 | | | | | | |
| 0.30 | 0.83 | 104672.7 | 4270.0 | | | | | | |
| 0.35 | 0.82 | 109506.6 | 4196.2 | | | | | | |
| 0.40 | 0.81 | 113795.9 | 4135.1 | | | | | | |
| 0.45 | 0.79 | 117805.3 | 4046.8 | | | | | | |
| 0.50 | 0.77 | 121330.2 | 3903.3 | | | | | | |
| 0.55 | 0.75 | 123231.8 | 3833.5 | | | | | | |
| 0.60 | 0.73 | 123146.6 | 3719.1 | | | | | | |
| 0.65 | 0.71 | 119009.3 | 3603.3 | | | | | | |
| 0.70 | 0.68 | 113280.3 | 3484.4 | | | | | | |
| 0.75 | 0.66 | 105914.7 | 3360.3 | | | | | | |
| 0.80 | 0.63 | 92008.0 | 3233.6 | | | | | | |
| 0.85 | 0.61 | 79051.5 | 3100.5 | | | | | | |
| 0.90 | 0.58 | 70007.0 | 2975.0 | | | | | | |
| 0.95 | 0.55 | 61054.3 | 2804.5 | | | | | | |
| 1.00 | 0.53 | 50375.0 | 2712.5 | | | | | | |

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INTROYAL PLFETMASTFK TRIPLE-TREAD 10.0-20 (DANA)



0.00

LONGITUDINAL SLIP

100.00

FZ = 5274.9 VFL = 55.0 MULOCK = 0.53 MUPEAK = 0.83 RATIO = 1.57 A-O FILE 42 NHFILE 23 SAMPLE 12R

309

1 064 1

TEST SAMPLE 129 **

NEW FILE 24

** A-D FILE 43

UNIROVAL FLEETHASTER TRIPLE-TREAD 10.0-20/F (DANA)

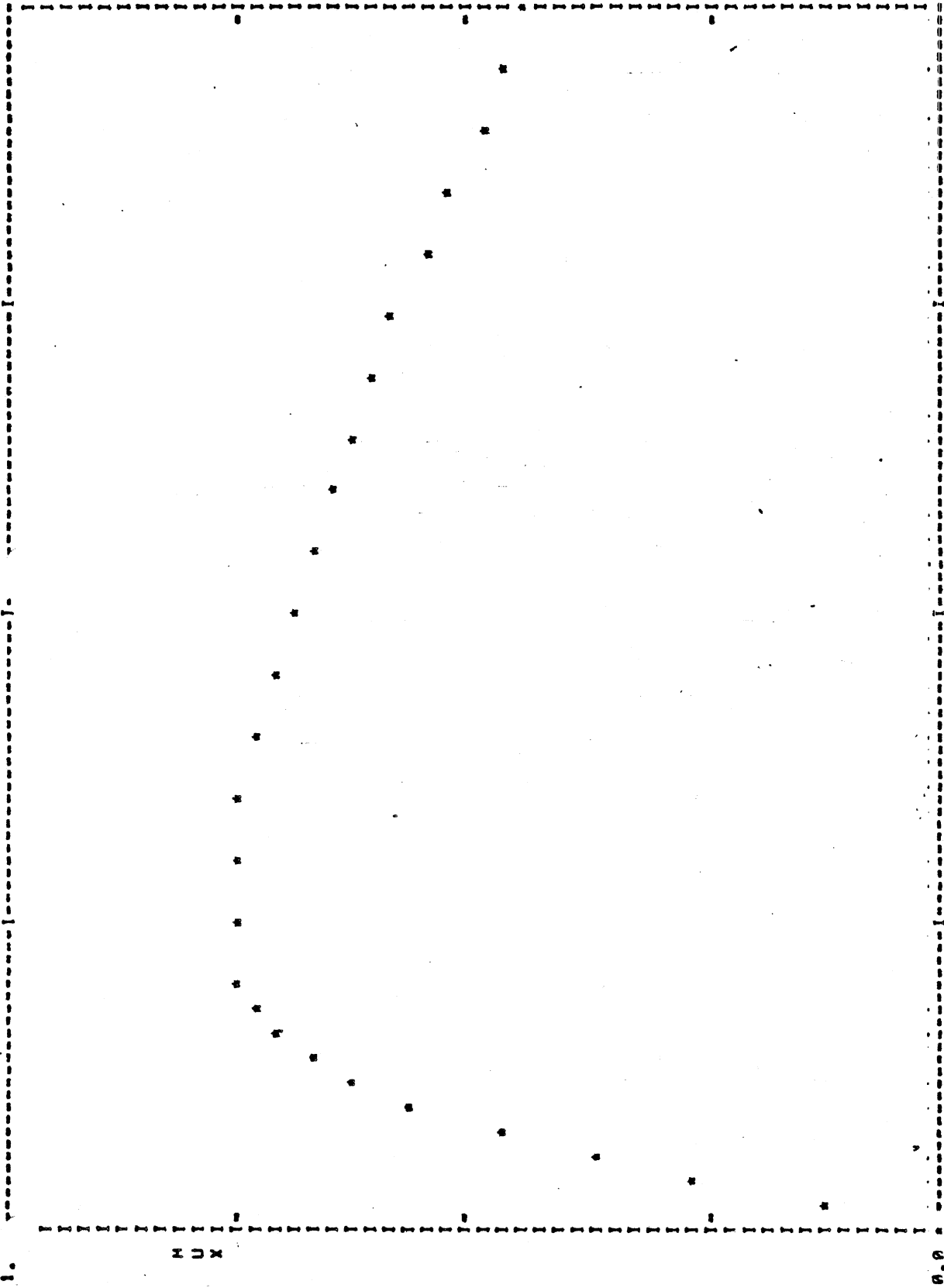
AVERAGE OF FILE 43 FOR 4 RECORDS.

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.13 | 20263.3 | 1025.0 |
| 0.04 | 0.26 | 41653.7 | 2064.0 |
| 0.06 | 0.38 | 59732.7 | 2988.0 |
| 0.08 | 0.48 | 74991.1 | 3750.2 |
| 0.10 | 0.57 | 87766.2 | 4389.9 |
| 0.12 | 0.63 | 98987.4 | 4896.6 |
| 0.14 | 0.68 | 105787.2 | 5275.6 |
| 0.16 | 0.72 | 111709.7 | 5536.4 |
| 0.18 | 0.74 | 115885.8 | 5788.2 |
| 0.20 | 0.75 | 118181.1 | 5786.8 |
| 0.25 | 0.76 | 122270.2 | 5826.3 |
| 0.30 | 0.76 | 125539.8 | 5796.7 |
| 0.35 | 0.75 | 128496.0 | 5720.3 |
| 0.40 | 0.74 | 130409.4 | 5631.8 |
| 0.45 | 0.72 | 132752.5 | 5507.4 |
| 0.50 | 0.70 | 135143.8 | 5359.0 |
| 0.55 | 0.68 | 137282.0 | 5188.7 |
| 0.60 | 0.66 | 138120.5 | 5010.5 |
| 0.65 | 0.63 | 136472.1 | 4830.1 |
| 0.70 | 0.61 | 131353.7 | 4659.4 |
| 0.75 | 0.59 | 122873.1 | 4074.3 |
| 0.80 | 0.56 | 111370.6 | 4268.3 |
| 0.85 | 0.53 | 98373.0 | 4045.8 |
| 0.90 | 0.50 | 87311.3 | 3832.0 |
| 0.95 | 0.47 | 77182.2 | 3023.4 |
| 1.00 | 0.45 | 67000.7 | 3023.0 |

TQAV = 67968.7 LOAD = 7972.1 VEL = 55.0 MPH

MUPEAK = 0.76 MULOCK = 0.45 RATIO = 1.71

UNIROVAL FLEETMASTER TRIPLE-TREAD 10.0-20 (DANA)



LONGITUDINAL SLIP

0.00

100.00

FZ = 7972.1 VFL = 55.0 MULOCK = 0.45 MUPEAK = 0.76 RATIO = 1.71 A-D FILE 43 NWFILE 24 SAMPLE 129

366-1

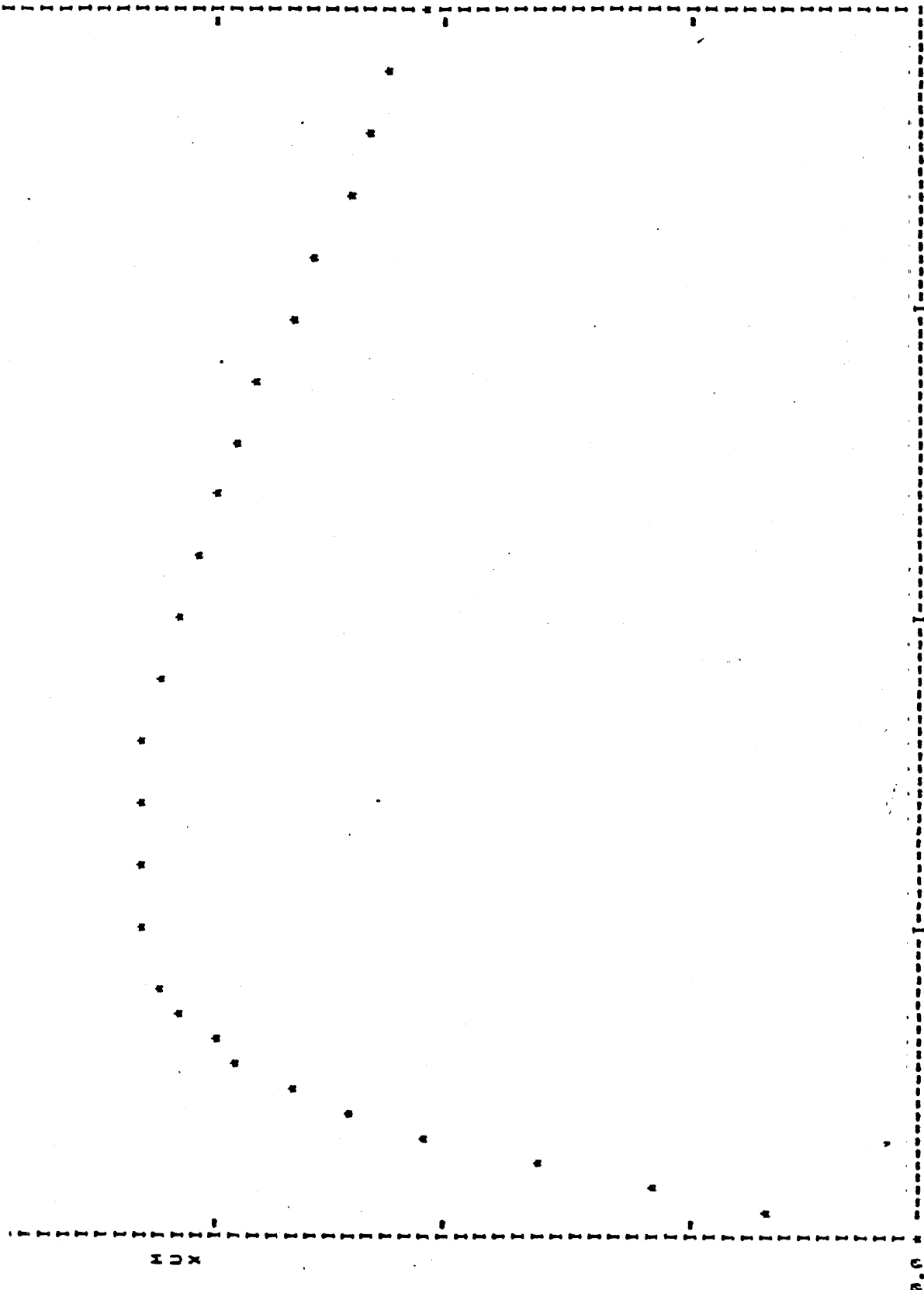
** A-D FILE 44 NO FILE 25 TEST SAMPLE 130 **
AVERAGE OF FILE 44 FOR 6 RECORDS. UNIROYAL FLEETMASTER TRIPLE-TREAD 18.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 17504.0 | 832.6 |
| 0.04 | 0.30 | 33346.3 | 1590.7 |
| 0.06 | 0.42 | 46971.5 | 2249.8 |
| 0.08 | 0.52 | 58082.5 | 2802.8 |
| 0.10 | 0.61 | 67310.5 | 3243.4 |
| 0.12 | 0.68 | 74729.5 | 3578.3 |
| 0.14 | 0.73 | 80495.9 | 3831.3 |
| 0.16 | 0.77 | 85206.1 | 4023.4 |
| 0.18 | 0.80 | 88752.3 | 4166.7 |
| 0.20 | 0.81 | 91542.1 | 4247.3 |
| 0.25 | 0.83 | 97079.6 | 4339.7 |
| 0.30 | 0.84 | 101627.9 | 4367.5 |
| 0.35 | 0.84 | 105314.8 | 4353.2 |
| 0.40 | 0.83 | 108368.7 | 4312.7 |
| 0.45 | 0.82 | 111010.5 | 4248.9 |
| 0.50 | 0.81 | 113120.4 | 4163.7 |
| 0.55 | 0.79 | 113880.0 | 4056.0 |
| 0.60 | 0.76 | 112846.3 | 3931.3 |
| 0.65 | 0.74 | 110143.7 | 3798.2 |
| 0.70 | 0.71 | 104808.2 | 3657.9 |
| 0.75 | 0.68 | 97061.2 | 3510.9 |
| 0.80 | 0.65 | 87336.7 | 3362.7 |
| 0.85 | 0.62 | 77502.9 | 3216.4 |
| 0.90 | 0.60 | 69460.8 | 3074.8 |
| 0.95 | 0.57 | 62290.4 | 2935.2 |
| 1.00 | 0.54 | 56041.7 | 2797.5 |

TQAV = 56041.7 LOAD = 5261.2 VEL = 40.0 MPH
MUPEAK = 0.84 MULOCK = 0.54 RATIO = 1.56

(DANA)

UNIVERSAL FIFTHMASTER TRIPLE-TRACE 10,000-20



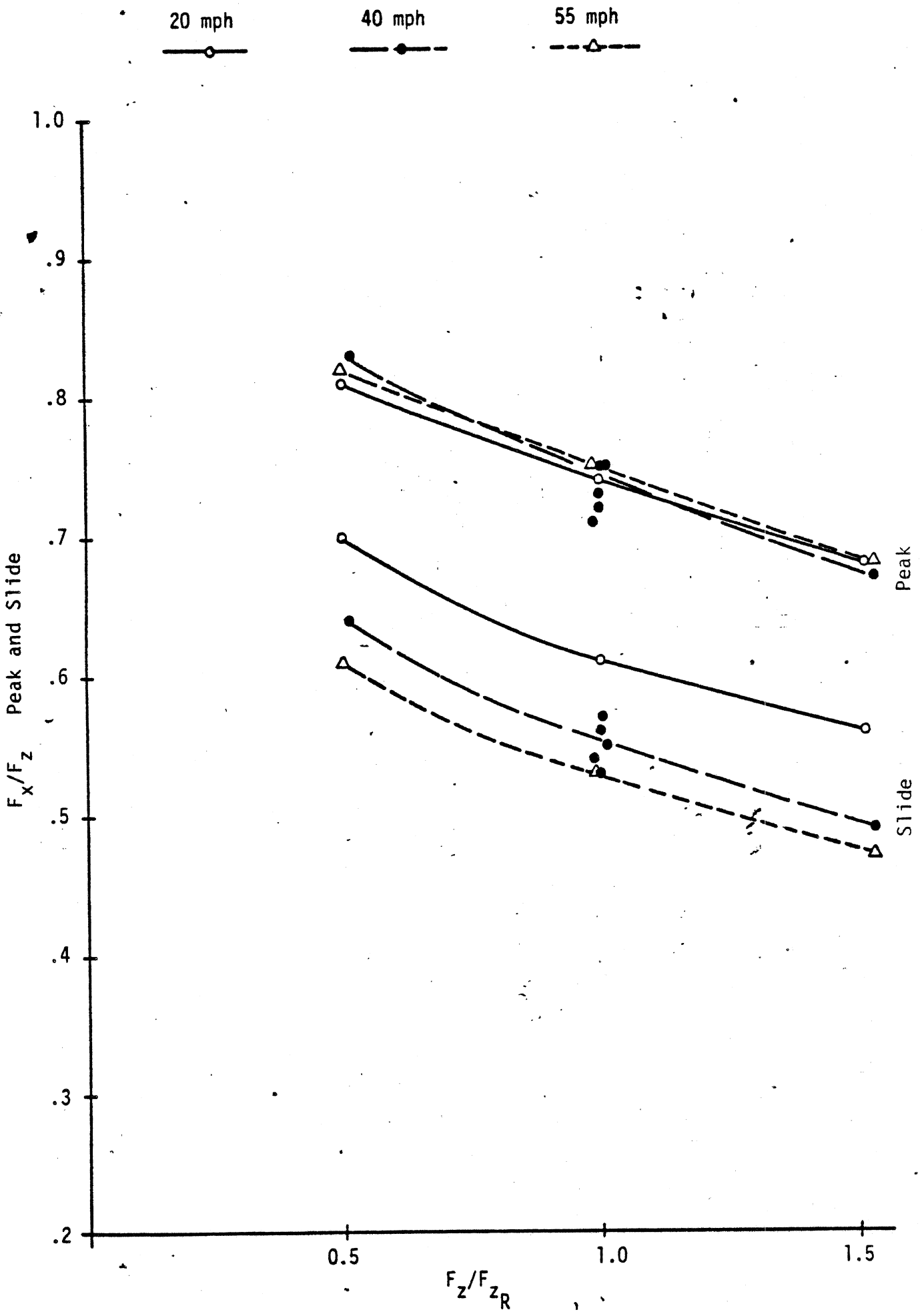
LONGITUDINAL SLIP

LONGITUDINAL SLIP

0.00

100.00

FZ = 5261.2 VFL = 40.0 MULOCK = 0.54 MUPEAK = 0.84 RATIO = 1.56 A-D FILE 44 NWFILE 25 SAMPLE 130



Summary - Firestone Power Drive - 10.00 x 20F

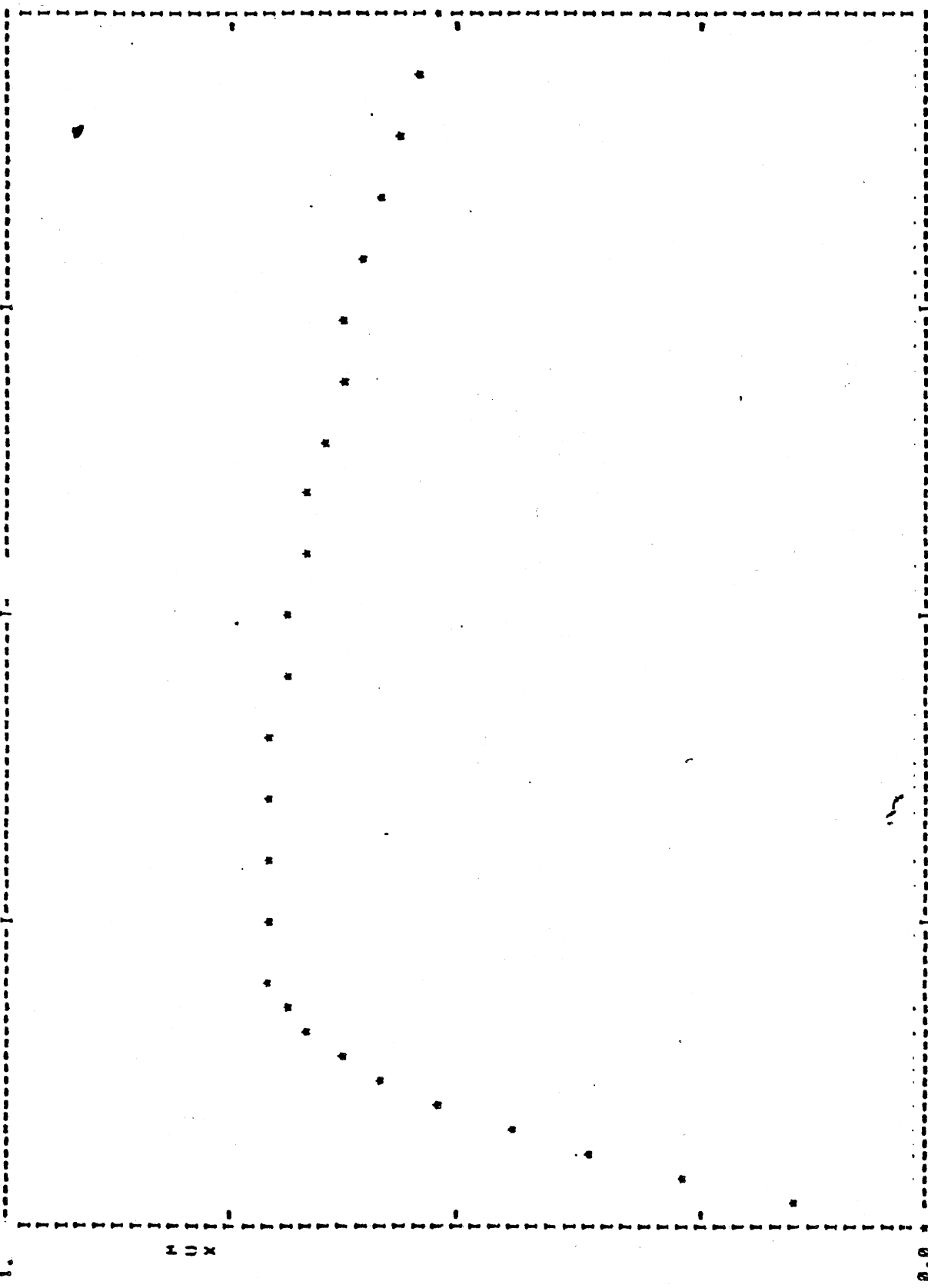
** A-D FILE 75 FOR 5 RECORDS. ** FILE 3A ** TEST SAMPLE 140 **
FIRKSTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.15 | 16758.6 | 825.3 |
| 0.04 | 0.27 | 30228.2 | 1489.1 |
| 0.06 | 0.37 | 41395.0 | 2025.0 |
| 0.08 | 0.46 | 50700.1 | 2472.3 |
| 0.10 | 0.53 | 58669.3 | 2850.9 |
| 0.12 | 0.59 | 65189.2 | 3162.1 |
| 0.14 | 0.64 | 70527.2 | 3399.9 |
| 0.16 | 0.67 | 74828.6 | 3572.8 |
| 0.18 | 0.70 | 78214.3 | 3687.4 |
| 0.20 | 0.71 | 80673.6 | 3740.1 |
| 0.25 | 0.72 | 85266.6 | 3793.1 |
| 0.30 | 0.72 | 88937.2 | 3809.4 |
| 0.35 | 0.72 | 92014.1 | 3796.1 |
| 0.40 | 0.71 | 94848.7 | 3761.7 |
| 0.45 | 0.70 | 97618.0 | 3715.0 |
| 0.50 | 0.69 | 100410.2 | 3660.6 |
| 0.55 | 0.68 | 103142.2 | 3597.5 |
| 0.60 | 0.67 | 105082.6 | 3535.3 |
| 0.65 | 0.66 | 105277.5 | 3470.4 |
| 0.70 | 0.64 | 102927.0 | 3400.9 |
| 0.75 | 0.63 | 97897.6 | 3321.0 |
| 0.80 | 0.61 | 90267.1 | 3229.4 |
| 0.85 | 0.59 | 80931.4 | 3132.0 |
| 0.90 | 0.57 | 72131.5 | 3033.2 |
| 0.95 | 0.55 | 60215.3 | 2931.7 |
| 1.00 | 0.53 | 57100.0 | 2820.0 |

TQAV = 57300.0 LOAD = 5033.7 VFL = 40.0 MPH.
MUPEAK = 0.72 MULLOCK = 0.53 RATIO = 1.36

394

FIRESTONE POWER-DRIVE 1A.C-2M/F (DA)



LONGITUDINAL SLIP 109.00

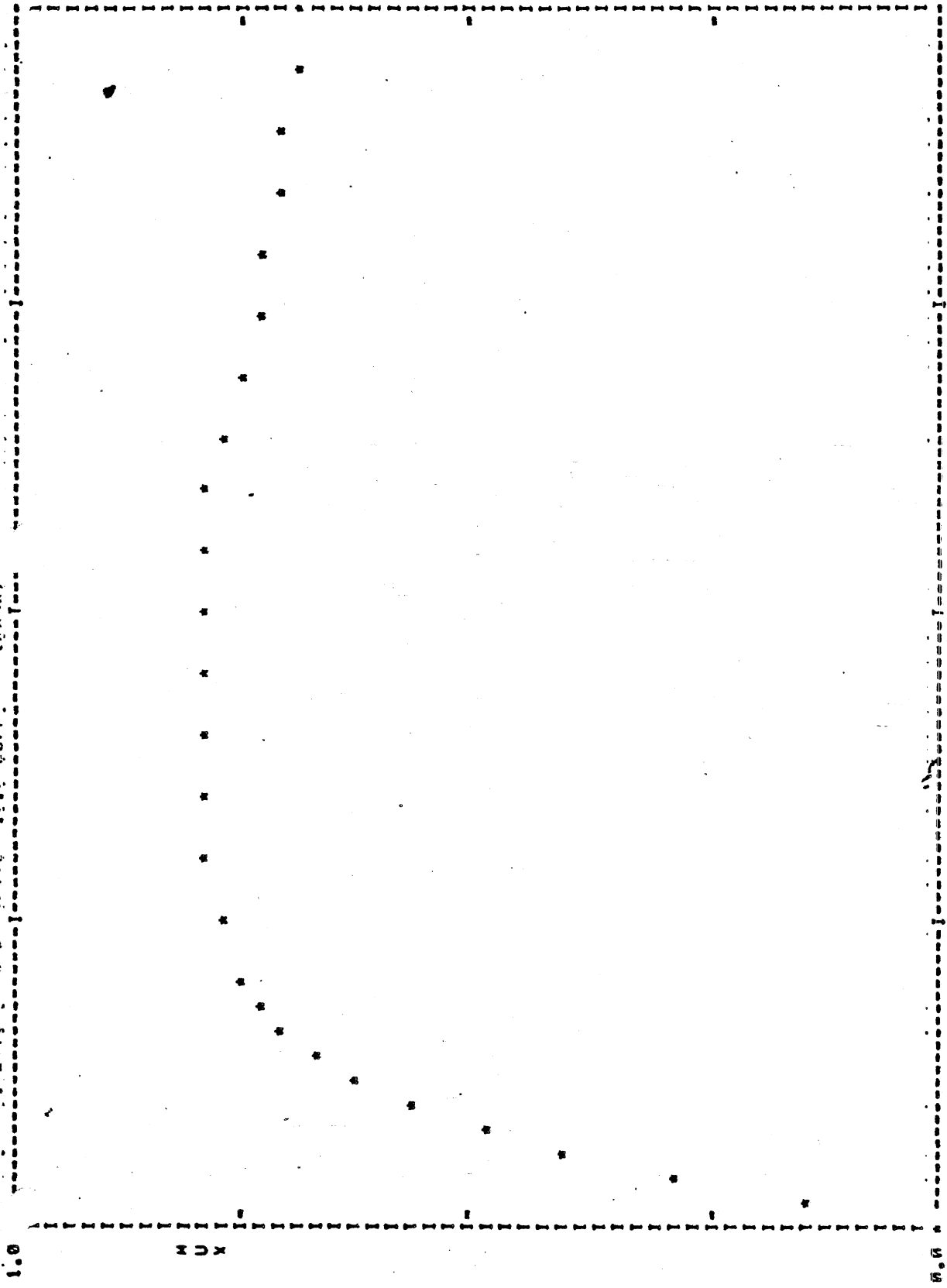
FZ = 5433.7 VEL = 40.0 MULLOCK = 0.53 MUPEAK = 4.72 RATIO = 1.36 A-D FILE 75 N-FILE 3A SAMPLE 140

** A-D FILE 76 FILE 39j- TEST SAMPLE 145 **
AVERAGE OF FILE 76 FOR 2 RECORDS. FIRESTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.15 | 0731.7 | 382.3 |
| 0.04 | 0.28 | 16289.7 | 735.5 |
| 0.06 | 0.44 | 22612.5 | 1036.5 |
| 0.08 | 0.50 | 28372.5 | 1287.0 |
| 0.10 | 0.57 | 33199.8 | 1487.6 |
| 0.12 | 0.63 | 37654.5 | 1647.3 |
| 0.14 | 0.68 | 39987.3 | 1770.7 |
| 0.16 | 0.72 | 42358.4 | 1863.1 |
| 0.18 | 0.75 | 44430.3 | 1937.8 |
| 0.20 | 0.76 | 46261.5 | 1981.5 |
| 0.25 | 0.79 | 50481.7 | 2031.2 |
| 0.30 | 0.80 | 54304.3 | 2054.1 |
| 0.35 | 0.80 | 57676.8 | 2062.4 |
| 0.40 | 0.81 | 60714.2 | 2062.5 |
| 0.45 | 0.81 | 63359.7 | 2056.4 |
| 0.50 | 0.81 | 65258.5 | 2044.0 |
| 0.55 | 0.80 | 66055.4 | 2022.9 |
| 0.60 | 0.79 | 65394.4 | 1991.5 |
| 0.65 | 0.78 | 63653.5 | 1950.1 |
| 0.70 | 0.76 | 60018.4 | 1899.6 |
| 0.75 | 0.74 | 56705.1 | 1852.4 |
| 0.80 | 0.73 | 51580.0 | 1819.1 |
| 0.85 | 0.72 | 47483.2 | 1796.4 |
| 0.90 | 0.71 | 43695.3 | 1777.8 |
| 0.95 | 0.71 | 40220.8 | 1761.3 |
| 1.00 | 0.70 | 37187.5 | 1747.5 |

TOAV = 37187.5 LOAD = 2712.0 VFL = 25.0 MPH.
MUPEAK = 0.81 MULOCK = 0.70 RATIO = 1.16

FIRESTONE POWER-DRIVE 1P.0-20/F. (DANA)



LONGITUDINAL SLIP 100.00

0.00

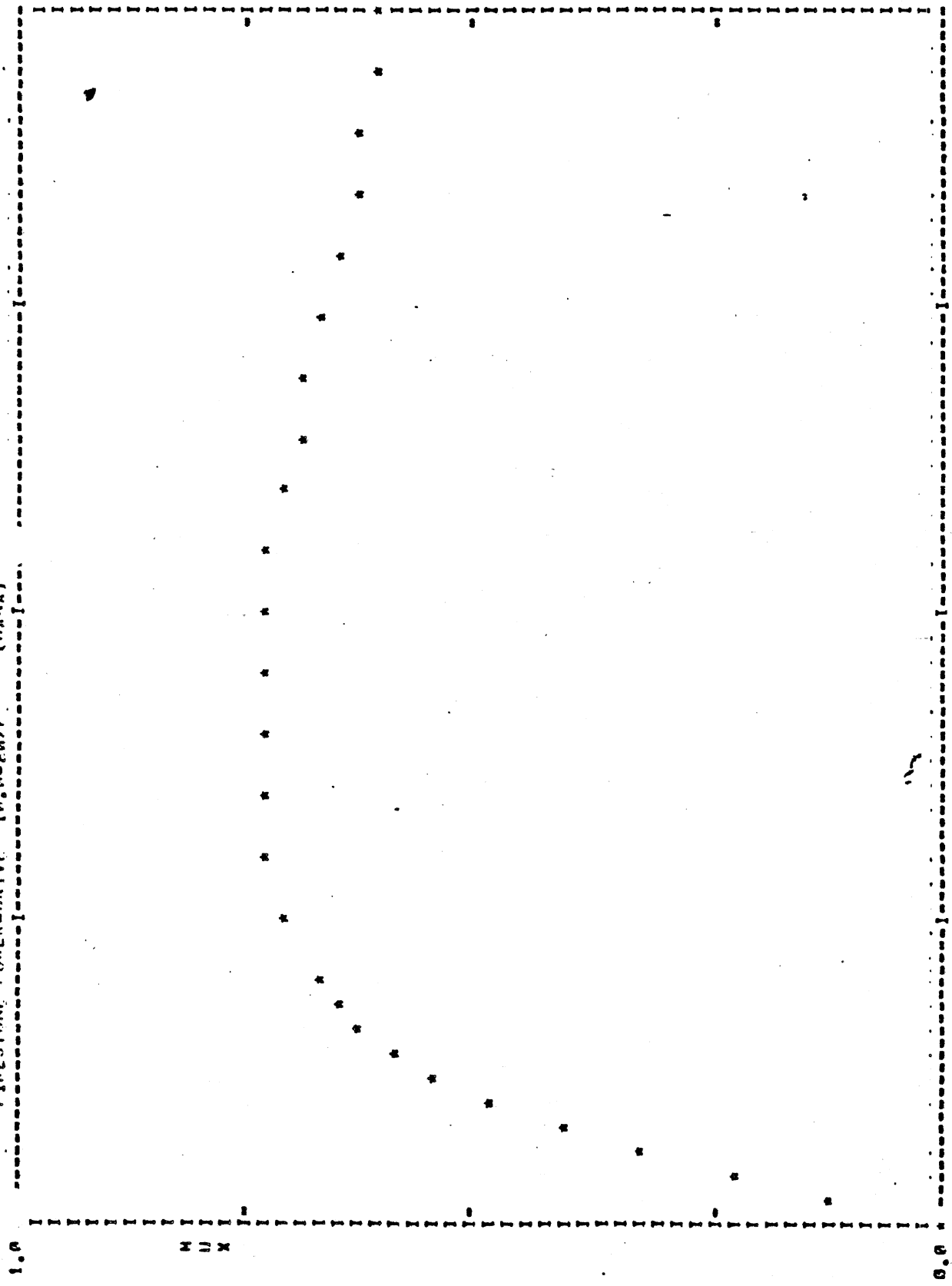
FZ = 2712.0 VFL = 29.0 MULLOCK = 0.70 MUPEAK = 0.81 RATIO = 1.16 A-D FILE 76 N-FILE 39 SAMPLE 145

** A-D FILE 77 FILE 40 1FST SAMPLE 144 **
AVERAGE OF FILE 77 FOR 5 RECORDS. FIRSTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.12 | 12536.1 | 6622.9 |
| 0.04 | 0.23 | 25163.9 | 1255.3 |
| 0.24 | 0.33 | 36418.0 | 1793.8 |
| 0.08 | 0.42 | 46847.1 | 2252.9 |
| 0.10 | 0.49 | 53912.4 | 2626.1 |
| 0.12 | 0.55 | 60091.4 | 2922.8 |
| 0.14 | 0.60 | 65353.5 | 3158.3 |
| 0.16 | 0.63 | 69734.3 | 3344.0 |
| 0.18 | 0.66 | 73168.5 | 3486.6 |
| 0.20 | 0.68 | 75613.0 | 3583.7 |
| 0.25 | 0.71 | 81360.1 | 3732.6 |
| 0.30 | 0.73 | 84616.9 | 3823.5 |
| 0.35 | 0.74 | 88524.3 | 3866.5 |
| 0.40 | 0.74 | 92219.2 | 3873.9 |
| 0.45 | 0.74 | 95595.4 | 3858.5 |
| 0.50 | 0.73 | 98043.4 | 3830.6 |
| 0.55 | 0.73 | 99010.2 | 3791.5 |
| 0.60 | 0.72 | 98573.9 | 3743.4 |
| 0.65 | 0.71 | 96477.4 | 3684.0 |
| 0.70 | 0.69 | 92835.3 | 3609.1 |
| 0.75 | 0.67 | 87863.7 | 3524.2 |
| 0.80 | 0.66 | 82305.4 | 3443.7 |
| 0.85 | 0.64 | 77536.0 | 3374.2 |
| 0.90 | 0.63 | 73107.6 | 3309.5 |
| 0.95 | 0.62 | 69019.5 | 3247.9 |
| 1.00 | 0.61 | 65400.0 | 3190.5 |

TOAV = 65400.0 LOAD = 5450.0 VEL = 20.0 MPH.
MUPEAK = 0.74 MULLOCK = 0.61 RATIO = 1.23

PIRESTONE POWER-DRIVE 10.0-20/F (DATA)



LONGITUDINAL SLTP

FZ = 5450.0 VFL = 20.0 M/LOCK = 0.61 MUPEAK = 0.74 RATIO = 1.23 A-D FILE 77 NWFILE 40 SAMPLE 146

399

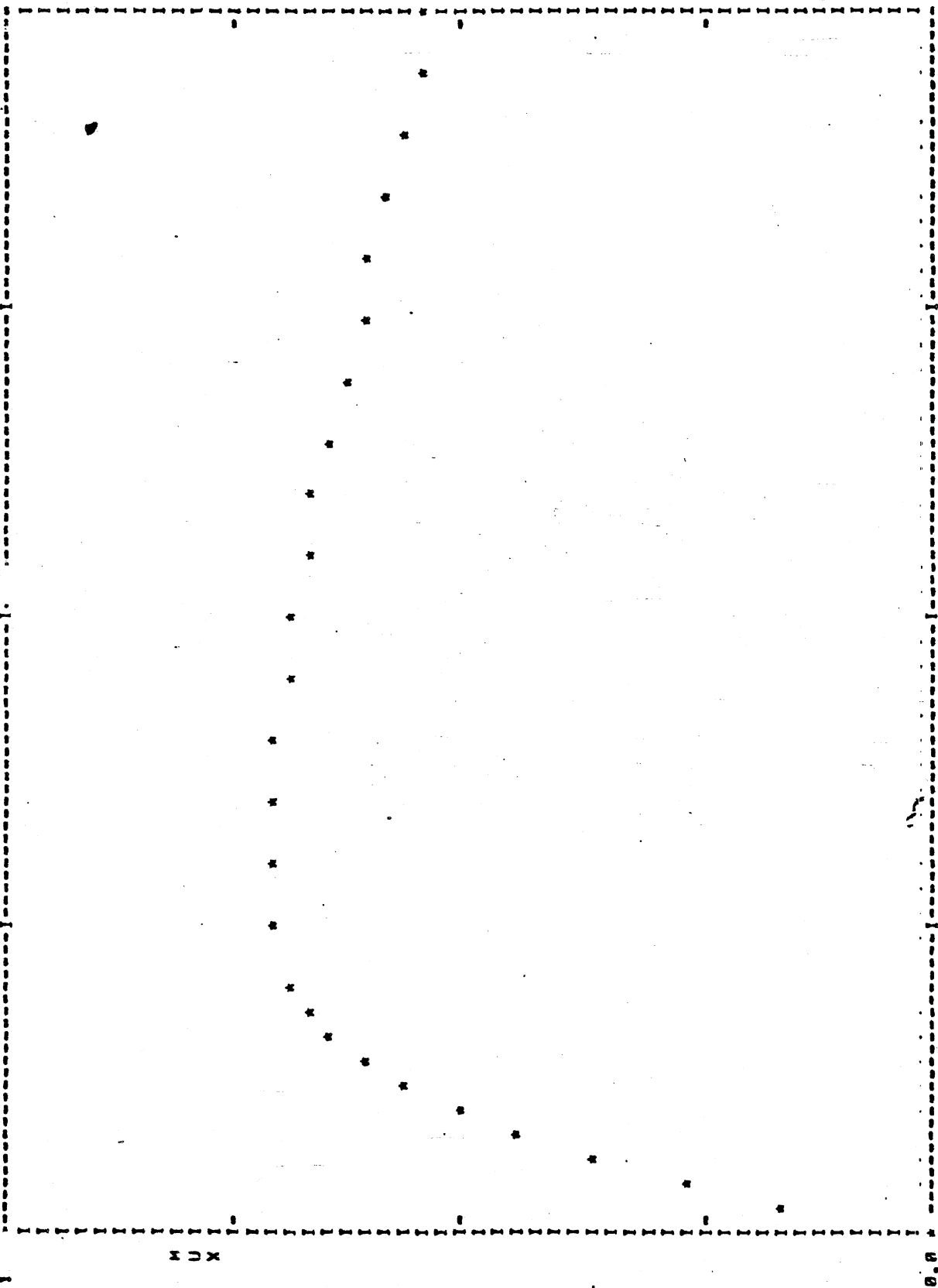
** A-D FILE 7A NEW FILE 44 TEST SAMPLE 147 **
 FIRESTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.16 | 17938.0 | 871.5 |
| 0.04 | 0.27 | 30461.5 | 1469.8 |
| 0.06 | 0.37 | 40780.6 | 1960.7 |
| 0.08 | 0.45 | 49652.9 | 2379.5 |
| 0.10 | 0.52 | 57259.1 | 2730.5 |
| 0.12 | 0.57 | 63611.2 | 3018.2 |
| 0.14 | 0.62 | 68832.5 | 3200.2 |
| 0.16 | 0.65 | 73084.7 | 3425.4 |
| 0.18 | 0.68 | 76589.2 | 3555.2 |
| 0.20 | 0.69 | 79256.4 | 3627.9 |
| 0.25 | 0.71 | 84522.2 | 3709.1 |
| 0.30 | 0.71 | 86963.0 | 3700.8 |
| 0.35 | 0.71 | 92640.7 | 3701.7 |
| 0.40 | 0.71 | 95748.0 | 3722.4 |
| 0.45 | 0.70 | 98570.6 | 3687.1 |
| 0.50 | 0.69 | 101328.6 | 3635.6 |
| 0.55 | 0.68 | 103965.9 | 3569.6 |
| 0.60 | 0.67 | 105706.4 | 3495.3 |
| 0.65 | 0.65 | 105022.6 | 3417.9 |
| 0.70 | 0.64 | 102796.1 | 3300.7 |
| 0.75 | 0.62 | 97570.1 | 3271.2 |
| 0.80 | 0.61 | 89586.1 | 3106.1 |
| 0.85 | 0.59 | 81191.9 | 3119.7 |
| 0.90 | 0.58 | 72022.6 | 3032.5 |
| 0.95 | 0.56 | 65033.9 | 2956.1 |
| 1.00 | 0.54 | 58937.5 | 2888.7 |

TOAV = 58937.5 LOAD = 5374.6 VEL = 40.0 RPM
 MUPEAK = 0.71 MULOCK = 0.50 RATIO = 1.31

400

FIRESTONE POWER-DRIVE 14.0-20/F (DAN)



M U X

0.0

0.00

LONGITUDINAL SLIP

107.00

FZ = 5374.6 VFL = 40.0 MULOCK = 0.54 MUPEAK = 0.71 RATIO = 1.31 A-D FILE 78 NWFILE 41 SAMPLE 147

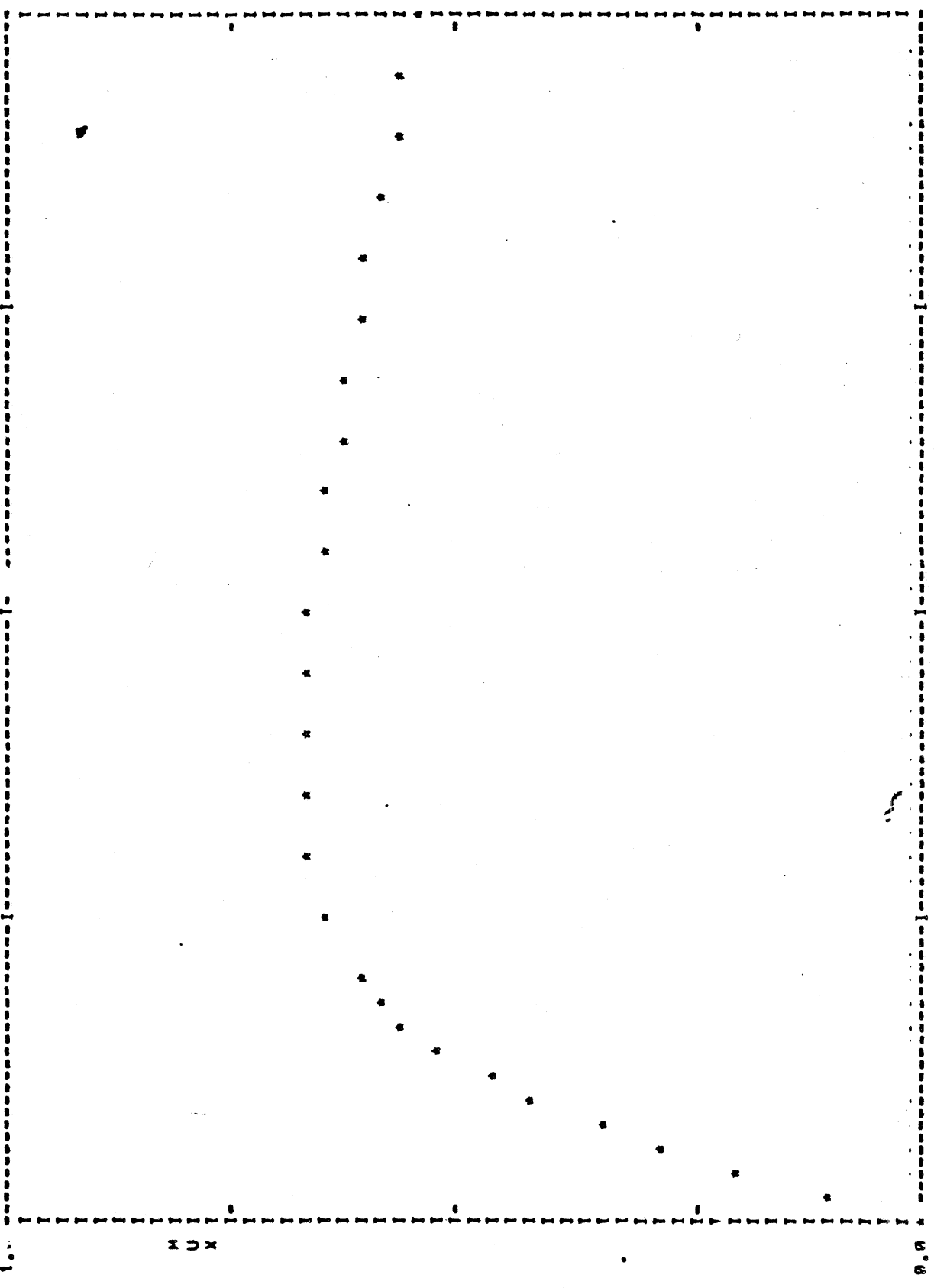
401

** A-D FILE 79 FOR 6 RECORDS. ** A-D FILE 79 ** EW FILE 4P ** TFST SAMPLING **
FIRSTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.11 | 17169.6 | 956.8 |
| 0.04 | 0.20 | 31631.8 | 1650.1 |
| 0.06 | 0.28 | 45146.4 | 2327.4 |
| 0.08 | 0.35 | 57135.0 | 2931.4 |
| 0.10 | 0.42 | 68714.6 | 3472.1 |
| 0.12 | 0.48 | 77284.4 | 3931.3 |
| 0.14 | 0.53 | 85205.5 | 4307.8 |
| 0.16 | 0.57 | 91522.9 | 4605.8 |
| 0.18 | 0.60 | 96541.8 | 4837.8 |
| 0.20 | 0.62 | 100197.9 | 4990.2 |
| 0.25 | 0.65 | 106386.4 | 5210.5 |
| 0.30 | 0.67 | 111187.3 | 5359.8 |
| 0.35 | 0.68 | 115142.4 | 5427.4 |
| 0.40 | 0.68 | 118638.5 | 5440.5 |
| 0.45 | 0.68 | 121775.9 | 5417.5 |
| 0.50 | 0.67 | 124226.9 | 5367.8 |
| 0.55 | 0.66 | 125337.2 | 5300.1 |
| 0.60 | 0.65 | 125120.4 | 5222.1 |
| 0.65 | 0.64 | 123190.1 | 5134.1 |
| 0.70 | 0.63 | 119603.8 | 5035.9 |
| 0.75 | 0.62 | 114563.3 | 4934.0 |
| 0.80 | 0.60 | 109300.4 | 4840.5 |
| 0.85 | 0.59 | 104333.6 | 4751.9 |
| 0.90 | 0.58 | 99503.4 | 4665.5 |
| 0.95 | 0.57 | 94804.3 | 4581.5 |
| 1.00 | 0.56 | 90625.0 | 4501.2 |

TOAV = 90625.0 LOAD = 8225.9 VEL = 20.0 MPH
MUPEAK = 0.68 MULOCK = 0.56 RATIO = 1.21

FIRESTONE POWER-DRIVE 10.0-20/F. (DAN)



LONGITUDINAL SLIP

0.00

LONGITUDINAL SLIP

100.00

403

FZ = 8225.9 VFL = 20.0 MULOCK = 0.56 MUPEAK = 0.68 RATIO = 1.21 A-D FILE 79 NWFILE 42 SAMPLE 148

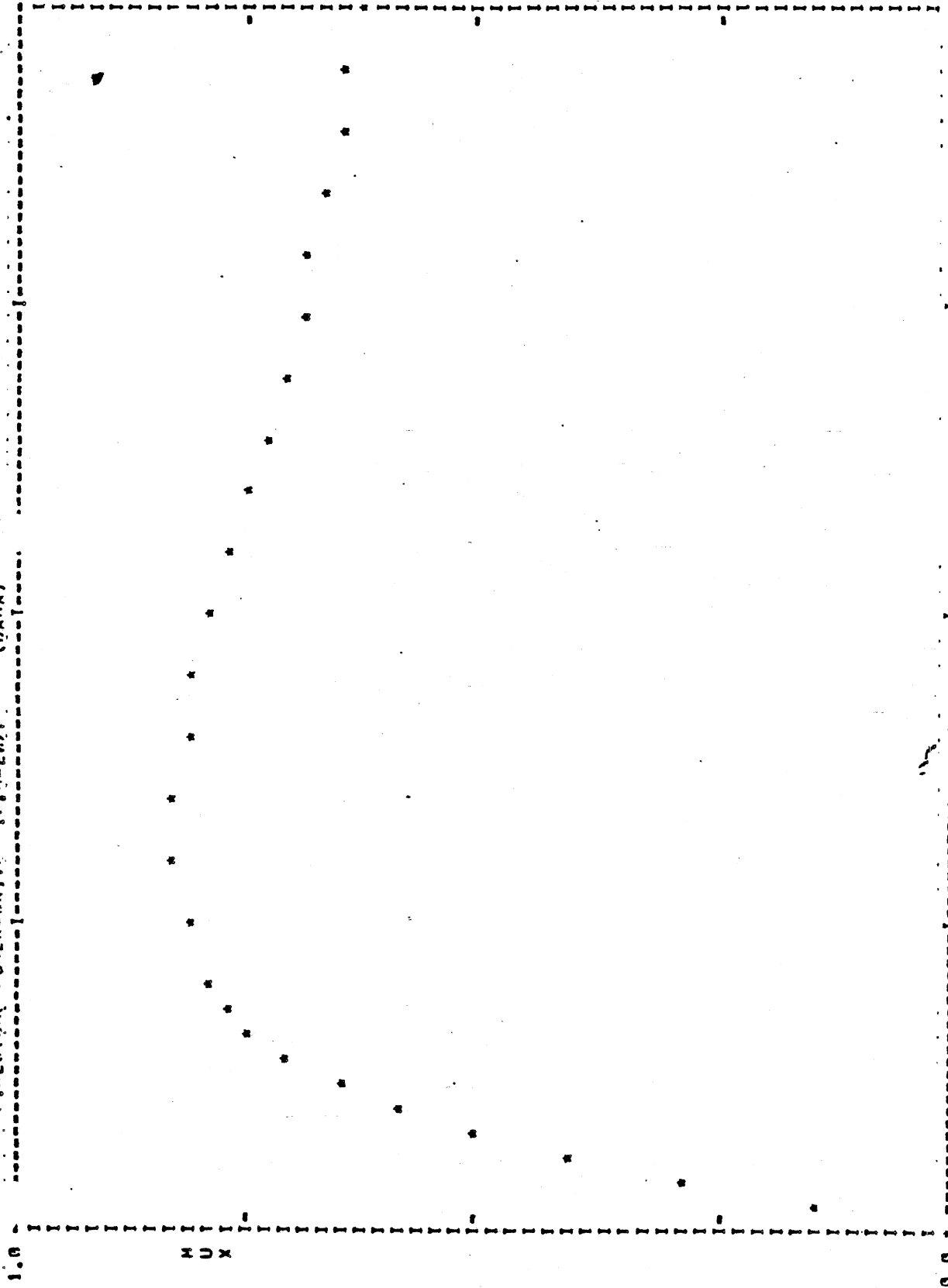
** A-D FILE 80 AVERAGE OF FILE 80 FOR 4 RECORDS. TEST SAMPLE 149 **
FIRESTONE POWER-DRIVE 1W.U-20/F (DANA)

| SLIP | MUX | TORQUE | FX |
|------|------|---------|--------|
| 0.00 | 0.20 | 0.0 | 0.0 |
| 0.02 | 0.15 | 9168.4 | 436.1 |
| 0.04 | 0.29 | 17663.8 | 826.8 |
| 0.06 | 0.41 | 25943.7 | 1155.5 |
| 0.08 | 0.51 | 31369.0 | 1431.8 |
| 0.10 | 0.59 | 36914.2 | 1651.6 |
| 0.12 | 0.66 | 41522.8 | 1825.5 |
| 0.14 | 0.71 | 45264.5 | 1961.9 |
| 0.16 | 0.75 | 48261.4 | 2067.5 |
| 0.18 | 0.78 | 50743.9 | 2145.8 |
| 0.20 | 0.80 | 52847.7 | 2191.6 |
| 0.25 | 0.82 | 57368.8 | 2247.3 |
| 0.30 | 0.83 | 61354.9 | 2269.7 |
| 0.35 | 0.83 | 64870.9 | 2268.5 |
| 0.40 | 0.83 | 68083.1 | 2251.5 |
| 0.45 | 0.81 | 71175.5 | 2220.6 |
| 0.50 | 0.80 | 74263.4 | 2173.5 |
| 0.55 | 0.78 | 76910.1 | 2118.3 |
| 0.60 | 0.76 | 78287.9 | 2059.7 |
| 0.65 | 0.73 | 77054.6 | 2002.6 |
| 0.70 | 0.72 | 74979.1 | 1953.8 |
| 0.75 | 0.70 | 69414.0 | 1906.6 |
| 0.80 | 0.69 | 61541.7 | 1859.9 |
| 0.85 | 0.67 | 52760.7 | 1815.1 |
| 0.90 | 0.66 | 45779.6 | 1775.6 |
| 0.95 | 0.65 | 39737.6 | 1738.6 |
| 1.00 | 0.64 | 34687.5 | 1704.4 |

TQAV = 34687.5 LOAD = 2818.0 VEL = 40.0 MPH
MUPEAK = 0.83 MULOCK = 0.64 RATIO = 1.30

404

FIRESTONE POWER-DRIVE 10.0-20/F. (DANA)



P.00

LONGITUDINAL SLIP

100.00

FZ = 2818.0 VFL = 40.0 HULLOCK = 0.64 MUPEAK = 0.83 RATIO = 1.30 A-D FILE 80 M-FILE 43 SAMPLE 149

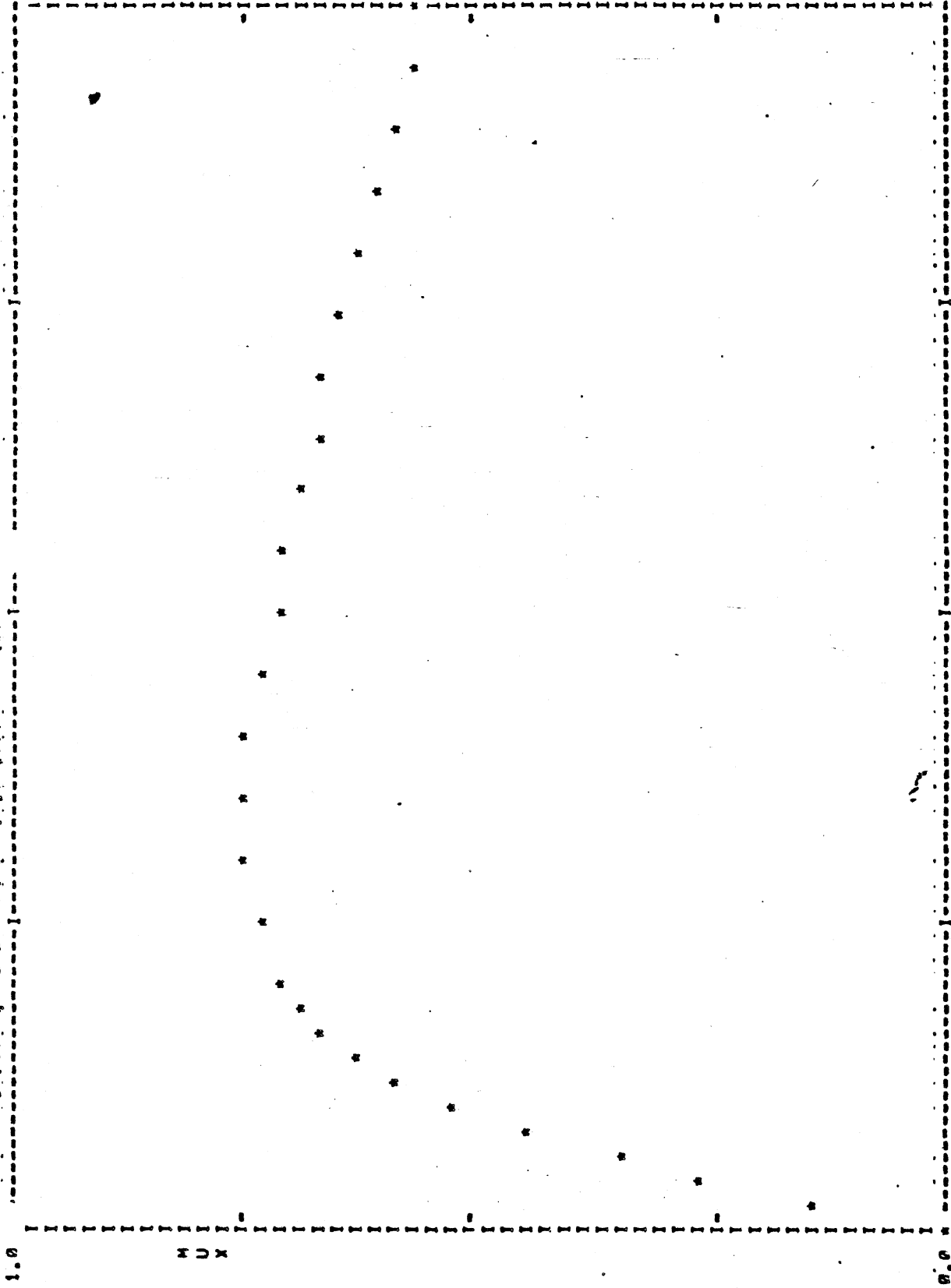
405

** A-D FILE 81 FOR 6 RECORDS. FILE 4/3 TEST SAMPLE 150 **
FIRKSTONE POWER-DRIVE 10.0-20/F (DATA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.15 | 15595.1 | 833.4 |
| 0.04 | 0.26 | 27773.9 | 1409.1 |
| 0.06 | 0.36 | 30577.2 | 1936.3 |
| 0.08 | 0.45 | 48374.6 | 2406.5 |
| 0.10 | 0.52 | 57042.3 | 2802.4 |
| 0.12 | 0.59 | 64215.3 | 3125.4 |
| 0.14 | 0.64 | 70006.7 | 3383.8 |
| 0.16 | 0.67 | 74789.7 | 3582.5 |
| 0.18 | 0.70 | 78721.4 | 3728.0 |
| 0.20 | 0.72 | 81599.4 | 3812.0 |
| 0.25 | 0.74 | 86989.5 | 3923.7 |
| 0.30 | 0.75 | 91520.4 | 3977.4 |
| 0.35 | 0.75 | 95430.1 | 3981.4 |
| 0.40 | 0.75 | 98842.3 | 3954.7 |
| 0.45 | 0.74 | 101867.5 | 3909.9 |
| 0.50 | 0.73 | 104557.5 | 3854.9 |
| 0.55 | 0.71 | 106867.8 | 3789.3 |
| 0.60 | 0.70 | 108195.5 | 3715.5 |
| 0.65 | 0.68 | 107714.5 | 3635.8 |
| 0.70 | 0.67 | 104909.5 | 3551.1 |
| 0.75 | 0.65 | 99538.8 | 3457.6 |
| 0.80 | 0.63 | 91701.5 | 3359.3 |
| 0.85 | 0.61 | 82444.0 | 3265.6 |
| 0.90 | 0.60 | 74180.2 | 3178.5 |
| 0.95 | 0.58 | 66706.0 | 3094.1 |
| 1.00 | 0.57 | 60333.3 | 3012.5 |

TOAV = 60333.3 LOAD = 5481.2 VEL = 40.0 MPH
MUPEAK = 0.75 MULOCK = 0.57 RATIO = 1.33

FIRESTONE POWER-DRIVE 10.0-20/F (DANA



LONGITUDINAL SLIP 100.00

FZ = 5481.2 VFL = 40.0 MULOCK = 0.57 MUPEAK = 0.75 RATIO = 1.33 A-D FILE 81 NWFILE 44 SAMPLE 150

407

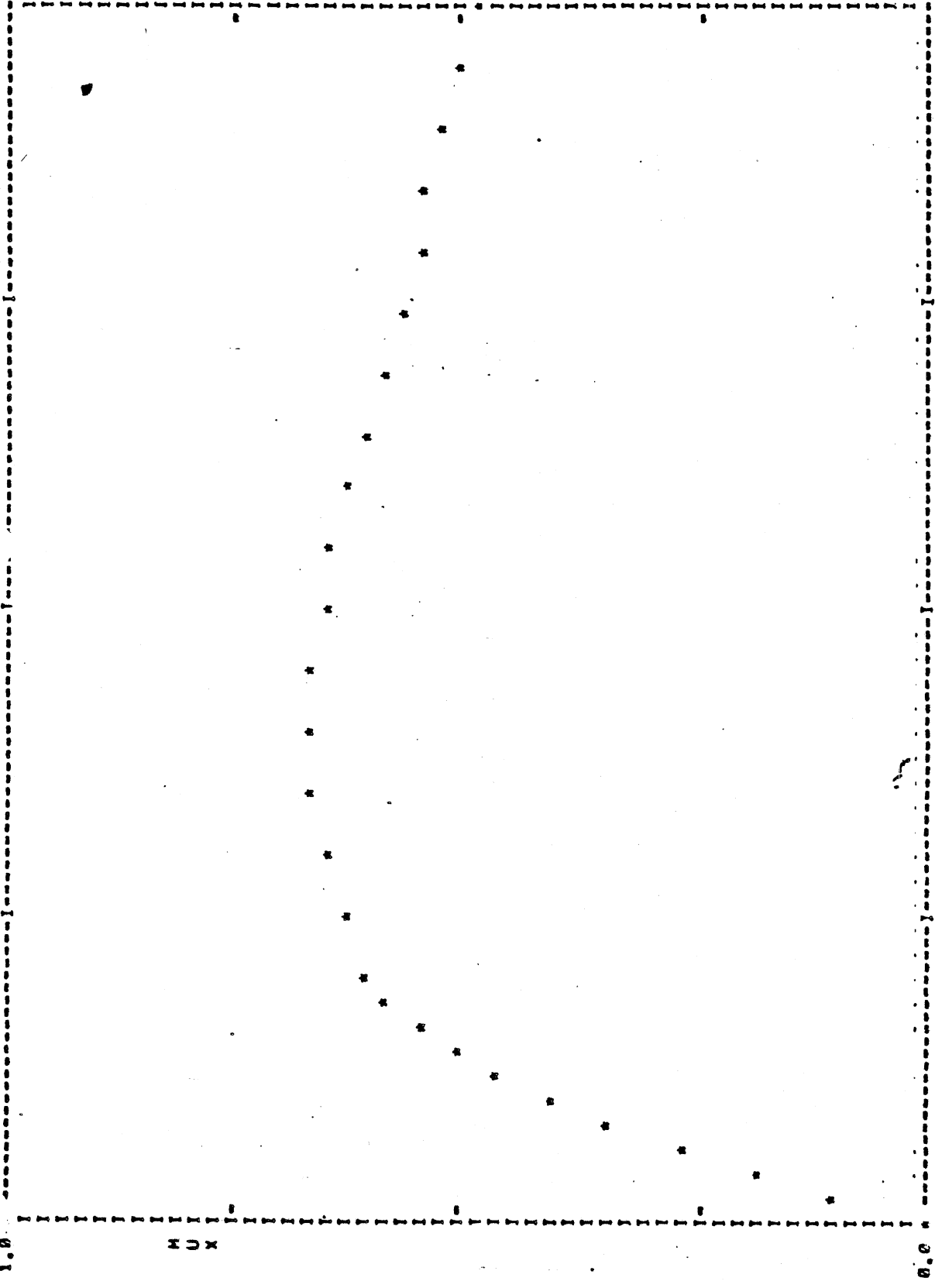
** A-D FILE 85 NEW FILE 85 TEST SAMPLES 100
AVERAGE OF FILE 85 FOR 6 RECORDS. FIRESTONE POWER-DRIVE 10.0-20/F (DATA)

| SLIP | MUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 13482.8 | 812.5 |
| 0.04 | 0.18 | 29506.8 | 1514.7 |
| 0.06 | 0.27 | 44645.1 | 2107.8 |
| 0.08 | 0.34 | 58392.1 | 2823.4 |
| 0.10 | 0.41 | 70412.9 | 3368.7 |
| 0.12 | 0.47 | 80490.6 | 3836.4 |
| 0.14 | 0.52 | 88791.7 | 4225.1 |
| 0.16 | 0.56 | 95604.3 | 4533.8 |
| 0.18 | 0.59 | 101191.0 | 4767.7 |
| 0.20 | 0.61 | 105472.2 | 4912.5 |
| 0.25 | 0.64 | 113483.7 | 5119.9 |
| 0.30 | 0.66 | 120919.4 | 5251.2 |
| 0.35 | 0.67 | 125525.7 | 5313.8 |
| 0.40 | 0.67 | 130574.6 | 5318.4 |
| 0.45 | 0.67 | 135270.6 | 5276.3 |
| 0.50 | 0.66 | 139236.6 | 5195.2 |
| 0.55 | 0.65 | 141520.7 | 5091.6 |
| 0.60 | 0.63 | 141101.5 | 4975.7 |
| 0.65 | 0.62 | 137747.9 | 4852.8 |
| 0.70 | 0.60 | 131143.3 | 4722.4 |
| 0.75 | 0.58 | 121773.3 | 4597.6 |
| 0.80 | 0.56 | 110300.3 | 4447.3 |
| 0.85 | 0.54 | 99230.1 | 4305.7 |
| 0.90 | 0.53 | 90743.6 | 4172.3 |
| 0.95 | 0.51 | 83476.6 | 4003.2 |
| 1.00 | 0.49 | 77291.7 | 3918.7 |

TOAV = 77291.7 LOAD = 4315.2 VFL = 40.0 MPH.
MUPEAK = 0.67 MULOCK = 0.49 RATIO = 1.37

408

FIRESTONE POWER-DRIVE 10.0-20/F (DANA)



LONGITUDINAL SLIP 100.00

FZ = 8315.2 VFL = 40.0 MULOCK = 0.49 MUPEAK = 0.67 RATIO = 1.37 A-D FILE 65 NWFILE 45 SAMPLE 151

409

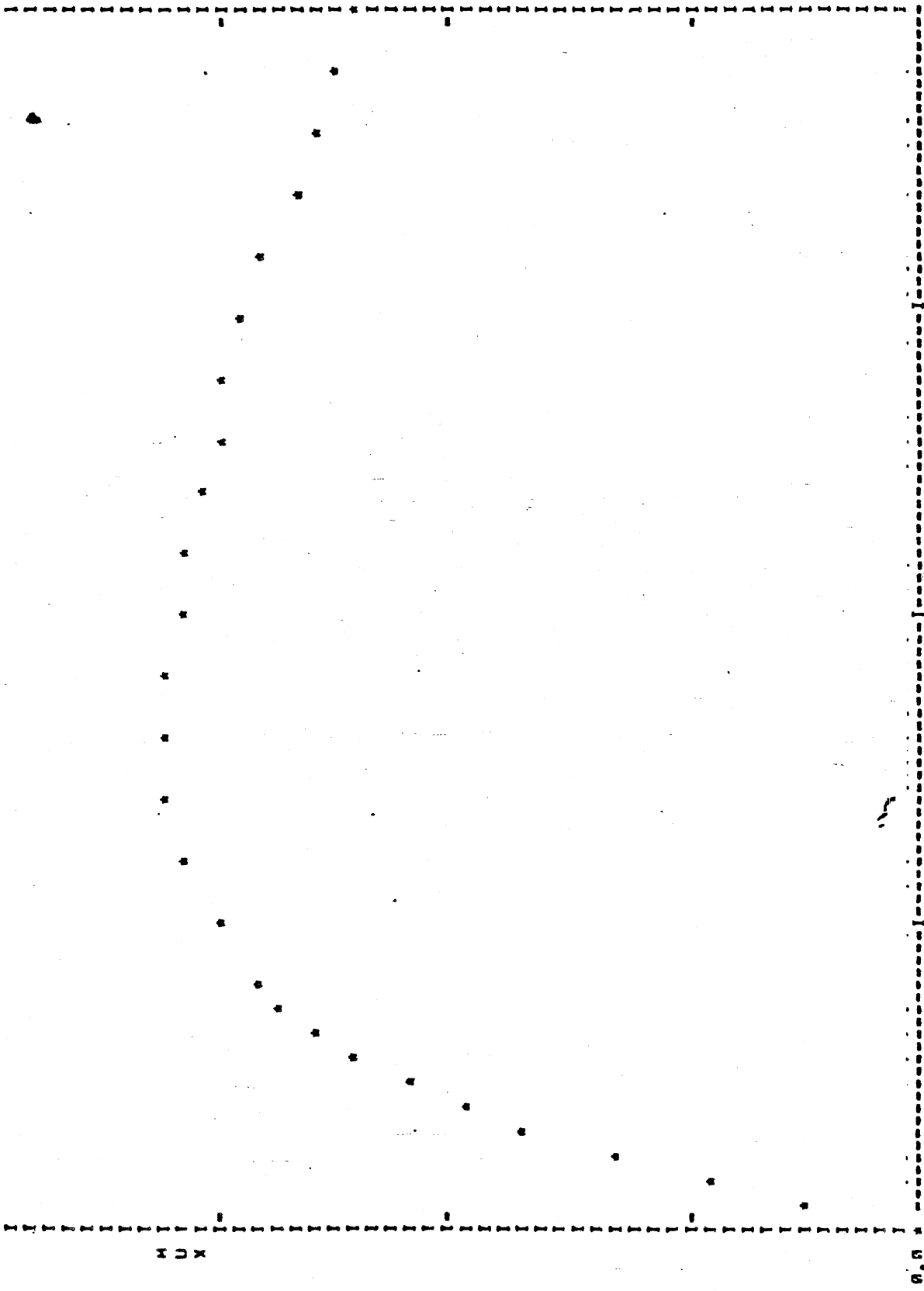
** A-D FILE 86 NEW FILE 86 TEST SAMPLE 152 **
 AVERAGE OF FILE 86 FOR 4 RECORDS. FIRFSTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.12 | 7027.1 | 309.7 |
| 0.04 | 0.23 | 15730.5 | 612.2 |
| 0.06 | 0.33 | 23732.3 | 894.0 |
| 0.08 | 0.42 | 31023.7 | 1114.5 |
| 0.10 | 0.50 | 37412.4 | 1306.8 |
| 0.12 | 0.56 | 43162.7 | 1471.6 |
| 0.14 | 0.62 | 48259.1 | 1611.5 |
| 0.16 | 0.66 | 52795.9 | 1727.5 |
| 0.18 | 0.70 | 56792.7 | 1819.3 |
| 0.20 | 0.72 | 60262.7 | 1884.9 |
| 0.25 | 0.76 | 67889.7 | 1992.8 |
| 0.30 | 0.79 | 74936.5 | 2069.8 |
| 0.35 | 0.81 | 81614.6 | 2117.4 |
| 0.40 | 0.82 | 88019.2 | 2140.9 |
| 0.45 | 0.81 | 94129.8 | 2130.1 |
| 0.50 | 0.80 | 99291.6 | 2120.0 |
| 0.55 | 0.79 | 102121.3 | 2095.2 |
| 0.60 | 0.78 | 101878.1 | 2067.3 |
| 0.65 | 0.77 | 98630.3 | 2037.1 |
| 0.70 | 0.75 | 92388.5 | 1997.4 |
| 0.75 | 0.73 | 83859.6 | 1946.6 |
| 0.80 | 0.71 | 71686.5 | 1886.7 |
| 0.85 | 0.68 | 57930.1 | 1823.5 |
| 0.90 | 0.66 | 40131.7 | 1759.5 |
| 0.95 | 0.64 | 39710.3 | 1690.4 |
| 1.00 | 0.61 | 32718.9 | 1627.5 |

TOAV = 32718.8 LOAD = 2719.8 VEL = 55.0 MPH
 MUPEAK = 0.02 MULOCK = 0.61 RATIO = 1.33

410

FIRESTONE POWER-SHIVE 10.0-20/F. (DAN)



100.00

LONGITUDINAL SLIP

0.00

FZ = 2719.8 VEL = 55.0 MULLOCK = 0.61 MUPEAK = 0.02 RATIO = 1.33 A-D FILE 86 NWFILE 46 SAMPLE 152

411

** A-D FILE 87 NEW FILE 470 TEST SAMPLE 153 **
 AVERAGE OF FILE 87 FOR A RECORDS, FIRESTONE POWER-DRIVE 10.0-20/F (DAND)

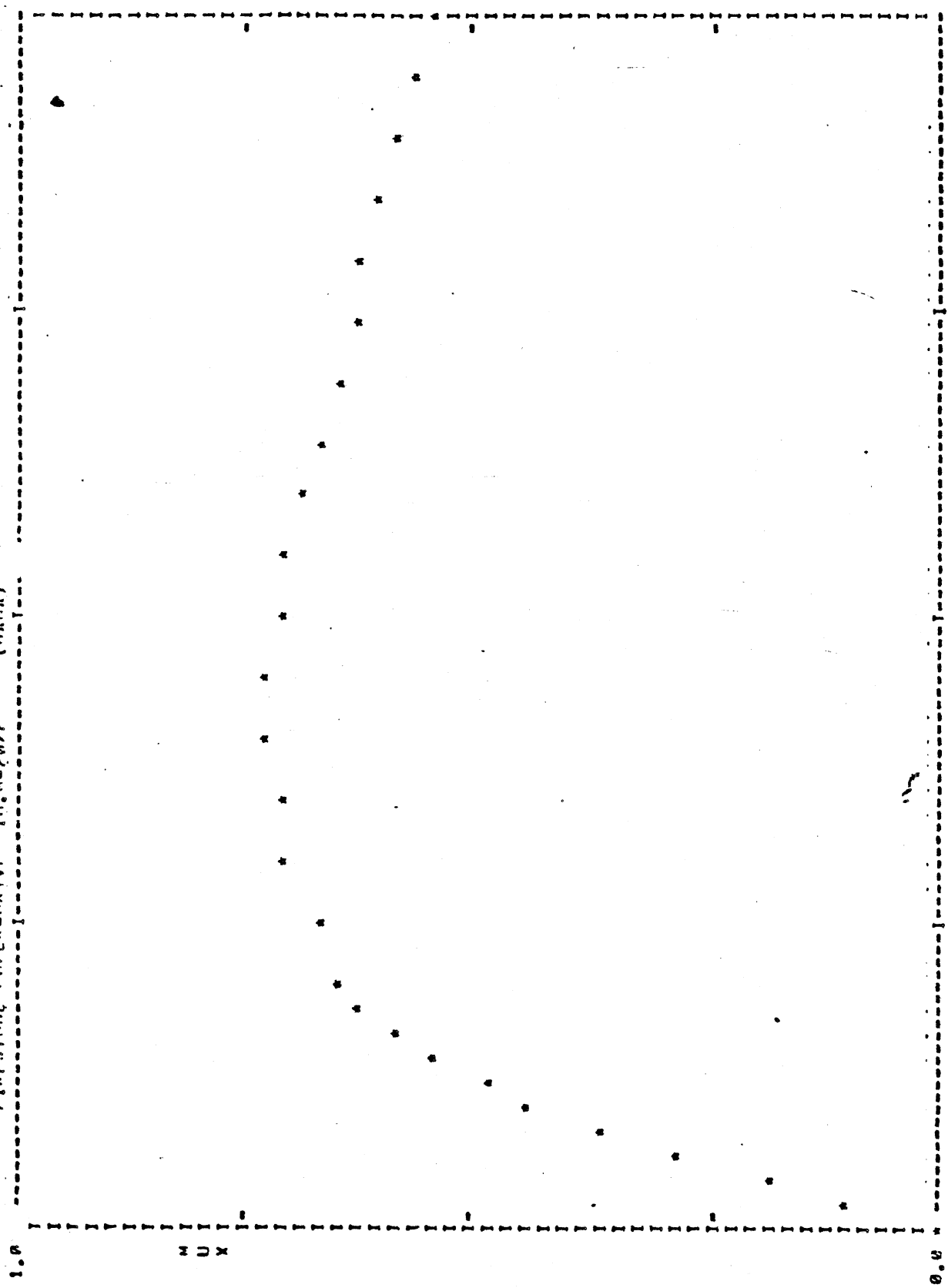
| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 10031.0 | 534.5 |
| 0.04 | 0.20 | 21282.2 | 1043.4 |
| 0.06 | 0.29 | 32630.1 | 1514.2 |
| 0.08 | 0.37 | 42902.5 | 1954.0 |
| 0.10 | 0.44 | 51768.4 | 2332.3 |
| 0.12 | 0.50 | 59244.9 | 2647.9 |
| 0.14 | 0.55 | 65759.8 | 2913.2 |
| 0.16 | 0.59 | 71379.0 | 3128.1 |
| 0.18 | 0.63 | 76176.3 | 3290.4 |
| 0.20 | 0.65 | 80046.5 | 3394.2 |
| 0.25 | 0.68 | 88237.3 | 3568.5 |
| 0.30 | 0.71 | 95657.9 | 3694.1 |
| 0.35 | 0.72 | 102462.0 | 3770.7 |
| 0.40 | 0.73 | 108782.9 | 3799.4 |
| 0.45 | 0.73 | 114396.3 | 3786.2 |
| 0.50 | 0.72 | 118506.8 | 3740.5 |
| 0.55 | 0.71 | 124002.3 | 3692.0 |
| 0.60 | 0.70 | 118586.1 | 3622.0 |
| 0.65 | 0.68 | 110073.0 | 3542.8 |
| 0.70 | 0.66 | 107649.8 | 3451.9 |
| 0.75 | 0.64 | 98375.0 | 3355.7 |
| 0.80 | 0.63 | 87064.9 | 3262.0 |
| 0.85 | 0.61 | 77719.0 | 3173.6 |
| 0.90 | 0.59 | 69967.4 | 3090.8 |
| 0.95 | 0.57 | 63267.7 | 3011.1 |
| 1.00 | 0.56 | 57791.7 | 2935.0 |

TOAV = 57791.7 LOAD = 5406.4 VEL = 40.0 MPH.
 MUPEAK = 0.73 MULLOCK = 0.56 RATIO = 1.31

412

1 W 08 05 1

FIRESTONE POWER-DWTF 10.0-20/F (DATA)



LONGITUDINAL SLIP 100.00

FZ = 5406.4 VEL = 40.0 MULLOCK = 0.56 MUPEAK = 0.73 RATIO = 1.31 A-D FILE 67 NWFILE 07 SAMPLE 153

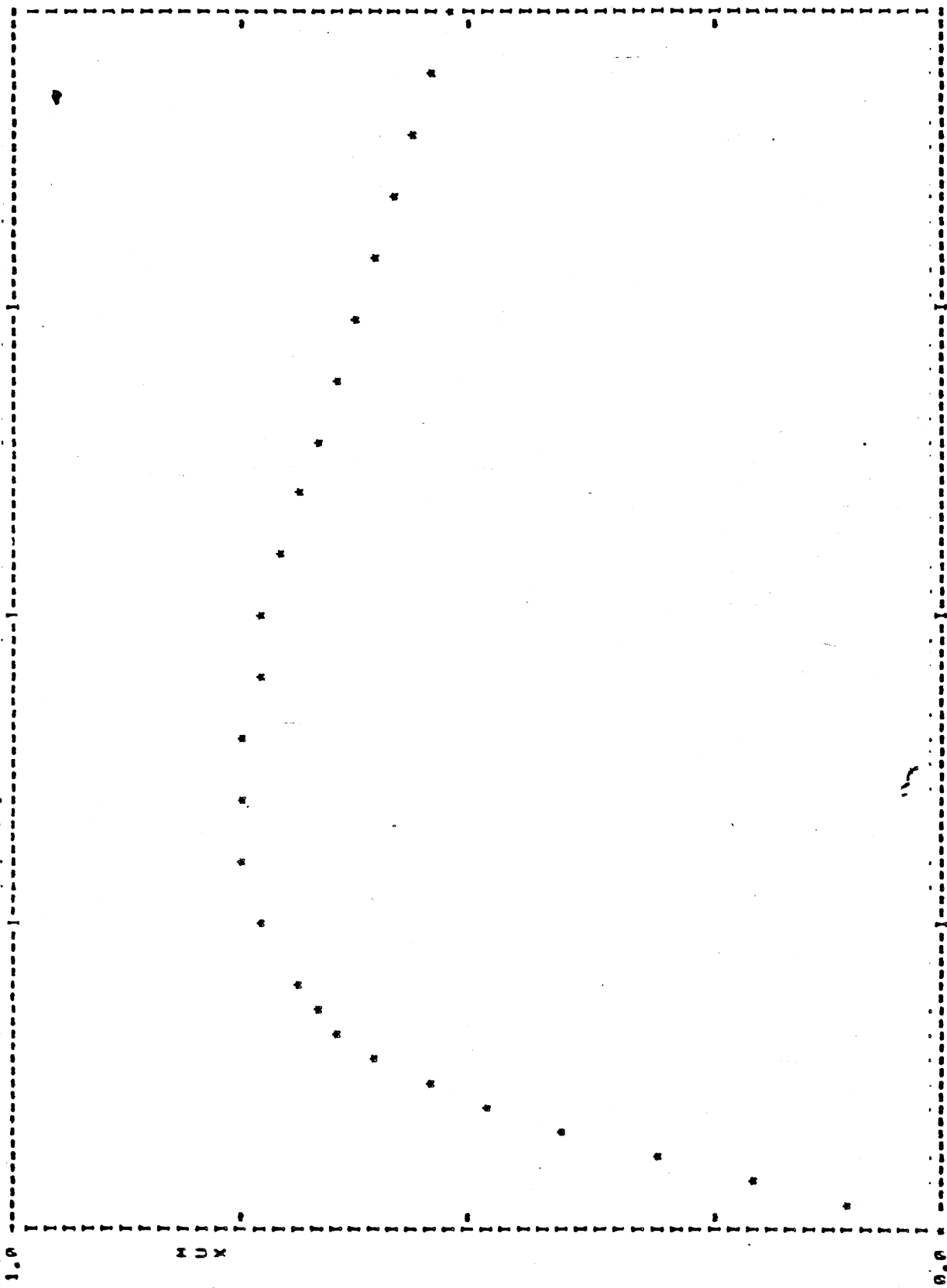
** A-D FILE 8A FOR 6 RECORDS. TEST SAMPLE 154 **
M FILE 4A. FIRESTONE POWER-DRIVE 10.0-20/F (DATA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.11 | 12284.2 | 588.7 |
| 0.04 | 0.22 | 25476.8 | 1154.1 |
| 0.06 | 0.32 | 38045.2 | 1693.9 |
| 0.08 | 0.41 | 49087.8 | 2177.9 |
| 0.10 | 0.49 | 58619.9 | 2587.1 |
| 0.12 | 0.55 | 66778.7 | 2927.6 |
| 0.14 | 0.61 | 73802.3 | 3206.9 |
| 0.16 | 0.65 | 79719.9 | 3420.9 |
| 0.18 | 0.68 | 84488.3 | 3594.8 |
| 0.20 | 0.70 | 88216.3 | 3703.5 |
| 0.25 | 0.73 | 95743.2 | 3848.7 |
| 0.30 | 0.75 | 102408.1 | 3924.5 |
| 0.35 | 0.75 | 108344.8 | 3947.9 |
| 0.40 | 0.75 | 113721.6 | 3934.2 |
| 0.45 | 0.74 | 118765.4 | 3890.3 |
| 0.50 | 0.73 | 123349.7 | 3821.5 |
| 0.55 | 0.72 | 126538.6 | 3740.7 |
| 0.60 | 0.70 | 127342.8 | 3647.9 |
| 0.65 | 0.68 | 124885.0 | 3548.4 |
| 0.70 | 0.66 | 118943.9 | 3441.6 |
| 0.75 | 0.64 | 109488.4 | 3324.2 |
| 0.80 | 0.61 | 96939.8 | 3205.6 |
| 0.85 | 0.59 | 83550.6 | 3094.1 |
| 0.90 | 0.57 | 72745.0 | 2984.0 |
| 0.95 | 0.55 | 63458.0 | 2800.5 |
| 1.00 | 0.53 | 55895.8 | 2607.5 |

TOAV = 55895.8 LOAD = 5428.8 VEL = 55.0 MPH.
MUPEAK = 0.75 MULOCK = 0.53 RATIO = 1.42

414

PIPESTONE POWER-DIAGNOSTIC (DANA)



0.00

LONGITUDINAL SLIP

1.00.00

FZ = 5428.8 VFL = 55.0 MULLOCK = 0.53 MUPEAK = 0.75 RATIO = 1.42 A-D FILE 8A NMFILE 4A SAMPLE 154

415

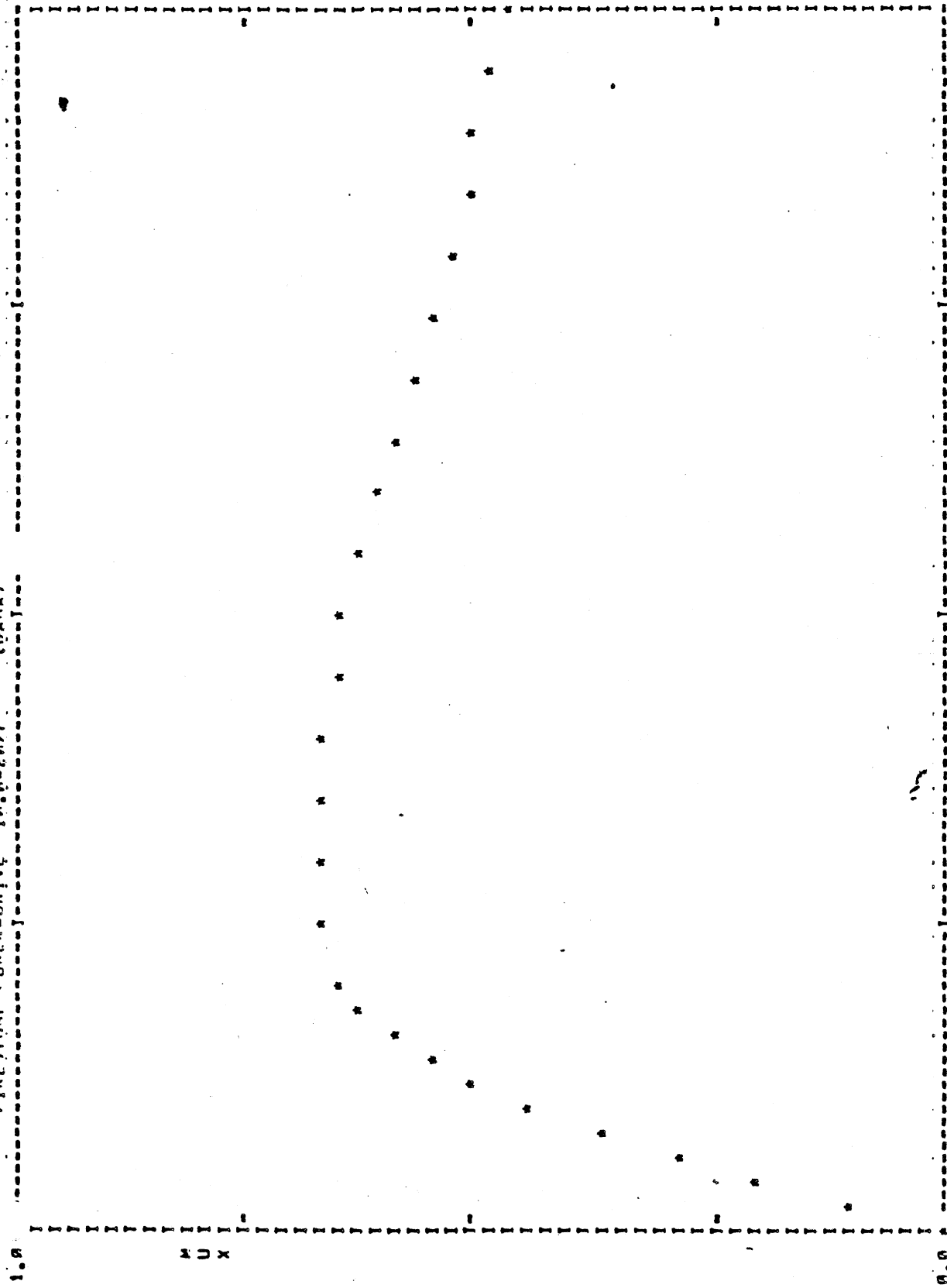
1 W 9 | 1

** A-D FILE 89 EM FILF 40 TEST SAMPLES **
AVERAGE OF FILE 89 FOR 6 RECORDS. FIRSTONE POWER-DRIVE 10.0-20/F (DAMA)

| SLIP | NUX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.10 | 14948.7 | 857.9 |
| 0.04 | 0.20 | 32445.3 | 1659.4 |
| 0.06 | 0.29 | 48596.8 | 2400.3 |
| 0.08 | 0.37 | 62436.0 | 3069.8 |
| 0.10 | 0.45 | 74473.5 | 3650.6 |
| 0.12 | 0.51 | 84822.9 | 4154.9 |
| 0.14 | 0.56 | 93431.2 | 4555.4 |
| 0.16 | 0.60 | 100347.7 | 4860.0 |
| 0.18 | 0.63 | 105898.8 | 5092.6 |
| 0.20 | 0.65 | 109983.2 | 5215.1 |
| 0.25 | 0.67 | 117204.4 | 5362.0 |
| 0.30 | 0.68 | 122803.9 | 5426.5 |
| 0.35 | 0.68 | 127275.3 | 5422.4 |
| 0.40 | 0.67 | 131111.1 | 5370.0 |
| 0.45 | 0.66 | 134595.3 | 5283.0 |
| 0.50 | 0.65 | 137800.9 | 5166.1 |
| 0.55 | 0.63 | 140671.0 | 5030.4 |
| 0.60 | 0.61 | 141659.5 | 4890.9 |
| 0.65 | 0.60 | 139860.2 | 4748.4 |
| 0.70 | 0.58 | 135190.5 | 4602.1 |
| 0.75 | 0.56 | 127035.7 | 4450.0 |
| 0.80 | 0.54 | 115670.3 | 4291.9 |
| 0.85 | 0.52 | 102886.4 | 4139.6 |
| 0.90 | 0.50 | 91063.7 | 4007.8 |
| 0.95 | 0.49 | 82246.0 | 3805.7 |
| 1.00 | 0.47 | 74062.5 | 3773.0 |

TOAV = 74062.5 LOAD = 8319.7 VFL = 55.0 MPH.
MUPEAK = 0.68 MULLOCK = 0.47 RATIO = 1.04

FIRESTONE POWER-OHIVE 10.0-20/F (DANA)



LONGITUDINAL SLIP 1.00.00

0.00

FZ = 8319.7 VEL = 55.0 MULLOCK = 0.47 MUPEAK = 0.68 RATIO = 1.44 A-D FILE 89 NWFILE 49 SAMPLE 155

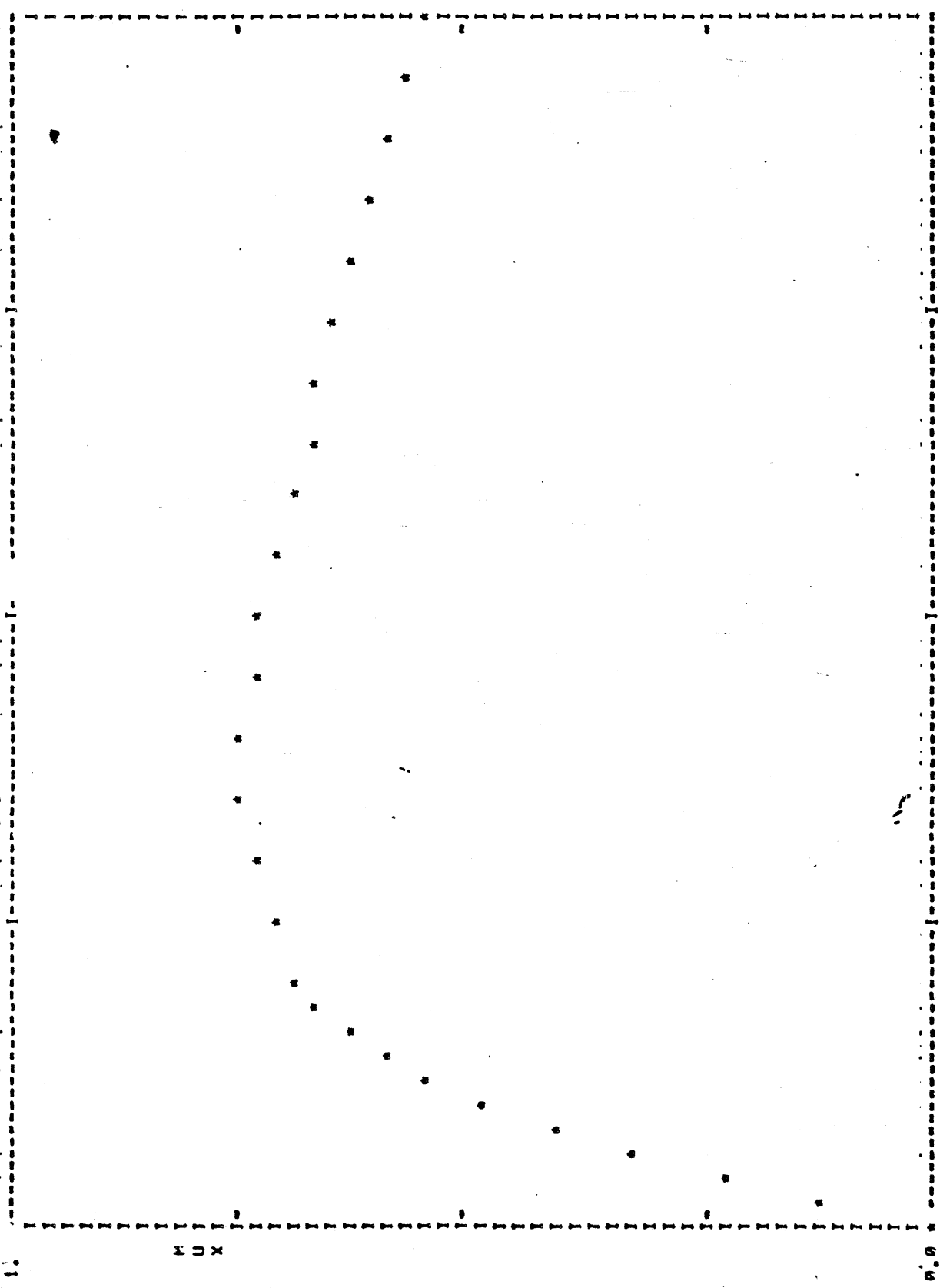
417

** A-D FILE 9M W FILE 50₃ TEST SAMPLE 15A **
 AVERAGE OF FILE 9M FOR 5 RECORDS. FIRROSTONE POWER-DRIVE 10.0-20/F (DANA)

| SLIP | MIX | TORQUE | FX |
|------|------|----------|--------|
| 0.00 | 0.00 | 0.0 | 0.0 |
| 0.02 | 0.12 | 12774.8 | 639.3 |
| 0.04 | 0.22 | 25360.7 | 1212.9 |
| 0.06 | 0.32 | 37340.3 | 1750.3 |
| 0.08 | 0.41 | 48253.2 | 2229.9 |
| 0.10 | 0.49 | 57662.5 | 2603.3 |
| 0.12 | 0.55 | 64512.3 | 2985.6 |
| 0.14 | 0.60 | 70790.6 | 3266.8 |
| 0.16 | 0.64 | 76115.3 | 3485.4 |
| 0.18 | 0.67 | 80532.9 | 3603.3 |
| 0.20 | 0.69 | 84147.0 | 3740.7 |
| 0.25 | 0.72 | 91302.0 | 3901.4 |
| 0.30 | 0.74 | 97660.5 | 3997.1 |
| 0.35 | 0.75 | 103398.6 | 4038.1 |
| 0.40 | 0.75 | 108763.2 | 4032.0 |
| 0.45 | 0.74 | 113725.7 | 3992.3 |
| 0.50 | 0.73 | 117651.7 | 3932.6 |
| 0.55 | 0.72 | 119783.6 | 3850.4 |
| 0.60 | 0.70 | 118844.2 | 3771.9 |
| 0.65 | 0.69 | 115170.0 | 3677.5 |
| 0.70 | 0.67 | 109030.0 | 3573.0 |
| 0.75 | 0.65 | 99900.0 | 3462.6 |
| 0.80 | 0.63 | 89097.3 | 3351.1 |
| 0.85 | 0.61 | 79057.2 | 3200.6 |
| 0.90 | 0.59 | 71217.7 | 3105.0 |
| 0.95 | 0.57 | 60851.5 | 3000.4 |
| 1.00 | 0.55 | 50900.0 | 2955.0 |

TOAV = 58900.0 LOAD = 5537.7 VFL = 40.0 MPH
 MUPEAK = 0.75 MULOPK = 0.55 PATIO = 1.37

FIRESTONE POWER-DRIVE 10.0-20/F (DATA)



100.00

LONGITUDINAL SLIP

0.00

FZ = 5507.7 VFL = 44.0 MULOCK = 0.55 MUPEAK = 0.75 RATIO = 1.37 A-D FILE 90 NWFILE 50 SAMPLE 156

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Table F.1. Tire Codes*

Heavy Bus:

- HB0: Tire H12 on all wheels
- HB1: Tire H18 on all wheels
- HB2: Tire H19 on all wheels

Heavy Truck:

- HT1: Tire H1 on all wheels
- HT2: Tire H4 on all wheels
- HT3: Tire H6 on all wheels

10.00-20/F

Light Van:

- E0: Tire L2 on all wheels (75 psi)
- E1: Tire L10 on all wheels
- E2: Tire L15 on all wheels
- E3: Tire L2 on all wheels (45 psi front, 75 psi rear)
- E4: Tire L2 on front wheels (45 psi) and L11 on rear wheels

Pickup Truck

- F0: Tire L1 on all wheels
- F1: Tire L16 on all wheels
- F2: Tire L13 on all wheels
- F3: Tire L1 on all wheels (45 psi front, 75 psi rear)

*Tires identified as per codings presented in Table 3.1.
Recommended inflation pressures except as indicated.

Table F.2. Dictionary of Metrics for Simulated Trapezoidal and Sinusoidal Steer Maneuvers.

Trapezoidal Steer

| | |
|---------|---------------------------------------------------------------------------------------------------------------------|
| STR4: | Maximum steering wheel angle (deg) |
| BETAMX: | Maximum absolute sideslip angle during the 2-second time period (t), beginning at the time of steering input (rad.) |
| BETDMX: | Maximum absolute value of the rate of change of sideslip angle during the time period t (rad/sec). |
| CUVRAT: | Average path curvature ratios = $(1/R)_{av}/(1/R)_0$ |

where

$$\left(\frac{1}{R}\right)_{av} = \frac{1}{2} \int_{t_4}^{t_4+2} \left(\frac{1}{R}\right) dt \cong \frac{1}{2s_f} \sum_{i=1}^{2s_f} \left(\frac{1}{R}\right)_i$$

$$\left(\frac{1}{R}\right)_0 = \left.\frac{1}{R}\right|_{t_4} \cong \left(\frac{1}{R}\right)_i, \quad i=0$$

and

t_4 is the time of the steering input

t_4+1 is the time 2 seconds after the steering input

$\left(\frac{1}{R}\right)_{av}$ is the average path curvature over the above defined interval $[t_4, t_4+1]$

$\left(\frac{1}{R}\right)_0$ is the path curvature at t_0 .

Table F.2 (Cont.)

- AYMAX: Maximum lateral acceleration over the entire maneuver time interval (g's).
- RMAX: Maximum yaw rate over the entire maneuver time interval (rad/sec).
- PHIMAX: Maximum roll angle over the entire maneuver time interval (deg).

Sinusoidal Steer

- STR5: Maximum steering wheel angle (deg).
- AYMAX: Maximum lateral acceleration over the entire maneuver time interval (g's).
- DEL: Lateral deviation of the vehicle position from the "desired" 12-ft lane change at the completion of the maneuver (ft).
- BETAMAX: Maximum absolute value of sideslip angle during the time period t (rad).
- DELPSI: Vehicle heading angle at the completion of the maneuver (rad).
- UIN: Initial velocity (mph).
- PHIMAX: Maximum roll angle over the entire maneuver time interval (deg).

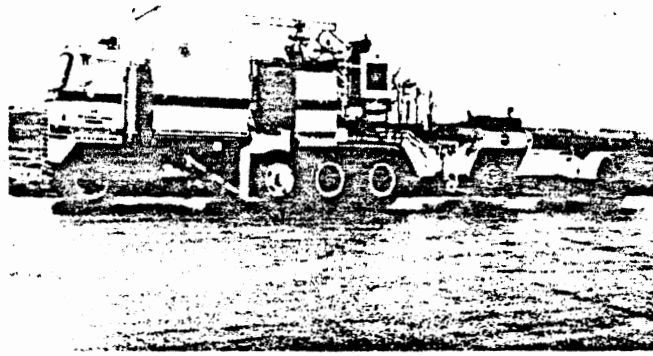


Fig. 1: HSRI mobile traction dynamometer for truck tires

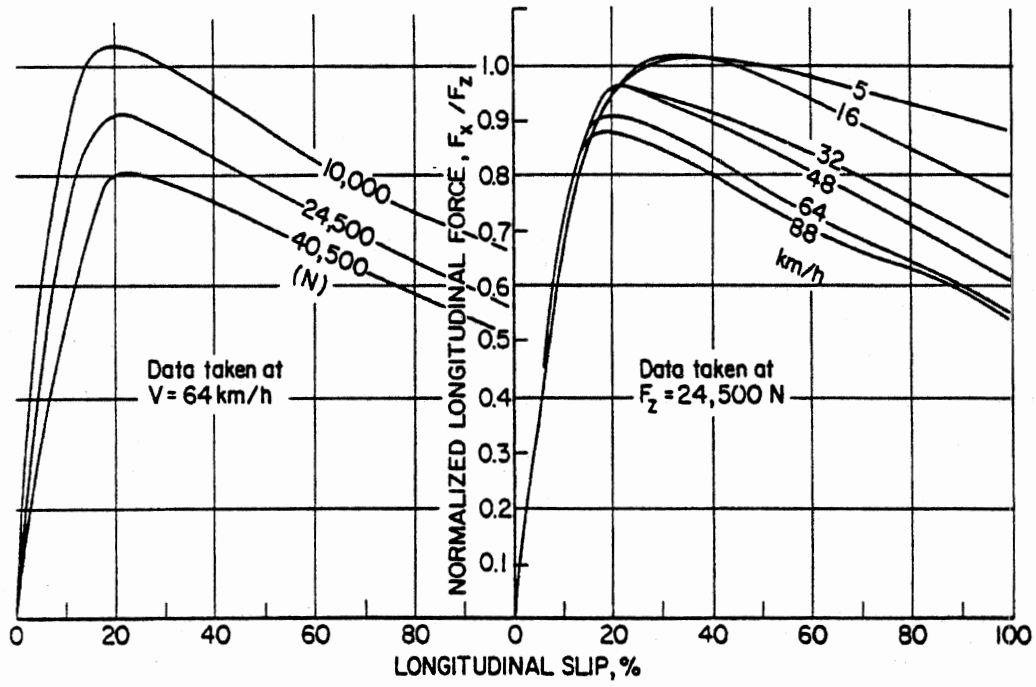


Fig. 2: Typical load and velocity influences on the F_x/F_z versus slip behavior of a 10.00 x 20/F tire, as measured on a dry asphalt surface.

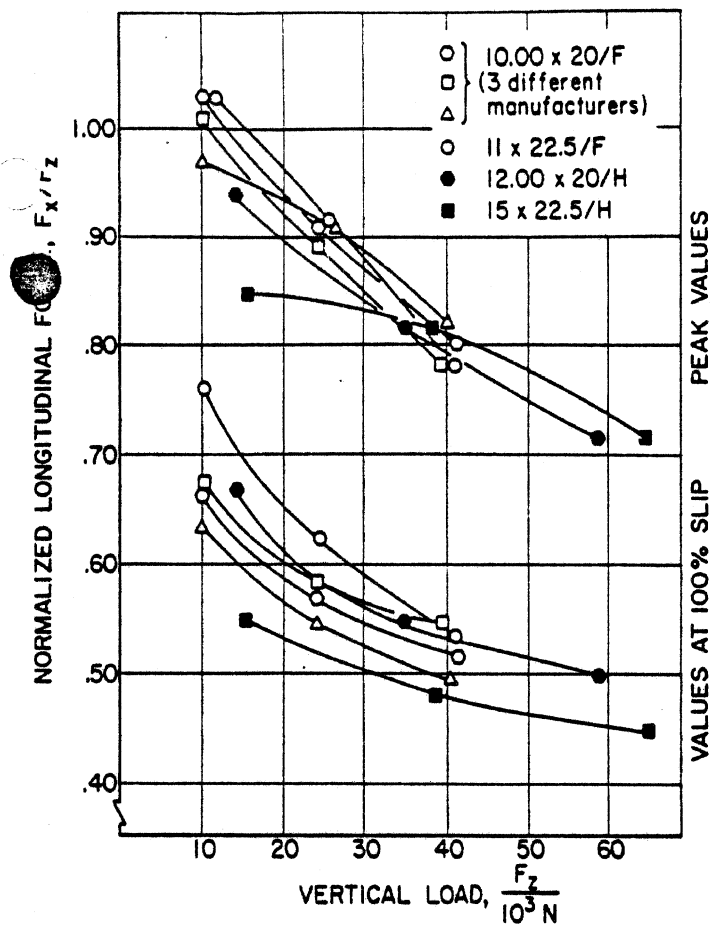


Fig. 3: Load sensitivity in the peak and slide traction of a six-tire sample on dry asphalt. All tests run at 64 km/h.

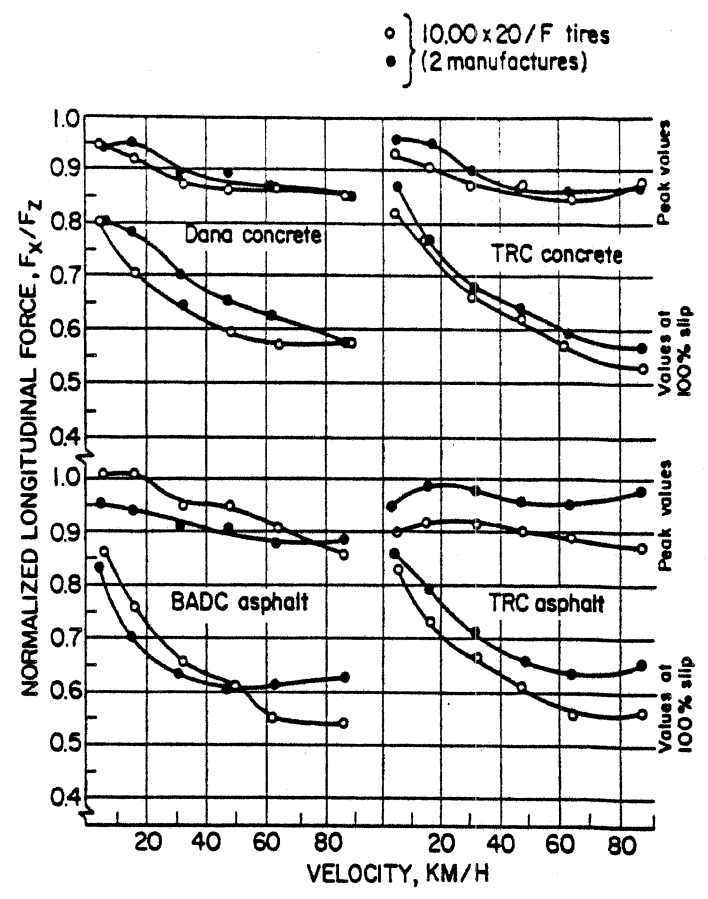


Fig. 5: The differing influence of pavement surface on the velocity sensitivities of two tires.

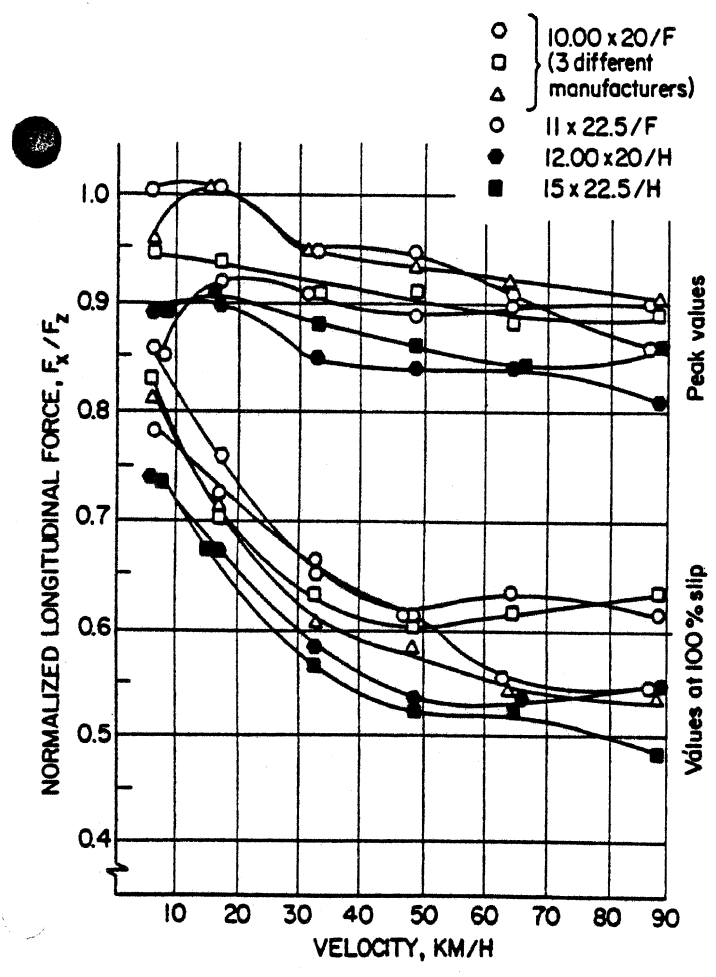


Fig. 4: Velocity sensitivity of the peak and slide traction values for a six-tire sample on dry asphalt. All tires operated at their respective T & RA rated load.

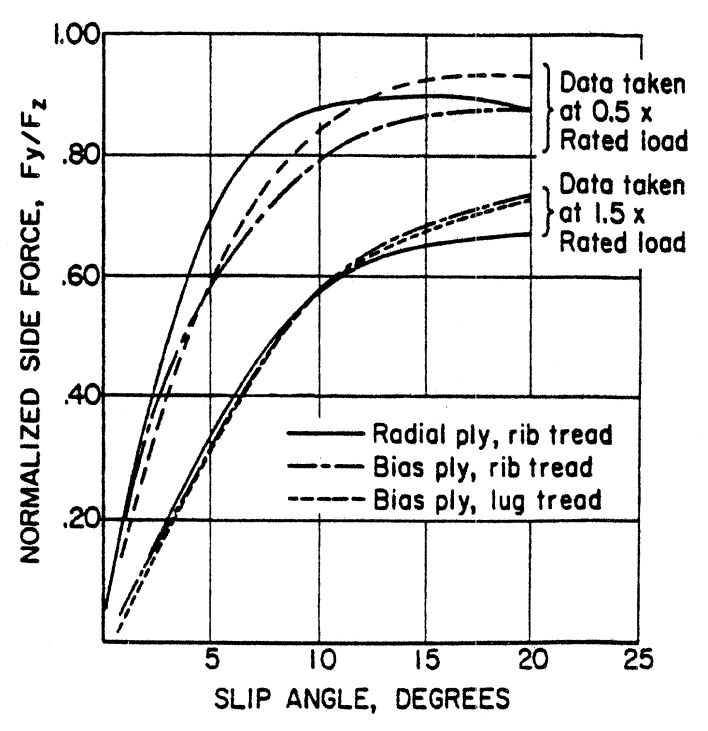


Fig. 6: Typical load sensitivities in the side force response of a sample of 10.00 x 20 tires tested at 32 km/h on a dry concrete surface.

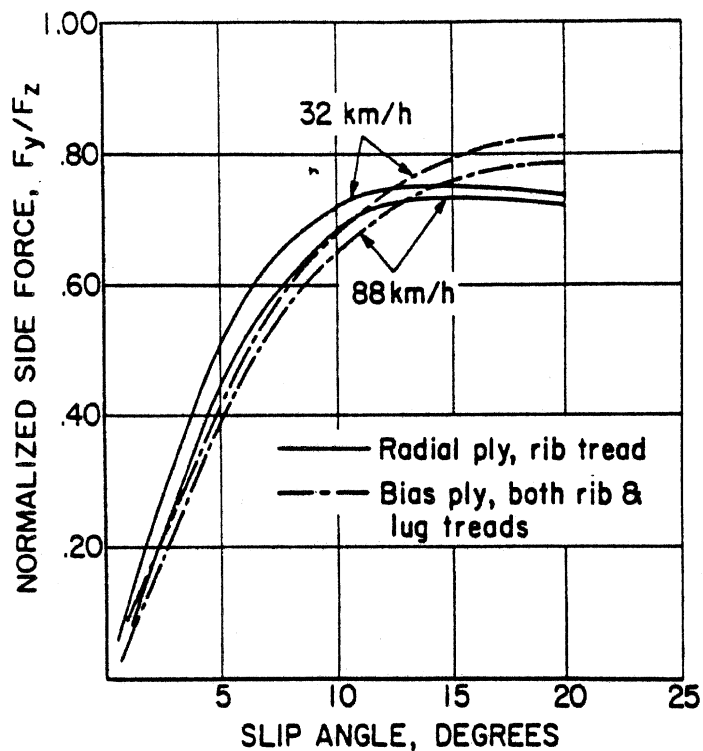


Fig. 7: Typical velocity sensitivities in the side force response of a sample of 10.00 x 20 tires tested at the T & RA rated load on a dry concrete surface.

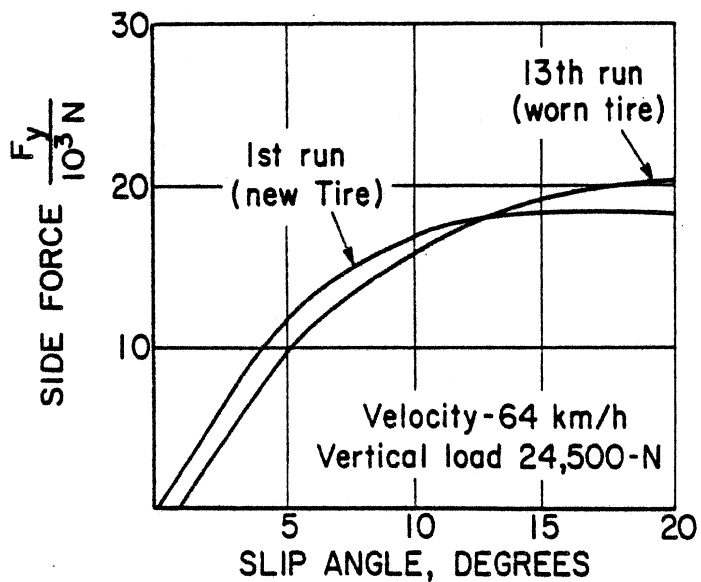


Fig. 8: Changing side force behavior of a 10.00 x 20 tire as a result of test-induced wear.

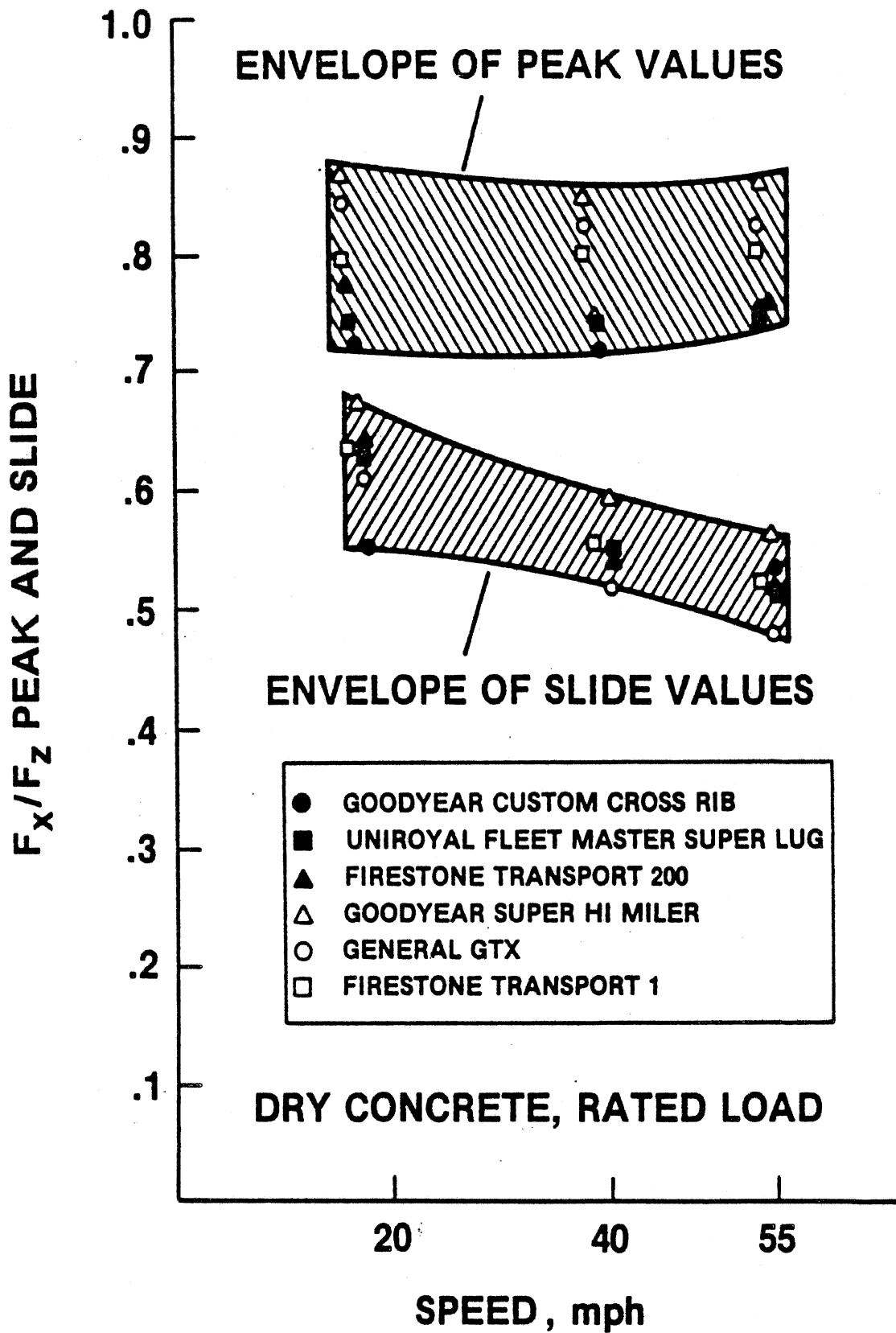


Figure 12. Peak and slide values versus speed for bias-ply tires at rated load on dry concrete.

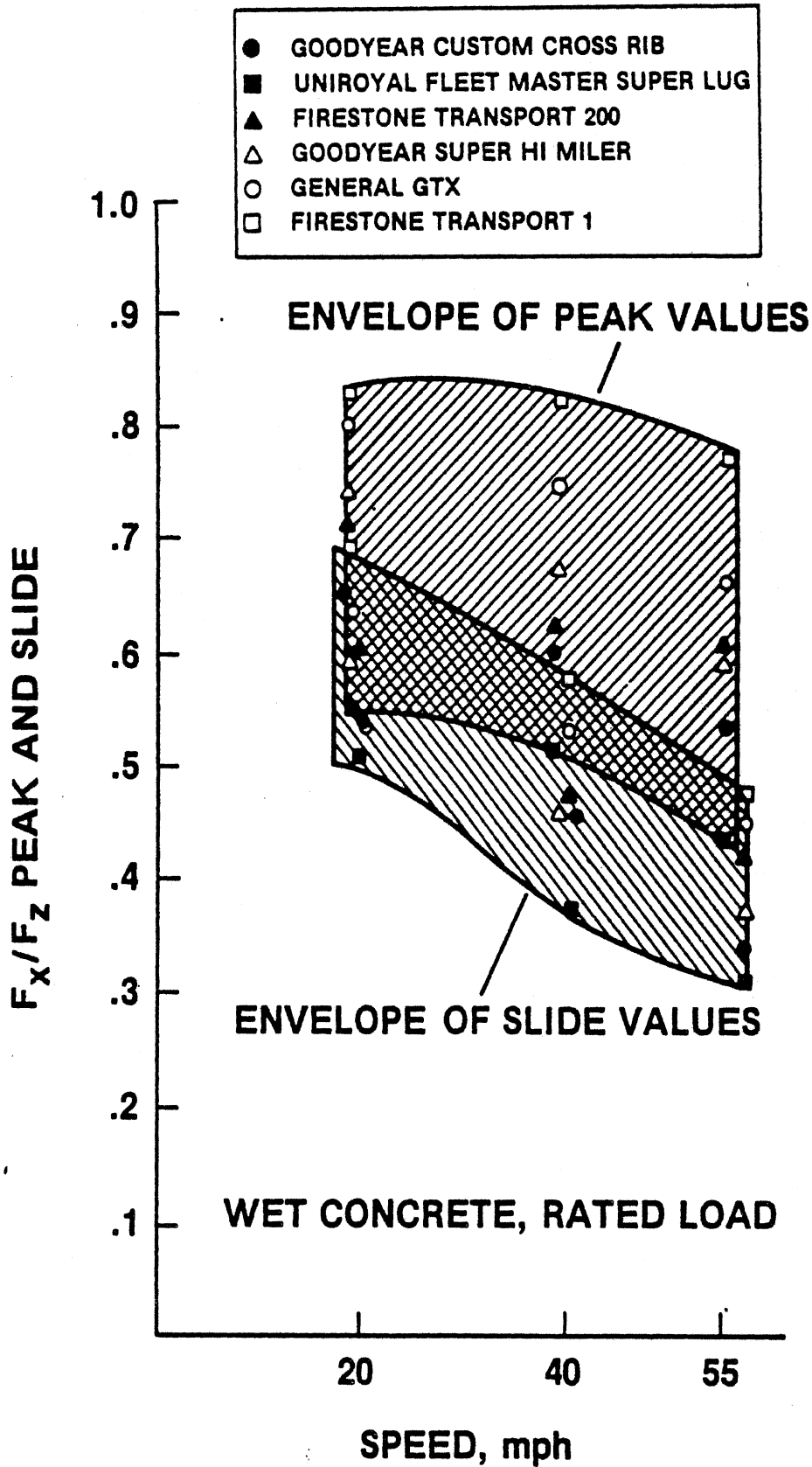


Figure 14. Peak and slide values versus speed for bias-ply tires at rated load on wet concrete.

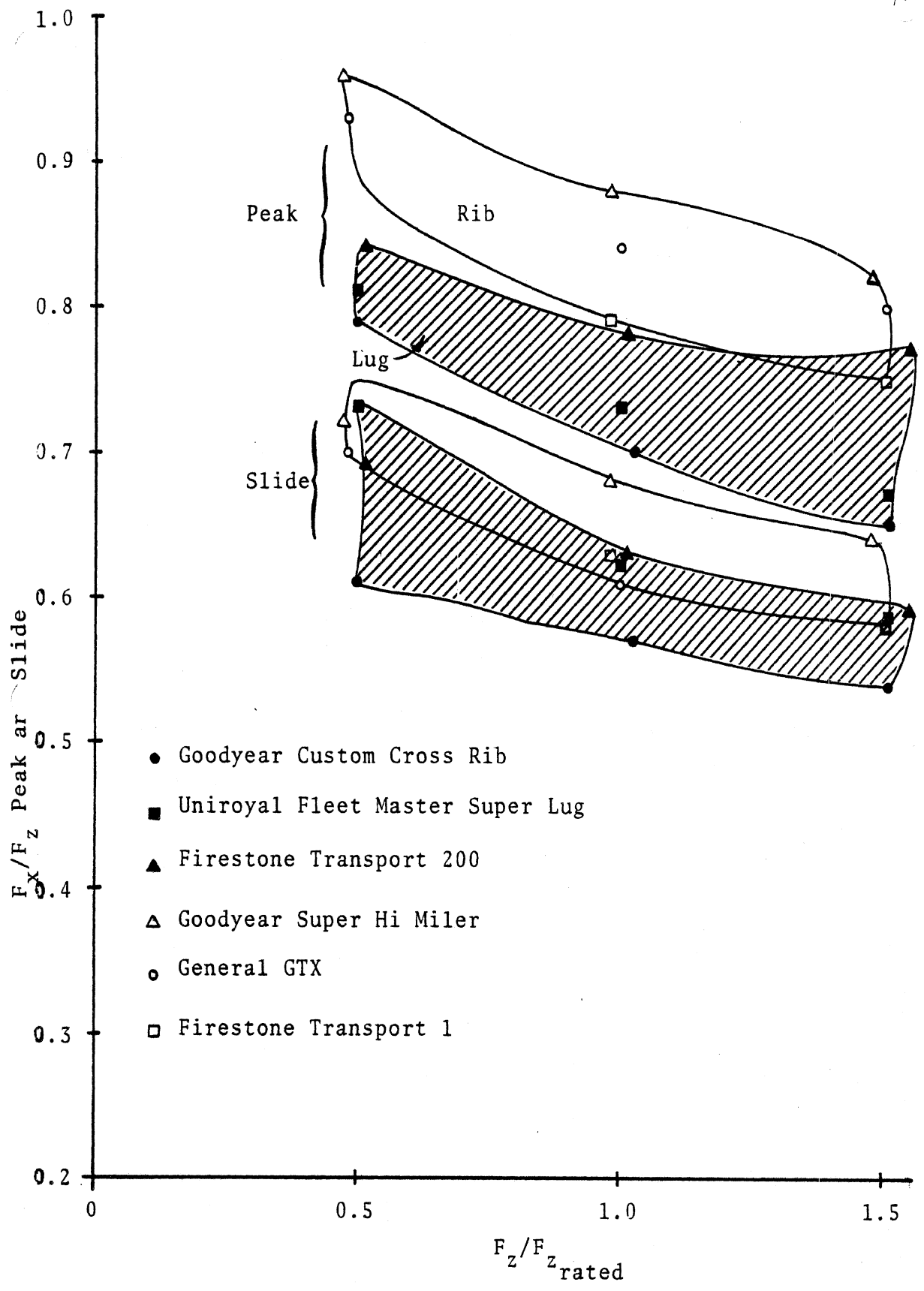


Figure 16. Peak and slide values versus load for bias-ply tires at 20 mph on dry concrete.

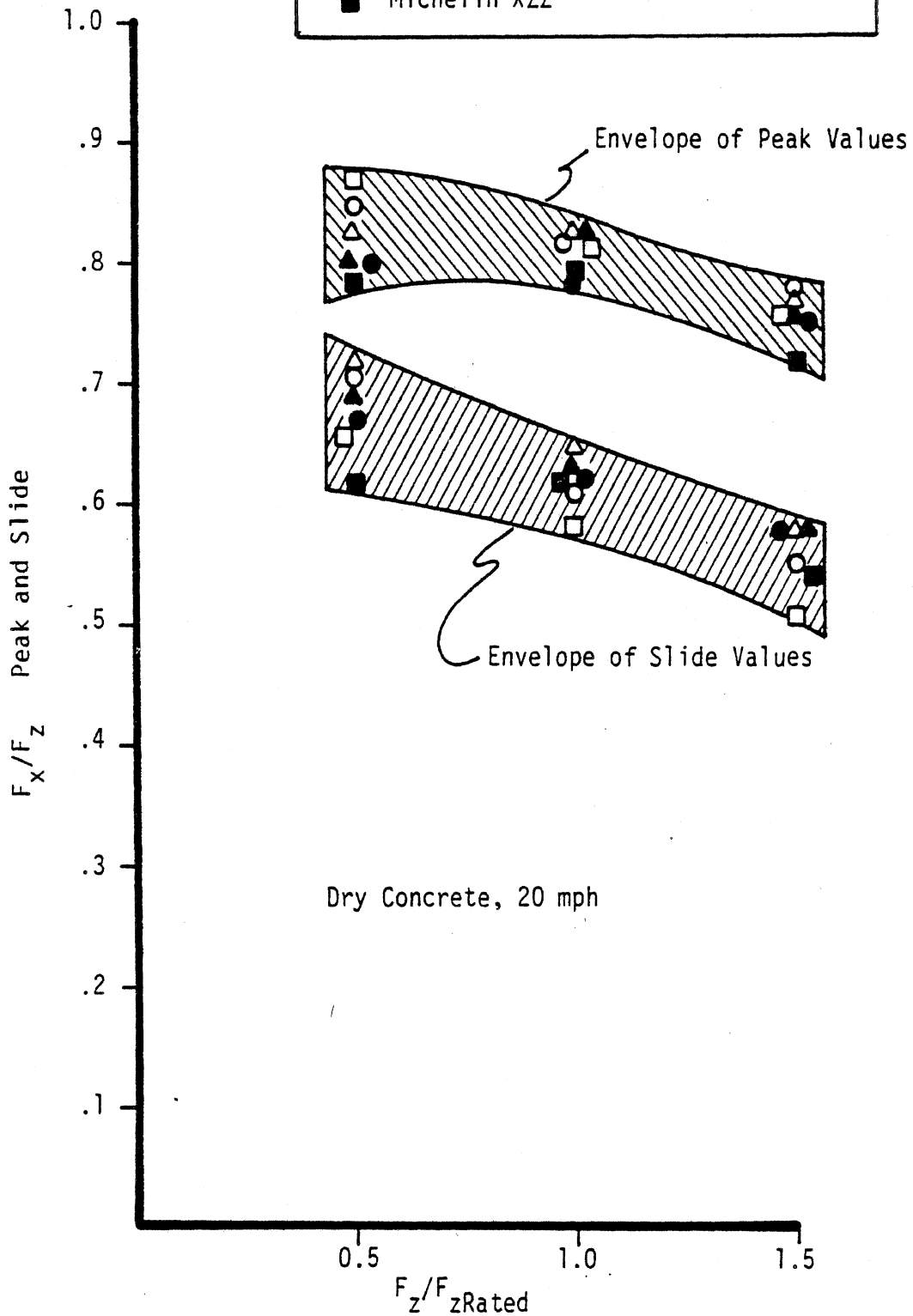


Figure 17. Peak and slide values versus load for radial tires at 20 mph on dry concrete.

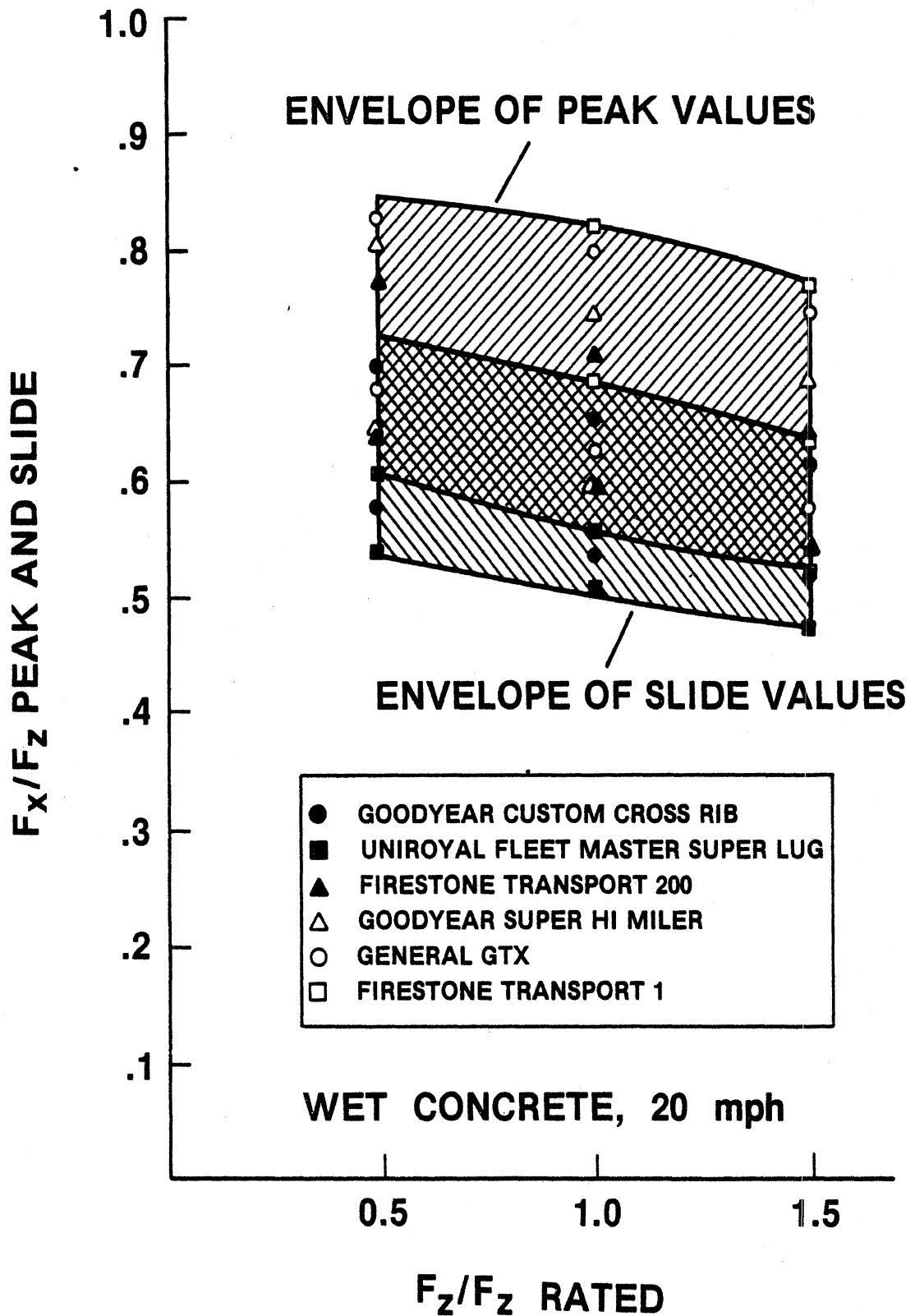


Figure 18. Peak and slide values versus load for bias-ply tires at 20 mph on wet concrete.

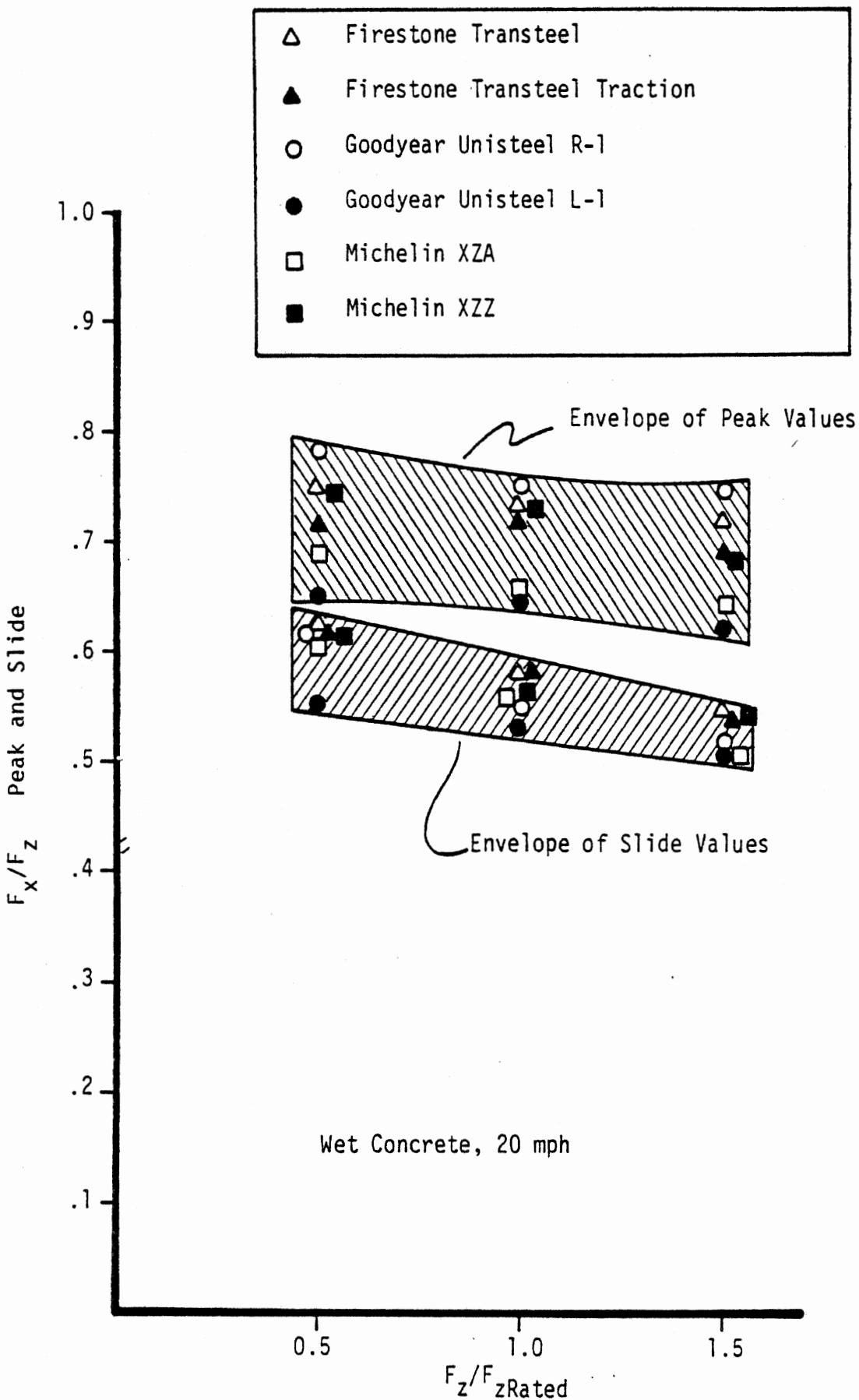


Figure 19. Peak and slide values versus load for radial tires at 20 mph on wet concrete.

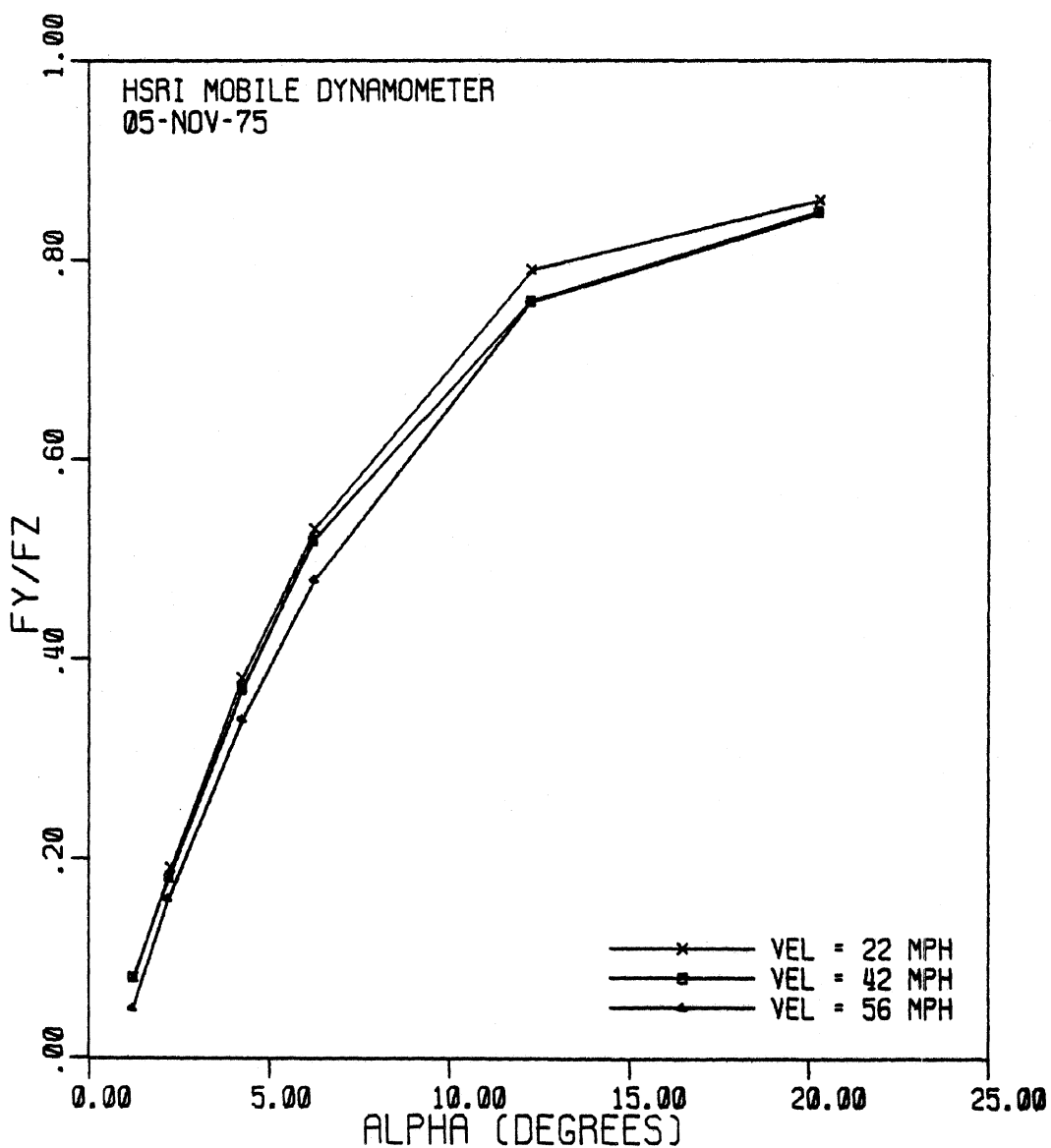


Figure C-1. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a dry Portland cement concrete surface. Tire load was 5527 pounds.

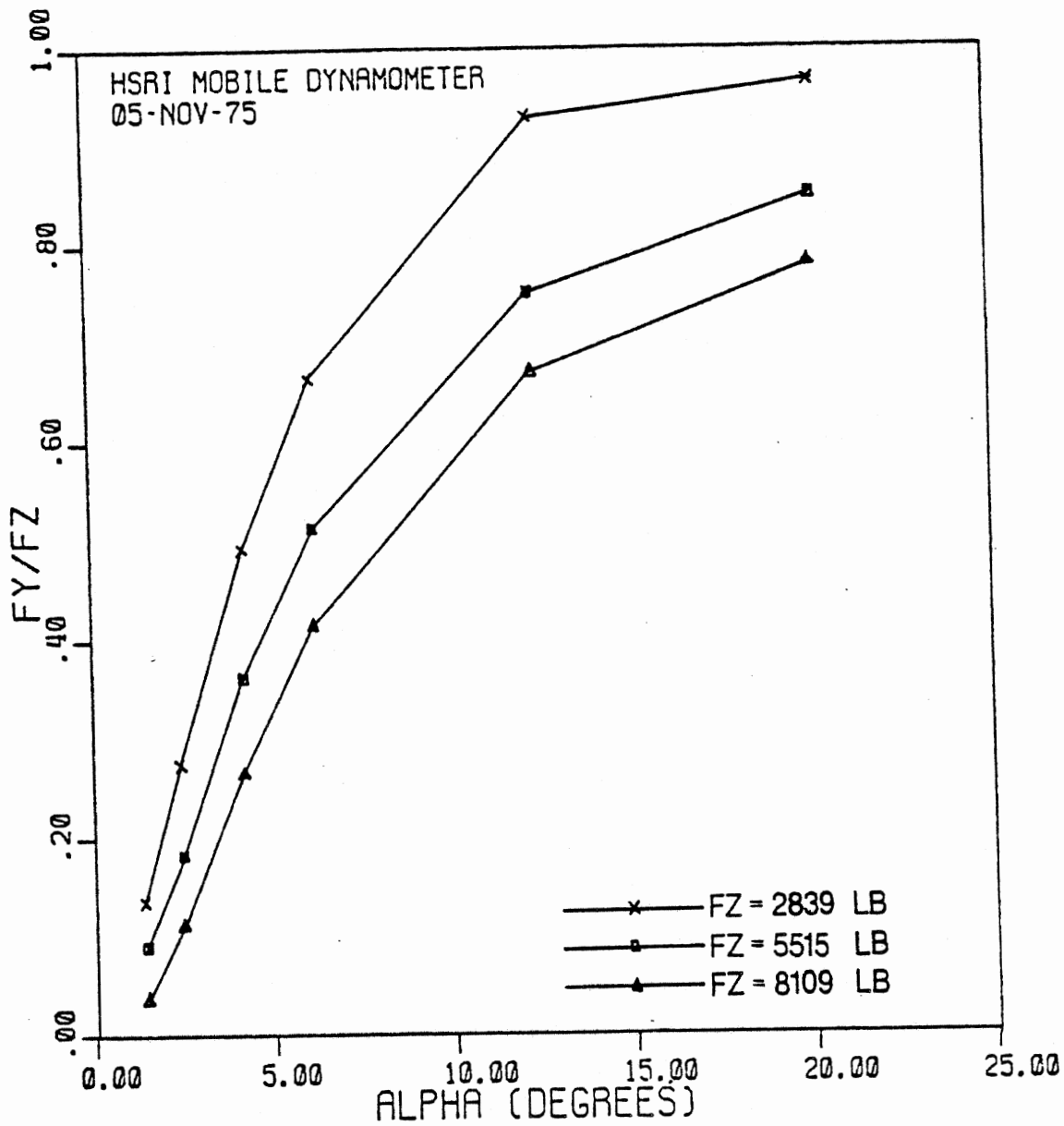


Figure C-2. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times R&RA rated load. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a dry Portland cement concrete surface. Nominal vehicle speed was 40 mph.

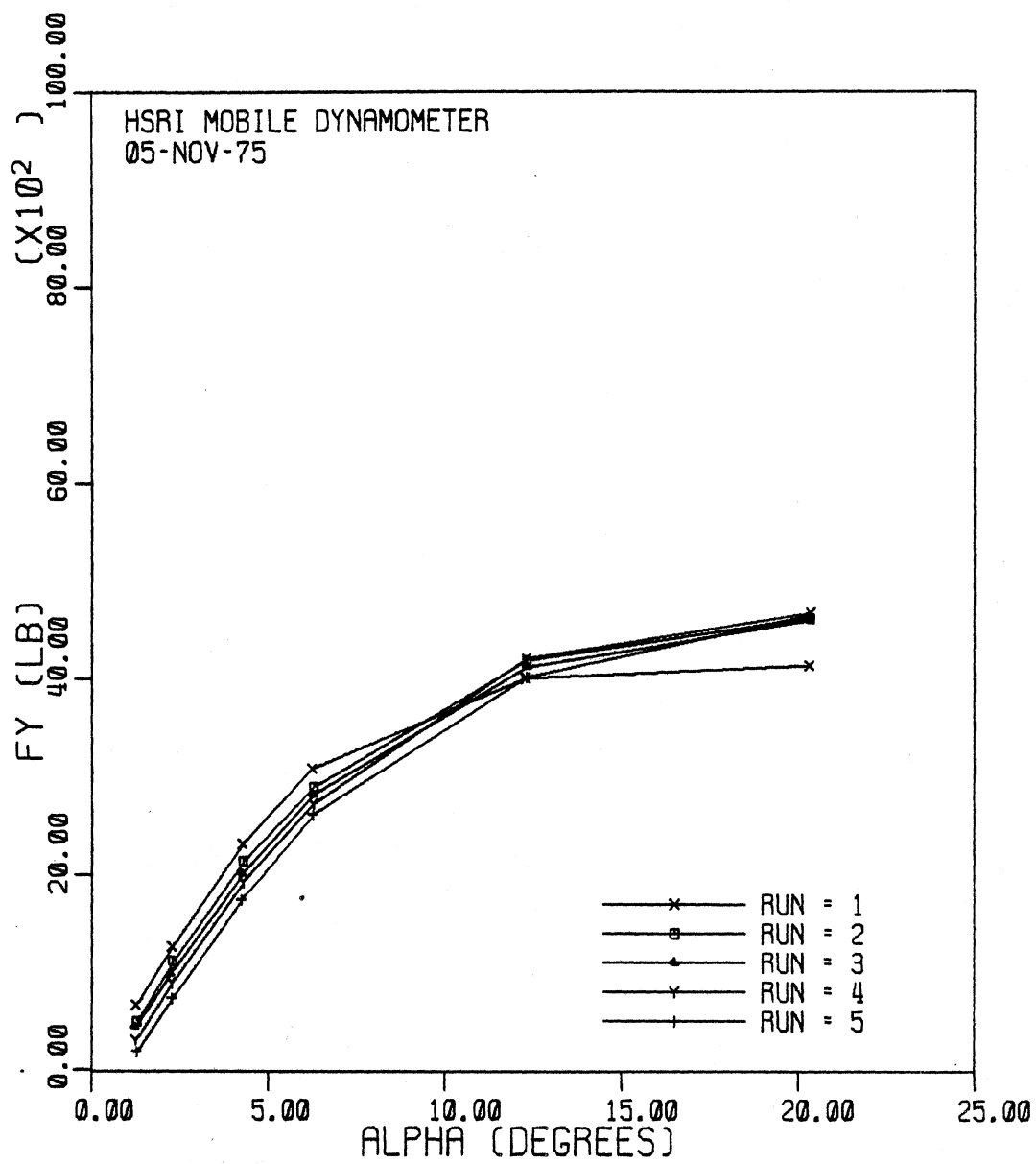


Figure C-3. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a dry Portland cement concrete surface.

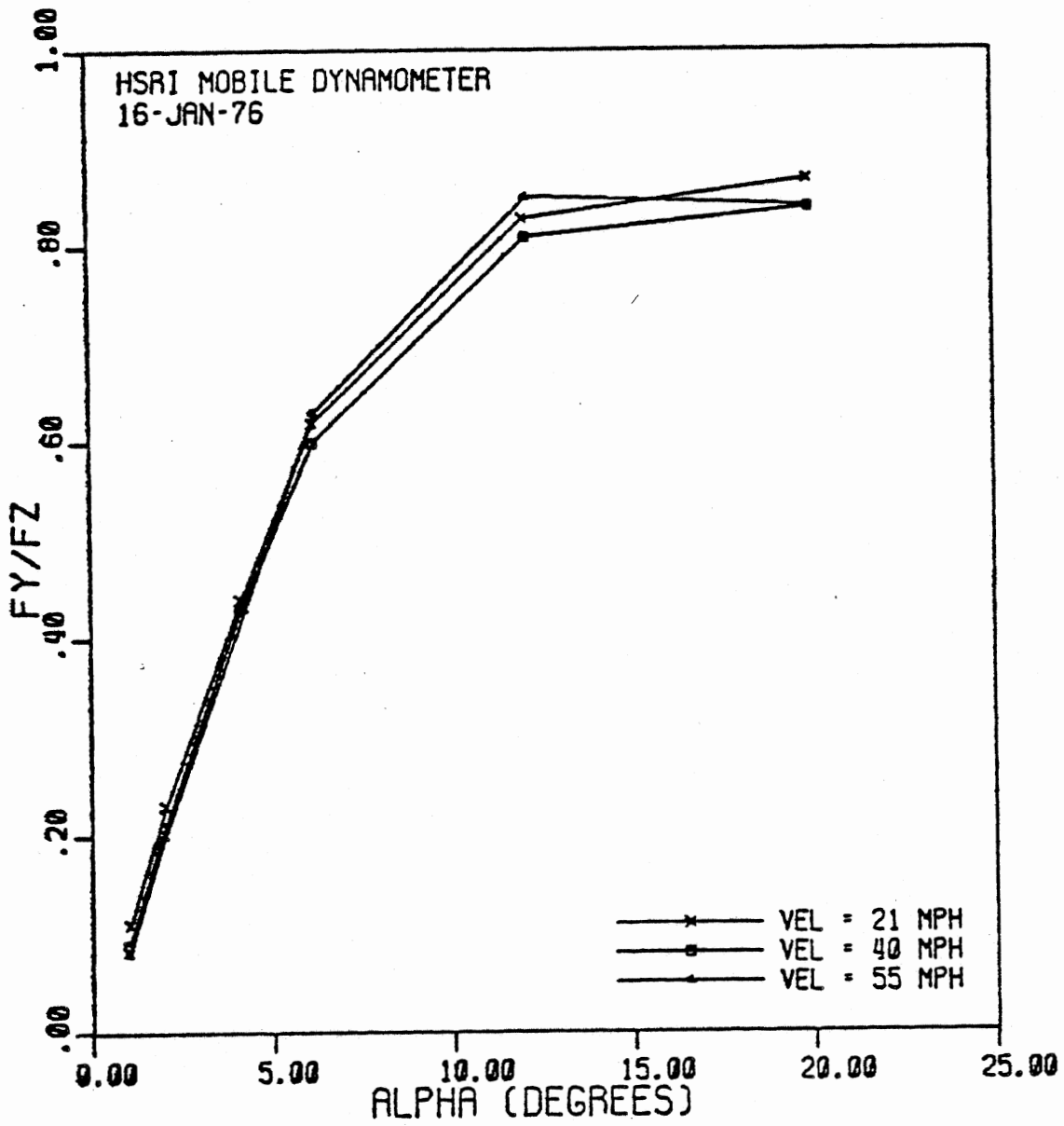


Figure C-4. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a wet Portland cement concrete surface. Tire load was 4867 pounds.

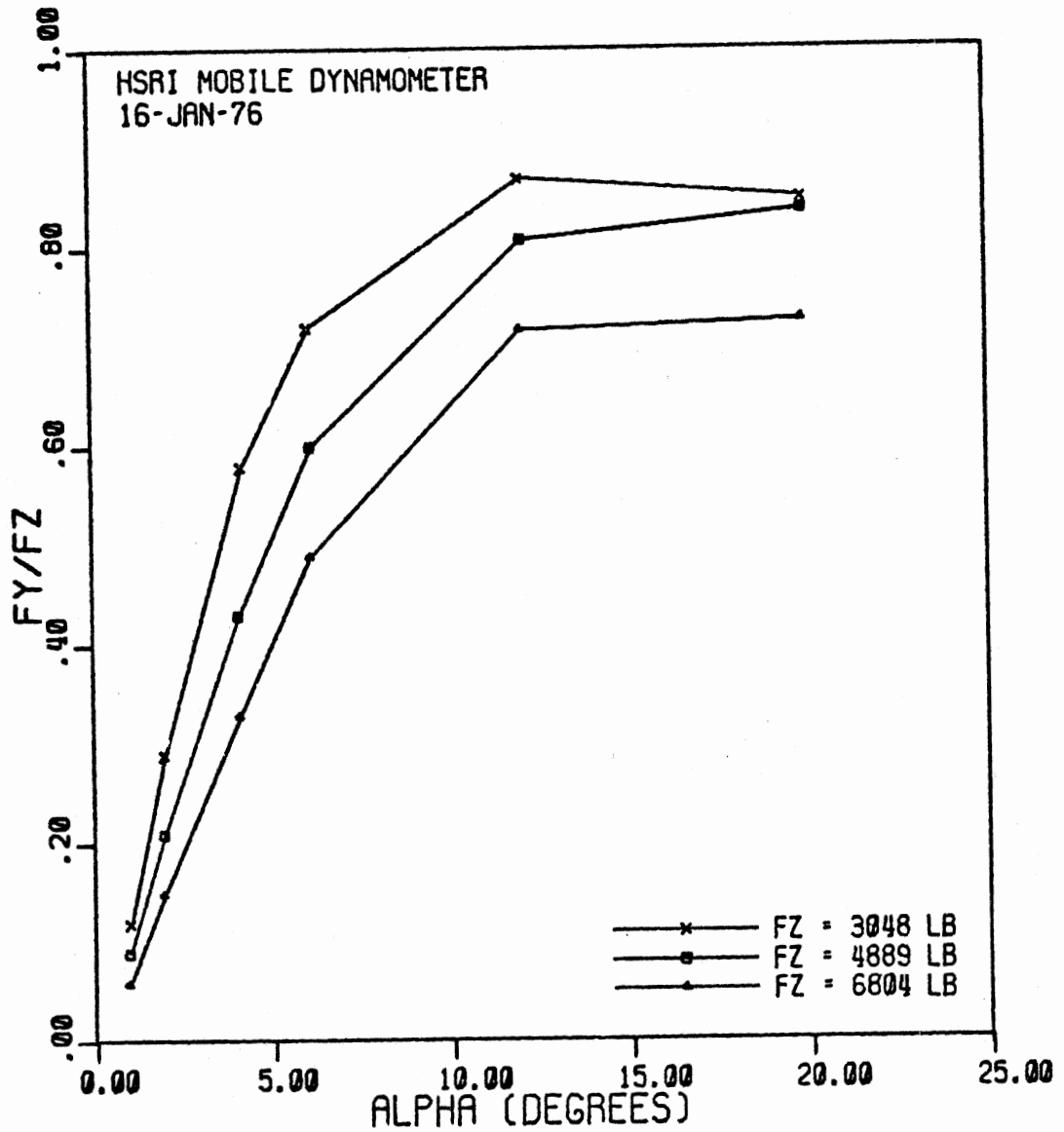


Figure C-5. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

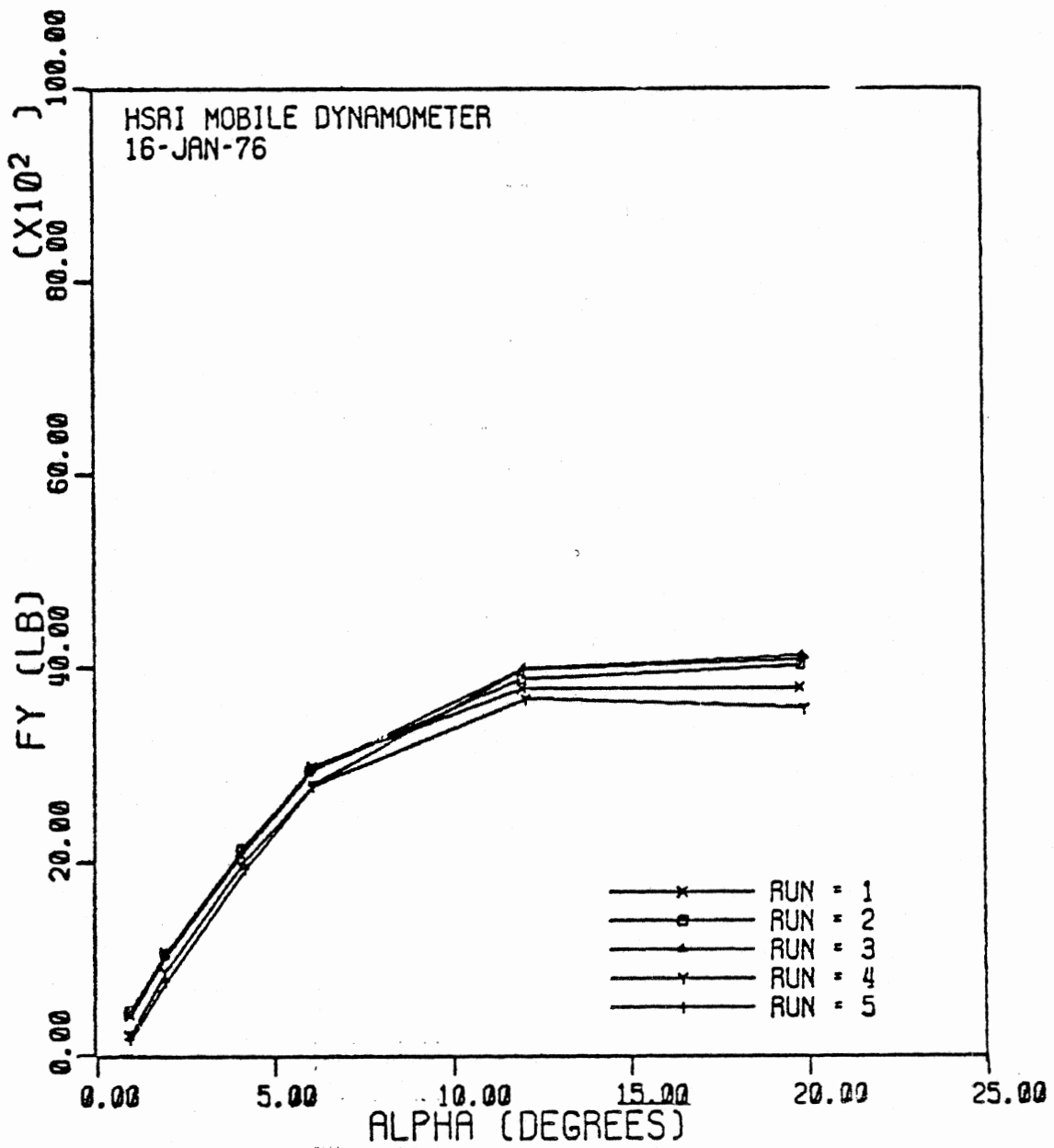


Figure C-6. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 1 tires were tested on a wet Portland cement concrete surface.

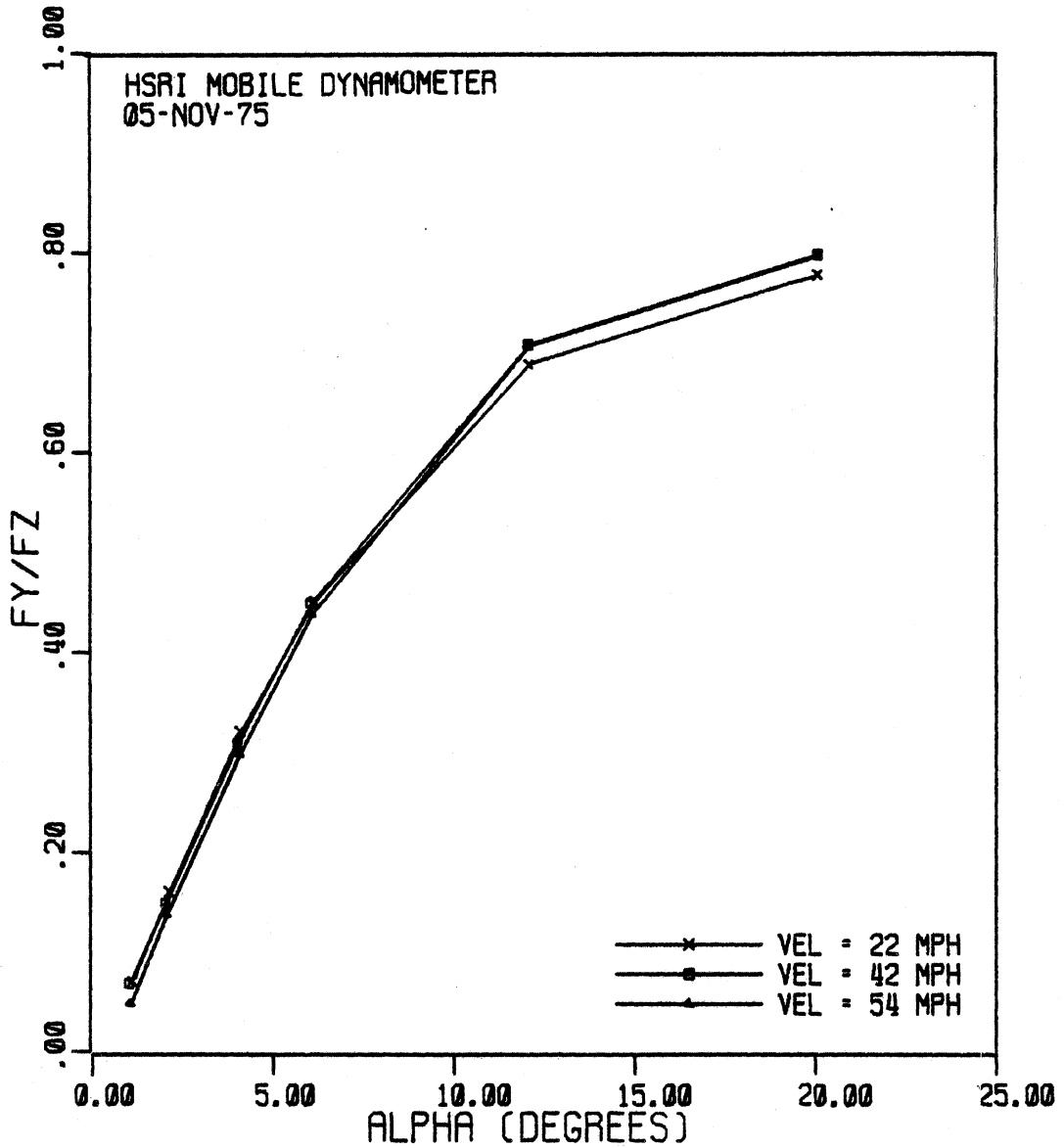


Figure C-7. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a dry Portland cement concrete surface. Tire load was 5437 pounds.

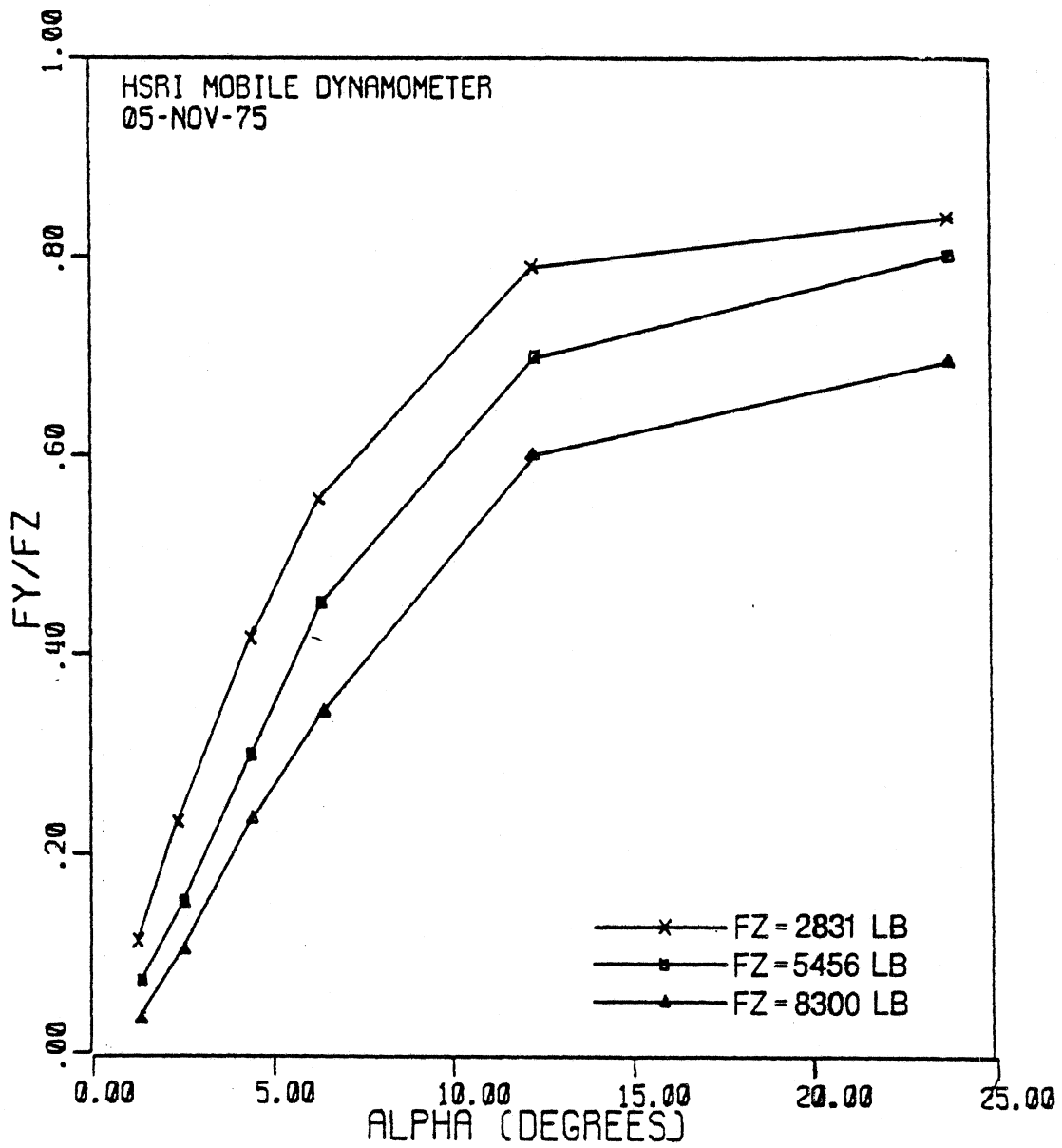


Figure C-8. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times R&RA rated load. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a dry concrete surface. Nominal vehicle speed was 40 mph.

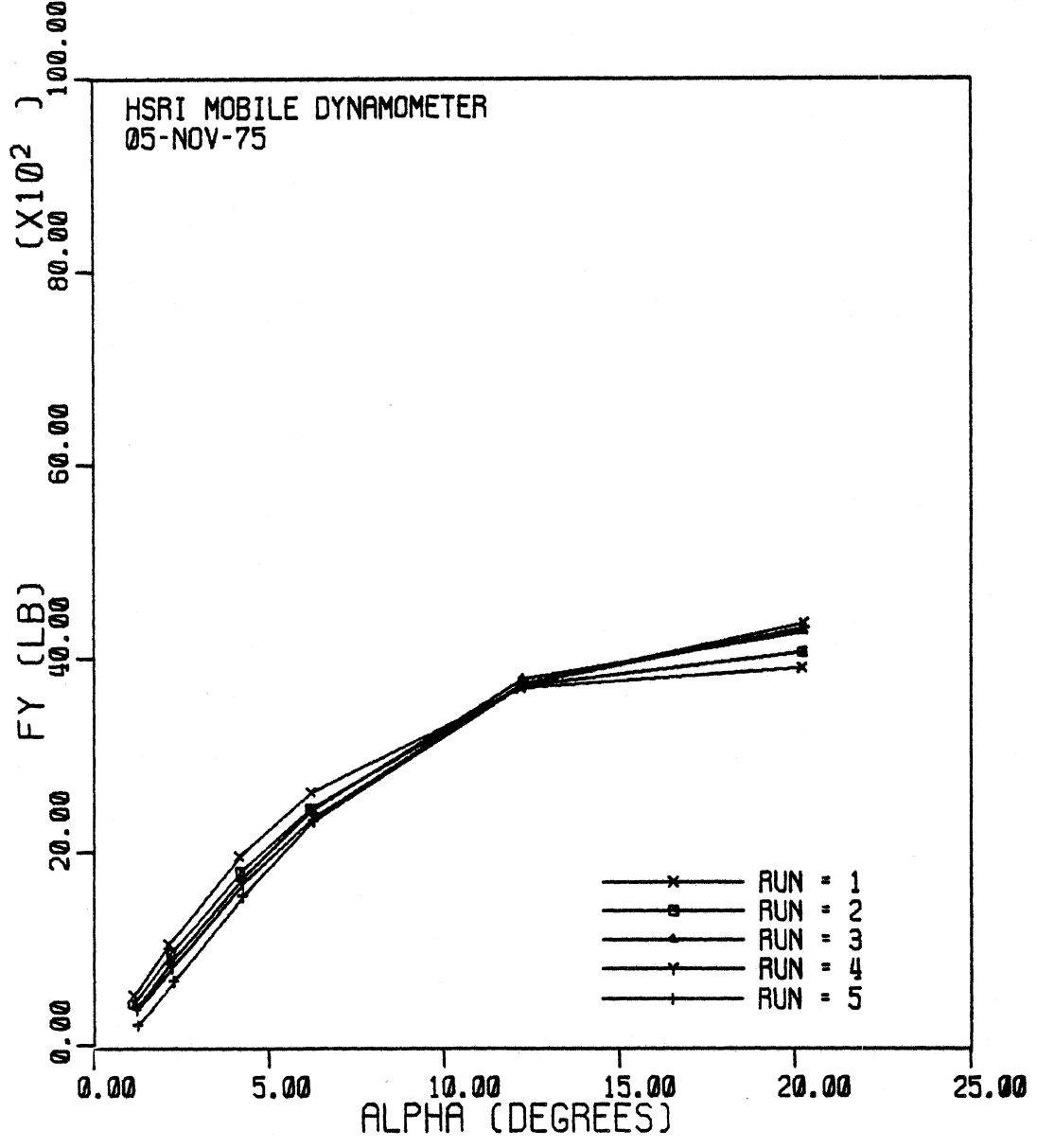


Figure C-9. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a dry Portland cement concrete surface.

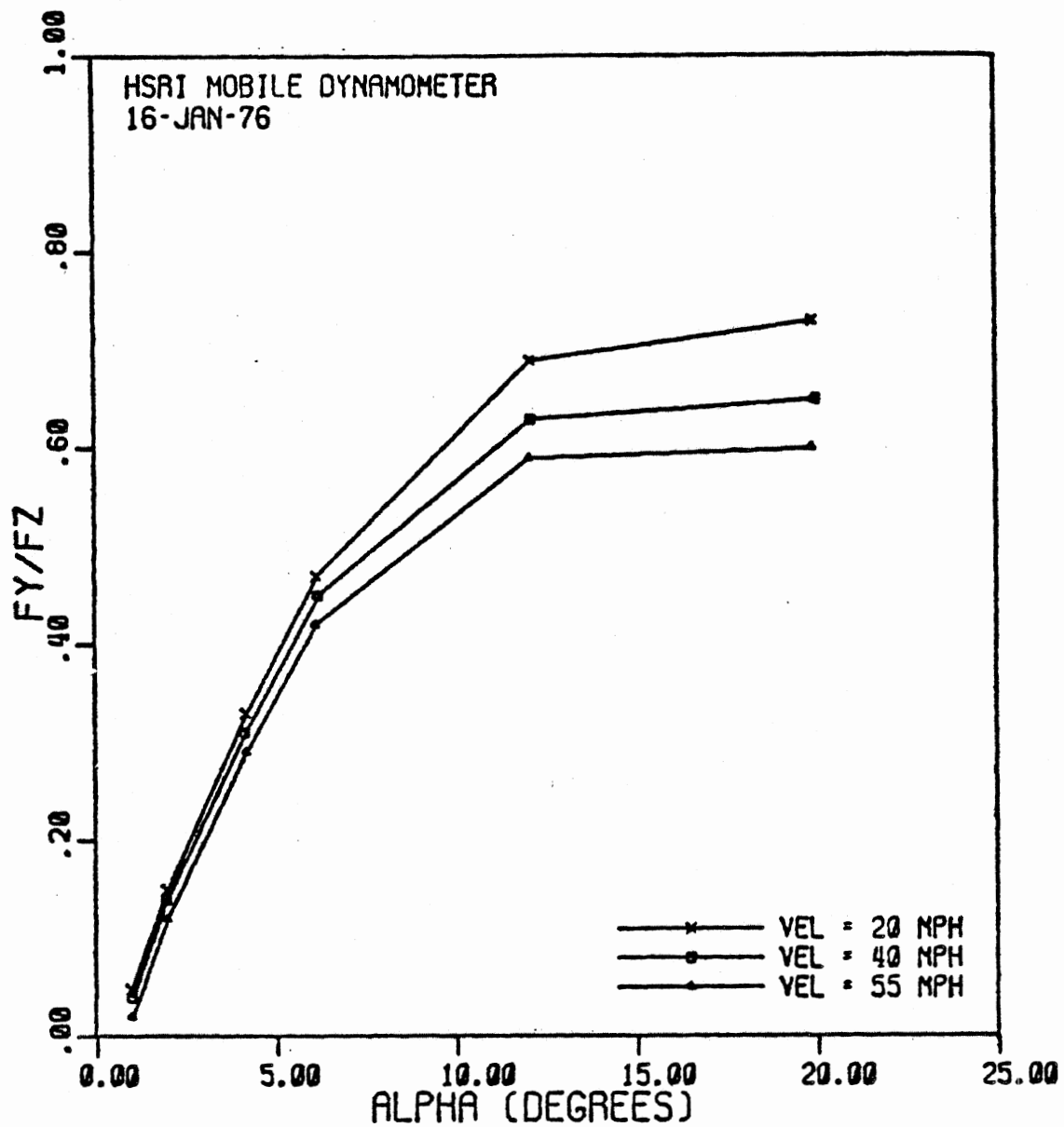


Figure C-10. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a wet Portland cement concrete surface. Tire load was 4743 pounds.

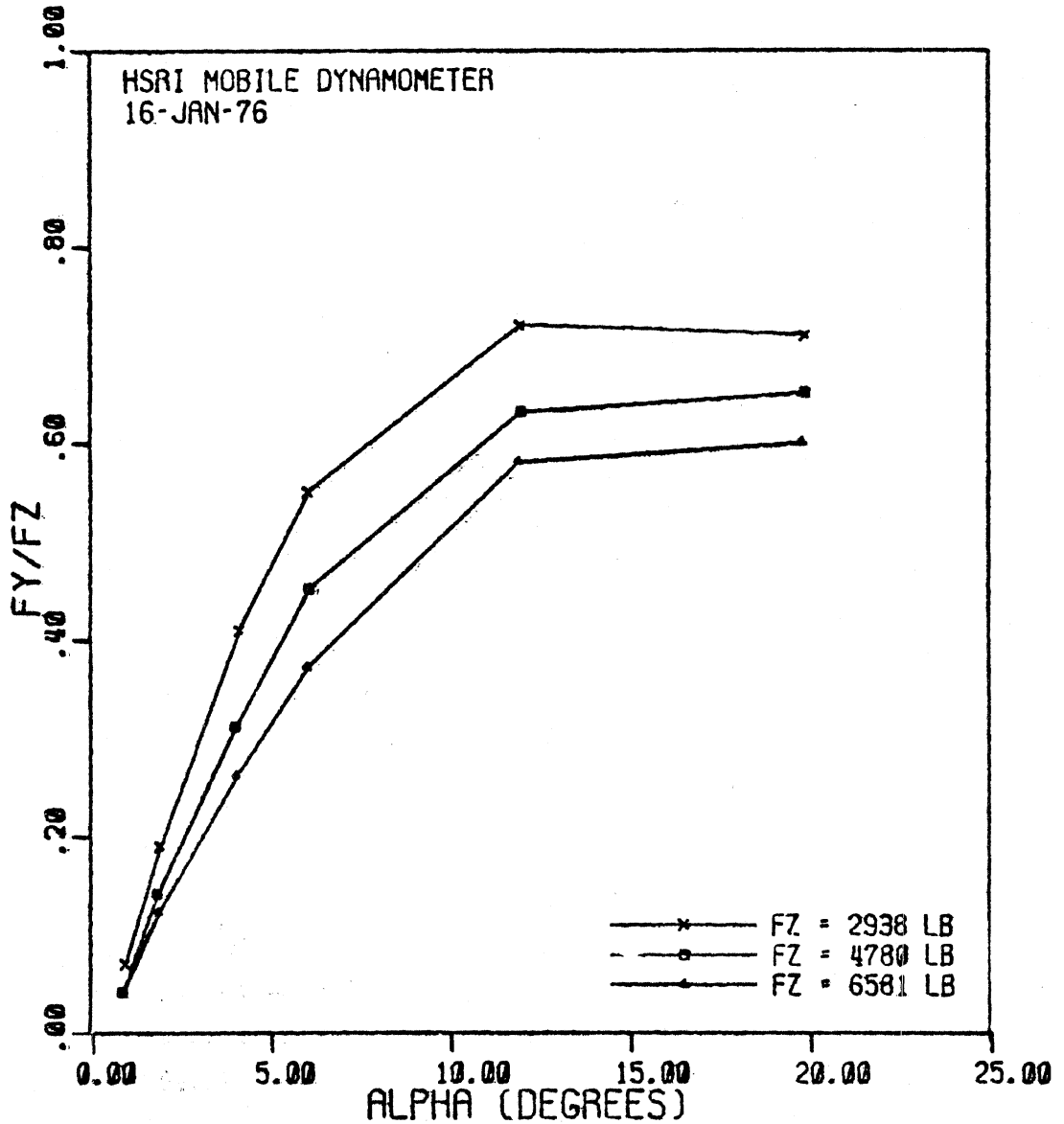


Figure C-11. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

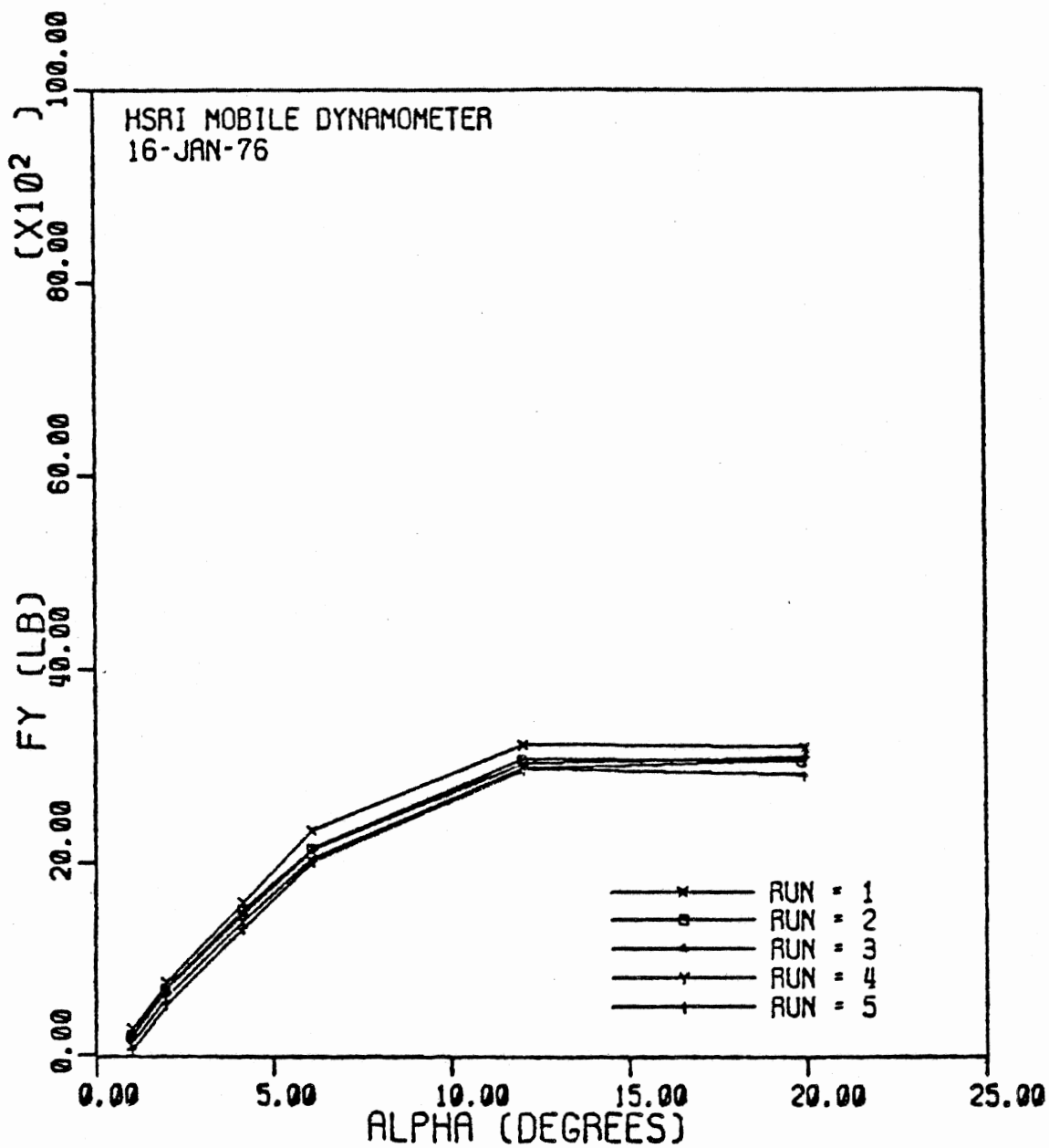


Figure C-12. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Firestone Transport 200 tires were tested on a wet Portland cement concrete surface.

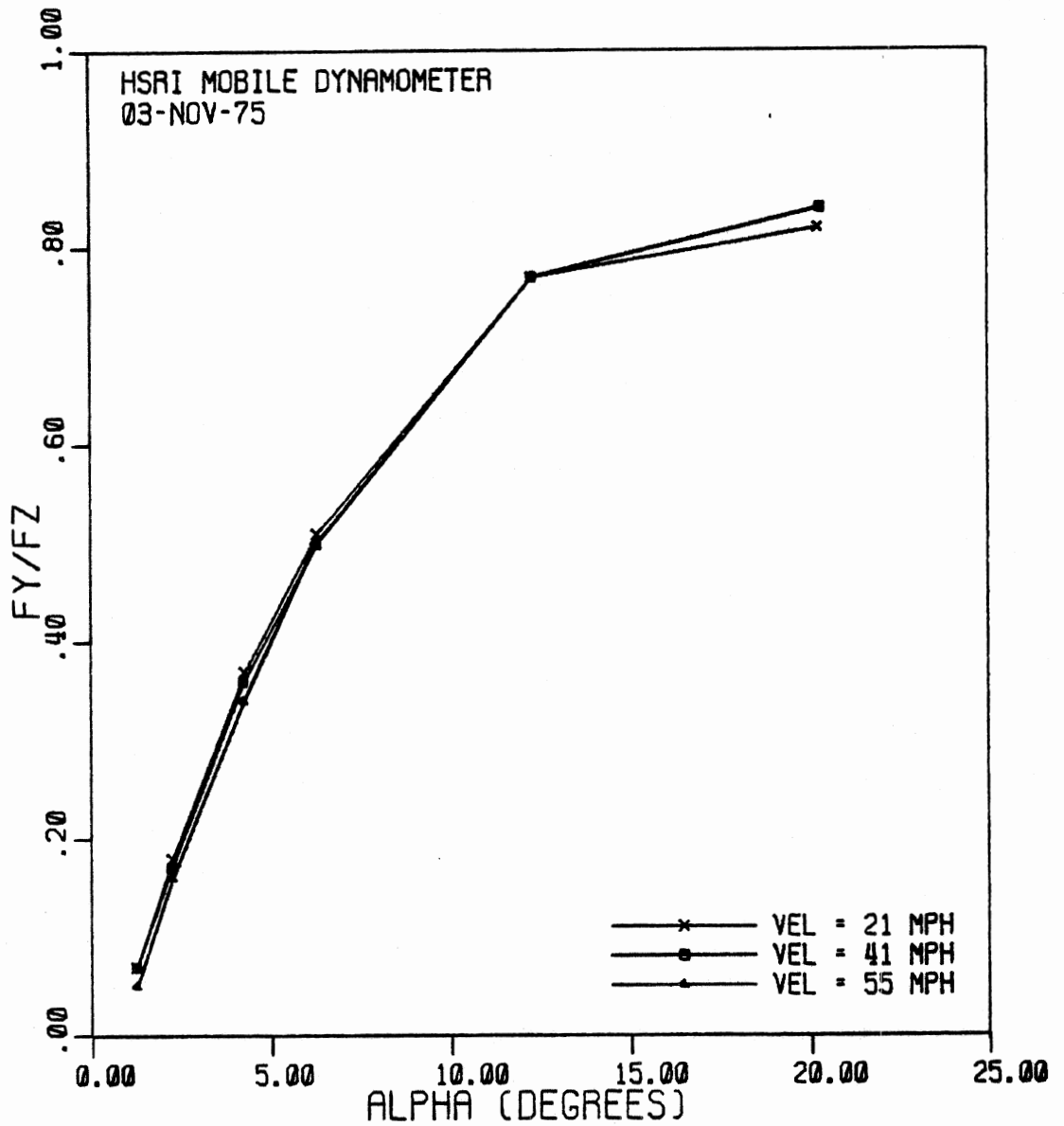


Figure C-13. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a dry Portland cement concrete surface. Tire load was 5515 pounds.

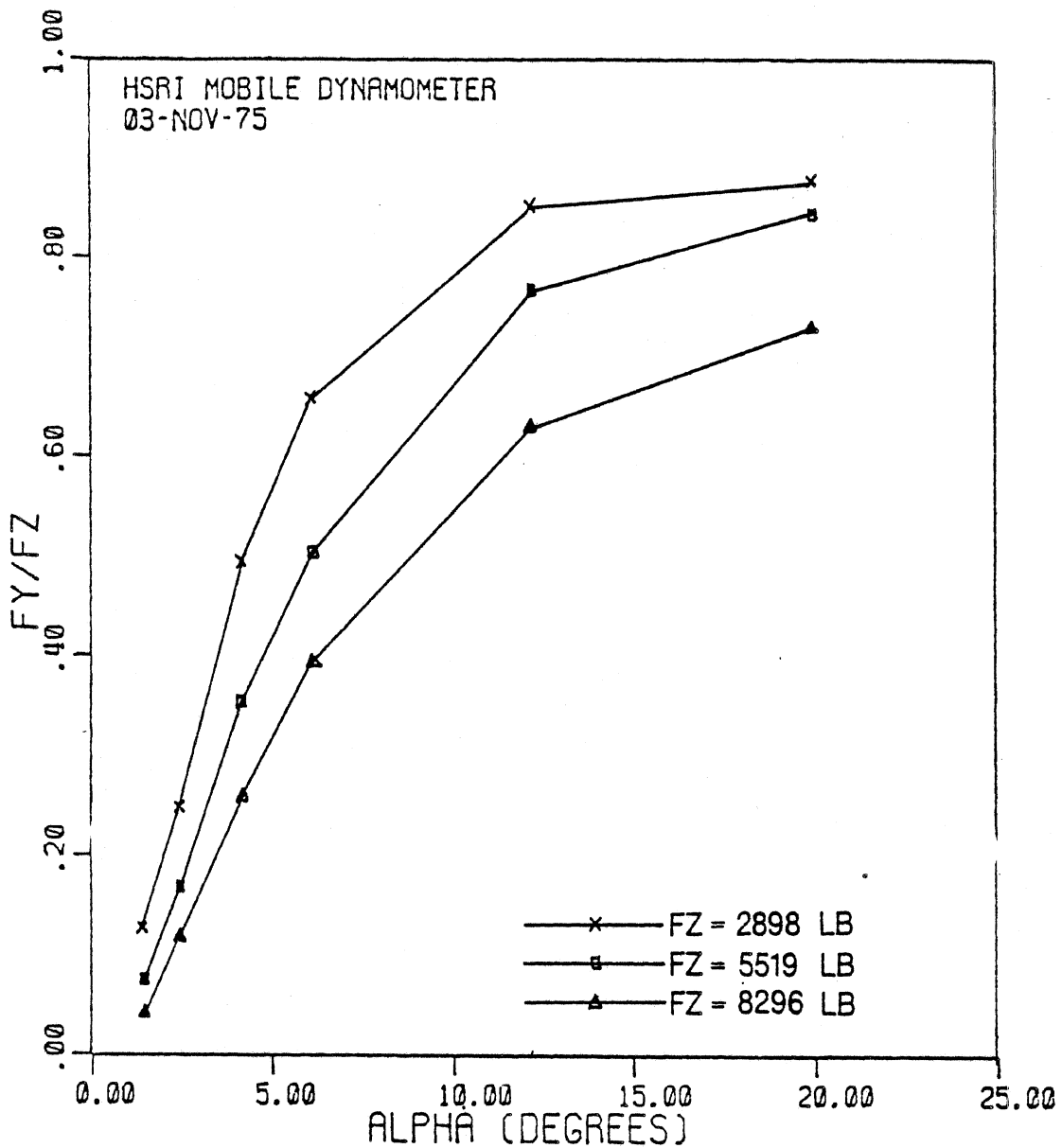


Figure C-14. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a dry Portland cement concrete surface. Nominal vehicle speed was 40 mph.

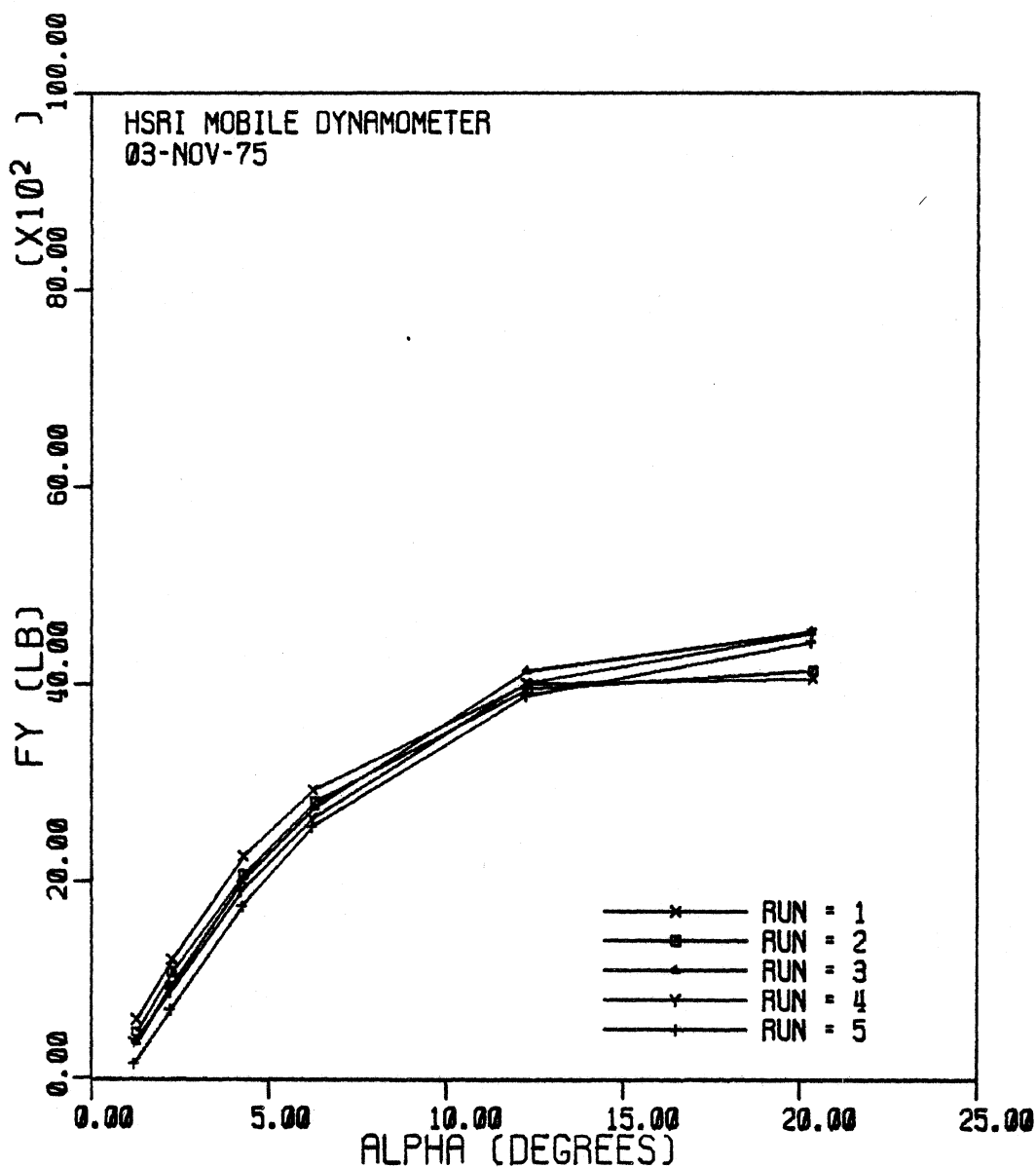


Figure C-15. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a dry Portland cement concrete surface.

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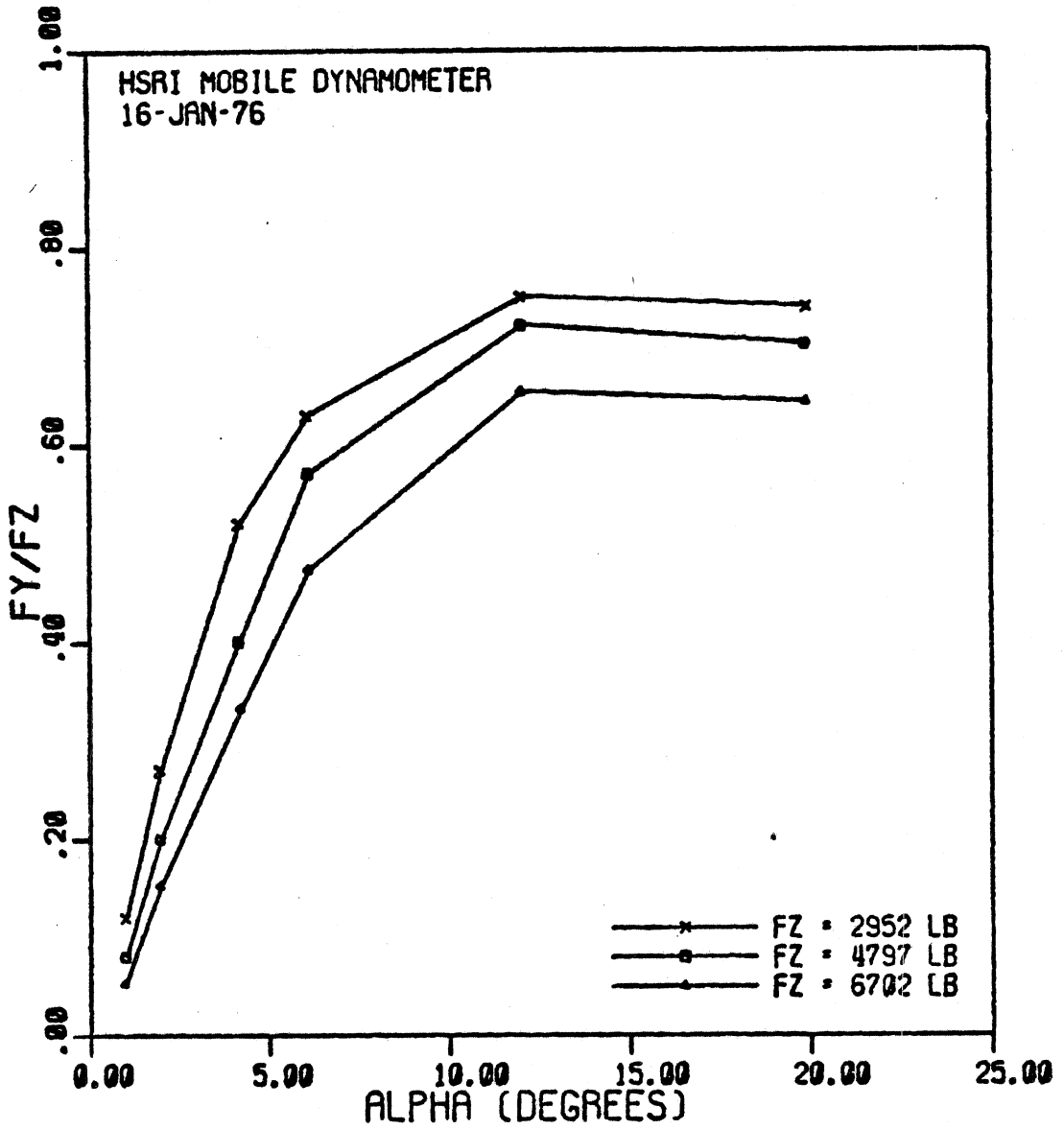


Figure C-17. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

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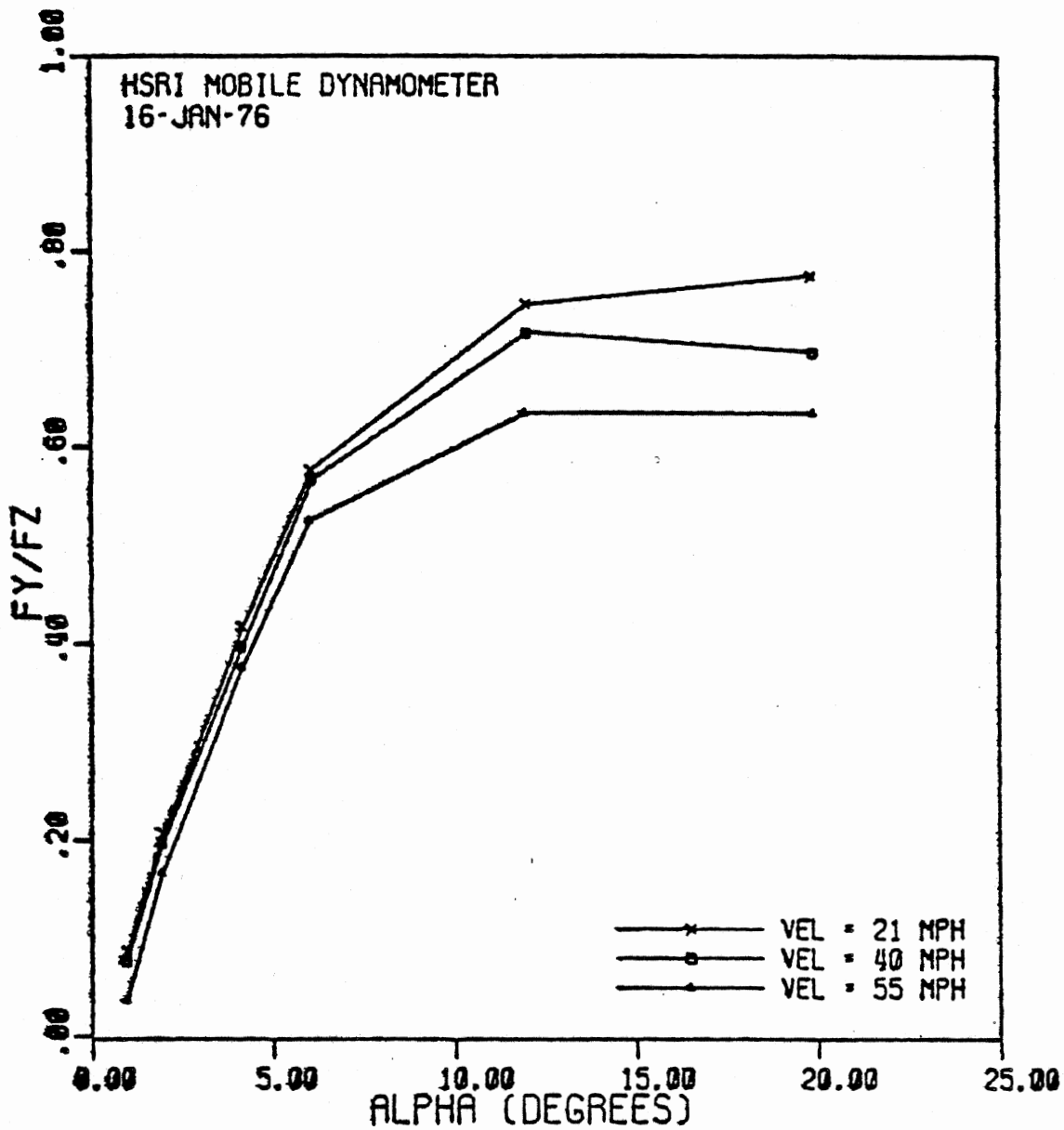


Figure C-16. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a wet Portland cement concrete surface. Tire load was 4776 pounds.

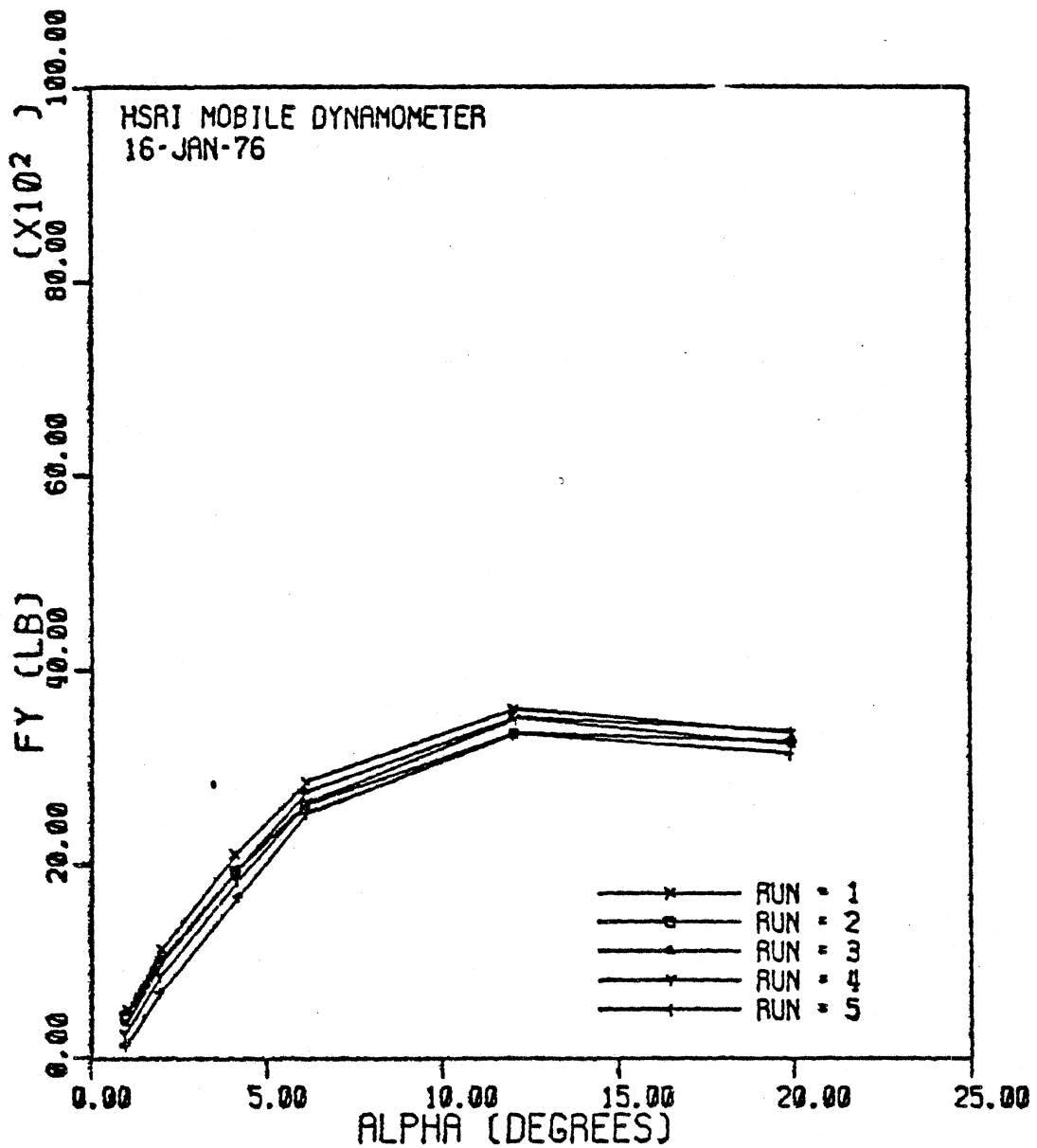


Figure C-18. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, General GTX tires were tested on a wet Portland cement concrete surface.

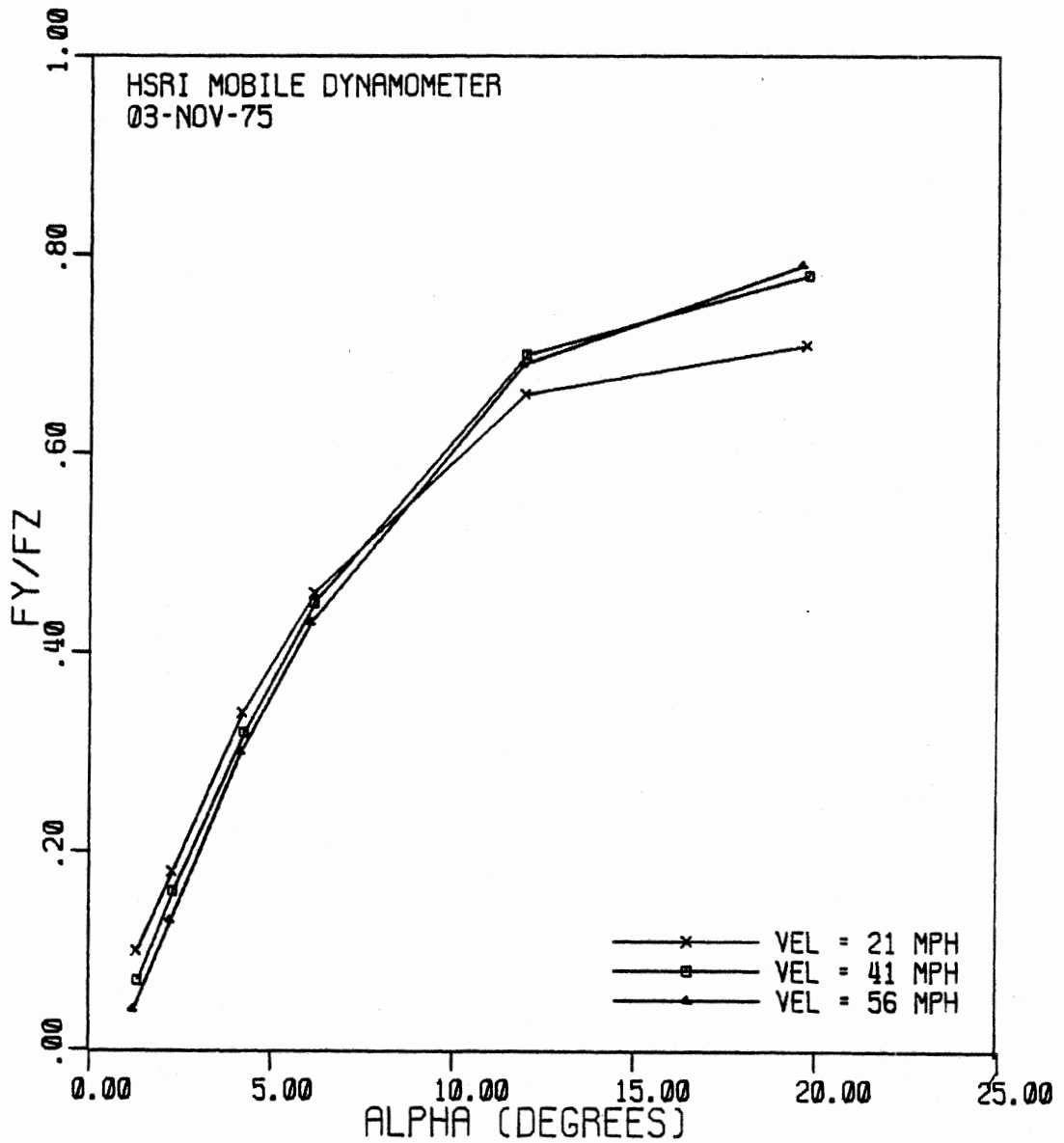


Figure C-19. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a dry Portland cement concrete surface. Tire load was 5530 pounds.

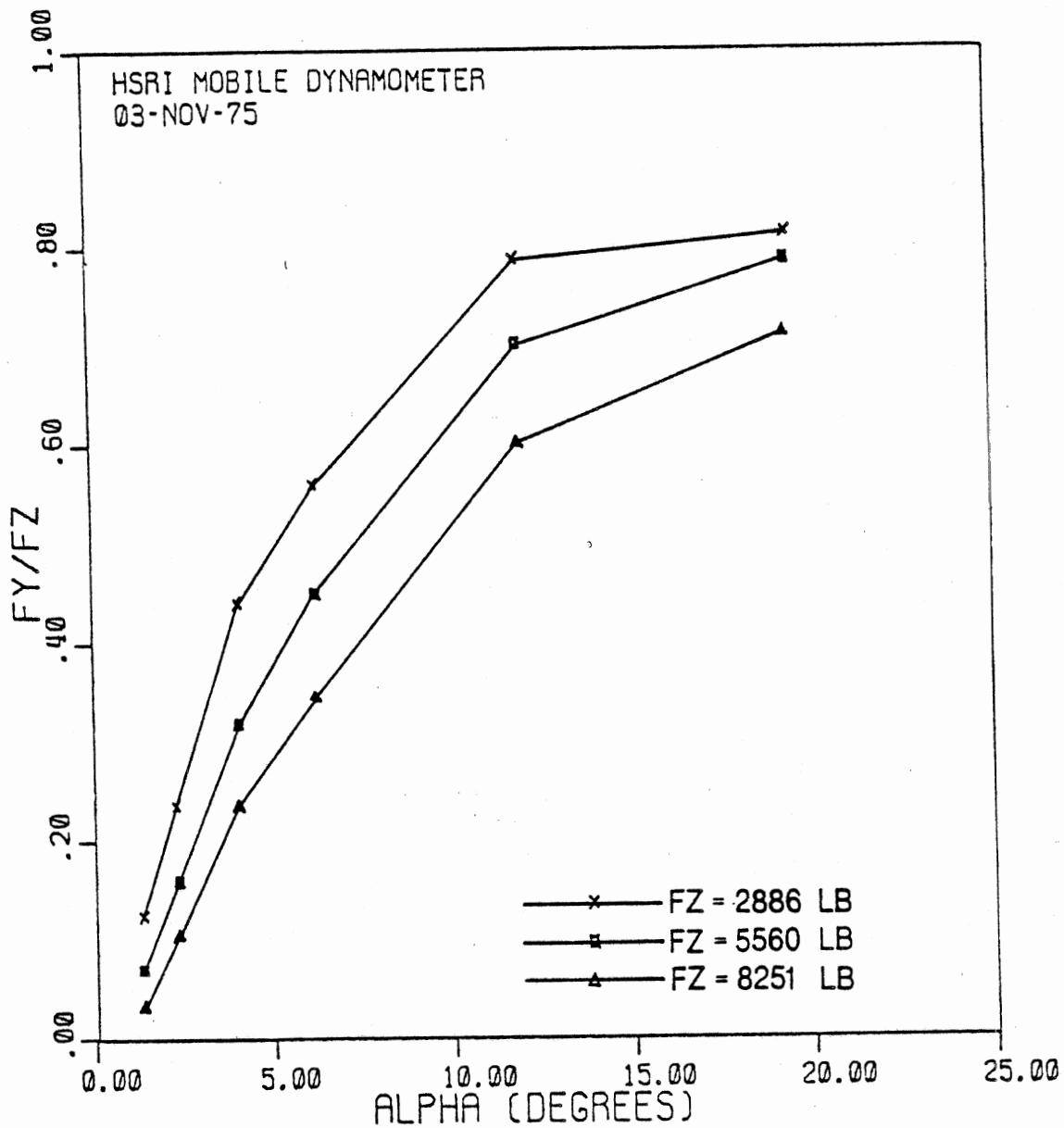


Figure C-20. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a dry Portland cement concrete surface. Nominal vehicle speed was 40 mph.

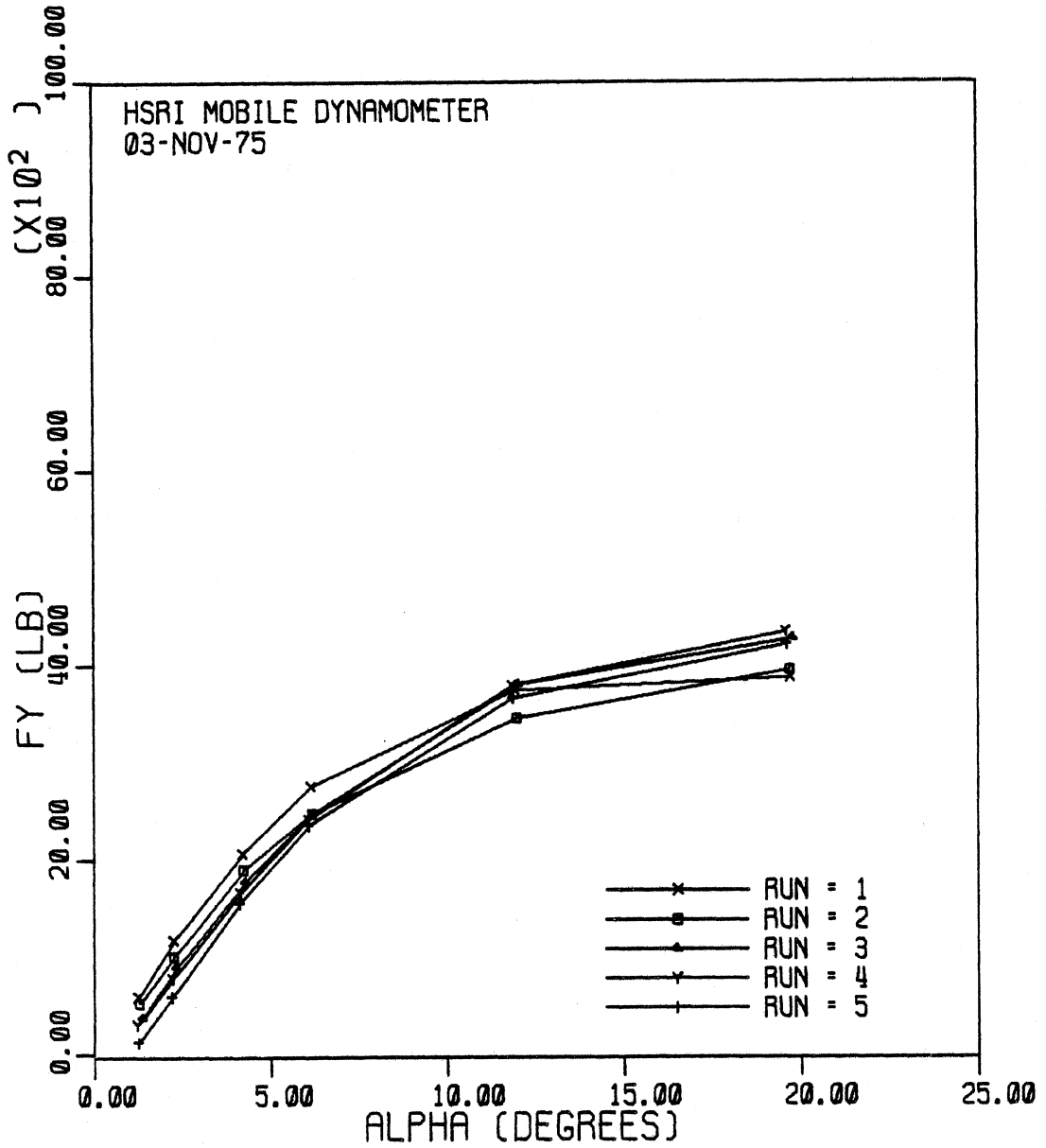


Figure C-21. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a dry Portland cement concrete surface.

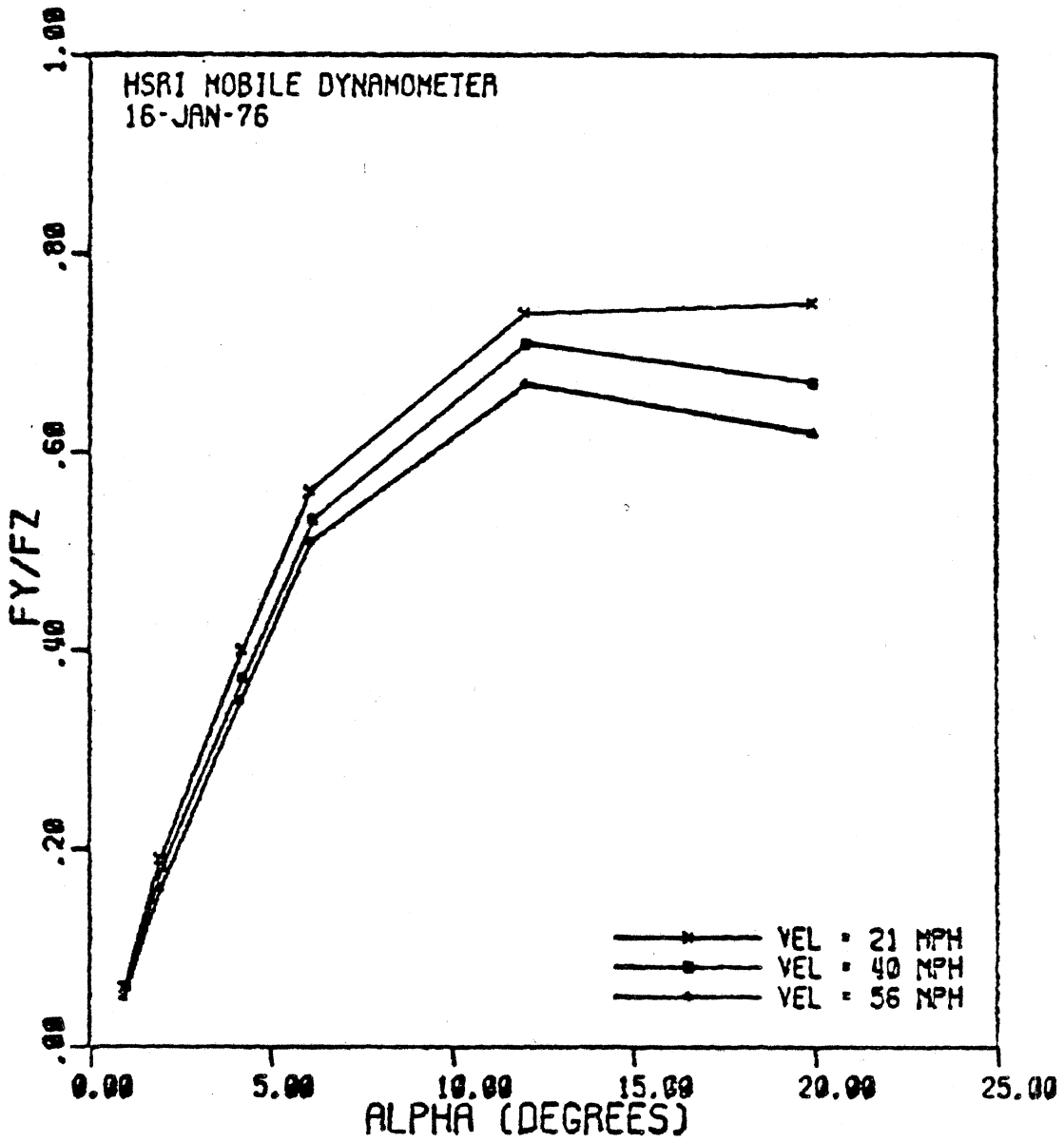


Figure C-22. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a wet Portland cement concrete surface. Tire load was 4761 pounds.

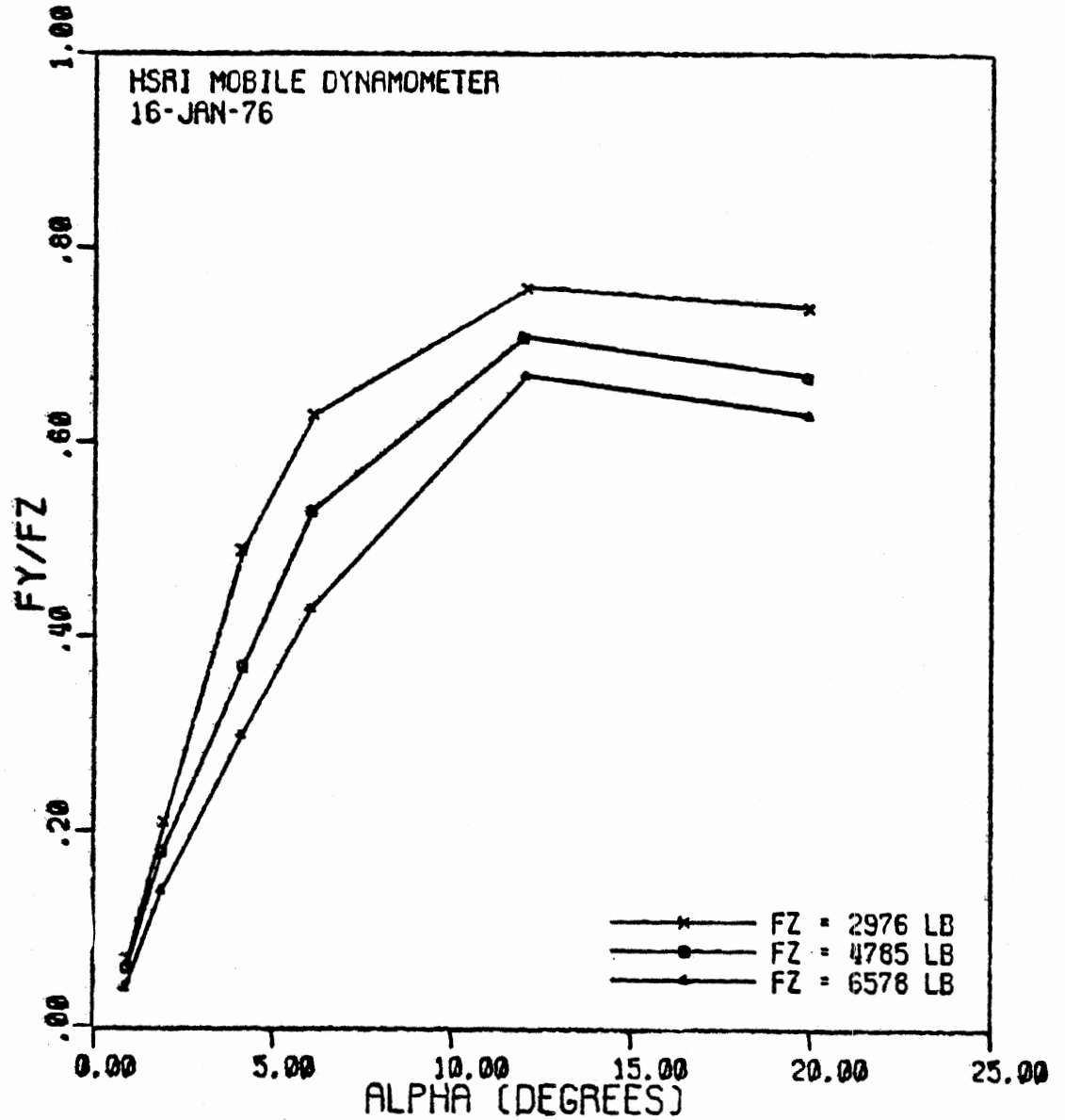


Figure C-23. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

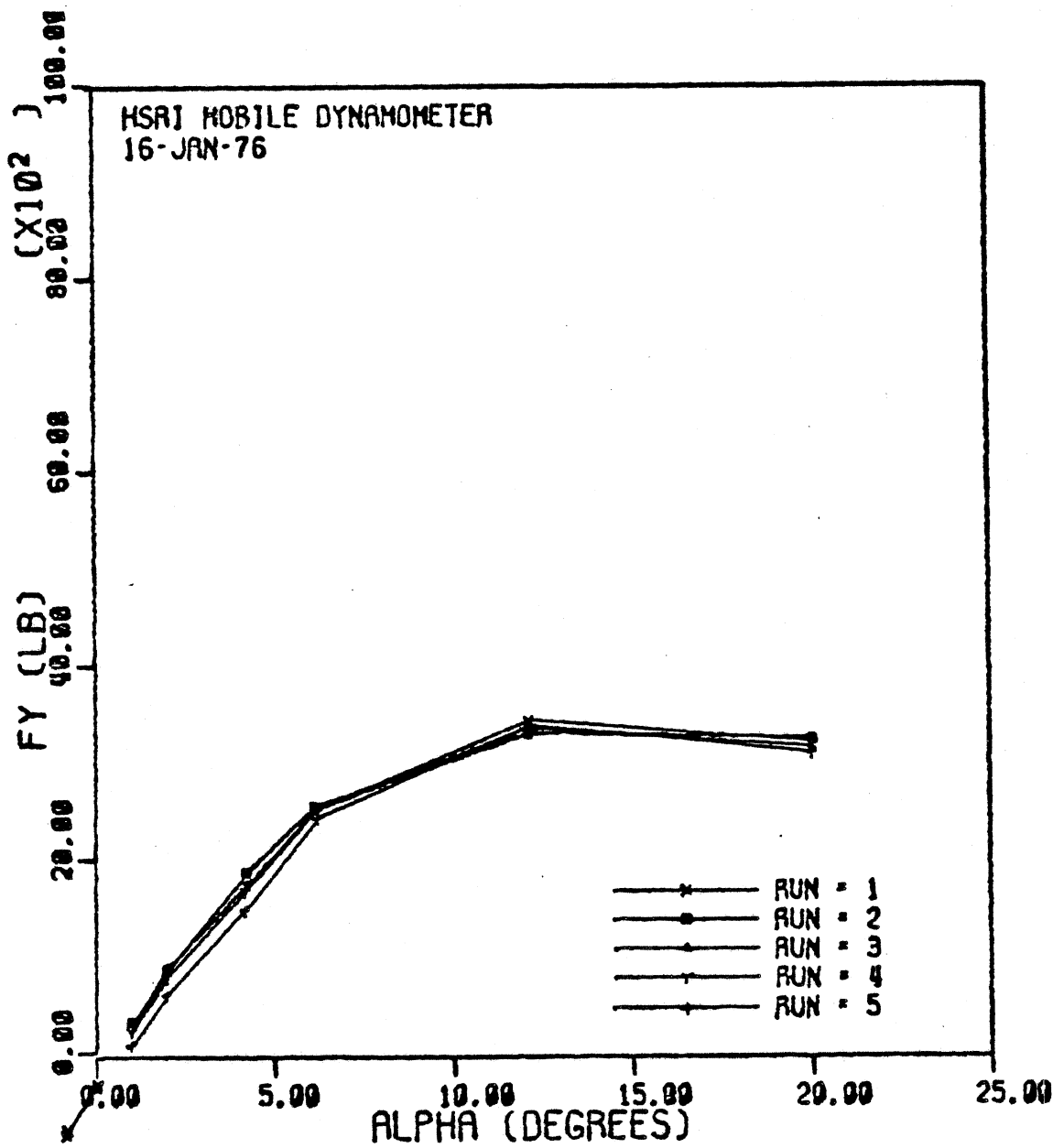


Figure C-24. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Goodyear Super Hi Miler tires were tested on a wet Portland cement concrete surface.

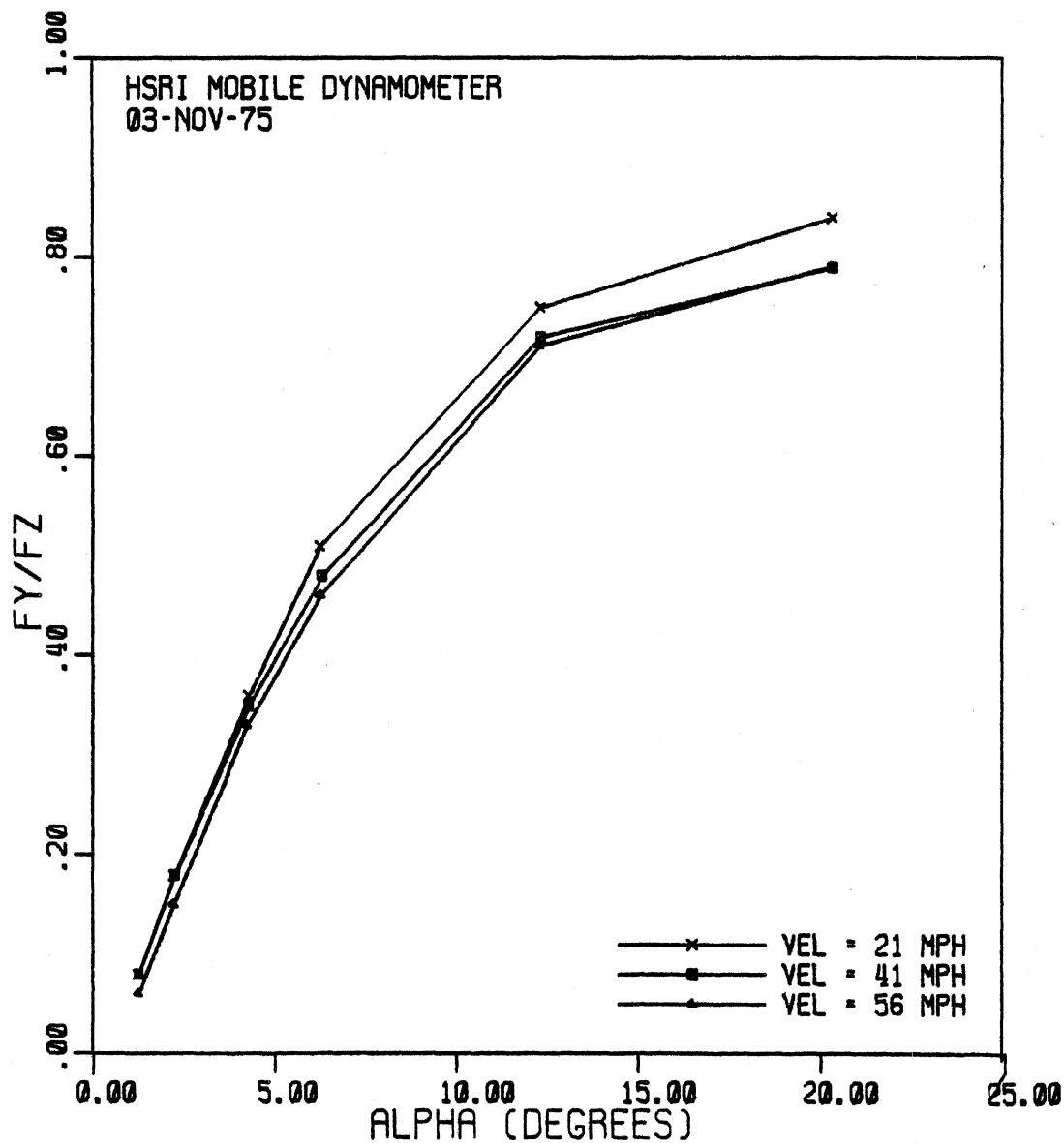


Figure C-25. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib Hi Miler tires were tested on a dry Portland cement concrete surface. Tire load was 5526 pounds.

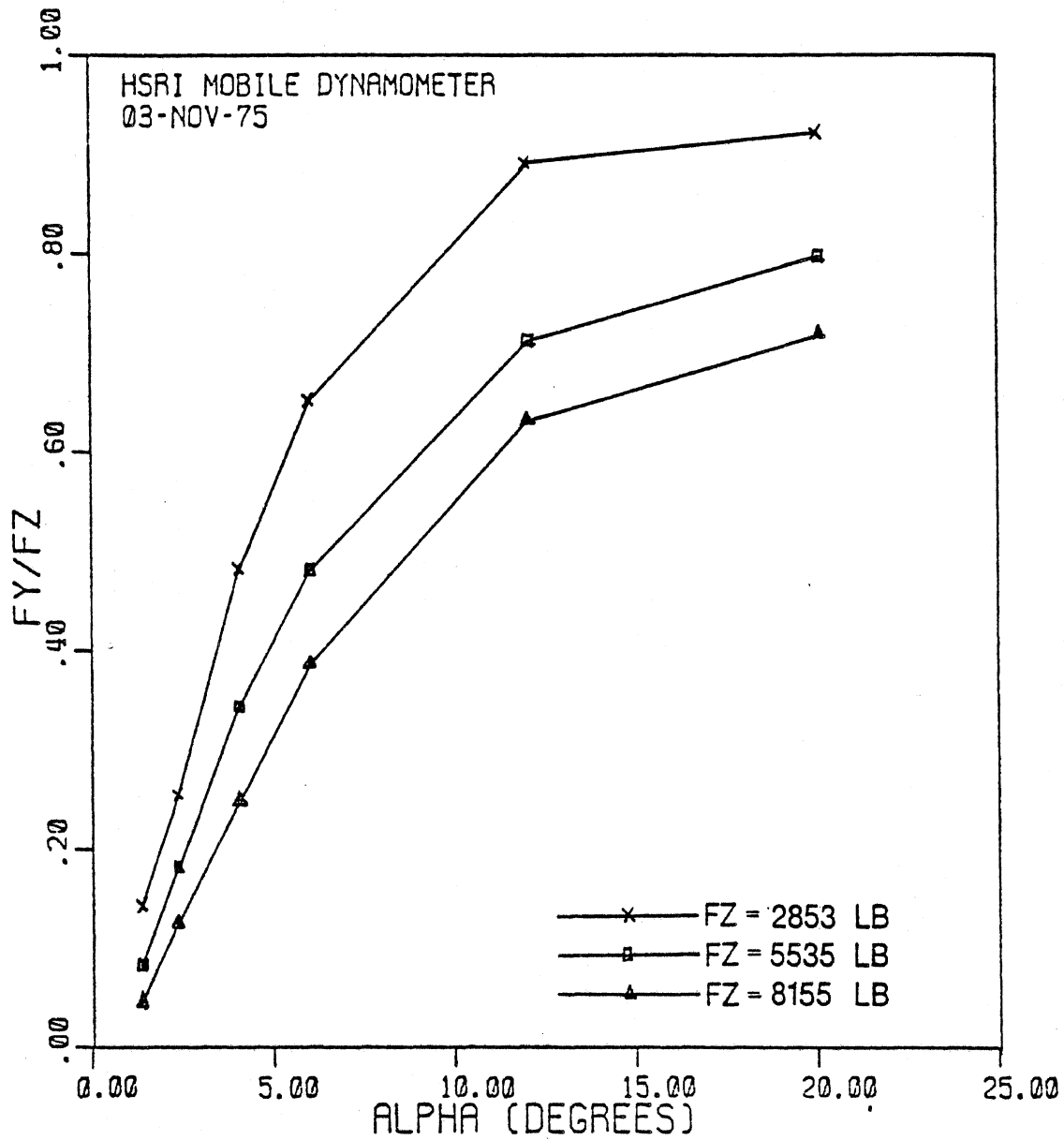


Figure C-26. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib Hi Miler tires were tested on a dry Portland cement concrete surface. Nominal vehicle speed was 40 mph.

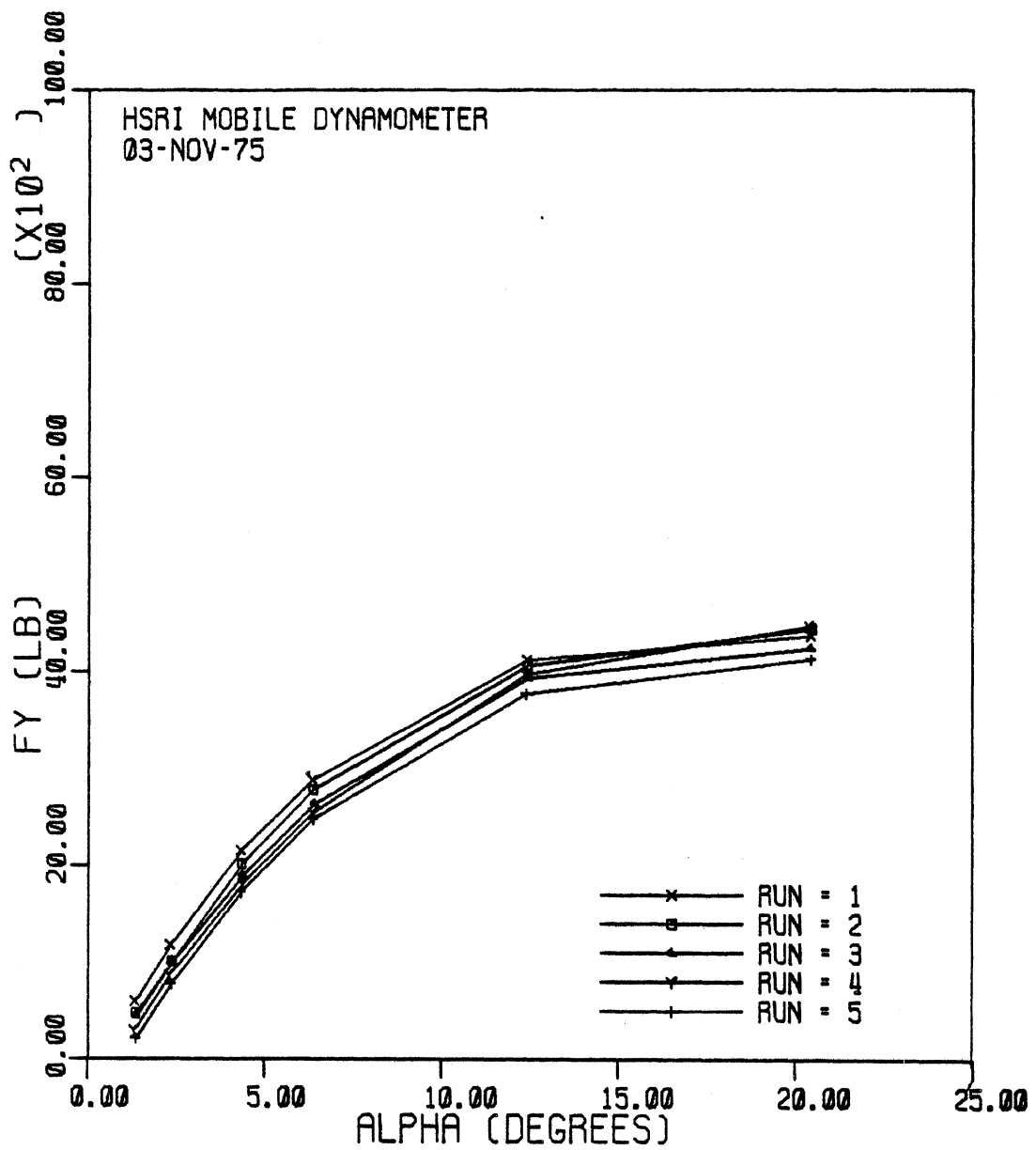


Figure C-27. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib Hi Miler tires were tested on a dry Portland cement concrete surface.

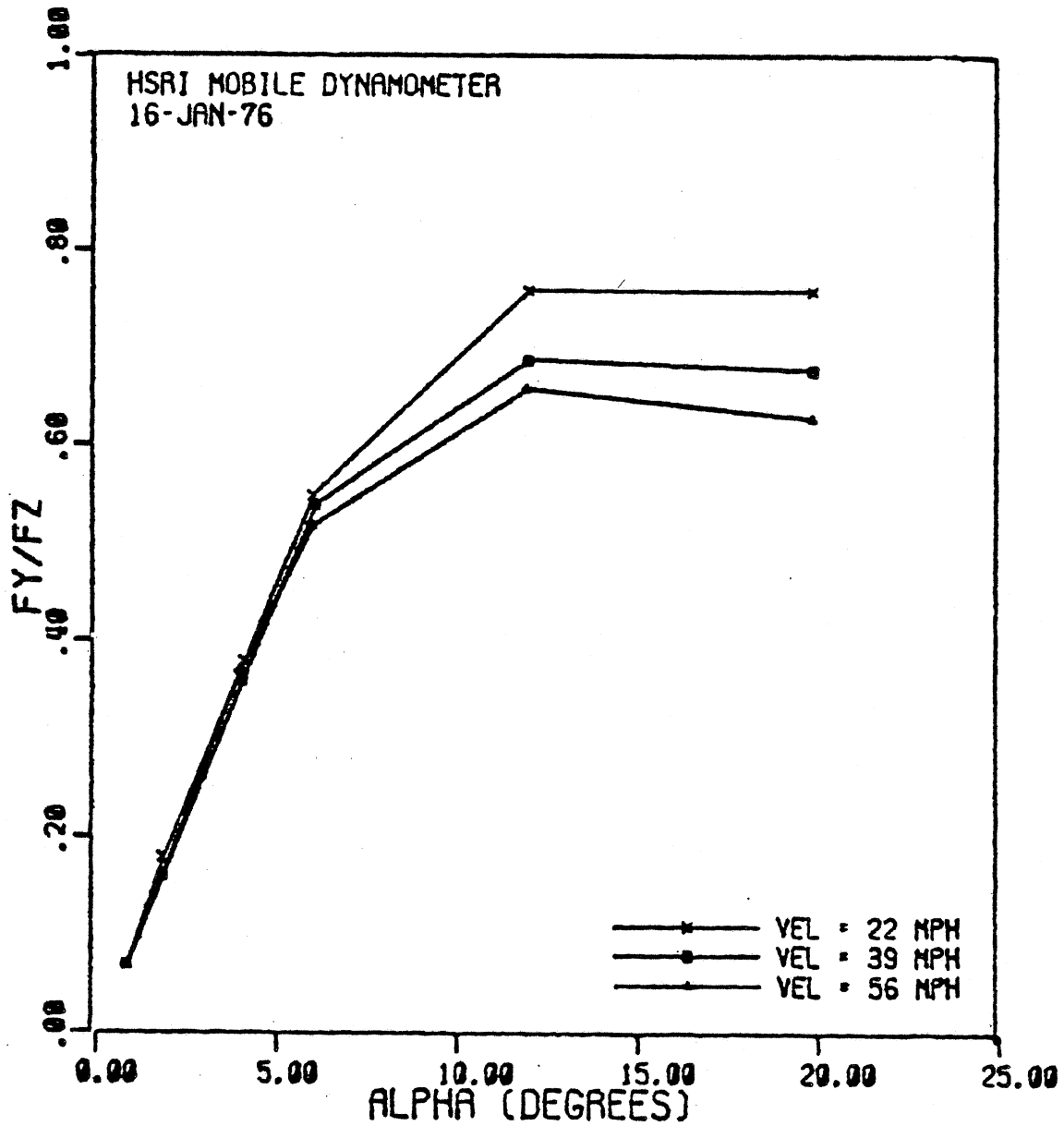


Figure C-28. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib tires were tested on a wet Portland cement concrete surface. Tire load was 4738 pounds.

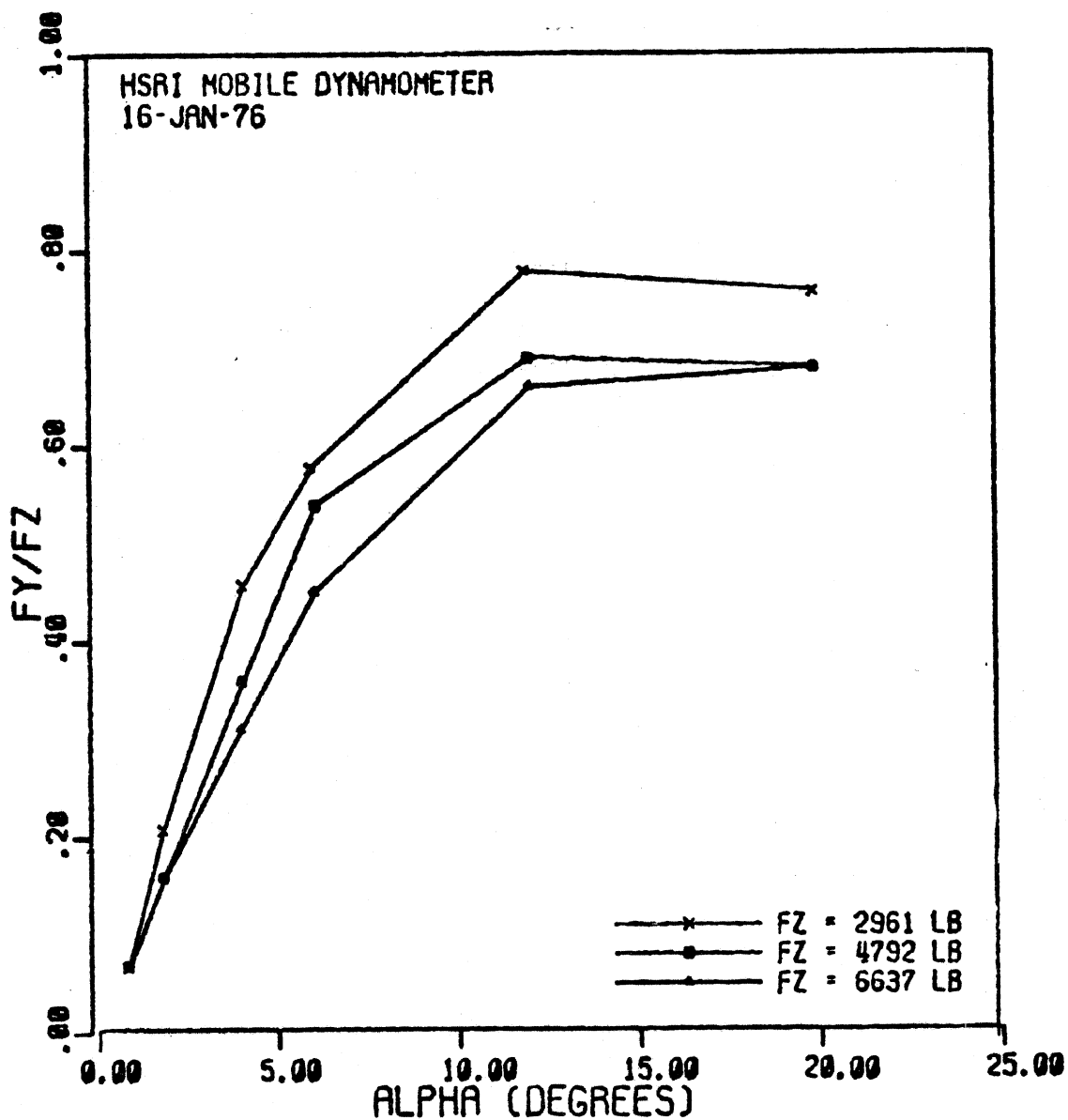


Figure C-29. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

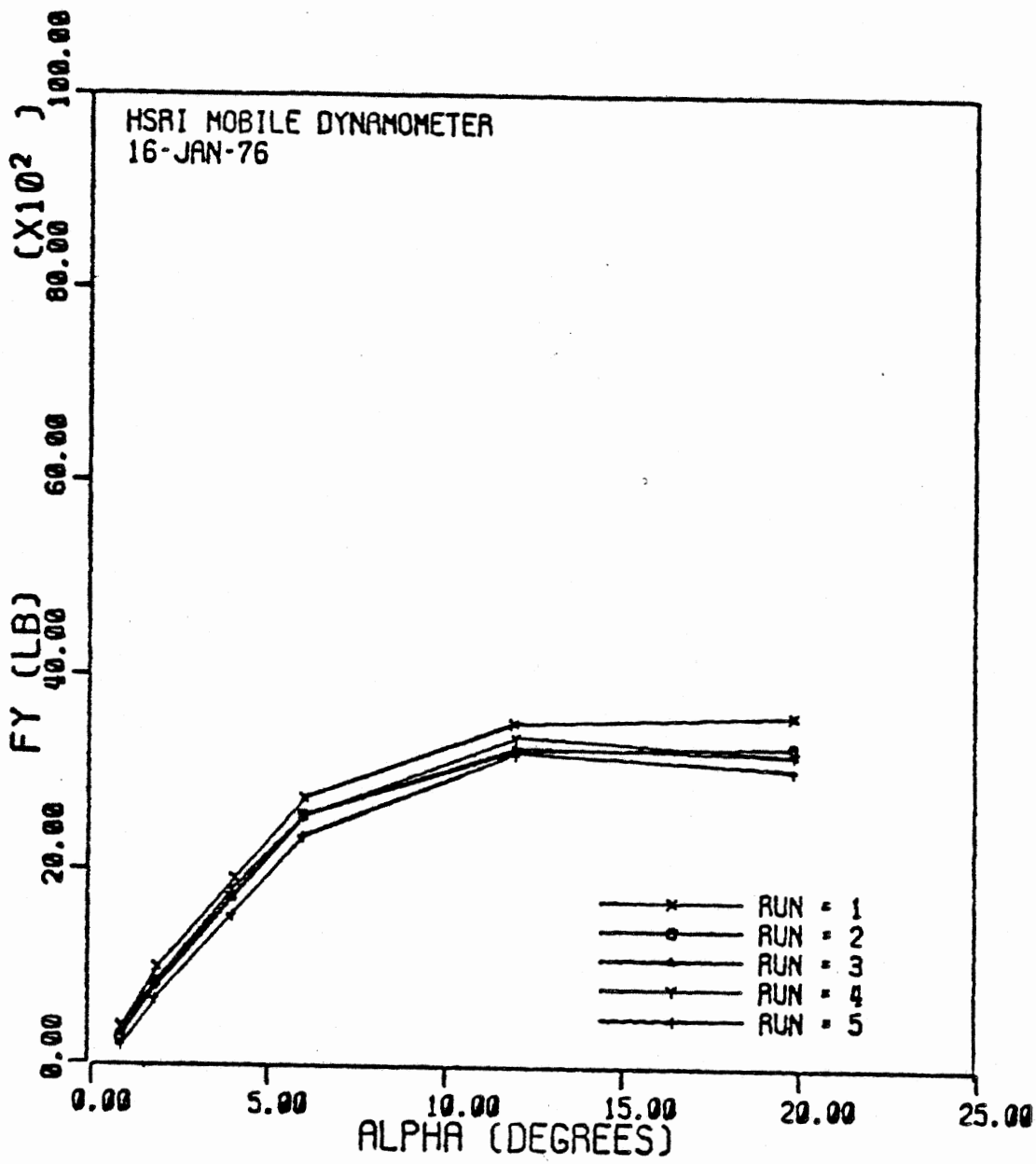


Figure C-30. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Goodyear Custom Cross Rib tires were tested on a wet Portland cement concrete surface.

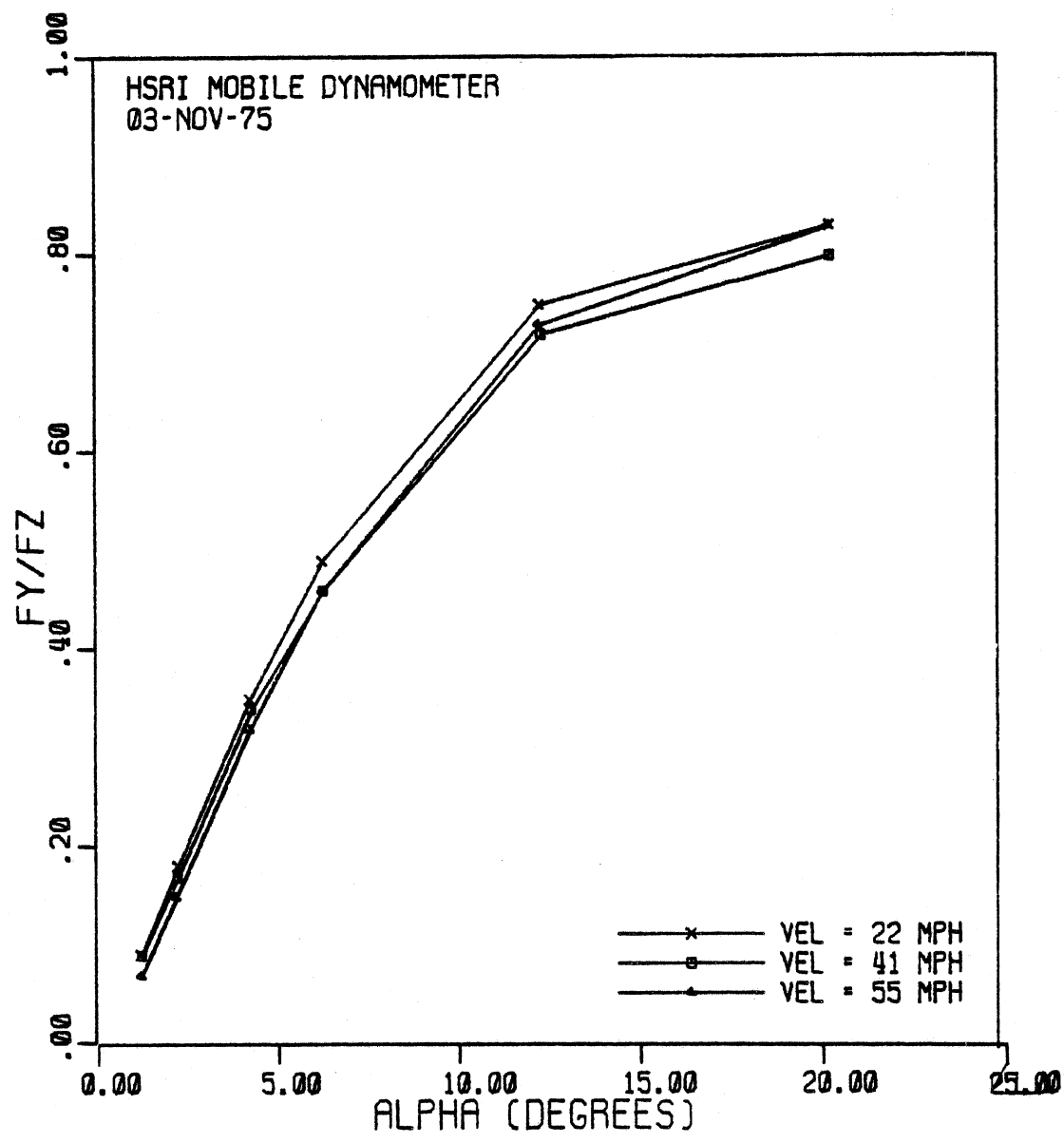


Figure C-31. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a dry Portland cement concrete surface. Tire load was 5512 pounds.

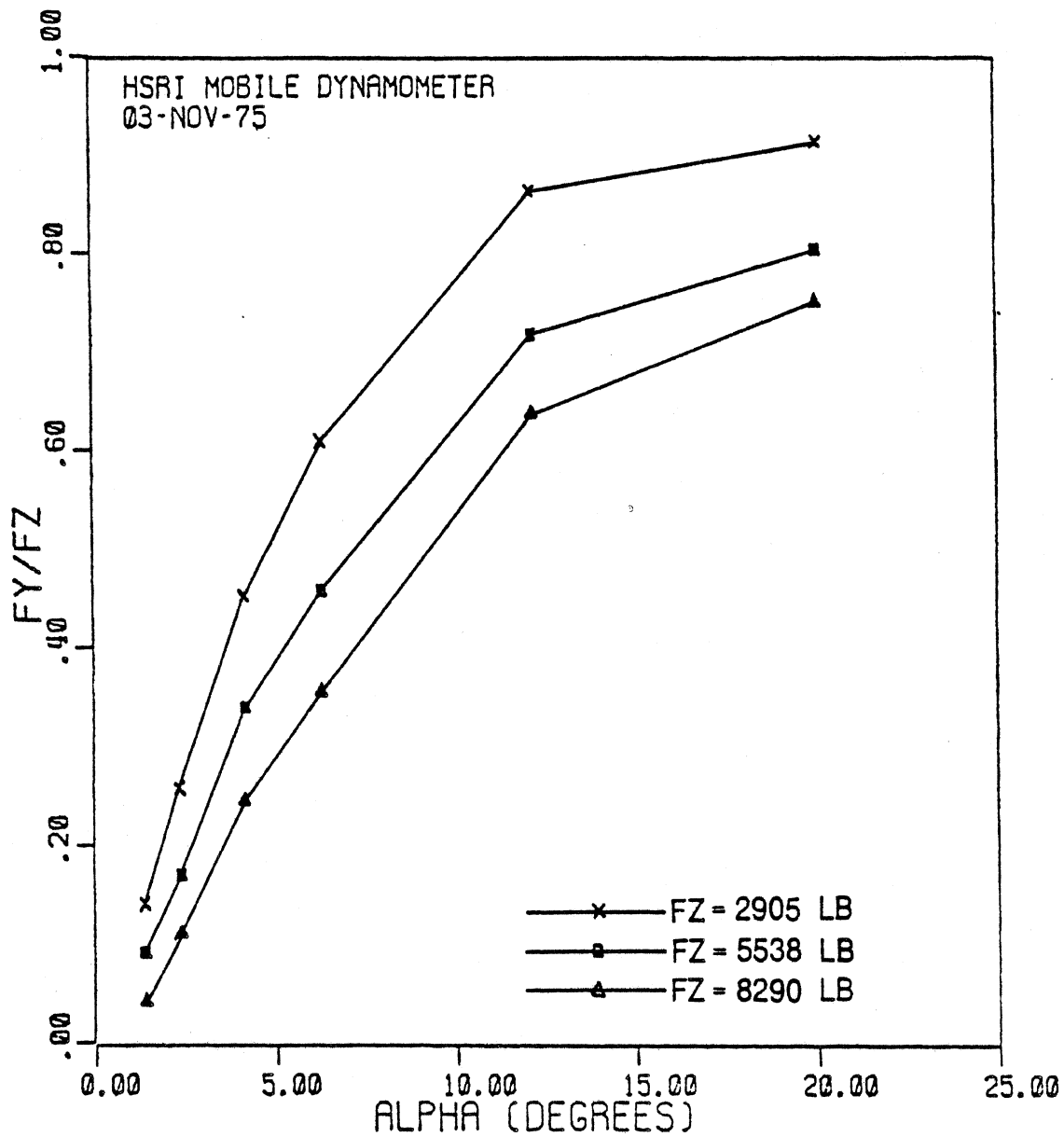


Figure C-32. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a dry Portland cement concrete surface. Nominal vehicle speed was 40 mph.

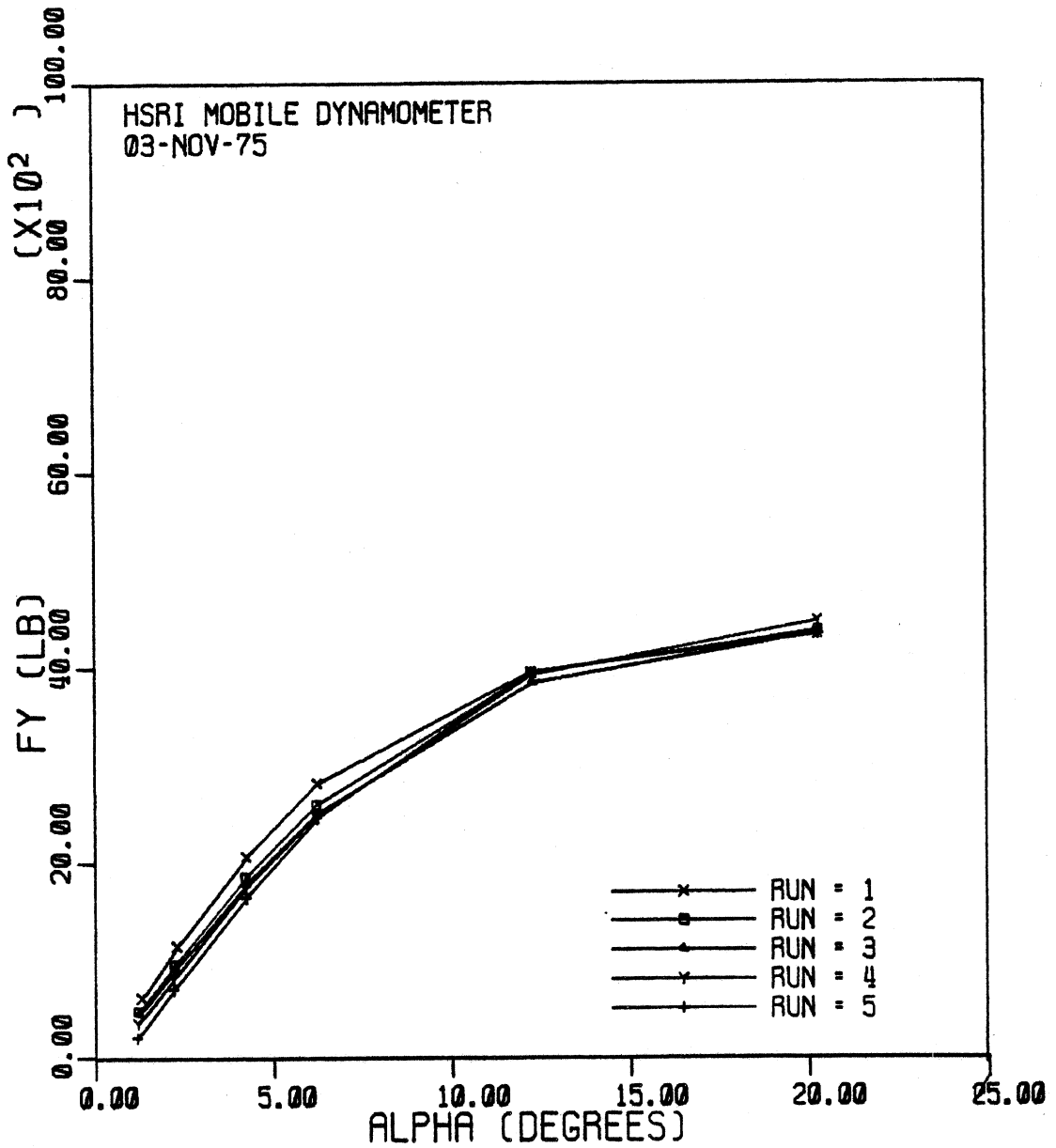


Figure C-33. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a dry Portland cement concrete surface.

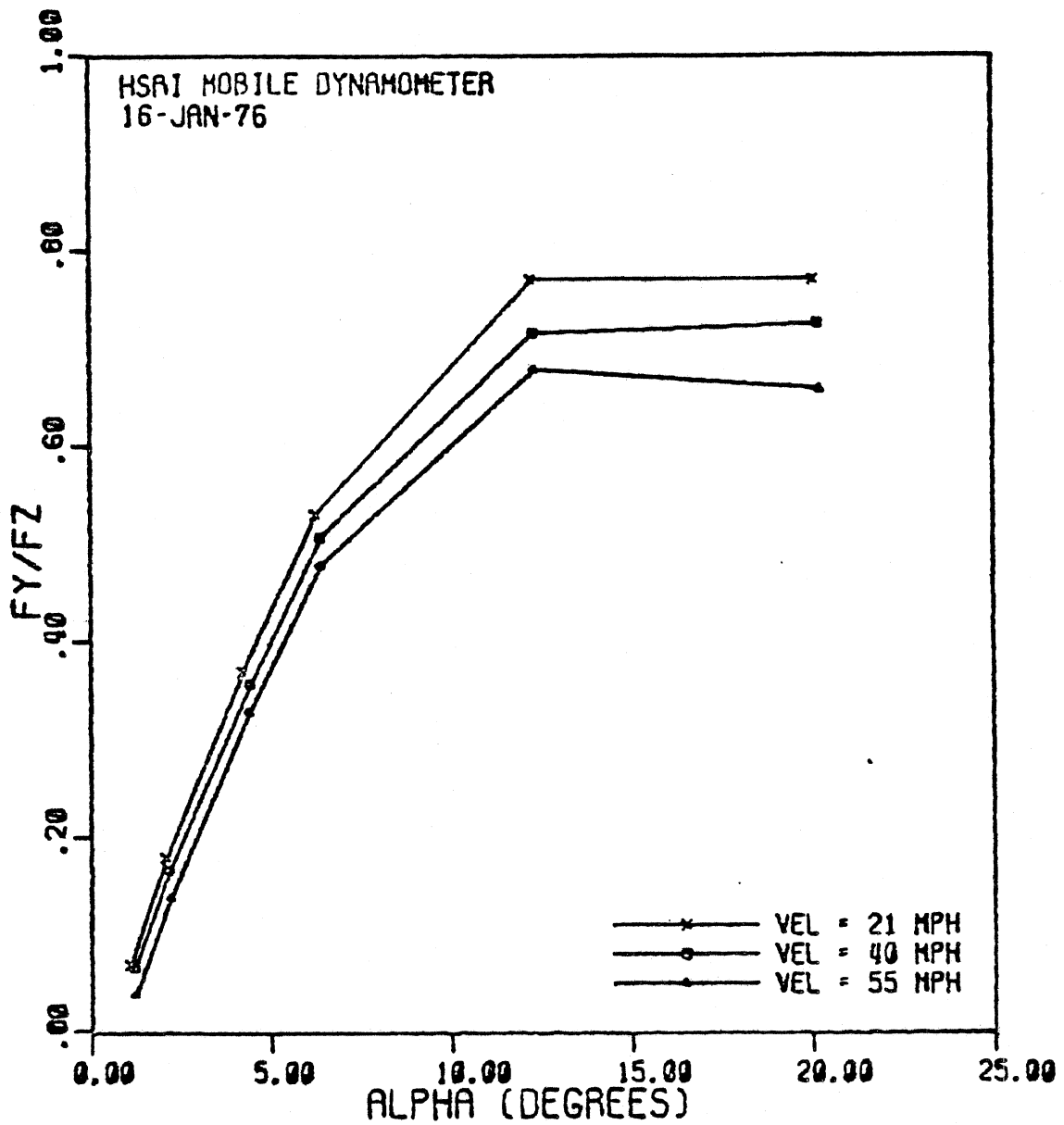


Figure C-34. Normalized lateral force versus slip angle data at nominal vehicle speeds of 20, 40 and 55 mph. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a wet Portland cement concrete surface. Tire load was 4790 pounds.

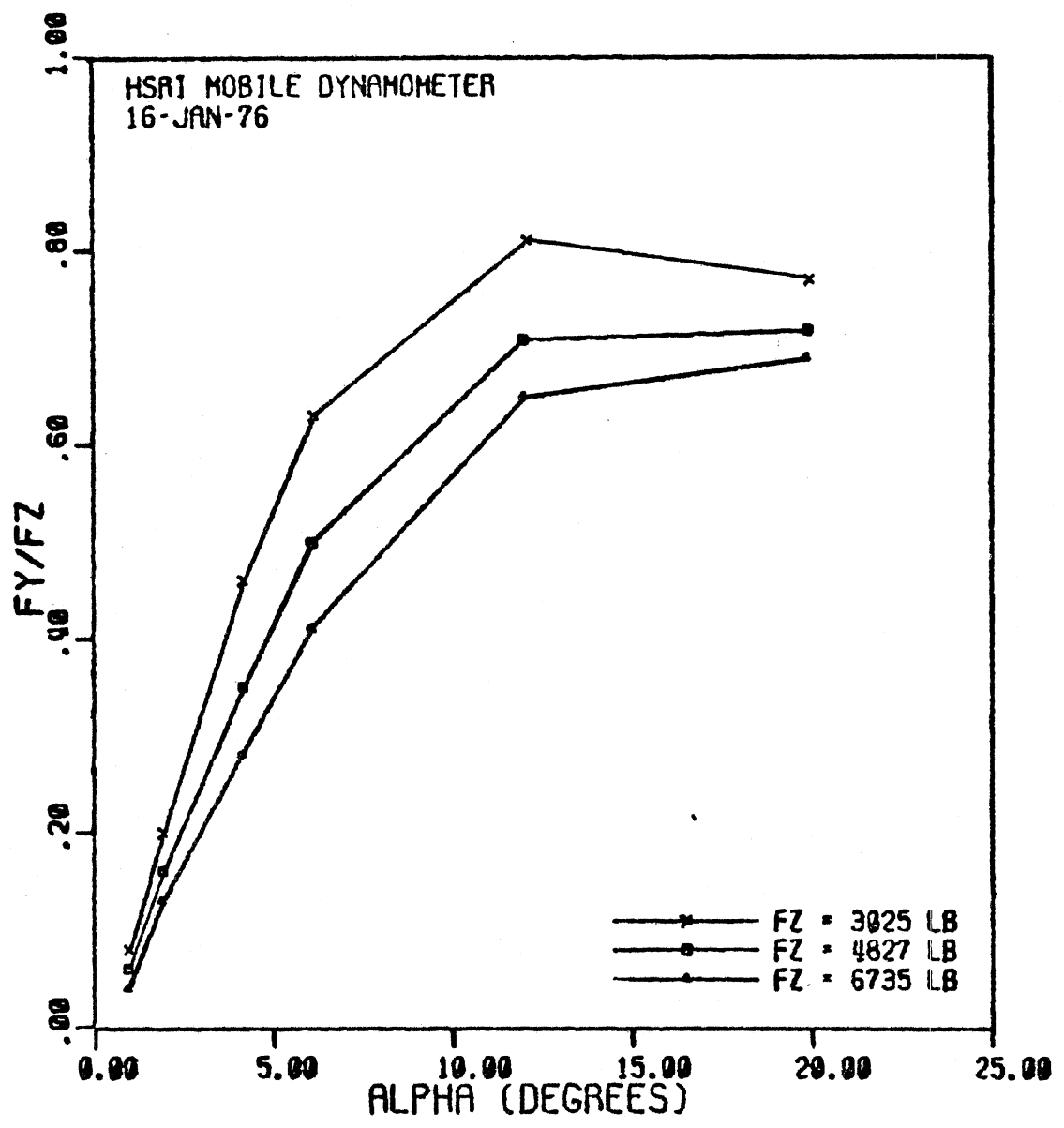


Figure C-35. Normalized lateral force versus slip angle for nominal tire loads of 0.5, 1.0, and 1.5 times T&RA rated load. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a wet Portland cement concrete surface. Nominal vehicle speed was 40 mph.

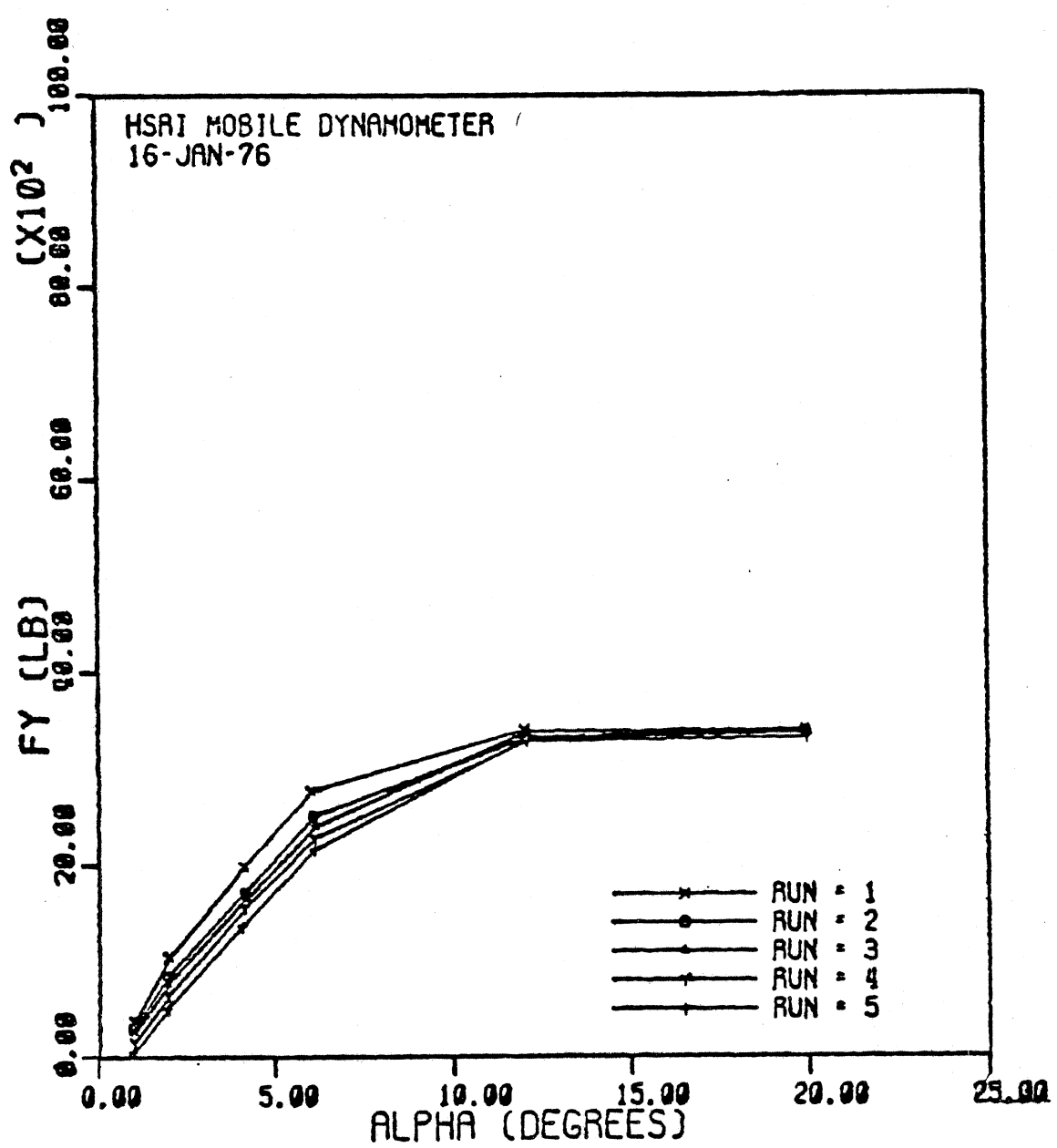


Figure C-36. Lateral force versus slip angle data for repeated tests at rated load and a vehicle speed of 40 mph. The bias-ply, 10:00-20, load range F, Uniroyal Fleetmaster Super Lug tires were tested on a wet Portland cement concrete surface.

2. TEST TIRES

The tire sample was chosen to be representative of the entire truck tire population, that is, representative in construction, brand and popularity. The number of tires of each brand selected for the test sample was based on the market penetration of the sales of that brand, and the relative number of tires of the three major types (bias ply, ribbed tread; bias ply, lug tread; and radial ply, ribbed tread) was based on the relative popularity of the types. Table 1 lists the test tires and identifies their type.

All of the tires were of the 10.00 x 20 size and they were mounted on the proper rim recommended by the Tire & Rim Association. They were inflated to the maximum pressure (85 psi for bias ply tires and 90 psi for radial ply tires) and loaded to a nominal 4,620 lbs.

Each tire was warmed-up by traveling about six miles at 50 miles per hour immediately before being tested. Each tire was also broken-in by six brake applications of one second lock-up duration during the warm-up. The whole group of tires were tested in braking and then retested later in cornering as a group.

3. SURFACES

Two pavements very much like the Uniform Tire Quality Grading traction pads at San Angelo, Texas were used. The surfaces were located at the Transportation Research Center of Ohio. One surface was a hot mixed bituminous asphalt pavement with a nominal ASTM E274-70 skid number of 60. The other surface was a polished Portland cement concrete pavement with a nominal ASTM E274-70 skid number of 35.

TABLE 1. TEST TIRES

| TIRE NO. | MANUFACTURER | % OF MARKET* | MODEL | CARCASS TYPE | TREAD TYPE |
|----------|-------------------|--------------|--------------------------|--------------|------------|
| 1a&b | Goodyear | 20% | Unisteel-2 | Radial | Rib |
| 2a&b | Goodyear | | Himiler Special | Bias | Rib |
| 3a&b | Goodyear | | Custom Quiet Drive | Bias | Rib |
| 4a&b | Goodyear | | SuperHiMiler | Bias | Rib |
| 5a&b | Goodyear | | Custom Hi-Miler | Bias | Rib |
| 6a&b | Firestone | 18% | Power Drive | Bias | Lug |
| 7a&b | Firestone | | Transteel | Radial | Rib |
| 8a&b | Firestone | | Long Hauler | Bias | Rib |
| 9a&b | Firestone | | Super All Traction | Bias | Lug |
| 10a&b | Kelly-Springfield | 6.5% | Registered Armor-Trac | Bias | Rib |
| 11a&b | Kelly-Springfield | | Registered Drive Trac | Bias | Lug |
| 12a&b | General | 6.1% | GQT | Bias | Rib |
| 13a&b | General | | QCL | Bias | Lug |
| 14a&b | Michelin | 6.0% | XZA | Radial | Rib |
| 15a&b | Michelin | | XZZ | Radial | Rib |
| 16a&b | Uniroyal | 5.2% | Fleetmaster Triple Tread | Bias | Rib |
| 17a&b | Uniroyal | | Fleetmaster Superlug | Bias | Lug |
| 18a&b | B.F. Goodrich | 5.0% | Extra Miler XL | Bias | Rib |
| 19a&b | B.F. Goodrich | | Traction Express Custom | Bias | Lug |
| 20a&b | Sears | 4.6% | Plus Mileage Rib | Bias | Rib |
| 21a&b | Sears | | Silent Trac | Bias | Lug |
| 22a&b | Armstrong | 4.5% | SD-200 | Bias | Rib |
| 24a&b | Dayton | 2% | Thorobred Premium ESD | Bias | Rib |
| 26a&b | Recap | | Uniroyal Fleet Carrier | Bias | Rib |

*Tire Review Magazine

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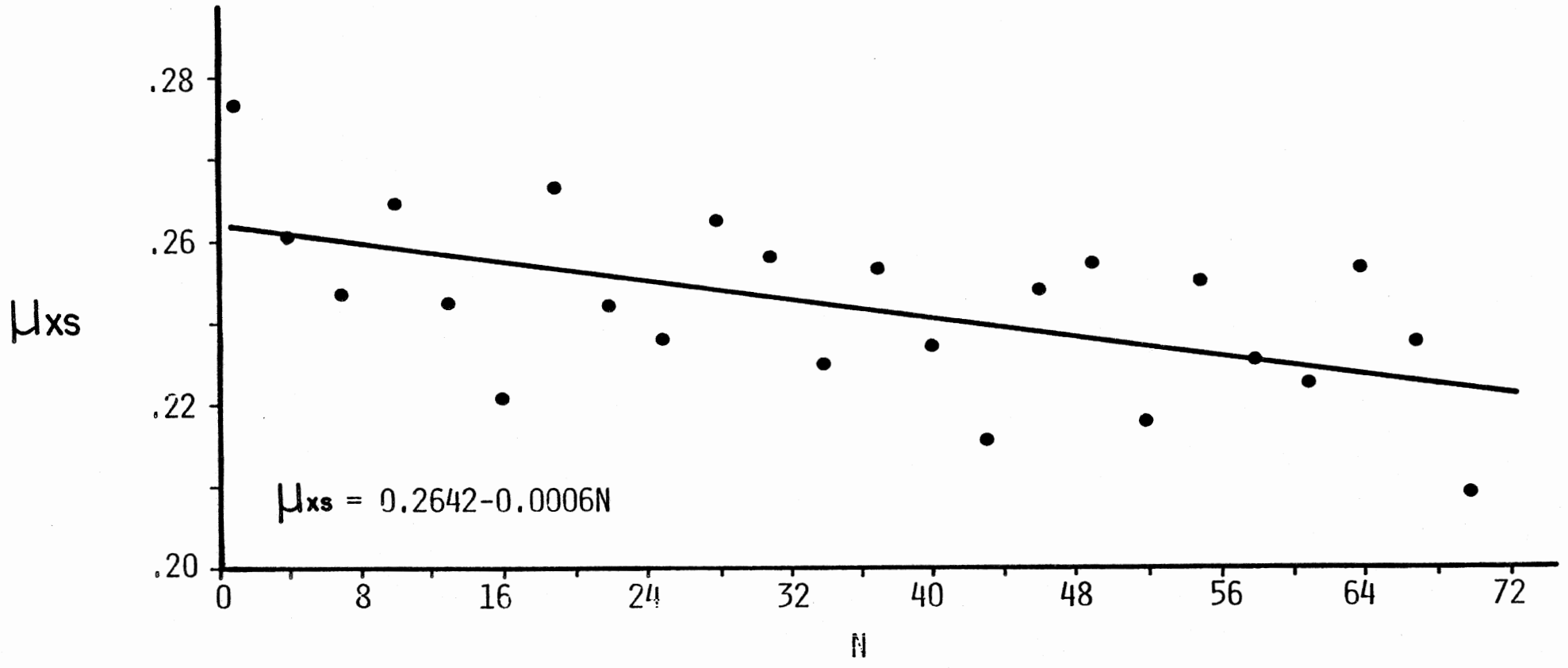


Fig. 1

Locked Wheel Braking Force Coefficient (μ_{xs}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 40 MPH on Concrete

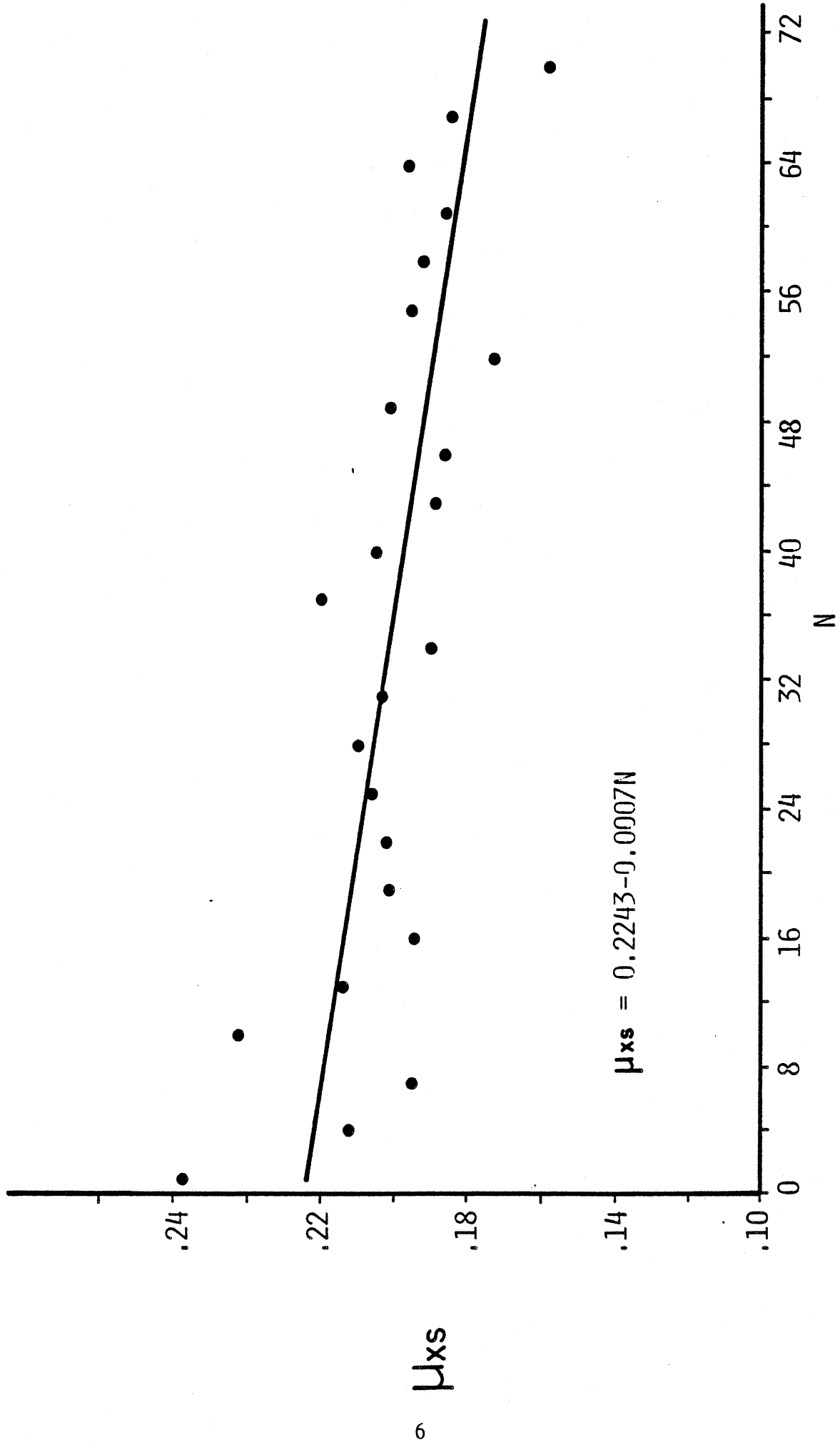


Fig. 2

Locked Wheel Braking Force Coefficient (μ_{xs}) of the Control Tire Vs. Consecutive Number of Tires Tested (N) at 55 MPH on Concrete

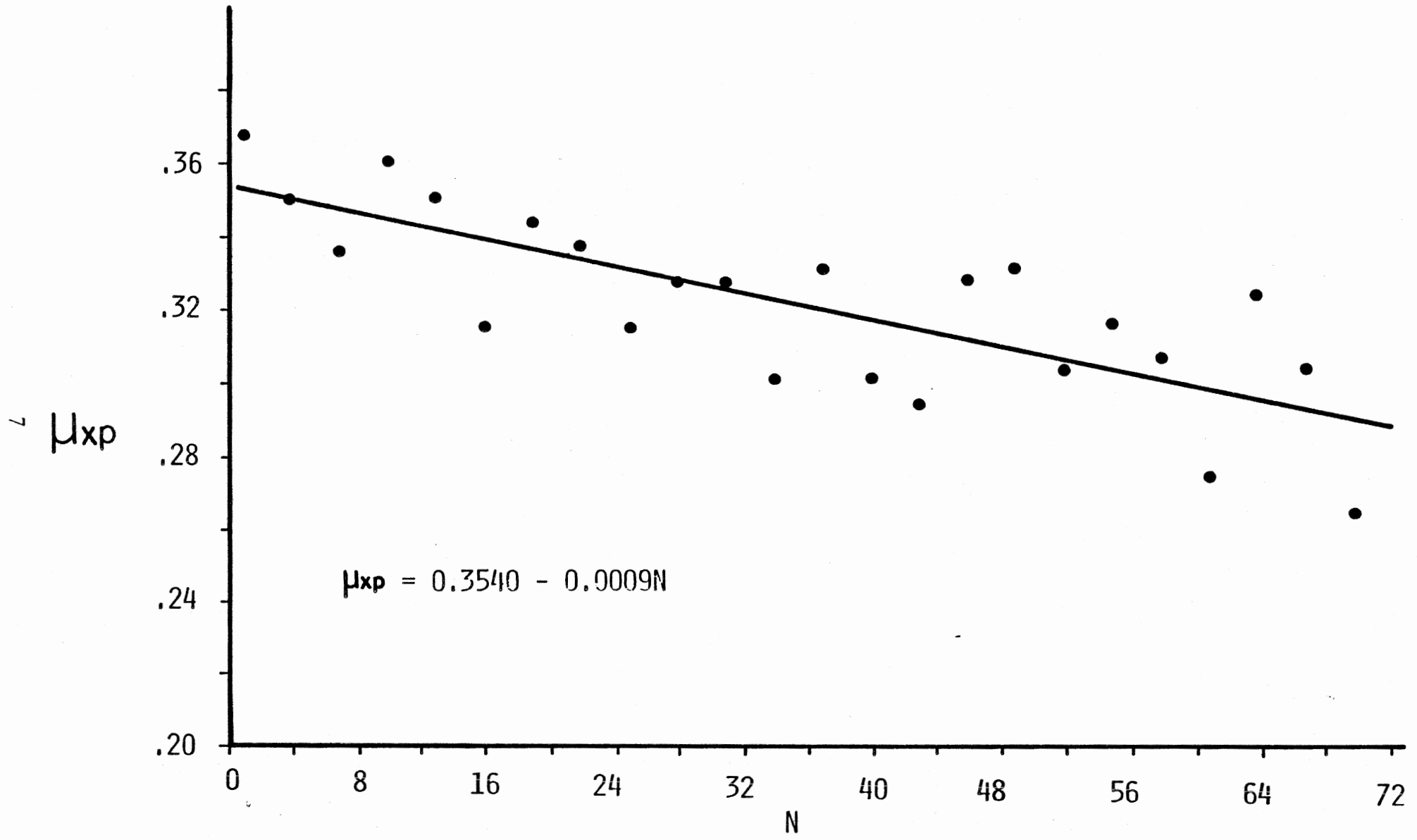


Fig. 3
 Peak Braking Force Coefficient (μ_{xp}) of the Control Tires Vs. Consecutive
 Number of Tires Tested (N) at 40 MPH on Concrete

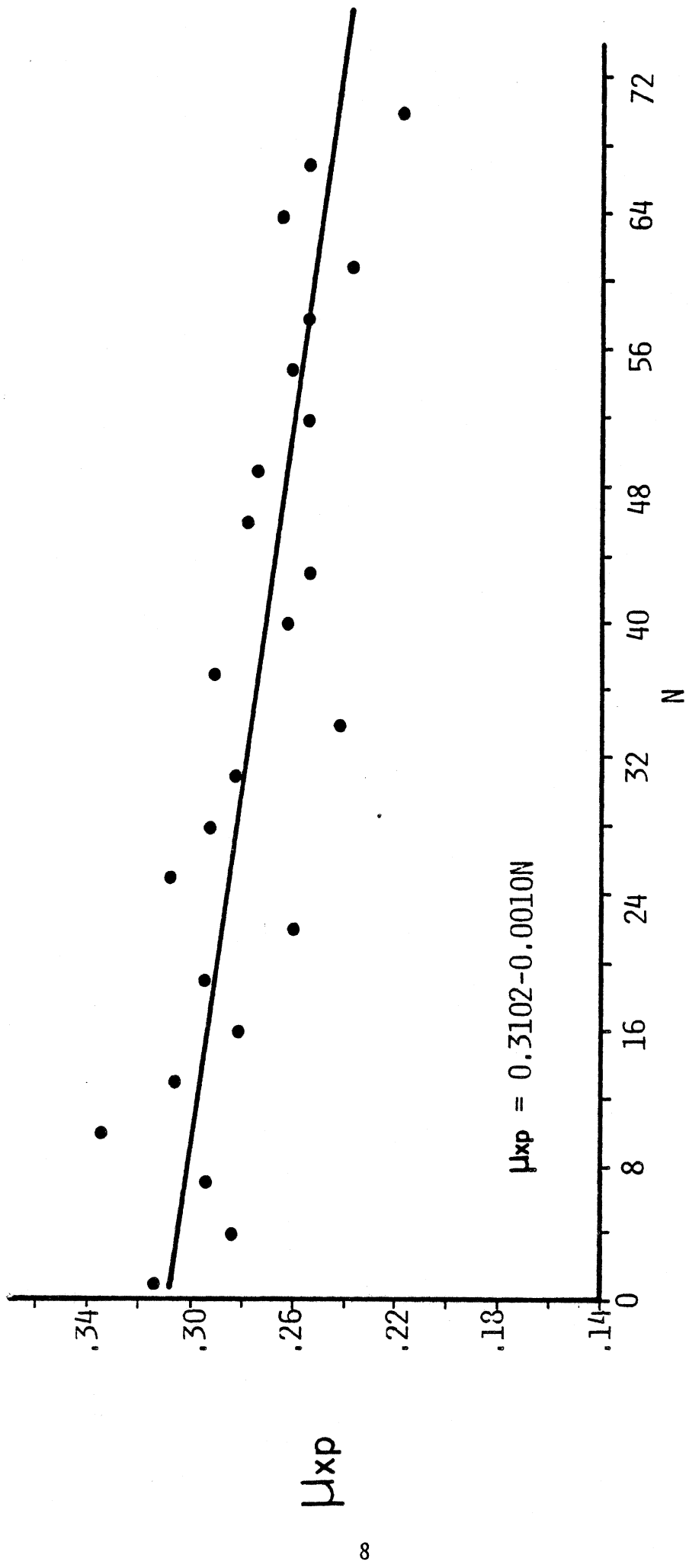


Fig. 4

Peak Braking Force Coefficient (μ_{xp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 55 MPH on Concrete

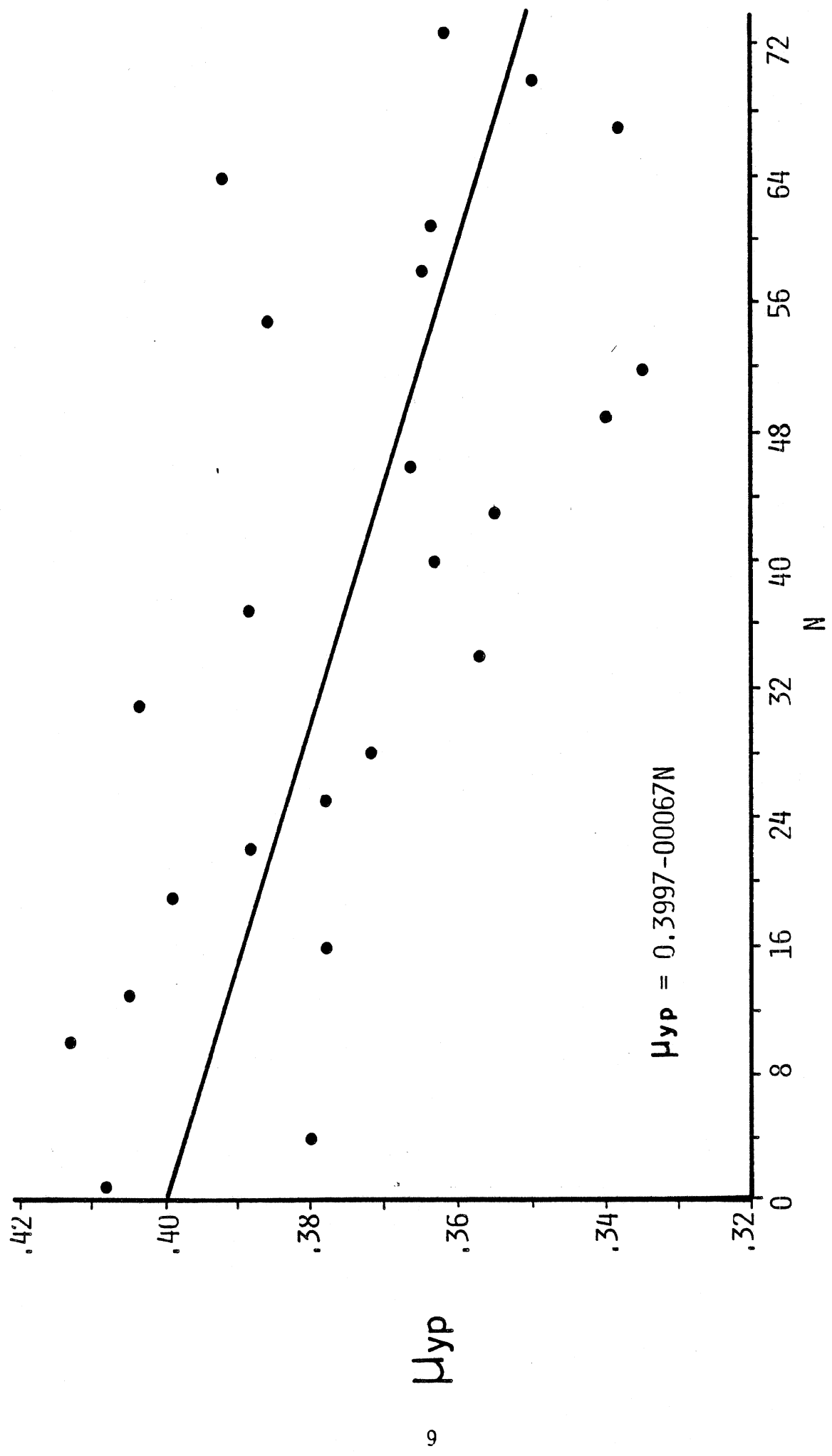


Fig. 5
Peak Lateral Force Coefficient (μ_{yp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 40 MPH on Concrete

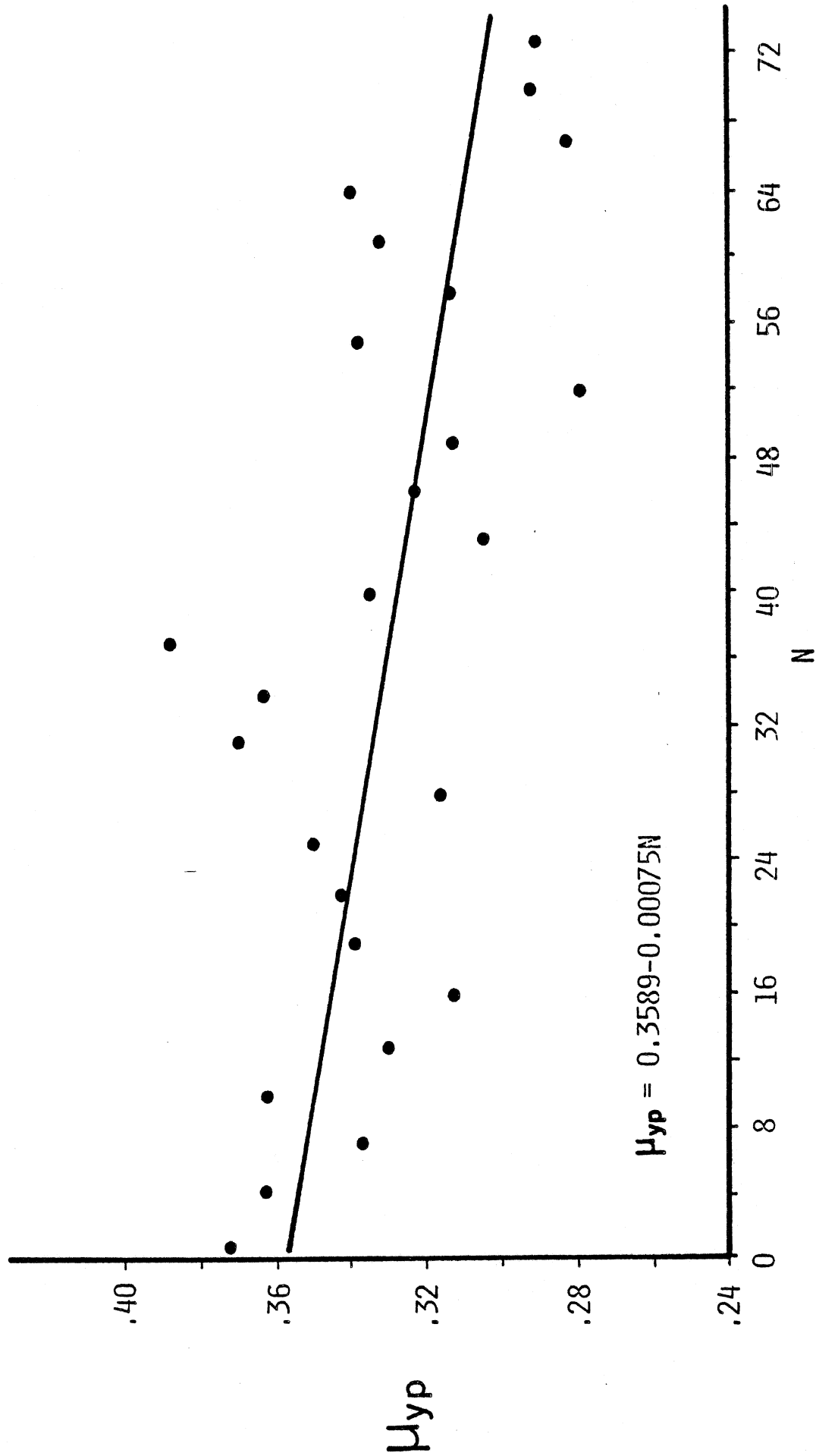


Fig. 6
 Peak Lateral Force Coefficient (μ_{yp}) of the Control Tires Vs. Consecutive
 Number of Tires Tested (N) at 55 MPH on Concrete

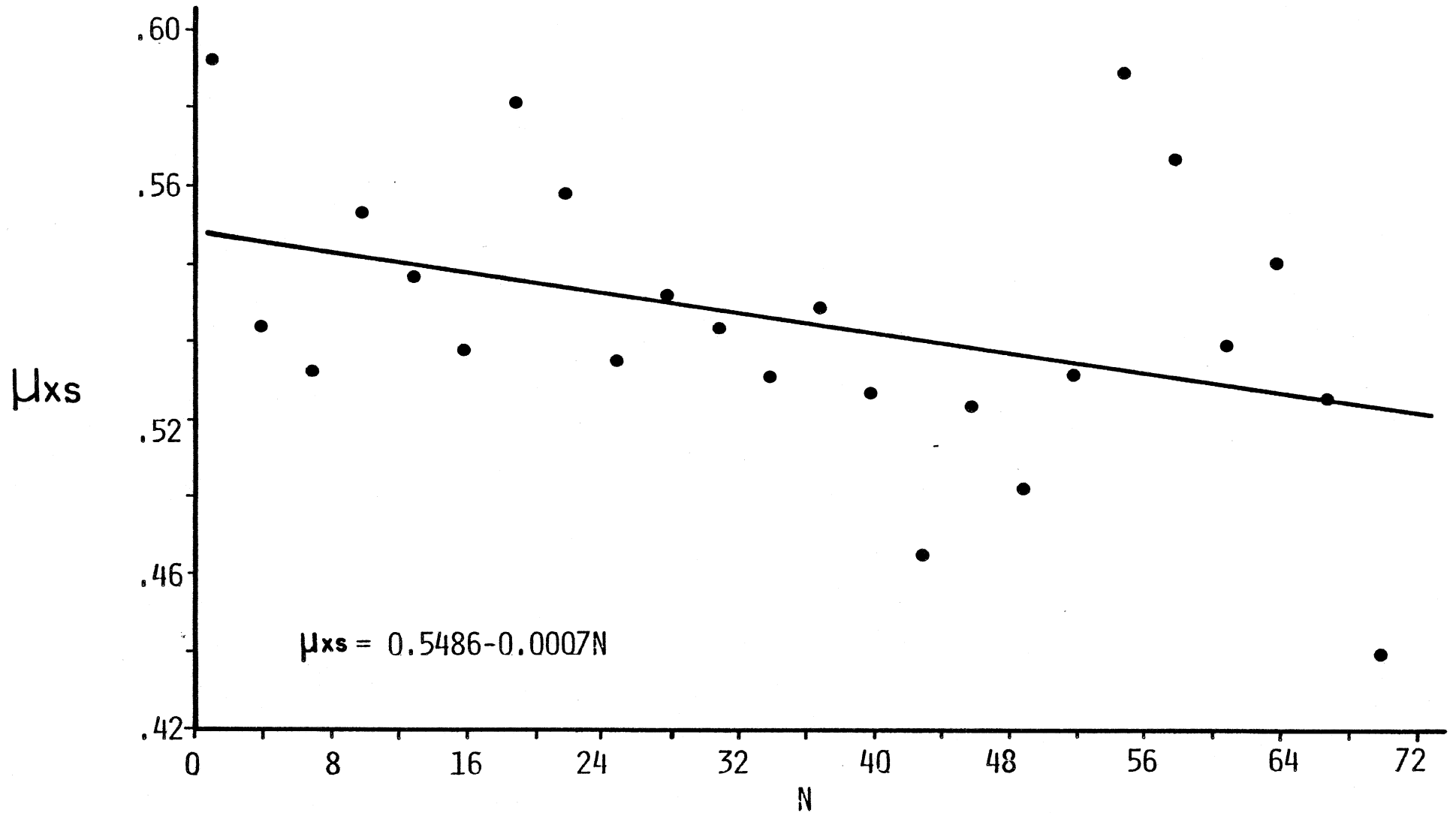


Fig. 7

Locked Wheel Braking Force Coefficient (μ_{xs}) of the Control Tires Vs.
Consecutive Number of Tires Tested (N) at 40 MPH on Asphalt

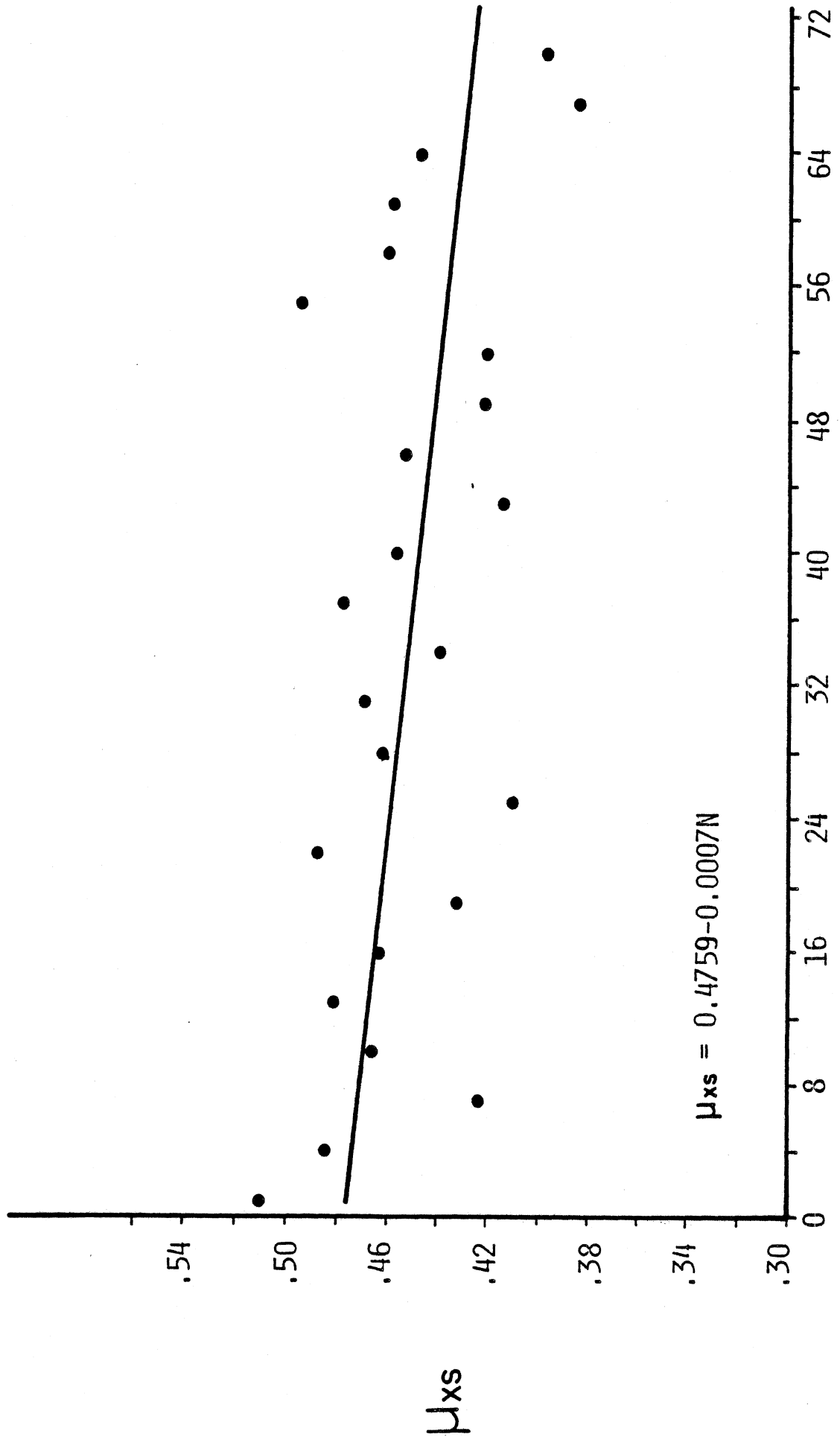


Fig. 8
Locked Wheel Braking Force Coefficient (μ_{xs}) of the Control Tires Vs.
Consecutive Number of Tires Tested (N) at 55 MPH on Asphalt

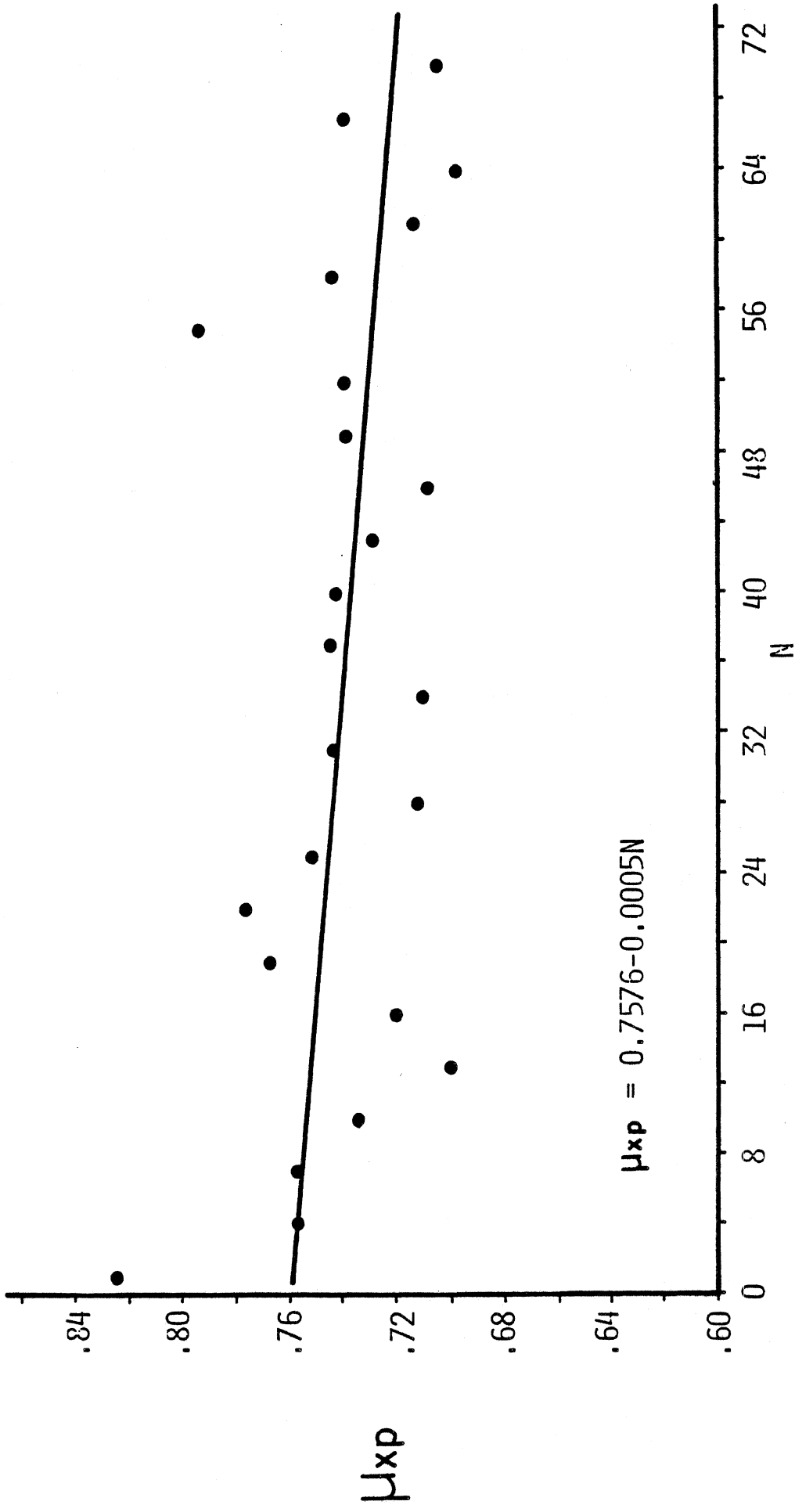


Fig. 9
Peak Breaking Force Coefficient (μ_{xp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 40 MPH on Asphalt

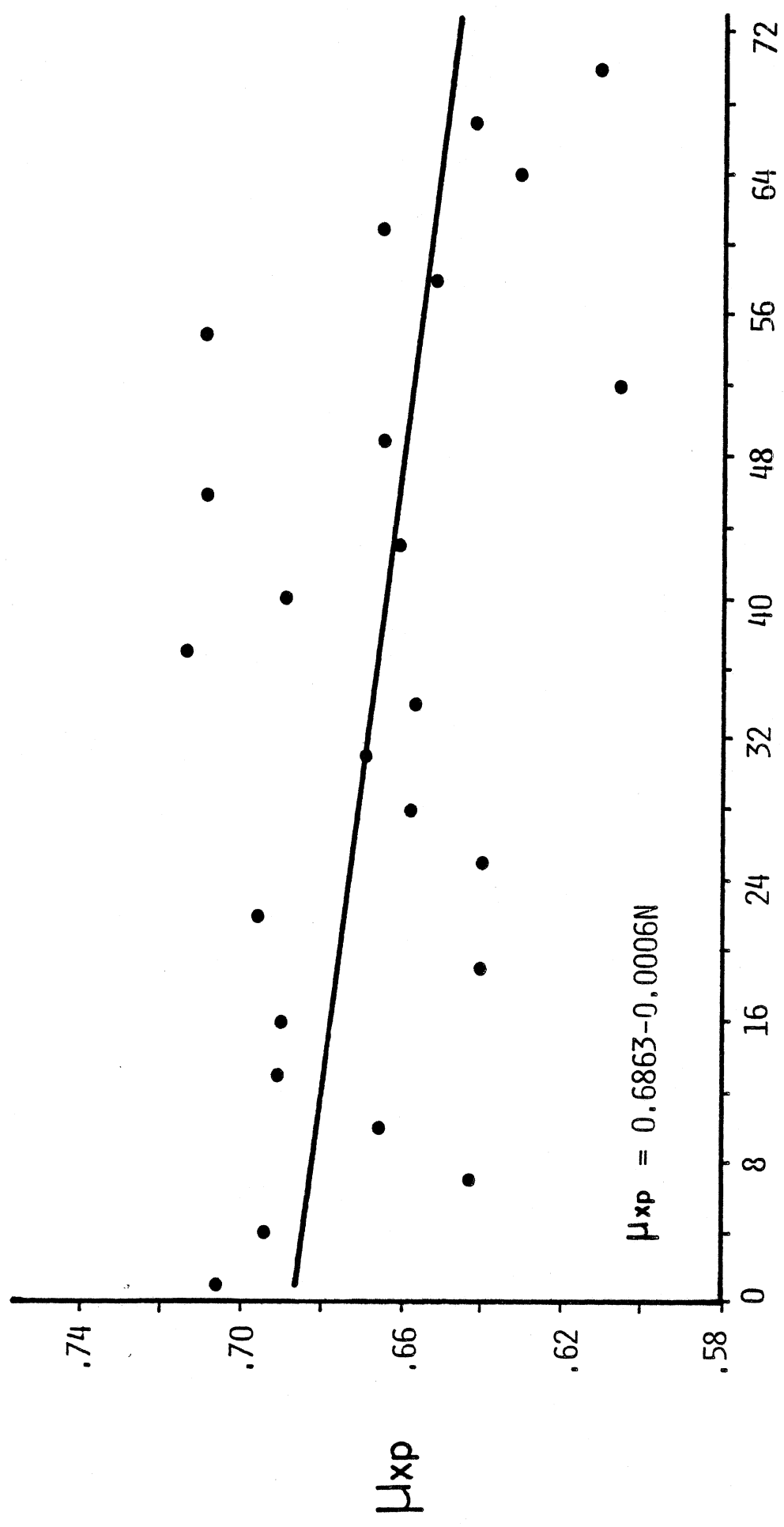


Fig. 10

Peak Braking Force Coefficient (μ_{xp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 55 MPH on Asphalt

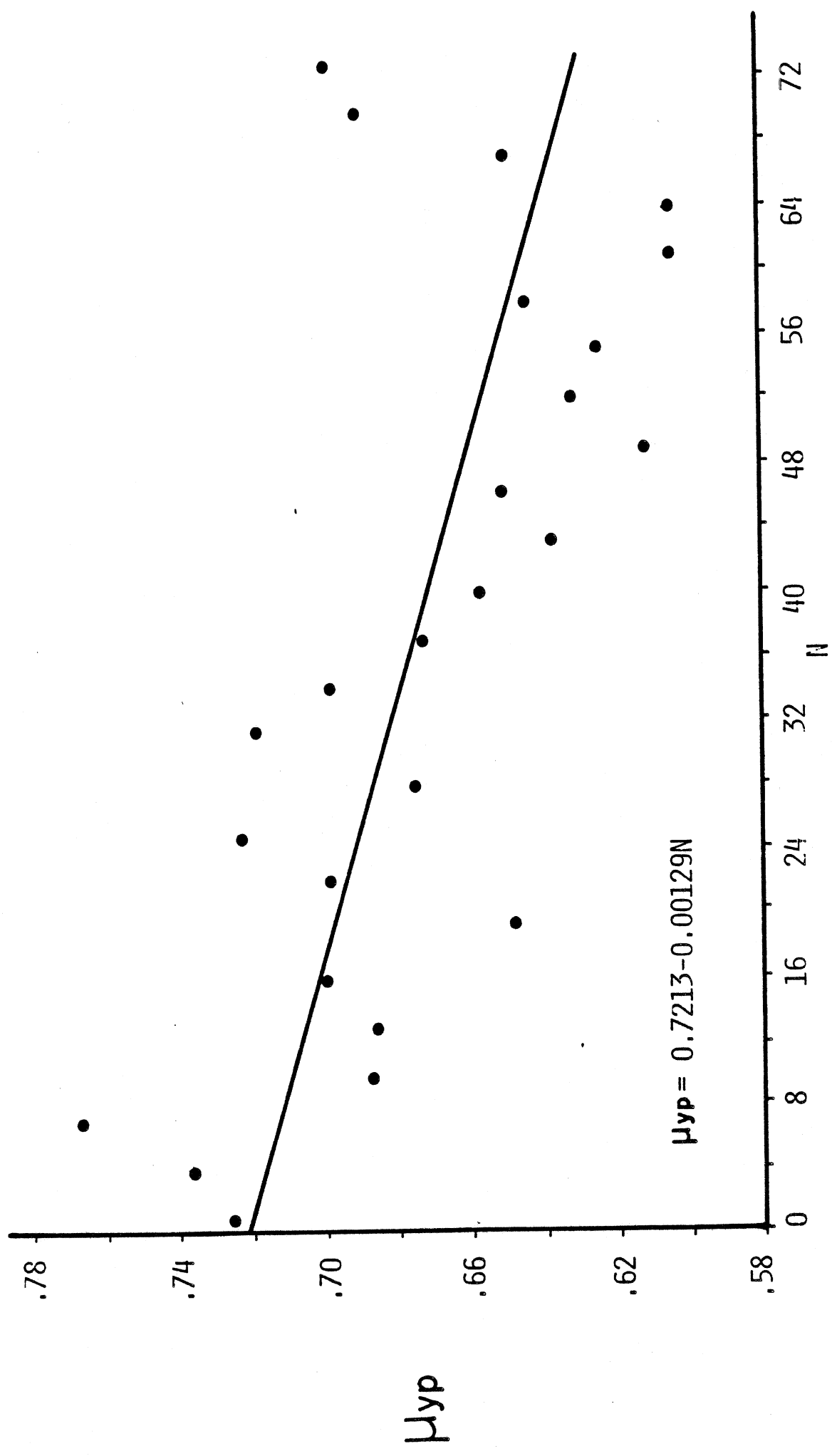


Fig. 11
Peak Lateral Force Coefficient (μ_{yp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 40 MPH on Asphalt

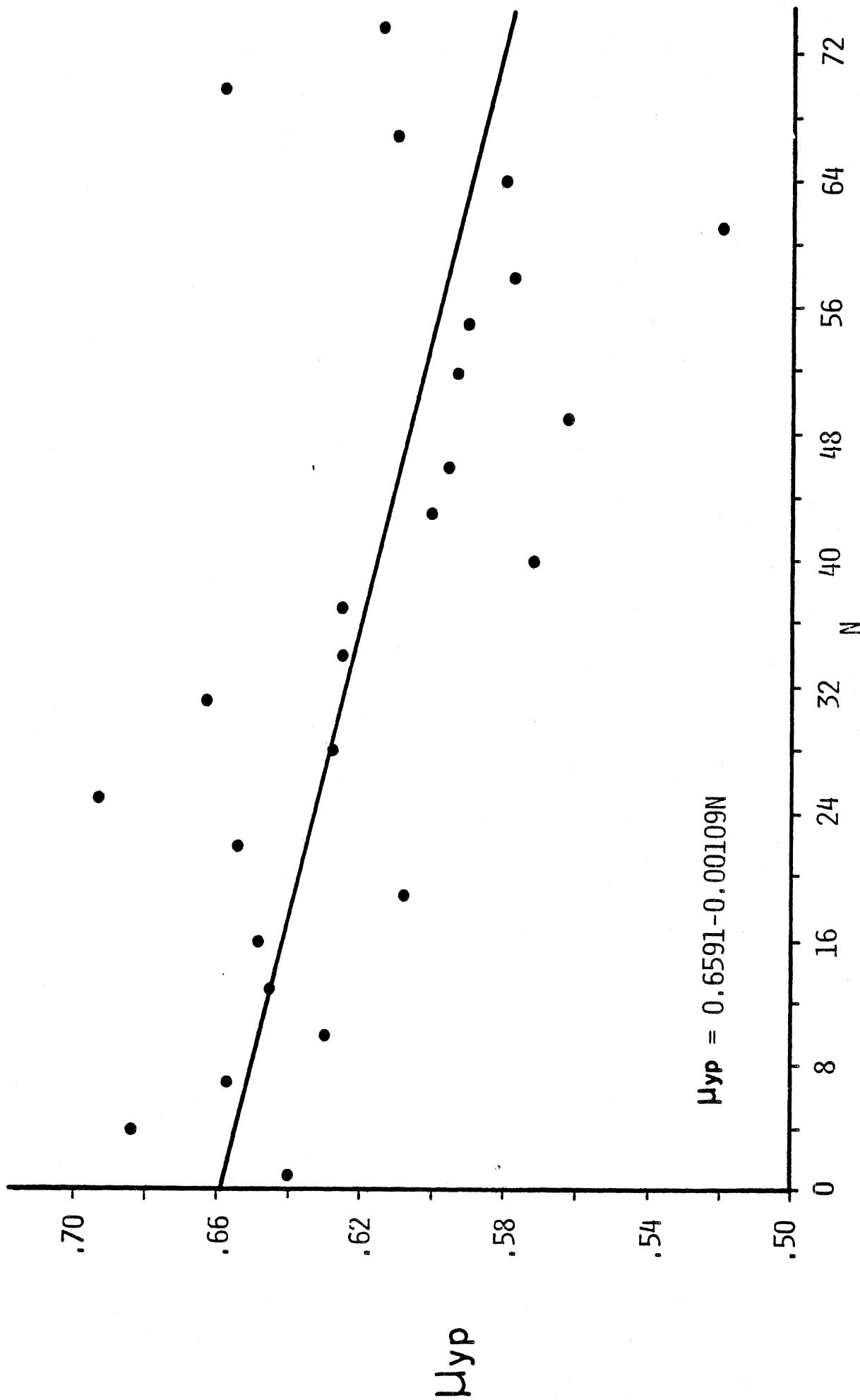


Fig. 12

Peak Lateral Force Coefficient (μ_{yp}) of the Control Tires Vs. Consecutive Number of Tires Tested (N) at 55 MPH on Asphalt

TABLE 2

TRUCK TIRE TRACTION FORCE COEFFICIENTS ON CONCRETE CORRECTED FOR SURFACE WEAR

| TIRE TYPE | TIRE NO. | μ_{xs} | | | | μ_{xp} | | | | μ_{yp} | | | |
|-----------|----------|------------|------|--------|------|------------|------|--------|------|------------|------|--------|------|
| | | 40 mph | | 55 mph | | 40 mph | | 55 mph | | 40 mph | | 55 mph | |
| | | avg | s | avg | s | avg | s | avg | s | avg | s | avg | s |
| | 2A | .245 | .026 | .200 | .010 | .362 | .069 | .311 | .054 | .381 | .025 | .336 | .000 |
| | 2B | .222 | .031 | .186 | .019 | .337 | .021 | .308 | .016 | .376 | .022 | .333 | .019 |
| | 4A | .221 | .018 | .182 | .012 | .325 | .040 | .290 | .043 | .430 | .028 | .385 | .024 |
| | 4B | .211 | .021 | .187 | .022 | .308 | .034 | .261 | .021 | .404 | .021 | .369 | .019 |
| | 5A | .264 | .024 | .211 | .021 | .347 | .028 | .303 | .025 | .371 | .023 | .325 | .017 |
| | 5B | .247 | .033 | .208 | .028 | .343 | .039 | .304 | .021 | .392 | .020 | .343 | .030 |
| | 8A | .222 | .021 | .186 | .011 | .324 | .039 | .282 | .034 | .362 | .015 | .300 | .022 |
| B | 8B | .232 | .017 | .194 | .021 | .332 | .029 | .272 | .036 | .352 | .028 | .301 | .006 |
| I | 10A | .266 | .011 | .209 | .012 | .350 | .029 | .305 | .025 | .396 | .018 | .368 | .015 |
| A | 10B | .266 | .042 | .224 | .016 | .362 | .039 | .317 | .025 | .382 | .022 | .342 | .021 |
| S | 12A | .201 | .022 | .161 | .017 | .276 | .029 | .232 | .014 | .397 | .029 | .386 | .054 |
| | 12B | .218 | .026 | .173 | .021 | .292 | .010 | .245 | .010 | .404 | .029 | .375 | .034 |
| R | 16A | .245 | .037 | .196 | .017 | .343 | .038 | .276 | .030 | .382 | .034 | .350 | .018 |
| I | 16B | .238 | .024 | .217 | .018 | .353 | .043 | .310 | .040 | .400 | .025 | .371 | .012 |
| B | 18A | .250 | .026 | .200 | .012 | .347 | .039 | .272 | .033 | .381 | .018 | .342 | .013 |
| | 18B | .239 | .025 | .198 | .016 | .352 | .045 | .302 | .030 | .395 | .024 | .360 | .020 |
| | 20A | .251 | .021 | .232 | .012 | .371 | .028 | .326 | .022 | .383 | .024 | .351 | .020 |
| | 20B | .263 | .021 | .230 | .015 | .370 | .043 | .326 | .025 | .394 | .019 | .367 | .029 |
| | 22A | .228 | .013 | .222 | .027 | .358 | .029 | .290 | .041 | .393 | .028 | .342 | .017 |
| | 22B | .253 | .030 | .221 | .024 | .354 | .028 | .292 | .017 | .382 | .021 | .305 | .020 |
| | 24A | .235 | .022 | .200 | .024 | .317 | .028 | .216 | .024 | .347 | .021 | .304 | .015 |
| | 24B | .251 | .032 | .208 | .021 | .344 | .023 | .287 | .011 | .363 | .019 | .320 | .016 |
| | 3A | .224 | .033 | .193 | .032 | .331 | .030 | .285 | .019 | .362 | .015 | .317 | .026 |
| | 3B | .231 | .019 | .204 | .022 | .330 | .024 | .295 | .018 | .363 | .023 | .299 | .012 |
| | 6A | .229 | .027 | .203 | .024 | .301 | .021 | .285 | .023 | .365 | .032 | .316 | .015 |
| | 6B | .204 | .014 | .185 | .020 | .293 | .027 | .266 | .025 | .353 | .024 | .329 | .018 |
| B | 9A | .226 | .012 | .179 | .024 | .320 | .036 | .260 | .044 | .361 | .022 | .298 | .023 |
| I | 9B | .233 | .028 | .196 | .024 | .322 | .016 | .297 | .050 | .371 | .039 | .328 | .024 |
| A | 11A | .224 | .026 | .185 | .026 | .325 | .028 | .286 | .039 | .406 | .026 | .359 | .027 |
| S | 11B | .214 | .018 | .202 | .028 | .335 | .032 | .291 | .040 | .415 | .034 | .374 | .051 |
| | 13A | .176 | .022 | .127 | .007 | .224 | .029 | .176 | .013 | .318 | .023 | .306 | .085 |
| L | 13B | .167 | .013 | .138 | .027 | .224 | .025 | .216 | .032 | .316 | .024 | .274 | .025 |
| U | 17A | .220 | .026 | .194 | .018 | .289 | .029 | .251 | .013 | .326 | .040 | .286 | .021 |
| G | 17B | .245 | .021 | .195 | .017 | .328 | .033 | .291 | .020 | .323 | .056 | .284 | .018 |
| | 19A | .236 | .018 | .197 | .024 | .311 | .026 | .267 | .020 | .407 | .045 | .361 | .021 |
| | 19B | .239 | .012 | .189 | .022 | .310 | .029 | .250 | .018 | .386 | .035 | .323 | .020 |
| | 21A | .248 | .021 | .211 | .032 | .345 | .021 | .309 | .023 | .387 | .013 | .332 | .024 |
| | 21B | .238 | .019 | .208 | .037 | .315 | .029 | .282 | .029 | .390 | .013 | .336 | .029 |
| | 1A | .235 | .015 | .180 | .012 | .352 | .037 | .338 | .055 | .416 | .026 | .392 | .016 |
| R | 1B | .230 | .032 | .176 | .022 | .361 | .035 | .316 | .033 | .407 | .022 | .376 | .012 |
| A | 7A | .211 | .023 | .170 | .015 | .276 | .041 | .234 | .043 | .391 | .023 | .366 | .024 |
| D | 7B | .212 | .022 | .167 | .033 | .290 | .037 | .240 | .039 | .361 | .050 | .314 | .026 |
| | 14A | .220 | .014 | .155 | .010 | .302 | .039 | .244 | .026 | .395 | .033 | .363 | .009 |
| R | 14B | .217 | .017 | .175 | .010 | .296 | .037 | .244 | .019 | .407 | .021 | .369 | .031 |
| I | 15A | .243 | .019 | .199 | .023 | .329 | .027 | .285 | .027 | .422 | .041 | .376 | .030 |
| B | 15B | .224 | .031 | .190 | .016 | .311 | .018 | .282 | .019 | .429 | .036 | .410 | .045 |
| RE | 26A | .184 | .029 | .153 | .013 | .235 | .024 | .194 | .011 | .370 | .017 | .262 | .025 |
| CAP | 26B | .171 | .011 | .152 | .022 | .235 | .024 | .216 | .039 | .366 | .016 | .297 | .015 |

TABLE 3

TRUCK TIRE TRACTION FORCE COEFFICIENTS ON ASPHALT CORRECTED FOR SURFACE WEAR

| TIRE TYPE | TIRE NO. | μ_{xs} | | | | μ_{xp} | | | | μ_{yp} | | | |
|--------------------------------------|----------|------------|------|--------|------|------------|------|--------|------|------------|------|--------|------|
| | | 40 mph | | 55 mph | | 40 mph | | 55 mph | | 40 mph | | 55 mph | |
| | | avg | s | avg | s | avg | s | avg | s | avg | s | avg | s |
| ↑ B I A S R I B | 2A | .538 | .026 | .462 | .024 | .784 | .023 | .718 | .036 | .620 | .023 | .572 | .033 |
| | 2B | .481 | .015 | .417 | .019 | .745 | .040 | .684 | .051 | .651 | .018 | .589 | .021 |
| | 4A | .521 | .024 | .444 | .033 | .778 | .032 | .729 | .030 | .612 | .018 | .597 | .023 |
| | 4B | .506 | .020 | .462 | .021 | .738 | .068 | .770 | .027 | .620 | .014 | .586 | .019 |
| | 5A | .612 | .017 | .461 | .046 | .779 | .021 | .682 | .034 | .666 | .034 | .620 | .020 |
| | 5B | .507 | .020 | .487 | .029 | .769 | .014 | .692 | .031 | .631 | .017 | .611 | .022 |
| | 8A | .474 | .017 | .421 | .026 | .674 | .033 | .604 | .052 | .613 | .018 | .554 | .012 |
| | 8B | .747 | .040 | .403 | .026 | .676 | .025 | .619 | .034 | .615 | .021 | .578 | .030 |
| | 10A | .500 | .036 | .465 | .026 | .745 | .039 | .684 | .018 | .655 | .023 | .624 | .022 |
| | 10B | .514 | .015 | .451 | .047 | .735 | .022 | .680 | .048 | .648 | .018 | .604 | .031 |
| | 12A | .552 | .034 | .445 | .034 | .784 | .022 | .726 | .025 | .657 | .024 | .611 | .014 |
| | 12B | .519 | .026 | .461 | .034 | .754 | .026 | .721 | .042 | .675 | .008 | .610 | .031 |
| 16A | .538 | .026 | .437 | .021 | .710 | .054 | .666 | .036 | .670 | .020 | .608 | .018 | |
| 16B | .524 | .022 | .451 | .042 | .731 | .027 | .663 | .012 | .662 | .019 | .591 | .015 | |
| 18A | .519 | .030 | .482 | .036 | .817 | .055 | .770 | .020 | .648 | .027 | .557 | .018 | |
| 18B | .544 | .044 | .463 | .037 | .797 | .047 | .606 | .040 | .662 | .032 | .582 | .014 | |
| 20A | .585 | .008 | .479 | .017 | .791 | .012 | .640 | .021 | .623 | .016 | .574 | .008 | |
| 20B | .576 | .044 | .453 | .052 | .742 | .027 | .633 | .043 | .604 | .021 | .548 | .015 | |
| 22A | .475 | .032 | .419 | .014 | .760 | .031 | .660 | .037 | .573 | .023 | .518 | .015 | |
| 22B | .471 | .018 | .411 | .023 | .728 | .038 | .642 | .036 | .653 | .027 | .609 | .023 | |
| 24A | .518 | .013 | .459 | .031 | .679 | .038 | .640 | .036 | .665 | .016 | .611 | .018 | |
| 24B | .552 | .018 | .485 | .028 | .721 | .031 | .574 | .017 | .700 | .023 | .644 | .004 | |
| 3A | .560 | .006 | .479 | .024 | .744 | .031 | .654 | .024 | .635 | .015 | .581 | .911 | |
| 3B | .556 | .025 | .471 | .024 | .745 | .026 | .669 | .016 | .681 | .016 | .585 | .012 | |
| 6A | .461 | .031 | .416 | .026 | .614 | .031 | .587 | .029 | .642 | .023 | .633 | .019 | |
| 6B | .398 | .082 | .405 | .025 | .567 | .046 | .603 | .029 | .643 | .021 | .599 | .025 | |
| 9A | .562 | .022 | .437 | .025 | .697 | .032 | .657 | .018 | .688 | .008 | .663 | .008 | |
| 9B | .501 | .059 | .431 | .008 | .679 | .031 | .677 | .021 | .709 | .014 | .704 | .008 | |
| 11A | .471 | .018 | .403 | .023 | .610 | .034 | .590 | .016 | .710 | .031 | .649 | .021 | |
| 11B | .478 | .016 | .404 | .018 | .611 | .027 | .586 | .019 | .678 | .014 | .635 | .014 | |
| 13A | .458 | .027 | .402 | .045 | .642 | .031 | .611 | .037 | ---- | ---- | .587 | .020 | |
| 13B | .435 | .025 | .366 | .023 | .643 | .043 | .584 | .022 | .620 | .019 | .593 | .012 | |
| 17A | .423 | .022 | .401 | .020 | .555 | .024 | .581 | .045 | .622 | .016 | .557 | .008 | |
| 17B | .415 | .016 | .396 | .017 | .535 | .030 | .590 | .037 | .579 | .012 | .538 | .024 | |
| 19A | .540 | .024 | .443 | .014 | .720 | .022 | .641 | .023 | .636 | .022 | .518 | .022 | |
| 19B | .483 | .021 | .431 | .024 | .670 | .029 | .622 | .030 | .660 | .026 | .582 | .016 | |
| 21A | .516 | .025 | .442 | .012 | .716 | .020 | .680 | .017 | .618 | .013 | .601 | .010 | |
| 21B | .512 | .016 | .454 | .029 | .708 | .056 | .696 | .012 | .632 | .021 | .583 | .022 | |
| 1A | .437 | .031 | .387 | .020 | .730 | .027 | .681 | .022 | .604 | .022 | .582 | .029 | |
| 1B | .422 | .022 | .393 | .031 | .722 | .040 | .657 | .032 | .585 | .015 | .573 | .021 | |
| 7A | .445 | .026 | .393 | .015 | .694 | .027 | .631 | .025 | .613 | .020 | .563 | .030 | |
| 7B | .475 | .020 | .410 | .027 | .694 | .031 | .658 | .024 | .613 | .010 | .582 | .020 | |
| 14A | .473 | .016 | .419 | .019 | .713 | .052 | .679 | .043 | .640 | .005 | .597 | .012 | |
| 14B | .474 | .020 | .410 | .027 | .646 | .051 | .604 | .036 | .661 | .015 | .613 | .012 | |
| 15A | .443 | .020 | .404 | .019 | .736 | .014 | .684 | .053 | .690 | .013 | .652 | .029 | |
| 15B | .448 | .023 | .390 | .030 | .747 | .014 | .712 | .031 | .762 | .052 | .689 | .039 | |
| RE | 26A | .505 | .025 | .424 | .029 | .847 | .041 | .756 | .024 | .815 | .024 | .738 | .039 |
| CAP | 26B | .485 | .018 | .454 | .026 | .848 | .032 | .766 | .037 | .780 | .019 | .696 | .024 |

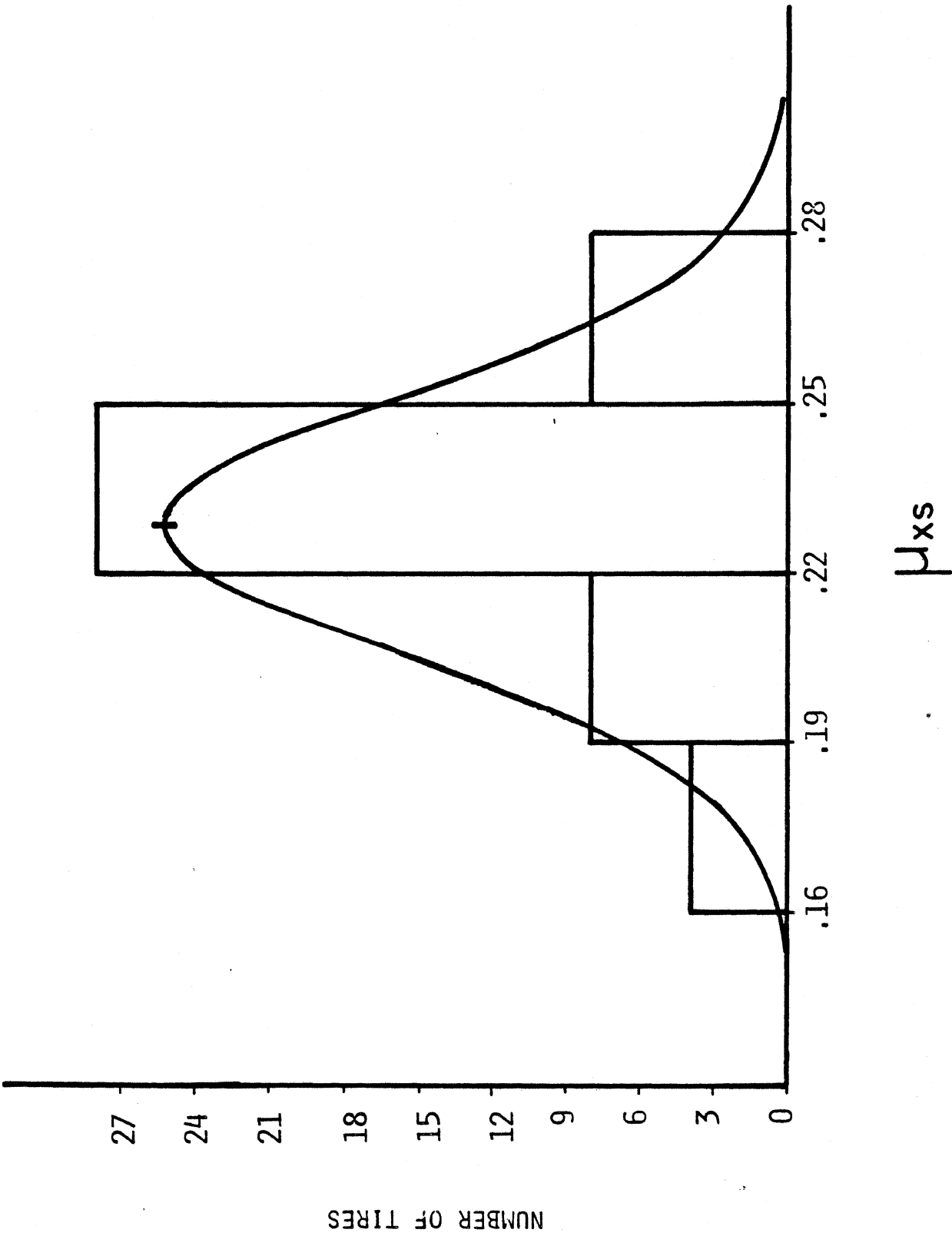


Fig. 14

Histogram of Test Sample Distribution for Locked Wheel Braking Coefficient (μ_{xs}) at 40 MPH on Concrete and a Prediction of the Population Distribution

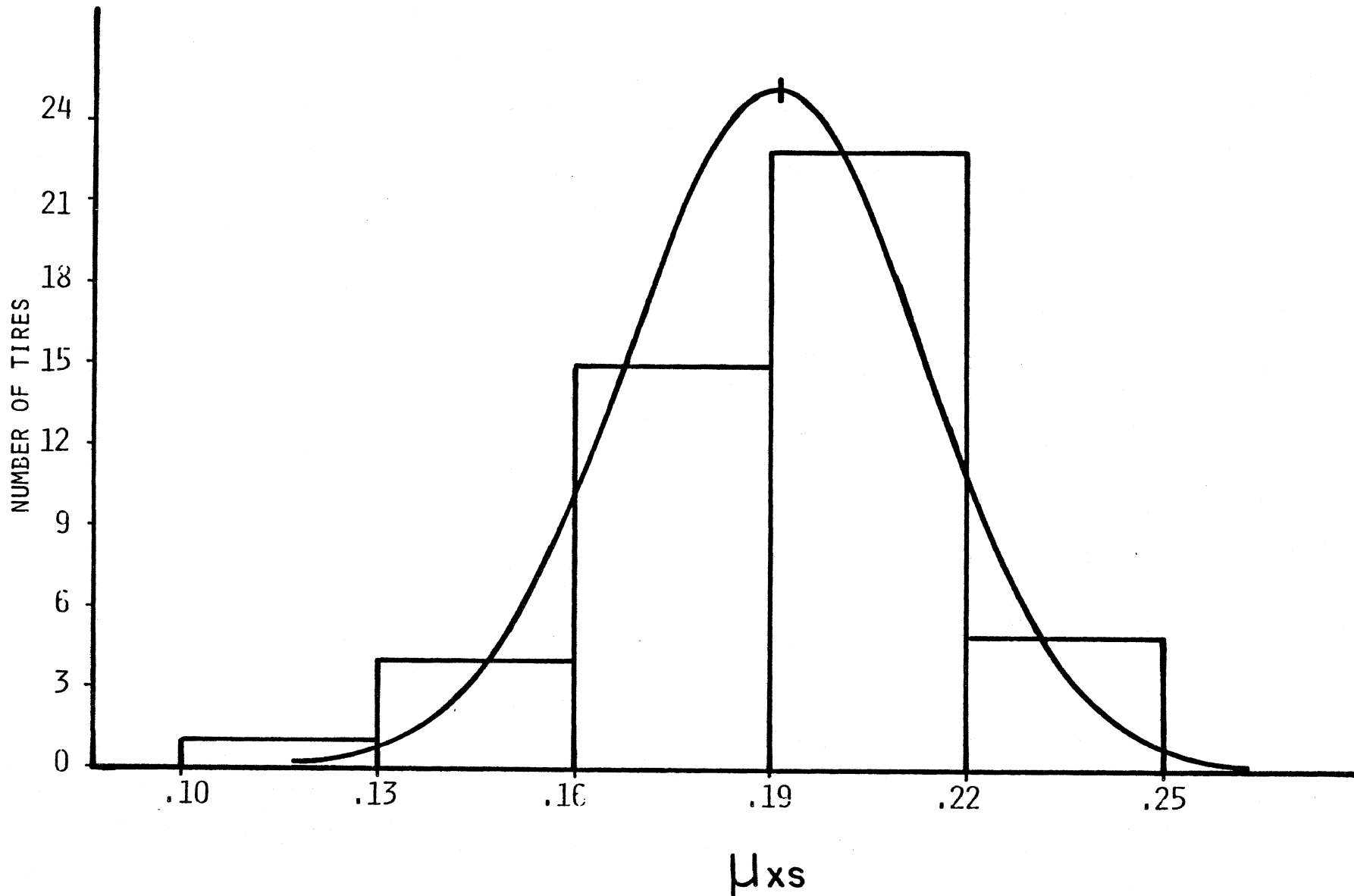
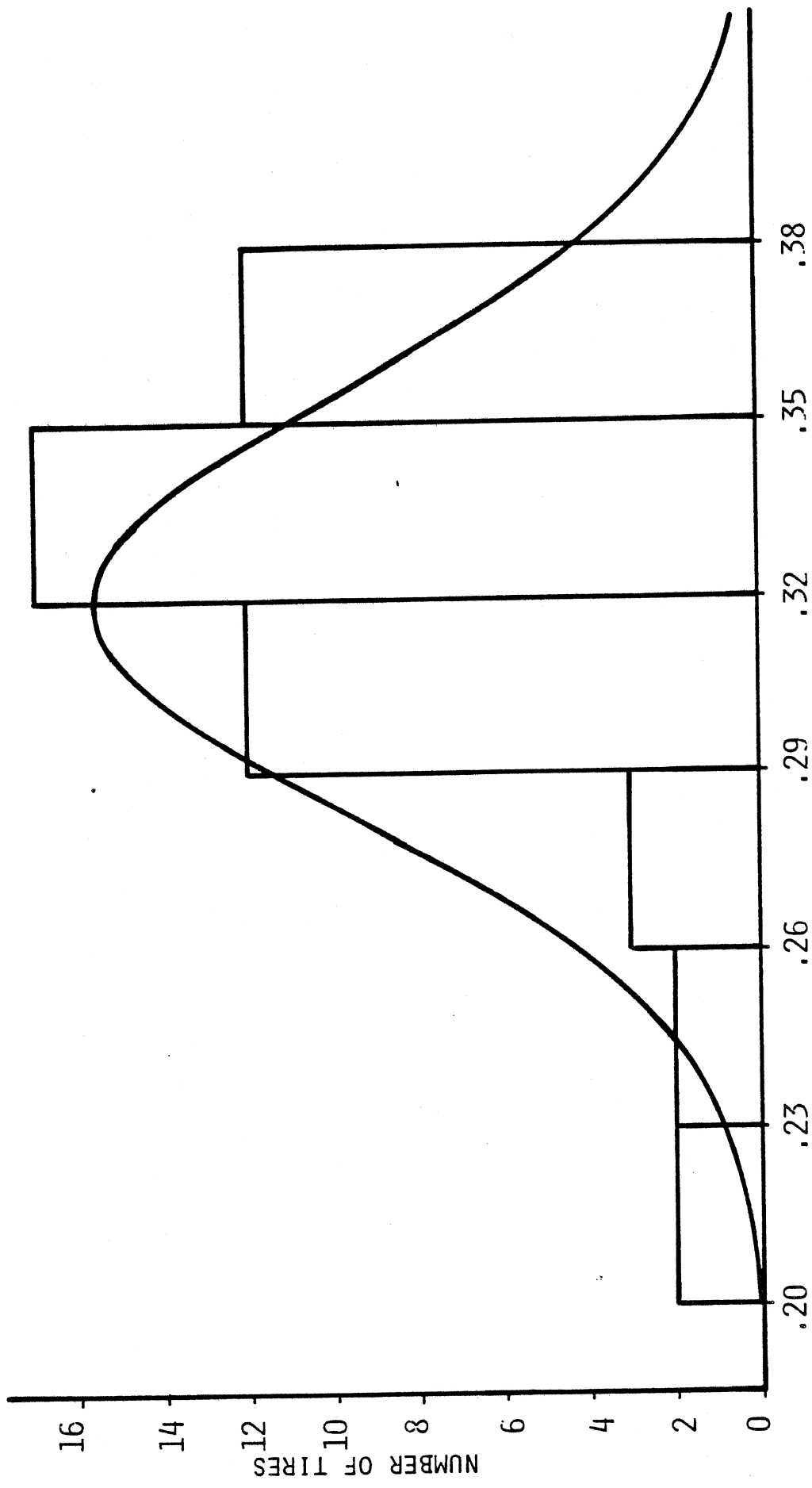


Fig. 15

Histogram of the Test Sample Distribution for Locked Wheel Braking Coefficient (μ_{xs}) at 55 MPH on Concrete and a Prediction of the Population Distribution



μ_{xp}

Fig. 16

Histogram of the Test Sample Distribution for Peak Braking Force Coefficient (μ_{xp}) at 40 MPH on Concrete and a Prediction of the Population Distribution

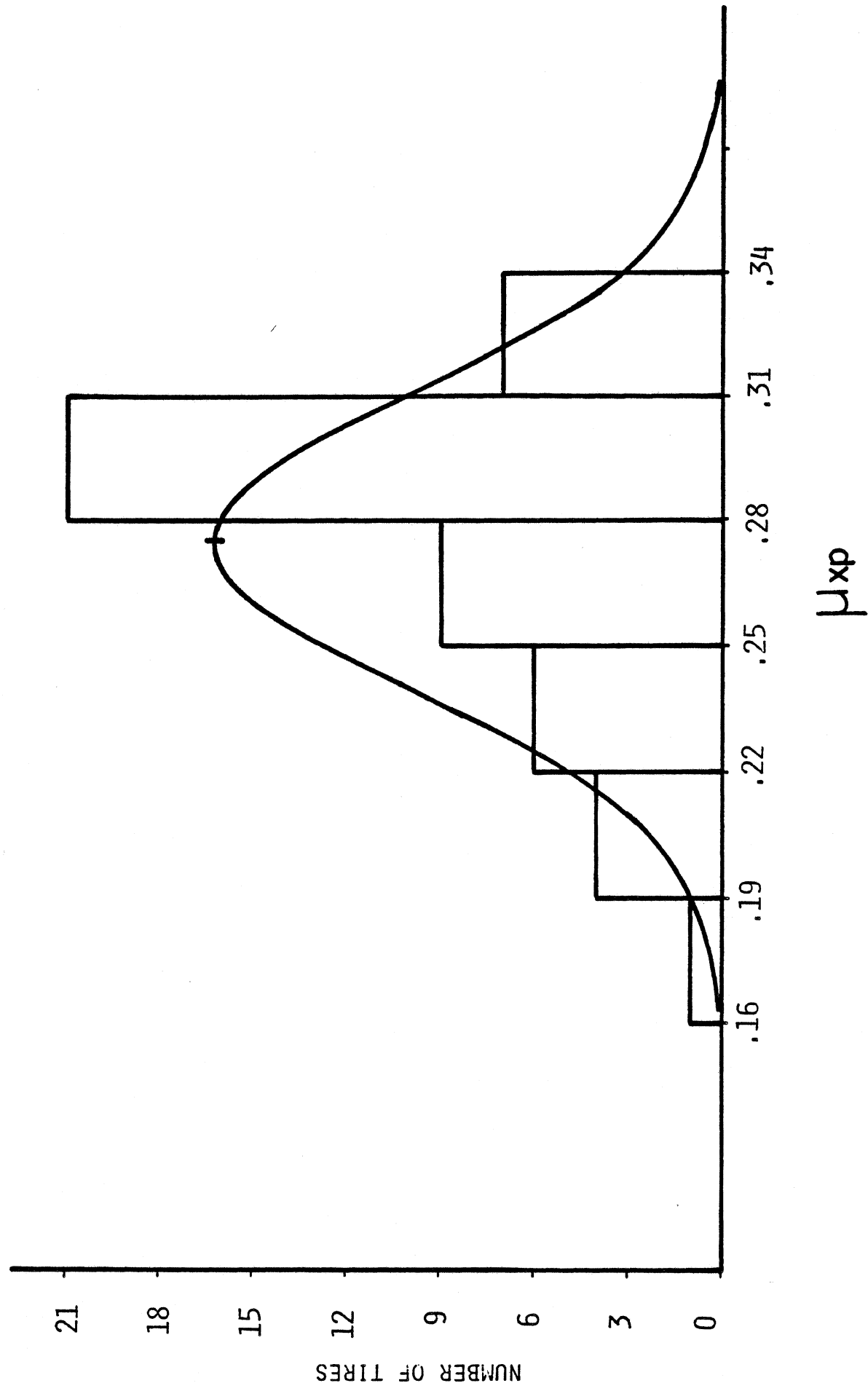


Fig. 17

Histogram of the Test Sample Distribution for Peak Braking Force Coefficient (μ_{xp}) at 55 MPH on Concrete and a Prediction of the Population Distribution

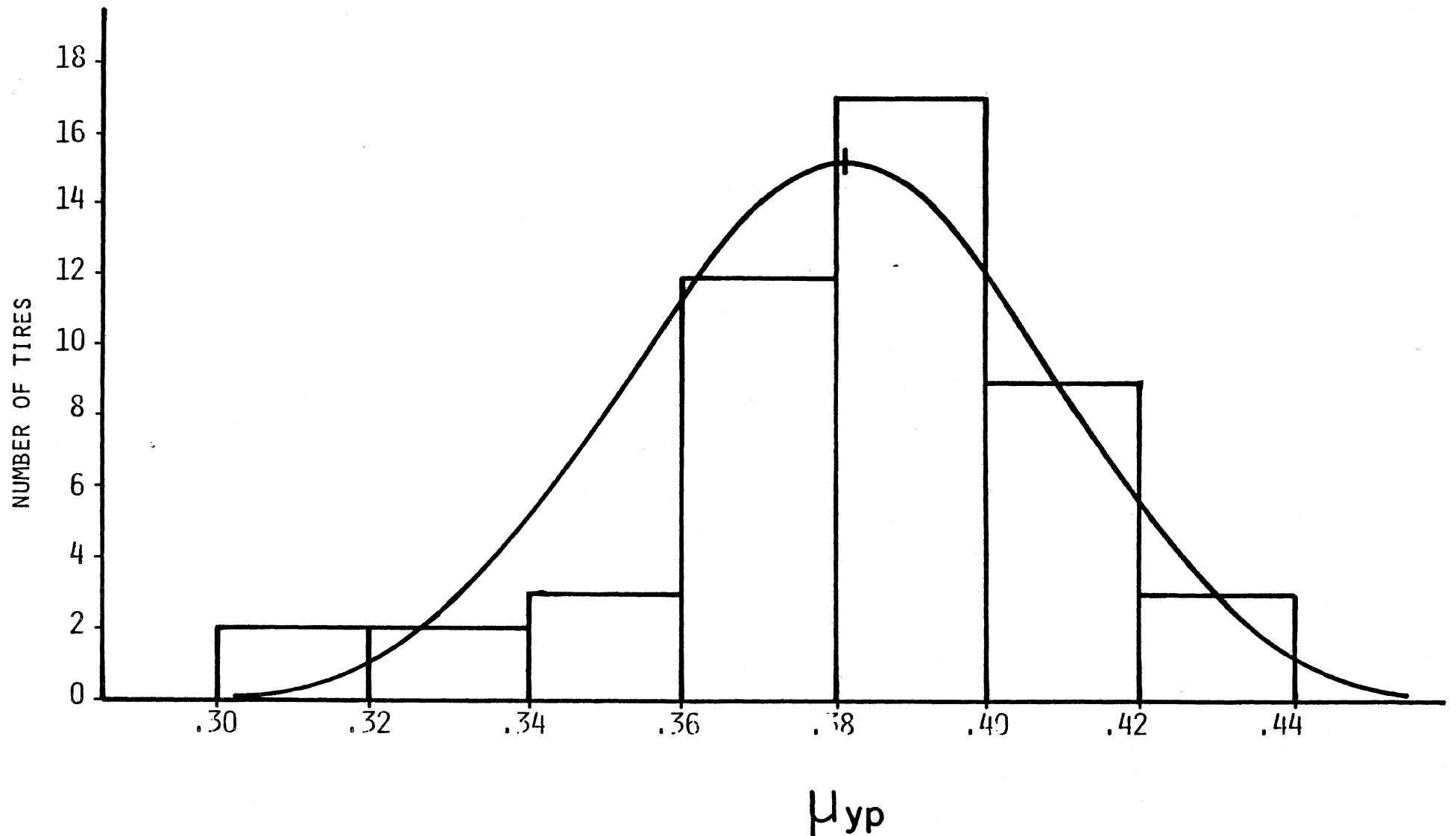
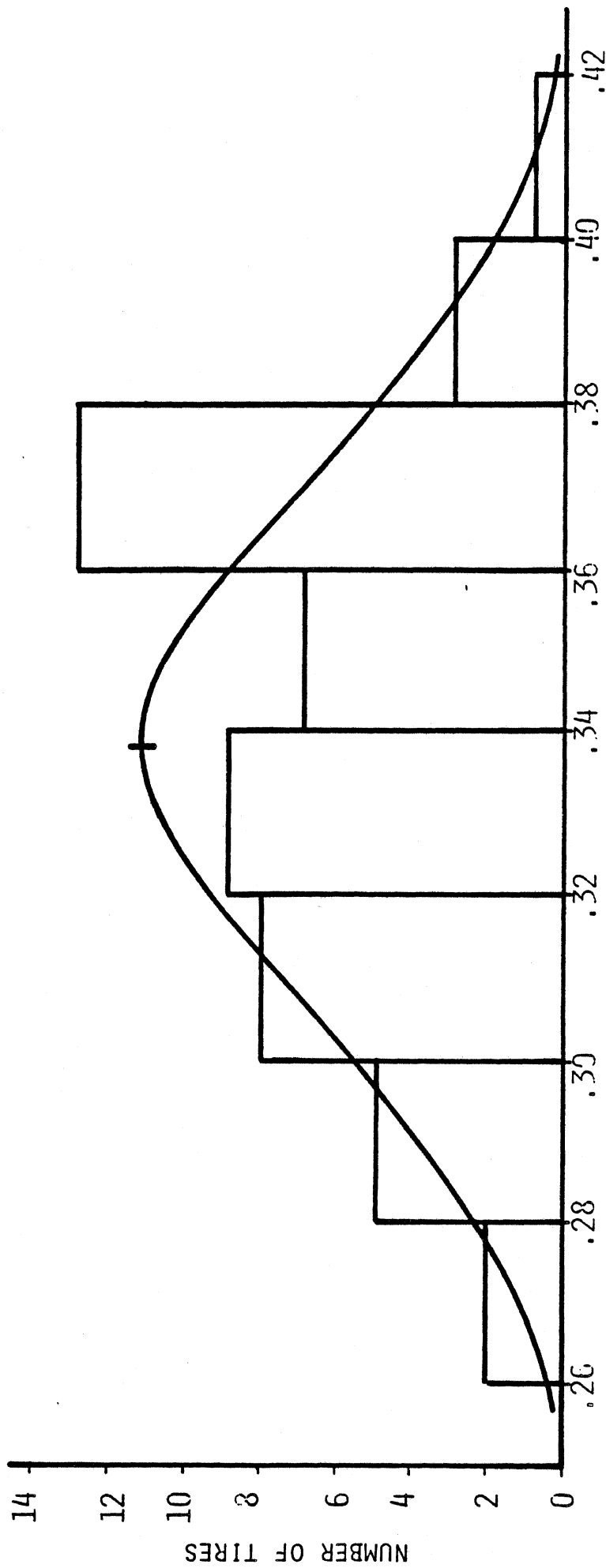


Fig. 18

Histogram of the Test Sample Distribution for Peak Lateral Force Coefficient (μ_{yp}) at 40 MPH on Concrete and a Prediction of the Population Distribution



μ_{yp}

Fig. 19

Histogram of the Test Sample Distribution for Peak Lateral Force Coefficient (μ_{yp}) at 55 MPH on Concrete and a Prediction of the Population Distribution

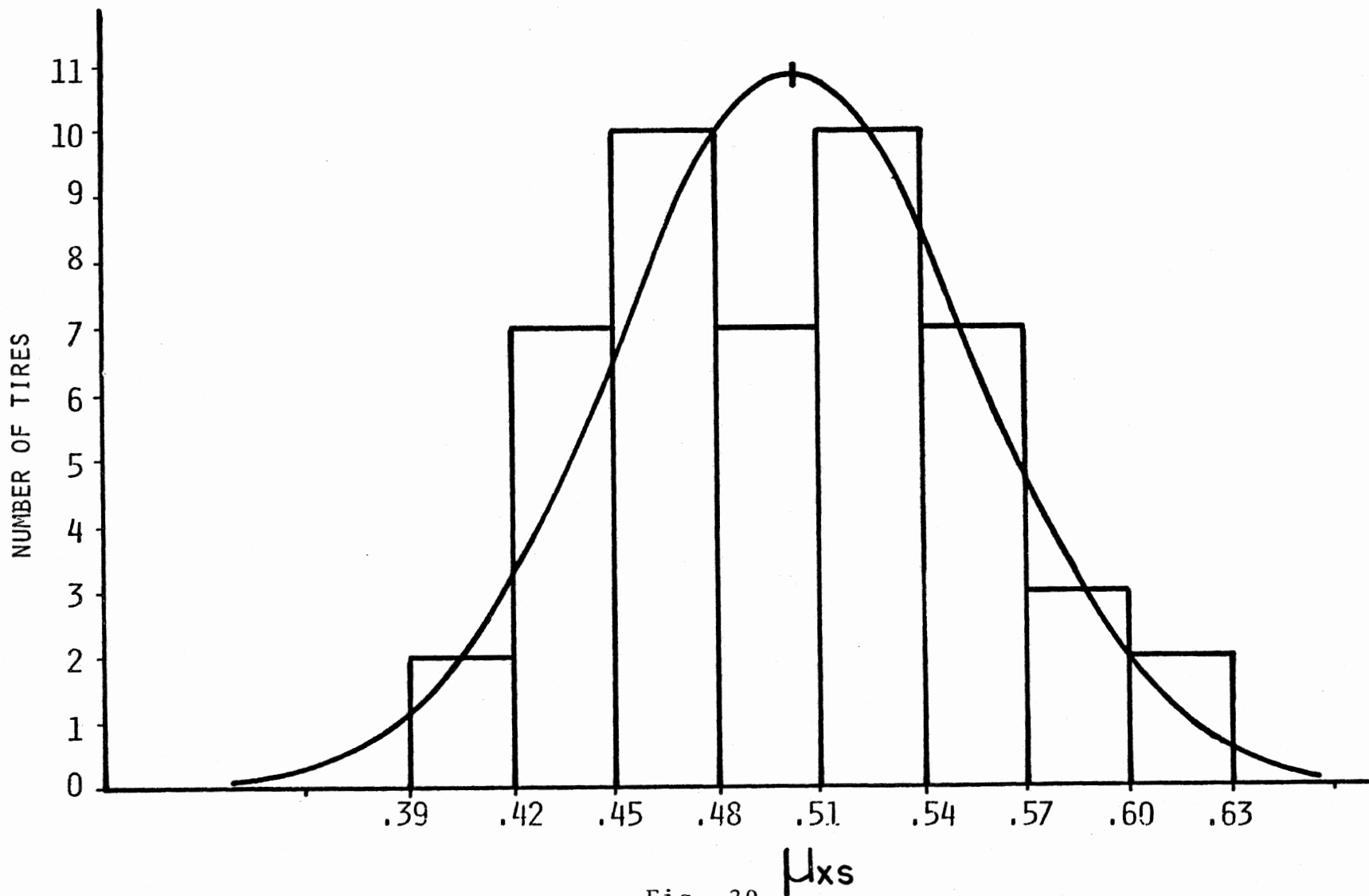
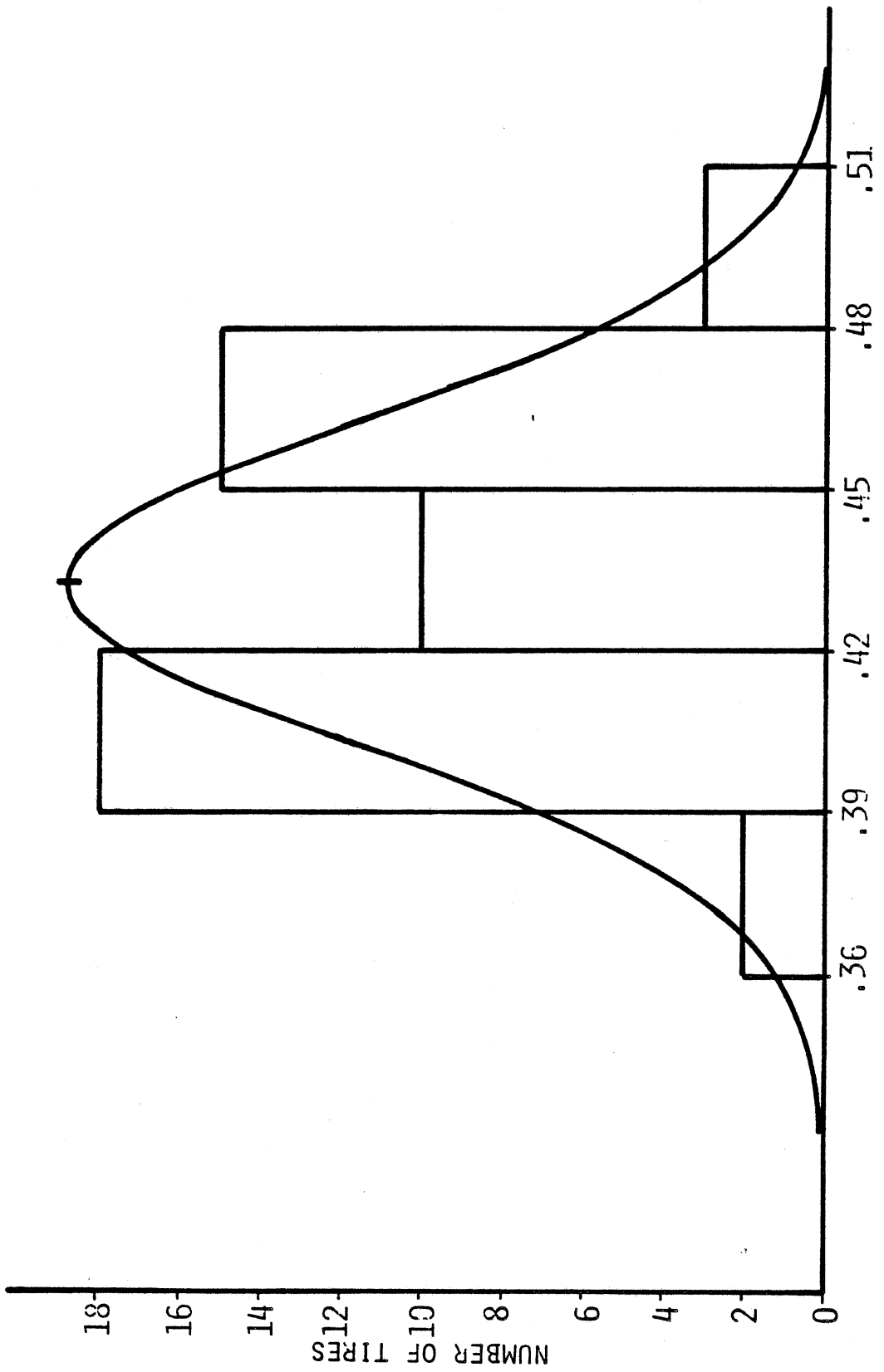


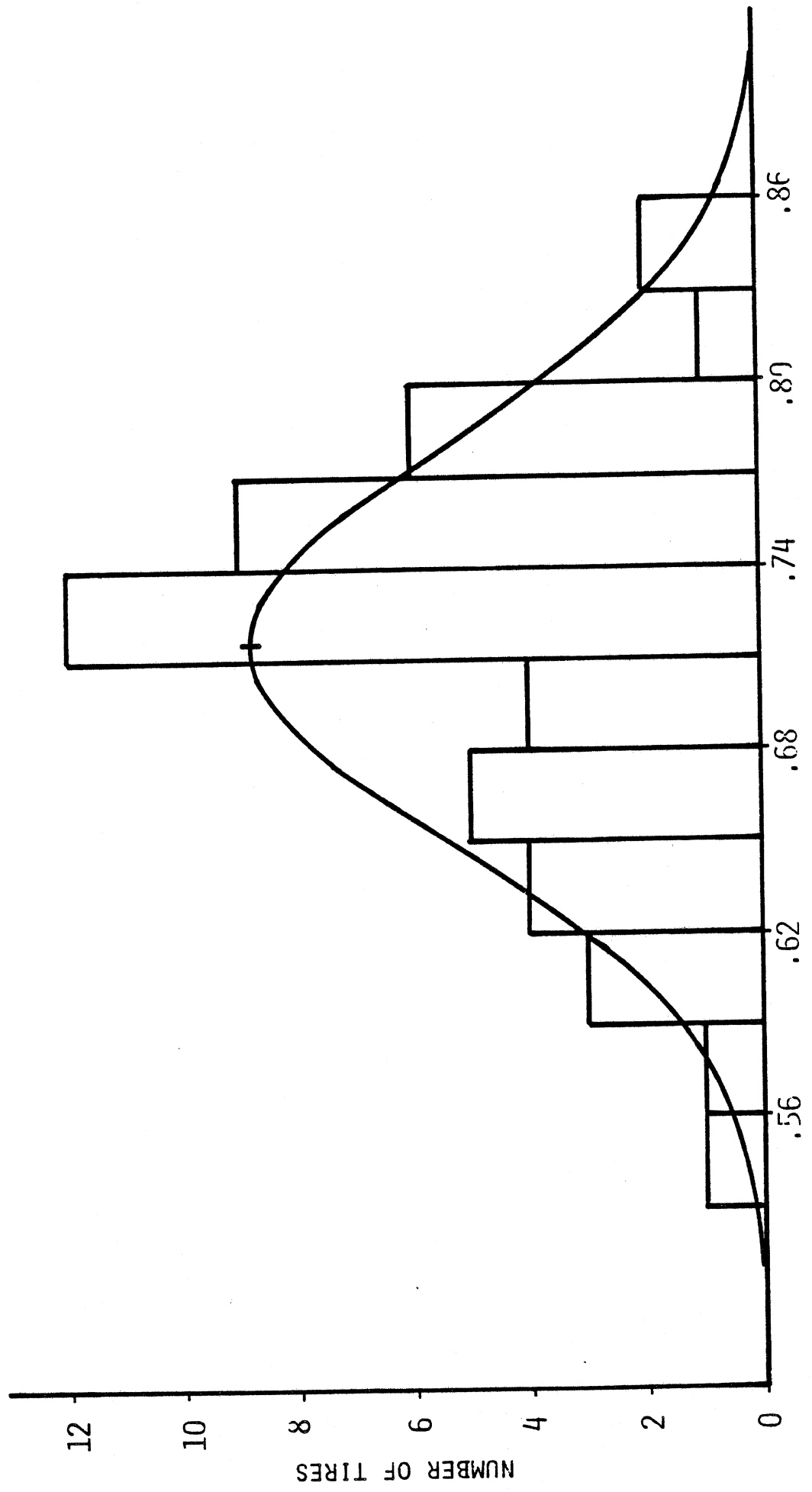
Fig. 20 μ_{xs}
Histogram of Test Sample Distribution for Locked Wheel Braking Coefficient (μ_{xs})
at 40 MPH on Asphalt and a Prediction of the Population Distribution



μ_{xs}

Fig. 21

Histogram of Test Sample Distribution for Locked Wheel Force Coefficient (μ_{xs}) at 55 MPH on Asphalt and a Prediction of the Population Distribution



μ_{xp}

Fig. 22

Histogram of Test Sample Distribution for Peak Braking Force Coefficients (μ_{xp}) at 40 MPH on Asphalt and a Prediction of the Population Distribution

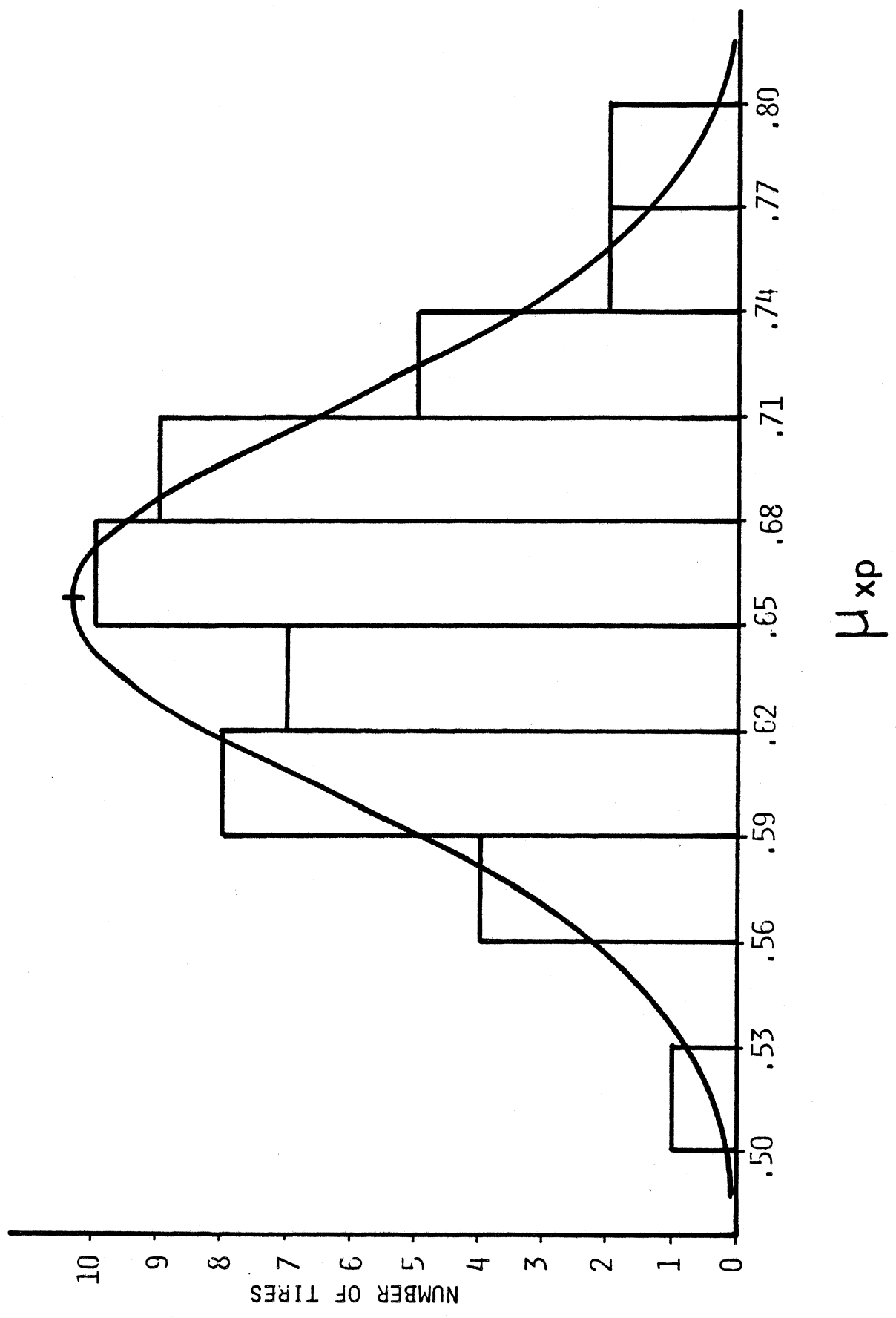
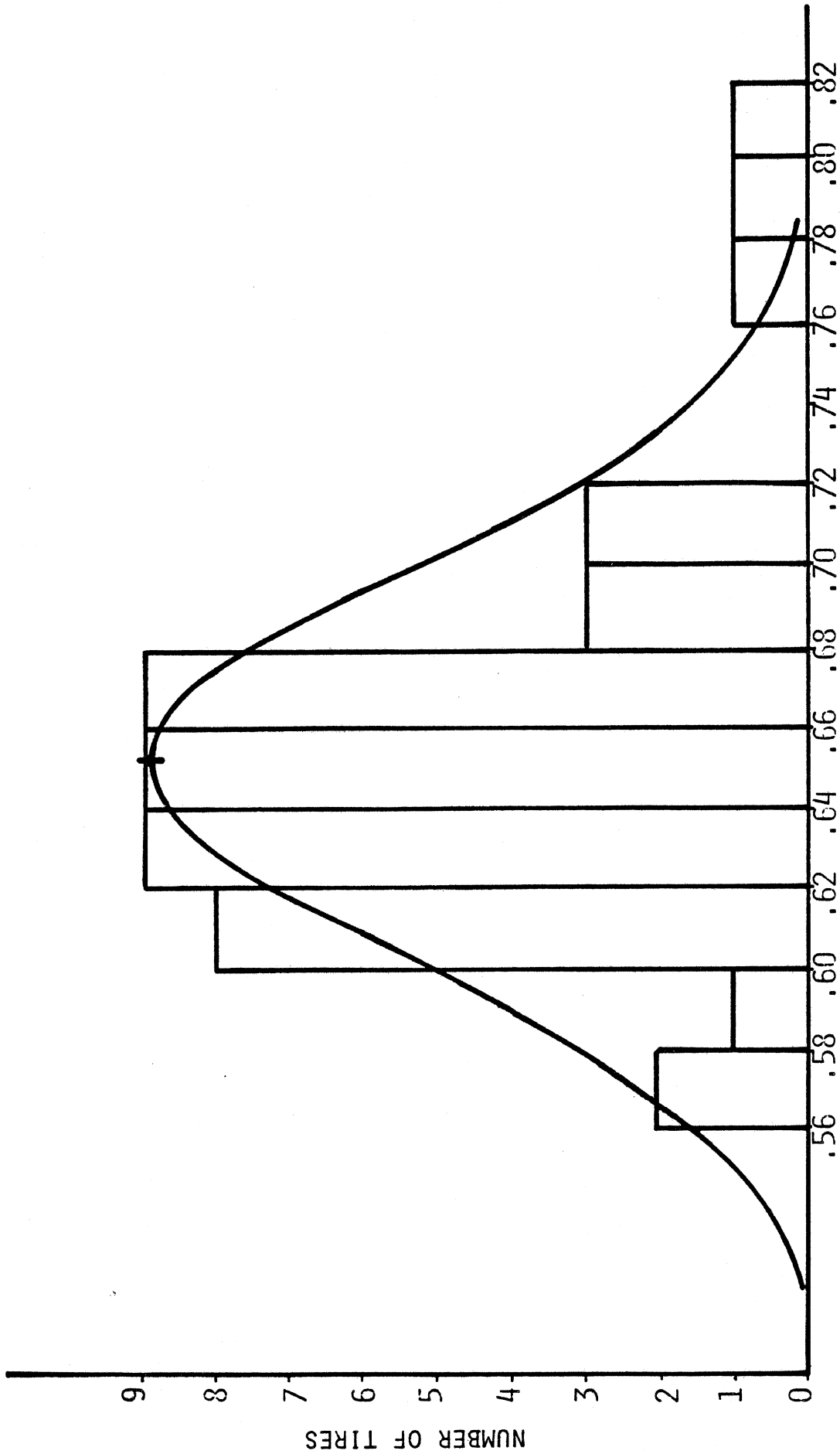


Fig. 23

Histogram of Test Sample Distribution for Peak Braking Force Coefficient (μ_{xp}) at 55 MPH on Asphalt and a Prediction of the Population Distribution



μ_{yp}
Fig. 24

Histogram of Test Sample Distribution for Peak Lateral Force Coefficient (μ_{yp}) at 40 MPH on Asphalt and a Prediction of the Population Distribution

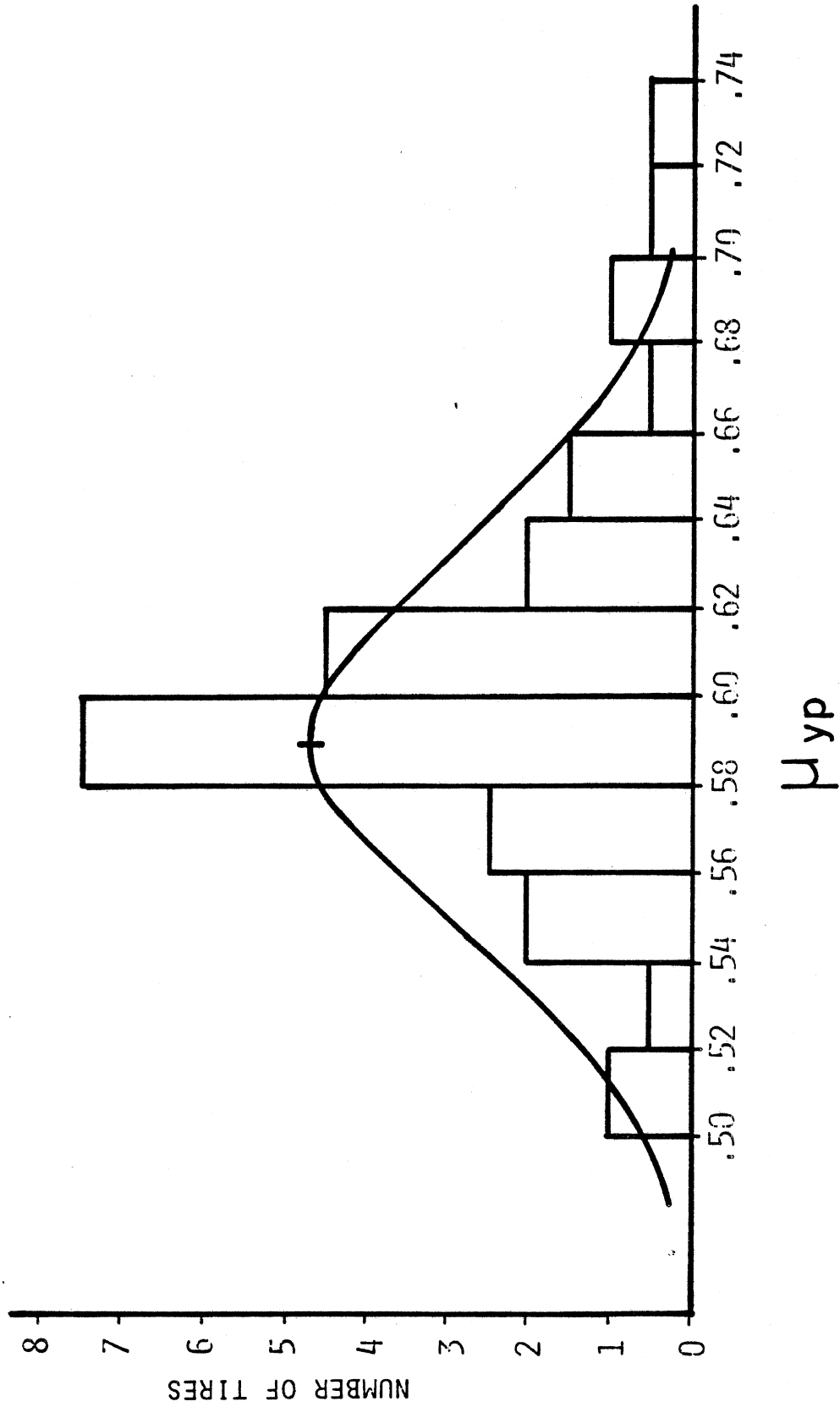


Fig. 25

Histogram of Test Sample Distribution for Peak Lateral Force Coefficient (μ_{yp}) at 55 MPH on Asphalt and a Prediction of the Population Distribution

TABLE 4. SAMPLE MEAN AND STANDARD DEVIATION FOR EACH TRACTION PROPERTY AT EACH SPEED AND SURFACE

| Property Mean & Standard Deviation | Asphalt | | Concrete | |
|------------------------------------|---------|--------|----------|--------|
| | 40 mph | 55 mph | 40 mph | 55 mph |
| $\bar{\mu}_{xs}$ | 0.497 | 0.433 | 0.229 | 0.191 |
| s | 0.048 | 0.031 | 0.023 | 0.023 |
| $\bar{\mu}_{xp}$ | 0.716 | 0.660 | 0.320 | 0.276 |
| s | 0.065 | 0.053 | 0.037 | 0.036 |
| $\bar{\mu}_{yp}$ | 0.652 | 0.602 | 0.381 | 0.339 |
| s | 0.048 | 0.045 | 0.027 | 0.034 |

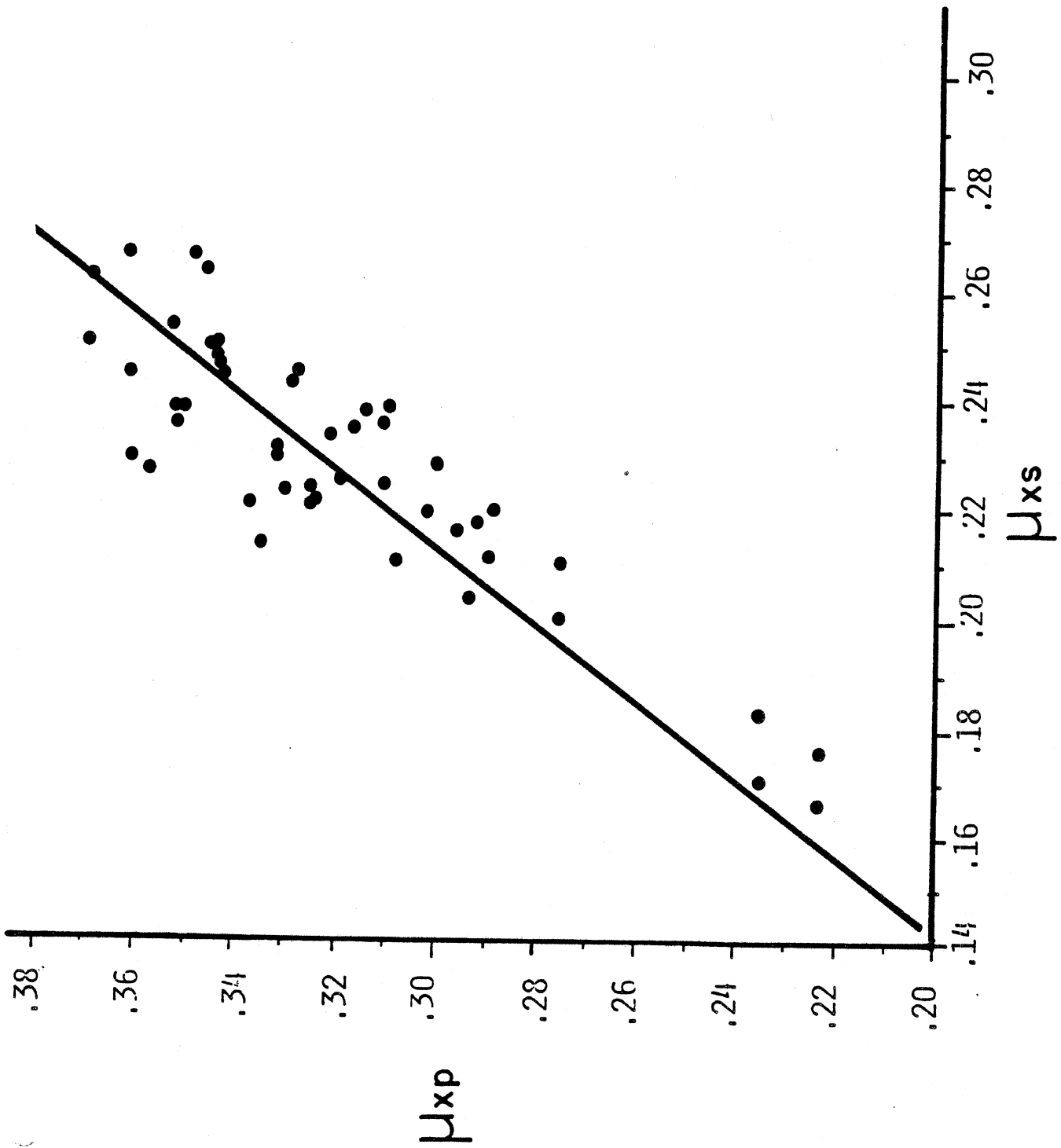


Fig. 32

Linear Regression Line Relating the Peak Braking Force Coefficient (μ_{xp}) and the Locked Wheel Braking Force Coefficient (μ_{xs}) Measurement on Concrete at 40 MPH

TABLE 5. CORRELATION BETWEEN TRACTION PROPERTIES

| COMPARISON | ASPHALT | | CONCRETE | |
|---------------------------|---------|--------|----------|--------|
| | 40 mph | 55 mph | 40 mph | 55 mph |
| μ_{xs} vs. μ_{xp} | .563 | .400 | .876 | .720 |
| μ_{xs} vs. μ_{yp} | .20 | .05 | .005 | .057 |
| μ_{yp} vs. μ_{xp} | -.23 | .06 | .405 | .285 |

Tire: Highway Tread 10.20/F (New) Rim: 20x7.50

ATERAL FORCE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Lateral Force at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-----------------------------------------------|------|------|------|------|------|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 245 | 444 | 758 | 1068 | 1195 | 1160 |
| | 85 | 214 | 399 | 688 | 971 | 1050 | 1115 |
| | 100 | 190 | 360 | 681 | 1088 | 1218 | 1309 |
| 2800 | 50 | 364 | 687 | 1209 | 1865 | 2211 | 2347 |
| | 85 | 364 | 693 | 1227 | 1829 | 2052 | 2213 |
| | 100 | 333 | 639 | 1232 | 2031 | 2377 | 2568 |
| 4200 | 50 | 388 | 744 | 1374 | 2289 | 2832 | 3163 |
| | 85 | 467 | 897 | 1612 | 2490 | 2881 | 3187 |
| | 100 | 437 | 844 | 1639 | 2745 | 3298 | 3626 |
| 5430 | 50 | 372 | 720 | 1365 | 2421 | 3142 | 3649 |
| | 85 | 523 | 1009 | 1830 | 2917 | 3458 | 3994 |
| | 100 | 501 | 973 | 1888 | 3201 | 3937 | 4399 |
| 6700 | 50 | 350 | 677 | 1307 | 2401 | 3286 | 3965 |
| | 85 | 550 | 1066 | 1962 | 3237 | 3994 | 4604 |
| | 100 | 546 | 1059 | 2045 | 3518 | 4455 | 5076 |
| 8100 | 50 | 332 | 632 | 1215 | 2274 | 3253 | 4079 |
| | 85 | 558 | 1086 | 2044 | 3446 | 4328 | 5181 |
| | 100 | 565 | 1109 | 2116 | 3744 | 4859 | 5468 |
| 9200 | 50 | 313 | 594 | 1129 | 2106 | 3060 | 3856 |
| | 85 | 557 | 1079 | 2044 | 3517 | 4459 | -- * |
| | 100 | 563 | 1112 | 2113 | 3791 | 5050 | -- |

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 23 | 36 | 41 | 21 | 5 | 0 |
| | 85 | 18 | 30 | 36 | 20 | 7 | 4 |
| | 100 | 15 | 26 | 38 | 33 | 16 | 5 |
| 2800 | 50 | 58 | 99 | 136 | 113 | 73 | 30 |
| | 85 | 47 | 80 | 108 | 81 | 47 | 24 |
| | 100 | 40 | 69 | 112 | 116 | 76 | 47 |
| 4200 | 50 | 91 | 163 | 248 | 243 | 180 | 98 |
| | 85 | 77 | 136 | 194 | 170 | 115 | 67 |
| | 100 | 66 | 117 | 201 | 228 | 165 | 109 |
| 5430 | 50 | 120 | 220 | 351 | 394 | 313 | 198 |
| | 85 | 101 | 182 | 274 | 263 | 193 | 132 |
| | 100 | 89 | 159 | 281 | 335 | 262 | 180 |

*--indicates loads beyond the capacity of the load cells

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD (Continued)

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|-------------------------|-----------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 6700 | 50 | 147 | 273 | 457 | 561 | 500 | 348 |
| | 85 | 126 | 229 | 358 | 372 | 313 | 205 |
| | 100 | 111 | 201 | 370 | 478 | 384 | 278 |
| 8100 | 50 | 176 | 329 | 567 | 751 | 715 | 591 |
| | 85 | 153 | 281 | 458 | 504 | 439 | 318 |
| | 100 | 135 | 250 | 484 | 636 | 543 | 376 |
| 9200 | 50 | 194 | 368 | 644 | 896 | 900 | 800 |
| | 85 | 173 | 323 | 533 | 618 | 561 | -- |
| | 100 | 154 | 288 | 580 | 768 | 685 | -- |

CIRCUMFERENTIAL STIFFNESS vs SLIP ANGLE AND NORMAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | C _s (lbs.) | Vertical Spring Rate (lbs./in.) |
|-------------------------|-----------------------------|--------------------------|------------------------------------|
| 2800 | 50 | | |
| | 85 | 28,000 | |
| | 100 | | |
| 5430 | 50 | 36,000 | 2943 |
| | 85 | 42,000 | 4700 |
| | 100 | 40,000 | 4309 |
| 8100 | 50 | | |
| | 85 | 42,000 | |
| | 100 | | |

Tire: Lug Type 10-20/F (New) Rim: 20x7.50

LATERAL FORCE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Lateral Force at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-----------------------------------------------|------|------|------|------|------|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 249 | 464 | 710 | 1103 | 708 | 1559 |
| | 85 | 195 | 373 | 625 | 946 | 1149 | 1380 |
| | 100 | 199 | 373 | 664 | 1067 | 1205 | 1213 |
| 2800 | 50 | 405 | 771 | 1262 | 2017 | 1294 | 2892 |
| | 85 | 342 | 660 | 1145 | 1772 | 2168 | 2634 |
| | 100 | 349 | 663 | 1202 | 1980 | 2277 | 2324 |
| 4200 | 50 | 474 | 898 | 1569 | 1869 | 1705 | 3859 |
| | 85 | 449 | 873 | 1561 | 2444 | 3021 | 3677 |
| | 100 | 465 | 895 | 1643 | 2738 | 3181 | 3296 |
| 5430 | 50 | 468 | 904 | 1696 | 2211 | 1958 | 4498 |
| | 85 | 516 | 997 | 1811 | 2919 | 3636 | 4409 |
| | 100 | 538 | 1044 | 1928 | 3257 | 3848 | 4048 |
| 6700 | 50 | 447 | 873 | 1711 | 2311 | 2095 | 4923 |
| | 85 | 546 | 1062 | 1958 | 3294 | 4138 | 5049 |
| | 100 | 584 | 1150 | 2141 | 3660 | 4415 | 4726 |
| 8100 | 50 | 435 | 837 | 1662 | 3038 | 2055 | 4974 |
| | 85 | 542 | 1079 | 2038 | 3584 | 4600 | 5626 |
| | 100 | 609 | 1217 | 2302 | 3966 | 4921 | 5373 |
| 9200 | 50 | 413 | 783 | 1576 | 2184 | 1947 | 4752 |
| | 85 | 556 | 1074 | 2063 | 3751 | 4865 | -- |
| | 100 | 623 | 1238 | 2341 | 4145 | 4992 | -- |

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 22 | 39 | 38 | 30 | 10 | 1 |
| | 85 | 19 | 30 | 37 | 35 | 23 | 8 |
| | 100 | 16 | 26 | 40 | 37 | 22 | 8 |
| 2800 | 50 | 60 | 105 | 126 | 116 | 55 | 37 |
| | 85 | 43 | 76 | 104 | 100 | 69 | 43 |
| | 100 | 41 | 73 | 109 | 116 | 75 | 32 |
| 4200 | 50 | 97 | 174 | 228 | 169 | 108 | 112 |
| | 85 | 73 | 130 | 190 | 189 | 146 | 96 |
| | 100 | 70 | 124 | 193 | 222 | 153 | 73 |
| 5430 | 50 | 128 | 233 | 327 | 277 | 187 | 214 |
| | 85 | 97 | 178 | 266 | 278 | 219 | 164 |
| | 100 | 94 | 169 | 272 | 323 | 231 | 117 |

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD (Continued)

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|-------------------------|-----------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 6700 | 50 | 155 | 295 | 431 | 398 | 289 | 371 |
| | 85 | 121 | 226 | 343 | 377 | 313 | 253 |
| | 100 | 116 | 215 | 355 | 434 | 326 | 172 |
| 8100 | 50 | 188 | 353 | 542 | 686 | 435 | 605 |
| | 85 | 140 | 270 | 428 | 495 | 418 | 359 |
| | 100 | 139 | 271 | 453 | 567 | 440 | 248 |
| 9200 | 50 | 213 | 404 | 622 | 639 | 499 | 784 |
| | 85 | 165 | 310 | 497 | 596 | 526 | -- |
| | 100 | 161 | 310 | 524 | 680 | 474 | -- |

CIRCUMFERENTIAL STIFFNESS vs SLIP ANGLE AND NORMAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | C _s (lbs.) | Vertical Spring Rate (lbs./in.) |
|-------------------------|-----------------------------|--------------------------|------------------------------------|
| 2800 | 50 | 20,000 | |
| | 85 | | |
| | 100 | | |
| 5430 | 50 | 28,000 | 3600 |
| | 85 | | 4500 |
| | 100 | | 5000 |
| 8100 | 50 | 40,000 | |
| | 85 | | |
| | 100 | | |

Tire: Competitive Highway Tread 10-20/F (New) Rim: 20x7.50

LATERAL FORCE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Lateral Force at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-----------------------------------------------|------|------|------|------|------|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 273 | 475 | 912 | 1309 | 1466 | 1382 |
| | 85 | 203 | 378 | 657 | 1002 | 1148 | 1197 |
| | 100 | 260 | 384 | 655 | 1082 | 1257 | 1157 |
| 2800 | 50 | 403 | 731 | 1389 | 2139 | 2512 | 2527 |
| | 85 | 347 | 655 | 1170 | 1835 | 2162 | 2300 |
| | 100 | 354 | 664 | 1178 | 2031 | 2341 | 2219 |
| 4200 | 50 | 443 | 831 | 1573 | 2601 | 3195 | 3351 |
| | 85 | 440 | 852 | 1541 | 2482 | 2971 | 3189 |
| | 100 | 459 | 876 | 1578 | 2762 | 3233 | 3101 |
| 5430 | 50 | 444 | 849 | 1600 | 2761 | 3531 | 3752 |
| | 85 | 508 | 968 | 1773 | 2935 | 3569 | 3888 |
| | 100 | 524 | 1014 | 1845 | 3235 | 3887 | 3790 |
| 6700 | 50 | 439 | 849 | 1519 | 2643 | 3508 | 4173 |
| | 85 | 551 | 1063 | 1946 | 3300 | 4087 | 4523 |
| | 100 | 575 | 1120 | 2053 | 3650 | 4474 | 4439 |
| 8100 | 50 | 430 | 830 | 1357 | 2283 | 3208 | 4165 |
| | 85 | 595 | 1131 | 2084 | 3608 | 4570 | 5149 |
| | 100 | 614 | 1203 | 2250 | 3967 | 4996 | 5089 |
| 9200 | 50 | 399 | 794 | 1126 | 1906 | 2797 | 3800 |
| | 85 | 619 | 1163 | 2147 | 3761 | 4868 | 5507 |
| | 100 | 635 | 1253 | 3292 | 4111 | 5281 | -- |

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 50 | 29 | 40 | 63 | 42 | 18 | 2 |
| | 85 | 17 | 27 | 34 | 28 | 13 | 5 |
| | 100 | 12 | 28 | 33 | 33 | 15 | 1 |
| 2800 | 50 | 68 | 106 | 183 | 154 | 92 | 36 |
| | 85 | 43 | 75 | 108 | 97 | 57 | 28 |
| | 100 | 43 | 70 | 100 | 116 | 67 | 24 |
| 4200 | 50 | 104 | 170 | 313 | 316 | 225 | 102 |
| | 85 | 70 | 123 | 187 | 184 | 120 | 63 |
| | 100 | 69 | 119 | 178 | 220 | 139 | 54 |
| 5430 | 50 | 134 | 225 | 435 | 500 | 395 | 190 |
| | 85 | 92 | 165 | 259 | 277 | 192 | 106 |
| | 100 | 90 | 161 | 248 | 321 | 225 | 93 |

ALIGNING TORQUE vs SLIP ANGLE AND VERTICAL LOAD (Continued)

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|-------------------------|-----------------------------|-------------------------------------------------|-----|-----|------|------|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 6700 | 50 | 167 | 285 | 551 | 711 | 639 | 378 |
| | 85 | 114 | 208 | 334 | 384 | 283 | 171 |
| | 100 | 112 | 202 | 320 | 443 | 332 | 144 |
| 8100 | 50 | 204 | 349 | 685 | 964 | 956 | 653 |
| | 85 | 140 | 253 | 416 | 508 | 405 | 255 |
| | 100 | 135 | 248 | 420 | 588 | 481 | 221 |
| 9200 | 50 | 232 | 397 | 776 | 1171 | 1216 | 900 |
| | 85 | 157 | 285 | 483 | 618 | 515 | 336 |
| | 100 | 154 | 283 | 468 | 717 | 598 | -- |

CIRCUMFERENTIAL STIFFNESS vs SLIP ANGLE AND NORMAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | C _s (lbs.) | Vertical Spring Rate (lbs./in.) |
|-------------------------|-----------------------------|--------------------------|------------------------------------|
| 2800 | 50 | 33,000 | |
| | 85 | | |
| | 100 | | |
| 5430 | 50 | 70,000 | 2680 |
| | 85 | 46,000 | 5032 |
| | 100 | 46,000 | 5416 |
| 8100 | 50 | 53,000 | |
| | 85 | | |
| | 100 | | |

Tire: Half Worn Highway Tread 10-20/F Rim: 20x7.50

LATERAL FORCE vs. SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Lateral Force at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-----------------------------------------------|------|------|------|------|------|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 85 | 363 | 620 | 965 | 1278 | 1633 | 1835 |
| 2800 | 85 | 556 | 1018 | 1675 | 2357 | 3004 | 3352 |
| 4200 | 85 | 662 | 1230 | 2130 | 3179 | 4105 | 4550 |
| 5430 | 85 | 691 | 1321 | 2368 | 3728 | 4833 | 5408 |
| 6700 | 85 | 680 | 1343 | 2492 | 4105 | 5408 | 6163 |
| 8100 | 85 | 657 | 1311 | 2530 | 4342 | 5766 | 6750 |
| 9200 | 85 | 628 | 1266 | 2499 | 4430 | 5892 | -- |

ALIGNING TORQUE vs. SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 85 | 32 | 43 | 41 | 18 | 15 | 6 |
| 2800 | 85 | 81 | 126 | 132 | 85 | 70 | 41 |
| 4200 | 85 | 126 | 201 | 251 | 182 | 163 | 101 |
| 5430 | 85 | 162 | 269 | 360 | 307 | 269 | 171 |
| 6700 | 85 | 197 | 336 | 473 | 448 | 419 | 253 |
| 8100 | 85 | 235 | 408 | 599 | 624 | 602 | 374 |
| 9200 | 85 | 262 | 463 | 695 | 782 | 768 | -- |

CIRCUMFERENTIAL STIFFNESS vs. SLIP ANGLE AND NORMAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | C _s (lbs.) | Vertical Spring Rate (lbs./in.) |
|----------------------|--------------------------|-----------------------|---------------------------------|
| 5430 | 85 | 52,000 | 3939 |

Tire: Fully Worn Highway Tread 10-20/F Rim: 20x7.50

LATERAL FORCE vs. SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Lateral Force at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-----------------------------------------------|------|------|------|------|------|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 85 | 391 | 769 | 1169 | 1426 | 1529 | 1649 |
| 2800 | 85 | 598 | 1205 | 2027 | 2681 | 2884 | 3182 |
| 4200 | 85 | 712 | 1413 | 2517 | 3635 | 4207 | 4522 |
| 5430 | 85 | 772 | 1464 | 2681 | 4192 | 5049 | 5488 |
| 6700 | 85 | 759 | 1436 | 2713 | 4473 | 5687 | -- |
| 8100 | 85 | 729 | 1360 | 2628 | 4537 | -- | -- |
| 9200 | 85 | 699 | 1280 | 2505 | -- | -- | -- |

ALIGNING TORQUE vs. SLIP ANGLE AND VERTICAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | Aligning Torque at Indicated Slip Angle (degs.) | | | | | |
|----------------------|--------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|
| | | 1 | 2 | 4 | 8 | 12 | 16 |
| 1400 | 85 | 32 | 52 | 45 | 14 | 5 | 2 |
| 2800 | 85 | 80 | 148 | 161 | 44 | 37 | 20 |
| 4200 | 85 | 126 | 249 | 324 | 123 | 119 | 66 |
| 5430 | 85 | 166 | 331 | 479 | 253 | 231 | 122 |
| 6700 | 85 | 198 | 409 | 635 | 443 | 378 | -- |
| 8100 | 85 | 233 | 490 | 799 | 686 | -- | -- |
| 9200 | 85 | 260 | 546 | 920 | -- | -- | -- |

CIRCUMFERENTIAL STIFFNESS vs. SLIP ANGLE AND NORMAL LOAD

| Vertical Load (lbs.) | Inflation Pressure (psi) | C _s (lbs.) | Vertical Spring Rate (lbs./in.) |
|----------------------|--------------------------|-----------------------|---------------------------------|
| 5430 | 85 | 60,000 | 4600 |