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MULTIDISCIPLINARY ACCIDENT INVESTIGATION DATA FILE

1974 Final Report

HIGHWAY SAFETY RESEARCH INSTITUTE
THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104

MARCH 1975

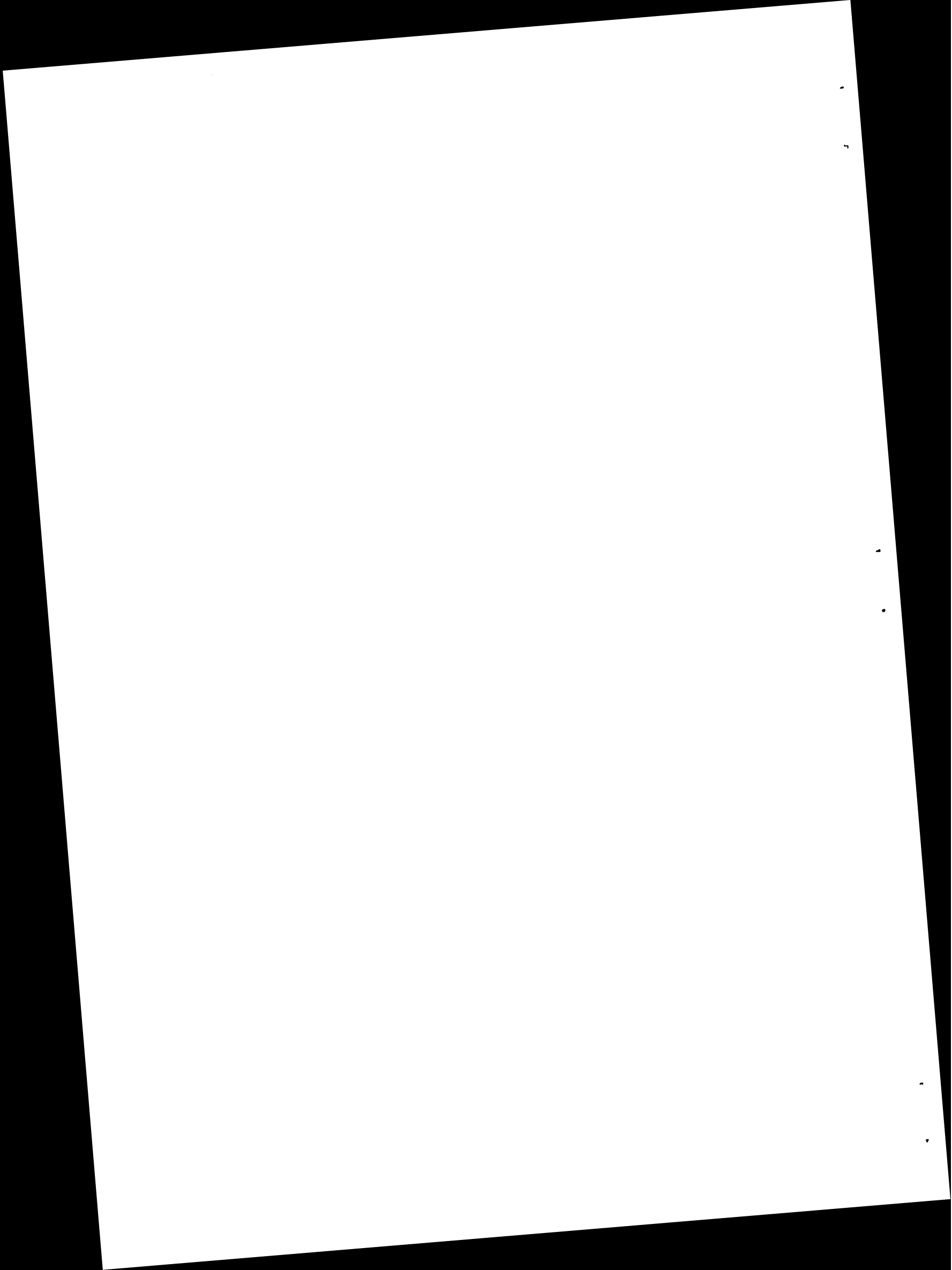
CONTRACT NO. DOT-HS-4-00898

Prepared for:

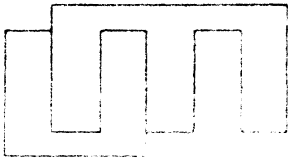
Department of Transportation

National Highway Traffic Safety Administration

Washington, D.C. 20590



MAY 9 8 1975



HIGHWAY SAFETY RESEARCH INSTITUTE

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Ann Arbor, Michigan 48105

File

THE UNIVERSITY OF MICHIGAN

May 7, 1975

Mr. Jesse Watt
National Highway Traffic
Safety Administration
Nassif Building
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Jesse:

1. The "Multidisciplinary Accident Investigation Data File, 1974 Final Report" on Contract No. DOT-HS-4-00898 has been completed. Four xerox copies (one unbound) are being supplied at this time. Offset copies will be supplied as soon as available from the printer.

Section 1.2 outlines the Work Accomplished between April 1, 1974 and March 31, 1975. Section 5 contains Conclusions and Recommendations that reflect the contents of my March 19 letter, reorganized on a file-by-file basis. Appendix A details the Contract Reports and Documentation provided over the last year.

2. The specific results of Task 2 (new variables) will be covered in a separate letter later this week. (The letter will be dated April 30 to match its reference in the "1974 Final Report.") Missing data rates from the 1974 trial coding will be included, along with a resultant prototype pre-crash coding module. Section 2.3 summarizes the results of the new variable and accident causation trial coding.

Sincerely,

Joseph C. Marsh IV
Data Operations

JCM/m

xc: J. O'Day
W. McCormick

1. Report No.		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Multidisciplinary Accident Investigation Data File, 1974 Final Report				5. Report Date March 1975	
				6. Performing Organization Code	
7. Author(s) J. C. Marsh IV				8. Performing Organization Report No. UM-HSRI-SA-75-6	
9. Performing Organization Name and Address Highway Safety Research Institute Huron Parkway and Baxter Road Ann Arbor, Michigan 48105				10. Work Unit No. 012827	
				11. Contract or Grant No. DOT-HS-4-00898	
12. Sponsoring Agency Name and Address National Highway Traffic Safety Administration Department of Transportation Washington, D.C. 20590				13. Type of Report and Period Covered Final Report, April 1, 1974 through March 31, 1975	
				14. Sponsoring Agency Code	
15. Supplementary Notes					
16. Abstract <p>This is the final report of the 1974 Multidisciplinary Accident Investigation (MDAI) Data File contract. It contains a summary of contract accomplishments and a discussion of data preparation, data files and the data system. Appendices include a list of all contract documentation and an index of all automated MDAI report DOT-HS publication numbers.</p> <p>About 10,000 clinical accident investigations have been conducted to-date (March 1975). These reports sponsored by the National Highway Traffic Safety Administration, the Motor Vehicle Manufacturers Association, and the Canadian Department of Transportation, are being edited and processed into a common data base. All sponsors are also being provided direct access to the data base through the University of Michigan's time-shared computer system via remote batch and interactive terminals. The data base contains data recorded on an annotated "Collision Performance and Injury Report."</p>					
17. Key Words Multidisciplinary Accident Investigation Reports; Computer Automation of Accident Reports; Accident Data Processing; Accident Data Analysis; Time-shared Data Base.				18. Distribution Statement Unlimited	
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 133	22. Price

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SECTION 1

SUMMARY

1.1 BACKGROUND

Since 1968 the National Highway Traffic Safety Administration (NHTSA), (formerly the National Highway Safety Bureau), has conducted over 3,000 in-depth or multidisciplinary accident investigations (MDAI) in contract with various universities and other research organizations.

The Canadian Department of Transportation also sponsors a series of MDAI teams throughout Canada; and the Motor Vehicle Manufacturers Association sponsors clinical investigations of traffic accident crash and injury factors. Altogether approximately 10,000 Level-III (in-depth, clinical) accident investigations have been conducted as of March 1975.

Since 1969 HSRI has been engaged in editing the case reports, placing the information into digital form, and making it accessible for retrieval or statistical analysis by computer techniques. Case reports from all sponsors are processed into a common data base that is then made available to all sponsors for direct analysis through the use of the Institute's Statistical Research System and Automated Data Access and Analysis System (ADAAS).

The NHTSA contract for Multidisciplinary Accident Investigation Data Files (DOT-HS-4-00898) provides for processing MDAI cases sponsored by NHTSA into the common data base, using procedures that assure the quality of the data. NHTSA is provided remote-terminal access to the common data base of Level-III cases obtained from all sponsors as well as to more than 100 other Level-I or police-accident-data files.

The primary emphasis of the 1974 MDAI Data File contract was to remove the extensive backlog of cases to be processed.

This was accomplished during the first six months of the contract.

The remainder of this section discusses the work accomplished under each of five tasks. The next three sections discuss, in turn, data preparation and quality control, MDAI data files, and the data system. The final section contains the conclusions and recommendations.

1.2 WORK ACCOMPLISHED

The following is a brief task-by-task review of 1974/1975 accomplishments for the contract period of April 1, 1974, through March 31, 1975. Each area of contract activity is then discussed more fully in subsequent sections. A complete compilation of all contract reports and documentation submitted to NHTSA is listed in Appendix A.

The 1974 contract provided for five specific tasks:

<u>Task</u>	<u>Short Title</u>
1	Case Processing
2	New Variables
3	Editing Documentation
4	Training
5	Preparation of Special Files

Task 1: Case Processing

The first task consisted of processing MDAI cases into computer storage. From April, 1974, through March, 1975 (the latest computer file update), 1,993 MDAI case vehicles were added to the computer file (including 1973-1974 Calspan cases processed under Motor Vehicle Manufacturers Association sponsorship). A total of 7,799 case vehicles from all sponsors are currently (March 1975) in computer storage and available to NHTSA (see Table 1).

Traffic Unit Compendium (TUC) forms for 5,409 traffic units (e.g., cars, pedestrians) were also coded and processed as an adjunct case inventory operation. Injury severity recoding using the new AIS-6 definition (1) was performed for 341 cases.

TABLE 1
Case Processing Status
April 1, 1974 - March 31, 1975

Case Processing	In Contract Period	New Total
1. CPIR's processed:	Total - 3,698 (vehicles)	7,779
	MDAI - 1,993	3,290
2. TUC's processed:	5,409 (vehicles)	9,361
3. FFF: NHTSA coded:	141 (accidents)	333
	HSRI coded: 192	
4. Pre-Crash New Variables Coded:	170 (vehicles)	170
5. VCMR's processed:	943 (vehicles)	1,344
6. AIS-6 recoded:	341 (vehicles)	341

Quality control was ensured by adequate training of data editors, complete key verification of keypunched data, and computer checking of data inconsistencies. Feedback to field MDAI teams was provided by individual case critiques, by presentations on November 14, 1974, to the MDAI training course conducted at the University of Southern California (USC), and by documentation of the editing process and reference information. Update sheets to the 1973 edition of the editing manual (2) were provided in July, 1974, and the entire manual was updated and reissued in March, 1975 (3,4).

Task 2 - New Variables

Several new variables, developed under the previous MDAI report processing contract (DOT-HS-031-3-589) (5), were coded for 170 MDAI cases under Task 2 of this contract. The new variables include approximately 200 CPIR supplementary questions--primarily concerned with precrash aspects. Based on the 1974 trial coding experience, a prototype MDAI precrash

coding form was submitted for NHTSA consideration. The other set of new variables was the Accident Causation Analysis System (ACAS) (6) developed in 1973--primarily from the Indiana University scheme. Trial coding of the ACAS from completed MDAI case documents was not very successful because the system inhibited consistent interpretation by the coders.

Task 3 - Editing Documentation

The document entitled 1973 Editing Manual and Reference Information, prepared under the previous contract (2), was updated on July 25, 1974, with Delete, Add, and Exchange sheets. It was reissued in April, 1975, as a two-volume document: Volume I - 1975 Editing Manual (2) and Volume II - 1975 Reference Information (3) for ease of handling and future updating. Both volumes were titled as "1975" because they are current as of early 1975 and contain information on 1975 model year vehicles.

Task 4 - Training

Training, instruction, and documentation on the operation of the Automated Data Access and Analysis System (ADAAS), including the analysis programs and the data files, were provided throughout the contract period. On October 9, 1974, an ADAAS seminar and workshop was conducted at NHTSA. Six SPAD and ADAAS Newsletters distributed to NHTSA data file users announced access to new and updated files.

Presentations concerning the MDAI case processing method and data file utilization were made on November 14 to the MDAI team training sessions at the University of Southern California (USC).

Currently more than 135 documented accident data files are being made available to NHTSA (Appendix B). The NHTSA computer users have utilized the data system for approximately two hours per day during the contract. About sixty percent of the utilization was of accident files other than the MDAI/CPIR data. NHTSA use of these non-MDAI files averaged fifty-seven percent of its total usage (Table 2).

TABLE 2
File Usage Statistics
May 1974 through November 1974

<u>File Group</u>	<u>NHTSA Accesses</u>	<u>Total Accesses</u>	<u>NHTSA % of Total*</u>	<u>% of all NHTSA Uses**</u>
BMCS	0	6	0.0	0.0
CPIR	198	553	35.8	39.8
DENVER	29	34	85.3	5.8
EXPOSURE	0	8	0.0	0.0
FLORIDA	3	5	60.0	1.0
MICHIGAN	18	91	19.8	3.6
NEW YORK	22	43	51.2	4.4
TEXAS	166	287	57.8	33.4
TURNPIKE	9	22	40.9	1.8
WASHINGTON	52	74	70.3	10.5
				100.0

*NHTSA usage of the specified file as a percentage of all usages of that file; e.g., 57.8 percent of all Texas file usage is by NHTSA.

**NHTSA usage of the specified file as a percentage of all NHTSA file usages during the period indicated.

Task 5 - Preparation of Special Files

A new MDAI Fatal Factors File (FFF) containing 333 MDAI fatal cases was constructed. The first codebook and file access was provided December 27, 1974. It originally contained 141 cases coded by NHTSA. Subsequently HSRI coded an additional 192 cases and provided an updated codebook and file access on April 14, 1975.



SECTION 2
DATA PREPARATION ACTIVITIES

The data preparation process is considered in three different dimensions--namely, case processing, quality control, and documentation. The processing of MDAI cases follows the steps of logging, Xeroxing, editing, coding, second editing, keypunching, computer case checking, analysis file updates, and correction of cases already in computer storage.

2.1 MDAI CASE PROCESSING

The steps involved in case processing are detailed in the MDAI Data File Editing Manual and Reference Information, Volume I - 1975 Editing Manual (3). Basically, the MDAI field teams submit their case documentation to NHTSA along with sets of 35mm slides. Copies of the original documentation and a set of 35mm slides are transmitted to HSRI by NHTSA. Upon arrival each case is recorded in a log of cases to be processed and cases returned. The one-sheet Traffic Unit Compendium (TUC) form is also coded at this time. The MDAI computer forms are processed by the data editors, who review all the case documentation to ensure the validity of the data to be keypunched. Over 45 pages of forms are manually verified. Additional pages of supplementary forms are also coded from the original documentation. The annotated CPIR is included in the 1975 Editing Manual, (3). It contains all the data elements routinely edited and keypunched.

A comprehensive case control system is maintained to permit the timely location of individual cases. A series of 5 x 8 cards was used to denote the "who" and "when" of each processing step. The Traffic Unit Compendium (TUC) is also used for inventory control. All MDAI vehicles in each case are recorded on TUC forms as cases arrive. Following each quarterly update of the CPIR files, the CPIR and TUC files are

merged. This merger indicates, among other things, which case vehicles in the TUC file have not yet shown up in the CPIR file.

The actual editing of each case is performed individually by three specialists. The first editor checks each case for consistency within the coding forms and with the narrative, and checks to see that each question is complete and correct. Each case is then edited by vehicle damage and occupant injury specialists. The vehicle damage editor checks the vehicle damage questions, in particular the Collision Deformation Classification (CDC/VDI) (8), speeds, and objects contacted. The narrative, collision diagram, black and white photos, and 35mm slides are used in this review. The Damage Analysis Supplement is also checked over or filled in at this point. An occupant injury specialist then edits the injury detail coding and completes an Occupant Supplement with Occupant Injury Classification (OIC) coding, if none was supplied.

The entire edited case and added coding are second edited by a second staff person to ensure overall consistency and correctness. After keypunching and key verification, the cards are read into HSRI's PDP 11/45 for checking, formatting, and cumulation. Quarterly, the compiled cases are built into the Level-III or in-depth data analysis files (Section 3). The last file update, performed in March, 1975, resulted in a data base of 7,799 case vehicle clinical investigations. Of these, 3,290 were MDAI case vehicles that were distributed by team, as displayed in Table 3. An abbreviated or excerpted codebook of 40 key summary variables for the 3,290 MDAI cases (including 1973 and 1974 Calspan Level-III cases) is provided in Appendix C.

Over the twelve-month contract period HSRI has edited and processed 3,598 CPIR forms into computer storage, including 1,993 CPIR forms prepared by MDAI teams (Figures 1 and 2). The backlog of MDAI cases was completed during the first six months of the contract by processing an average of 190 MDAI case vehicles per month. Generally, new cases are returned to NHTSA

within 30 days of receipt by HSRI. During that period, new cases are logged, edited, keypunched, and passed through the initial computer edit checks.

TABLE 3
Processed MDAI Case Vehicles, by Team

	<u>NUMBER CASE VEHICLES</u>
AA - Ann Arbor, HSRI	206
BA - Baylor College of Medicine	78
BC - Boston University	142
CB - Calspan III-B (including 1973-74 hybrids)	820
GI - Georgia Institute of Technology	102
IU - Indiana University	29
MI - University of Miami	197
ML - Maryland Medical/Legal Foundation	86
NM - University of New Mexico	135
OS - Ohio State University	56
RT - Research Triangle Institute	108
RU - University of Rochester	104
SC - University of Southern California	177
SI - Stanford Research Institute (2)	117
SR - Stanford Research Institute (1)	7
SU - Stanford University	46
SW - Southwest Research Institute	321
TR - Trauma Research Group, UCLA	69
TU - Tulane University	64
UK - University of Kentucky	64
UO - University of Oklahoma	90
UU - University of Utah	272
TOTAL	<u>3,290</u>

2.2 QUALITY CONTROL AND DOCUMENTATION

Quality control is one of the critical elements of the MDAI data management program. The computer forms become the

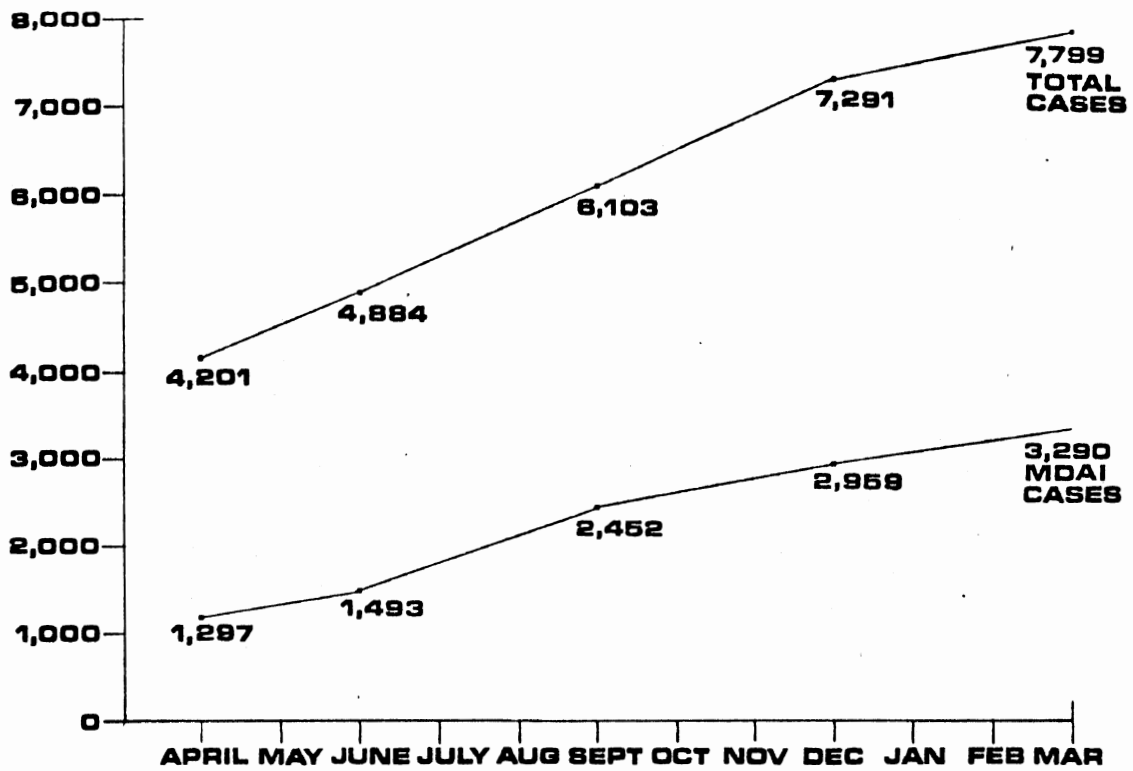


FIGURE 1

CPIR Case Vehicles in Computer Files
April, 1974 - March, 1975

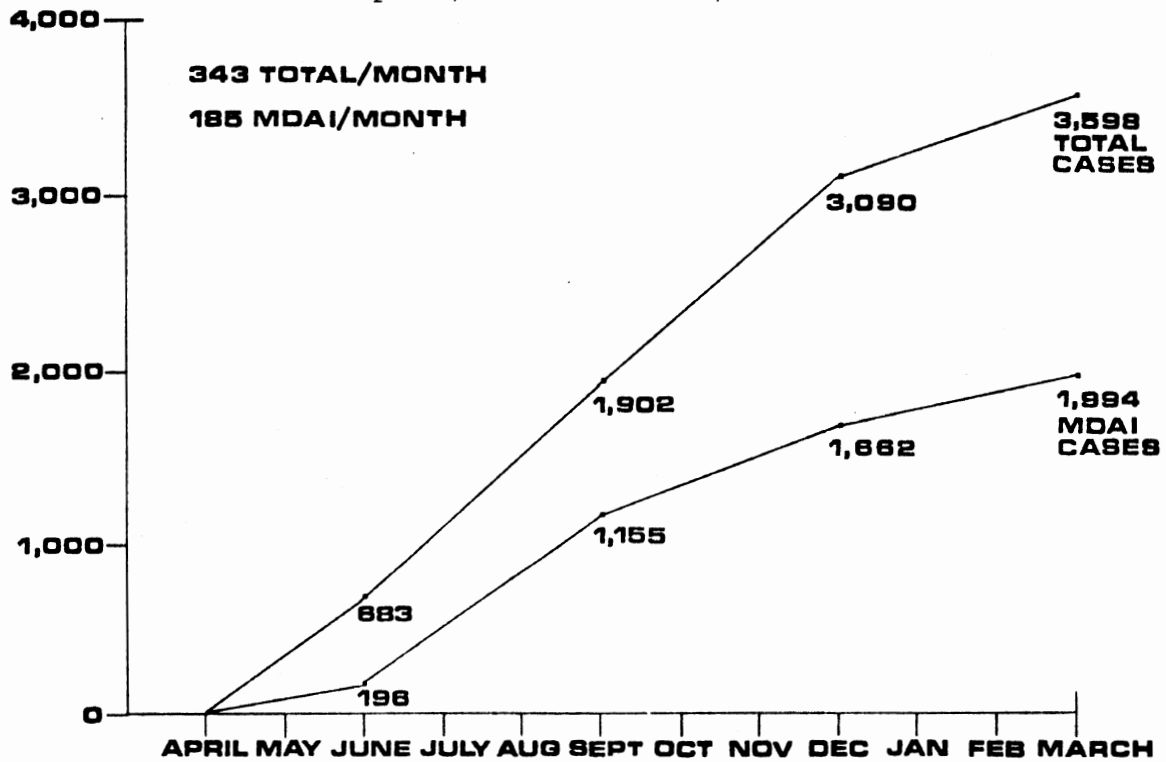


FIGURE 2

CPIR Case Vehicles Edited
April, 1974 - March, 1975

primary surrogate for each MDAI case. While data file errors can be corrected, they must first be detected. For example, once a Volkswagen is incorrectly coded as an Opel, it may be permanently lost to anyone subsequently conducting a study of Volkswagens. Superior field investigative efforts can be seriously damaged or deteriorated by a few coding errors. While it may be better to process ten cases correctly rather than a hundred of questionable quality, the basic objective is to process as many cases as quickly as possible, while employing procedures that minimize coding errors and detect those that are made. Thus several quality control steps are followed in an attempt to ensure the quality of the resulting automated data base. These steps were instituted to provide a sufficient number of checks on the coding and checks on the checks.

Specifically the following steps were performed with the guidance and approval of the NHTSA contract technical manager:

1. All of the 1973 editing criteria, corrections, and interpretations of questions were expanded and improved. The resulting editing manual increases inter-editor consistency and has aided in the training of new editors. The documentation provided in the MDAI data automation program has also been widely utilized by the MDAI field teams. Comments from each of the teams and by NHTSA staff have been incorporated in the 1975 MDAI Report Automation Editing Manual and Reference Information (3,4). This updated documentation should continue to reduce the variance with which the field data have been recorded.
2. To maintain and ensure the quality of the data-editing process itself, several procedures were followed: (a) all MDAI case editing was reviewed by a second staff member, and major differences resolved; (b) new data editors were not permitted to process full MDAI cases until adequately trained on other clinical accident investigation data; and finally (c) data editors receive some field training

in the original preparation of data forms by assisting experienced field investigators. This field experience proved to be particularly valuable and should be emphasized in any future MDAI report automation programs.

3. All keypunched data were 100 percent key verified. Also, any keypunch errors discovered in subsequent quality control steps were checked against the source document and arrangements were made for corrections by the keypunch staff. All keypunching and verifying was performed by HSRI staff, who have an average of four years' experience with CPIR computer forms.
4. A package of pre-build programs performs over 400 checks for invalid codes and internal data inconsistencies such as rear-door damage on two-door cars. The program was documented in the 1973 MDAI Report Automation Program Review (9) and is executed on the Institute's PDP 11/45 computer.
5. The pre-build data checking programs produce weekly error comment lists that are reviewed with the original coding and documentation. Either the keypunched cards are corrected or the data are corrected in subsequent file processing steps.
6. Four times a year the cases compiled by the pre-build programs were used to update the data analysis files available to users. The new data are file built, and univariate or one-way frequency distributions are computed for each numeric variable in the new data. This printout is reviewed for wild codes and unusual distributions before the new data are added to the existing data base.
7. Data corrections continue to be made to the existing computer data base, in response to comments received by all the data analysts and file users. This form of feedback from file users is encouraged as a means of educating the users and correcting the data file. In contrast to most

accident data files where data are stored once-and-forever, the records in the MDAI file are subject to a continual correction process.

8. Three forms of feedback are also provided for the MDAI field teams. The editing manual and reference information described in item one above has been provided to the teams and updated to reflect their comments. Secondly, individual case critiques have been prepared and supplied to each team's contract technical manager. Thirdly, a training seminar was conducted to introduce MDAI field investigators to how the case data are processed, stored, and used. A detailed presentation of the Occupant Injury Classification procedure was also provided as part of the MDAI training program conducted at the University of Southern California on November 14, 1974.

In summary, the goal or objective of the quality control task has been to provide a relatively noise-free communications channel between the collision event and the data analyst.

There are many reasons why errors and unknown values can occur in the data file. They can be due to weaknesses in the original investigations, the case documentation, the basic reference information provided to the teams and data editors, and in the data editing and processing itself. The approach taken has been to provide for communication with field teams in order to continually improve the quality of the original data reporting, to provide a series of checks in the report automation process, and, finally, to provide communication with data analysts in order to increase user understanding and continually improve the quality of the data file.

The current CPIR coding practice was documented in a form entitled "1/75 Annotated CPIR." This form was submitted separately to NHTSA and is included as Section 2 of the 1975 Editing Manual (3). No new questions were added, a few were dropped (e.g., Driving Complexity 93:53), and some new code values were added to existing CPIR (10) questions--for example,

to "tag" and retrieve ACRS cases. The "1/75 Annotated CPIR" is not a revision or redesign--it simply represents the status of current routine CPIR coding practice as of 1/75.

The following eight CPIR questions have added code values to record AIR Bag/ACRS-equipped cars. The new code values are tagged with an "*". The three numbers refer to the CPIR page card and column numbers, e.g., (7:03:44) refers to page 7, card 3, column 44.

A. Vehicle Variables

- 1,2. High Performance or Air Bag Equipped (7:03:44 and 6:02:43)

Not Air Bag Equipped and -

- (1) High Performance: Yes
- (2) High Performance: No
- (3) High Performance: Unknown

Air Bag Equipped (any engine performance);

- (4) Any Deployments*
- (5) No Deployments*
- (6) Deployment Unknown*
- (9) Both High Performance and Air Bag Equipped Unknown*

3. Steering Wheel Pad or Air Bag (17:07:14)

Steering Wheel Pad:

- (1) No Air Bag in Steering Wheel: Equipped with Pad
- (2) No Air Bag in Steering Wheel: No Wheel Pad
- (0) No Air Bag in Steering Wheel: Wheel Pad Unknown

Steering Wheel Air Bag

- (4) Deployment*
- (5) Equipped--No Deployment*
- (6) Deployment Unknown*
- (9) Both Pad and Air Bag Unknown*

4. Instrument Panel Other or Air Bag (21:07:74)

Instrument Panel - with No Air Bag:

- (1) Other Damage Yes
- (2) Other Damage No
- (3) Other Damage NA
- (0) Other Damage Unknown

Instrument Panel - with Air Bag:

- (4) Deployment*
- (5) Equipped - No Deployment*
- (6) Deployment Unknown*
- (9) Both Other Damage and Air Bag Equipped Unknown*

B. Occupant Variables

1. Upper Torso Belt and/or Air Bag Equipped (28:11:31)
 - (1) No Air Bag and Upper Belt Equipped
 - (2) No Air Bag and Upper Belt Not Equipped
 - (3) No Air Bag and Unknown if Upper Belt Equipped
 - (4) Air Bag Equipped and Upper Belt Equipped*
 - (5) Air Bag Equipped and Upper Belt Not Equipped*
 - (6) Air Bag Equipped and Unknown if Upper Belt Equipped*
 - (9) Both Upper Torso or Air Bag Equipped Unknown*
2. Upper Torso Belt and/or Air Bag Used (28:11:32)
 - (1) No Deployment or No Bag; Upper Belt Worn
 - (2) No Deployment or No Bag; Upper Belt Not Worn
 - (3) No Deployment or No Bag; No Upper Belt (Not. App.)
 - (0) No Deployment or No Bag; Unknown if Worn
 - (4) Deployment; Upper Belt Worn*
 - (5) Deployment; Upper Belt Not Worn*
 - (6) Deployment; No Upper Belt (Not. App.)*
 - (7) Deployment; Unknown if Upper Belt Worn
 - (9) Both Upper Torso Worn or Air Bag Deployed Unknown*
3. Type System Used (28:11:37)
 - (3) Not Applicable, Not Used
 - (4) 3-point
 - (5) 4-point
 - (6) Other (Not 2-point)
 - (7) Air Bag Deployed and No Belts Used*
 - (8) Air Bag Deployed and Any Belts Used*
 - (9) Air Bag Deployed and Unknown Belt Use*
 - (0) Unknown
4. Areas of Possible Contact (30:12-26:14-21)

"Air Cushion Skin (Air Bag)" (87) is already in the (January, 1974) list of Occupant Contact Codes.

The following data checks were made on the CPIR file between June and August 1974 to increase inter-variable consistency. These checks resulted in over 1,000 file corrections.

1. a. CDC clock direction vs. first letter
 - b. CDC collision type vs. Collision Configuration
 - c. Primary CDC extent vs. Secondary CDC extent
 - d. CDC extent vs. Inches Crush (by damage area)
 - e. Vehicle Make/Model vs. Vehicle Weight
2. Vehicle make/model codes vs. body style
3. Vehicle malfunction - number of vs. types

4. Fires - three questions
5. Trailer vs. trailer hitches
6. Rollovers: final attitude, initial clock of rollover, CDC rollover
7. Number of and Numbering of case vehicles
8. Restraint systems: lap belt and upper belts worn vs. system time used
9.
 - a. Overall AIS vs. treatment/mortality
 - b. Overall AIS vs. individual injury AIS's
 - c. Overall AIS vs. body region AIS's
10. Check for all valid combinations of the four CDC letters.
11. Bracketed data vs. original data (e.g., speed, weight)
12. Pre-crash location (e.g., urban/rural, limited access)
13. Sheet metal damage vs. inches of crush

All other invalid or inaccurate codes brought to our attention (e.g., by data users) have also been corrected.

2.3 TRIAL CODING OF NEW VARIABLES

Several new variables developed during the 1973 contract (DOT-HS-031-589) were trial coded for 170 MDAI cases under Task 2 of this current contract. Previously released MDAI cases were selected on the basis of the most recently processed 10 cases per currently active team and five cases per unsponsored team (Table 4).

Trial coding was performed so that determinations could be "made as to whether the variables can be coded (i.e., the data to code exists in the MDAI case documents) and whether they are useful for accessing/analysis purposes."* The objective was to see what could be coded from existing reports, not to look for new data elements that field teams might collect.

Two experienced MDAI data editors were assigned to perform all the coding under this task. Initially each reworked

*Contract DOT-HS-4-00898, Statement of work, Task 2: New Variables.

TABLE 4

MDAI Cases Selected for Trial Coding

Number of Cases	<u>Team: Report Numbers</u>
10	Ann Arbor: 353, 352, 351, 350, 347, 346, 344, 341, 340, and 337.
5	Baylor: 50, 49, 48, 47, and 46.
10	Boston: 73-09, 08, 07, 06, 05, 04, 03, 02, 72-14, and 72-13.
10	Cal B: 72-50, 48, 45, 44, 42, 41, 40, 37, 36, and 35.
5	Georgia Tech.: 122, 121, 120, 119, and 116.
5	Indiana Univ.: 70-09, 08, 07, 06, and 03.
10	Miami: 340, 339, 338, 337, 336, 335, 334, 333, 332, and 331.
10	Maryland: 73-17, 16, 15, 14, 12, 11, 09, 06, 05, and 04.
10	New Mexico: 100, 99, 98, 97, 96, 95, 94, 93, 92, and 91.
5	Ohio State: 68, 66, 64, 62, and 61.
5	Research Triangle: 83, 82, 81, 80, and 79.
5	Rochester: 153, 151, 148, 147, and 146.
10	Southern Calif.: 74-25, 24, 22, 21, 20, 19, 18, 17, 16, and 14.
5	Stanford SR: 81, 28, 12, 09, and 07.
5	Stanford SU: 42, 40, 39, 38, and 37.
10	Stanford SI: 74-04, 03, 02, 01, 72-40, 39, 37, 36, 35, and 33.
10	Southwest Res. Inst.: 73-28, 25, 24, 23, 22, 21, 20, 19, 16, and 15.
5	Trauma: TR1342D, 1318D, 1316D, 1307D, and 1305D.
5	Tulane: 71-49, 32, 31, 25, and 24.
10	Kentucky: 41, 40, 39, 38, 37, 36, 35, 34, 33, and 32.
10	Oklahoma: 72-40, 39, 38, 37, 36, 35, 34, 33, 32, and 31.
10	Utah: 73-159, 158, 157, 156, 155, 154, 153, 152, 151, and 150.

ten cases coded by the other. Subsequently coding was performed in a common cubicle with frequent discussion and coder interactions. All of these steps were taken to increase the consistency and thoroughness with which the test coding was performed. Once the coding was completed, the percentages of missing data for the individual new questions were tabulated and submitted to NHTSA.

Based upon the above experience, the experience gained from processing the Fatal Factors Form (Task 5: Special Files), and the contents of the existing annotated CPIR, a prototype MDAI precrash coding module was prepared for NHTSA comments.

No test coding was done because almost all the questions were taken from existing forms - CPIR, old CPIR supplement, FFF, or from trial coding of new variables. The prototype form is intended (in time) to replace the early CPIR questions (p. 1-4), old CPIR supplement questions (p. 31-38), and added items from the FFF and earlier (1973) trial precrash variables. While submitted in a rough format, this form could serve as the evolutionary basis for MDAI precrash accident and vehicle modules.

The trial coding of the 170 cases also included the Accident Causation Analysis System (ACAS) developed in 1973 (6). As noted above, the two coders worked closely and frequently discussed the ACAS coding of individual cases. Several more general discussions were also held during the testing with other HSRI staff with either ACAS background and/or field experience. All these discussions were for the purpose of developing a common and consistent set of ACAS coding interpretations.

Once all the discussions had been completed and the first 161 cases had been coded, the final nine cases were ACAS coded independently by three persons--the ACAS author (A) and the two trial coders (B,C). The overall average number of ACAS factors per case (accident) was 6.7 (Table 5). Although the average number of factors per case varied widely

(from 3 to 9), there was a fairly good agreement among the coders on the average number of factors required.

TABLE 5

Average Number ACAS Factors Coded per Case and per Coder

Case/Coder:	A	B	C	Total	Average per Case
1	10	7	6	23	7.7
2	3	4	3	10	3.3
3	9	6	6	21	7.0
4	6	7	5	18	6.0
5	8	9	6	23	7.7
6	8	6	3	17	5.7
7	9	9	6	24	8.0
8	7	10	10	27	9.0
9	5	6	6	17	5.7
TOTAL	64	64	51	180	60
Aver. per Coder:	7.1	7.1	5.7	-	6.7

Table 6 indicates that of the 128 unique (four digit) factor codes used for each of the nine cases, only nine percent were used by all three coders. In other words, all three coders were consistent in coding nine percent of the unique factors used in coding the average case. The biggest area of inconsistency was for the Human Direct factors (e.g., Recognition Errors, Decision Errors) where there was only four percent agreement amongst the three coders, vs. a 15 percent agreement for all other factors (Human Conditions and States, Vehicle Factors, and Environmental Factors). Close to a quarter of the factors were in agreement for two coders, without much difference in consistency between Human Direct and Other factors. Close to three-quarters Human Direct factors used (in a case) were uniquely coded by only one of the three coders.

TABLE 6
Four-Digit ACAS Factor Coding Consistency

Unique Factors Coded by:	Human Direct		Other		Total	
	Number	Percent	Number	Percent	Number	Percent
One Coder	51	74%	36	61%	87	68%
Two Coders	15	22%	14	24%	29	23%
Three Coders	3	4%	9	15%	12	9%
TOTAL	69	100%	59	100%	128	100%

An observation of the individual case coding experience revealed that the larger the number of factors reported and coded for an accident, the higher the inconsistency. The highest number of unique Human Direct (HD) factors used on one case was eleven--and not one was used in common by any of the coders. In another case with five unique HD factors, three were used in common by the coders. Unfortunately, it seems that the more detail the case provides, the more problem there is in consistently coding the case.

The ACAS provides for four levels of hierarchal detail. In order to test the possibility that the main categories coded were consistently coded (in other words, that the inconsistencies were in the selection of specific sub-subcategories), the same statistics were tabulated on the basis of only the first two digits of each factor coded (Table 7). Consequently, subtle differences between "Inattention" (factor 3.2.1.0) and "Internal Distractions" (factor 3.2.3.0) were removed by counting both factors as the same (more general) factor--"Reasons for Error or Delay in Recognition" (3.2). The consistency with which all three coders coded the same unique factor doubled from nine percent to 18 percent, and the difference between Human Direct (HS) factors and Other Factors was reduced. In fact, the consistency of two coders for HD factors was higher (29 percent) than for Other factors (23 percent).

TABLE 7

Two-Digit ACAS Factor Coding Consistency

Unique Factors Coded by:	Human Direct		Other		Total	
	Number	Percent	Number	Percent	Number	Percent
One Coder	33	57%	31	55%	64	56%
Two Coders	17	29%	13	23%	30	26%
Three Coders	8	14%	12	21%	20	18%
TOTAL	58	100%	56	99%	114	100%

The extent of coding consistency for either the two-digit or four-digit codes (even after trial coding 161 prior cases) is not high enough for general application. The extent of inconsistency would be greatly increased if such a scheme were to be used by several independent field teams without the advantage of extensive prior training.

In debriefing sessions following the nine-case consistency check, there was very little disagreement about the accident situation as documented by a team. A few minor causal factors hidden in the case text may have been missed, but all coders were in general agreement about what the original team intended to imply in their case documentation. The problem frequently came in trying to express the case contents in the ACAS scheme. This probably occurred because of misinterpretation of how the ACAS factors should be applied (i.e., which factor to use in each situation), and because the team documentation did not have an orientation consistent with the ACAS.

Typically the narratives would emphasize "conditions and states" (human, vehicle, and environment) prior to the collision, and then tend to emphasize "actions" as the narrative approached the time of impact. Factors that were more removed from the time of impact were better documented as causes. Close to the impact, the narratives became more of a story of what happened but not why. Conversely the ACAS (and Indiana University) coding scheme placed the heaviest emphasis on causal factors immediately prior to the collision.

These contradictory orientations tended to require a bit of guesswork from the coder, which in turn may have produced some of the inconsistencies.

This test did not provide the answer to what should be done. It did indicate that there is room for further thought on just what is needed, and on what techniques might be applied to meet this need.

2.4 SPECIAL FATAL CASE PROCESSING

Previously processed fatal MDAI cases received additional special processing. A special Fatal Factors File (FFF) containing additional precrash variables was implemented and the recoding of fatal occupants using the new abbreviated Injury Scale AIS-6 (Maximum Severity) definition was initiated.

Fatal Factors File

As part of an NHTSA internal study, all MDAI fatal cases were being reviewed and certain variables in the roadway and human factors area coded. NHTSA staff inventoried all the MDAI fatal cases in 1973 and coded 141 cases onto a special Fatal Factors Form (FFF). HSRI, under Task 5 (Preparation of Special Files), created a computer dictionary and codebook, keypunched the 141 FFF's, built an automated file (accessible to NHTSA only, via ADAAS), and, within three months of receipt of the data forms, printed out a codebook with marginal (one-way) frequencies inserted.

Subsequently, HSRI has inventoried its own holdings of MDAI fatal cases and requested copies of any missing cases. So far approximately 1,000 MDAI fatal accident reports have been tentatively identified by HSRI. An additional 192 FFF's were coded by HSRI. The Fatal Factors File (FFF) was updated to a total of 333 cases, and a new printed codebook, with frequencies, was supplied to NHTSA.

New AIS-6 Recoding

The "1974 AMA-SAE-AAAM Revision of the Abbreviated Injury Scale (AIS)" (1) contained a major change in the definition of

the old "fatal" categories of 6, 7, 8, 9, and 10, for patients who died within 24 hours. All of these "fatal" categories have been dropped in the revision, along with the fatal within 24 hours criteria. A new injury category "6" has been added for "Maximum Severity Injuries (Currently Untreatable)".

In order for the earlier fatal occupant injury coding to be consistent with the future adoption of the revised AIS, all of the old AIS 6-10 codes must be eventually recoded according to the revised AIS definition. The manual recoding phase was started in late January and by the end of March 341 case vehicles with fatal occupants had been recoded. This recoding process will significantly increase the number of "unknown" AIS codes. Previously a "fatal closed head injury" of a "died of internal chest injuries," for example, simply received an AIS-6 because they died within 24 hours. The revised AIS requires that one know the severity of the injuries incurred (not just whether he died). Lacking that information, as in the examples above, the AIS becomes "unknown."

SECTION THREE
STRUCTURE OF MDAI DATA FILES

The primary MDAI file contains data recorded on an annotated CPIR Revision 3 plus 12 supplementary pages. Several other special files have also been built and maintained from data recorded on the NHTSA Vehicle Condition and Maintenance Report (VCMR) form, the Traffic Unit Compendium (TUC) form, and the Fatal Factors Form (FFF). Computer codebooks have been submitted separately for the special files. A discussion here of the primary CPIR file organization and contents precedes a description of the special files.

3.1 COLLISION PERFORMANCE AND INJURY REPORT (CPIR) FILE

Over 800 different variables (items of information) are recorded in the master file for each case. The majority of these items are taken from the Collision Performance and Injury Report (CPIR), Long Form, submitted with each case. Because the primary emphasis of this form is on recording vehicle crash damage and concurrent injury details, several additional precrash and administrative variables have been coded by the editors onto supplementary forms.

Once the master file is created, three "working" or "analysis" files are created--centered respectively on the vehicle, the occupant, and the injury. The vehicle file contains one logical record for each case vehicle investigated; thus, if two vehicles involved in one head-on collision were reported on two CPIR forms, two computer records would be stored. The occupant file contains one record for each case vehicle occupant, whether injured or not. Finally, the injury file contains one record for each reported injury sustained by an occupant. A complete set of univariate descriptive statistics for each variable in the analysis files is provided to the data users.

The data file contains all the case vehicle passenger cars and light trucks investigated by both the NHTSA- and MVMA-sponsored teams and the teams sponsored by the Canadian Department of Transport. Large trucks, buses, motorcycles, and pedestrians are not included as a "case vehicle" but may be noted as an "other vehicle"*. These non-CPIR type traffic units are stored in the Traffic Unit Compendium (TUC) file (see Section 3.2).

3.1.1 Vehicle File Contents

There are 576 variables or items of information stored for each of the investigated MDAI case vehicles. These variables can be grouped under the following topics:

- Case Identification
- Environment
- Vehicle Malfunctions
- Collision Description
- Other Vehicle Description
- Case Vehicle:
 - Description
 - Damage, Exterior
 - Damage, Interior
- Case Vehicle Driver
- Crash, Post-Crash
- Pre-Crash
- Program Matrix Cells
- Occupant Summary

A more detailed explanation of each coded variable can be found in the MDAI Data File Editing Manual and Reference Information; Volume I - 1975 Editing Manual. An overview of the variables follows.

Accident Factors. The vehicle file contains the variables that describe the accident (the "Accident Factors"). There is no "accident file" as such. The individual vehicles involved in any one multiple-vehicle "accident" would each constitute a case vehicle, and the environmental

*A separate summary file of large trucks, buses, motorcycles, and pedestrians reported by Level-III teams was initiated under separate sponsorship and made available to NHTSA in 1973.

conditions common to all case vehicles for an accident would be identical. This situation can be identified because the team case number is common to both records, but the vehicle number will increment by one for each case vehicle stored. (Note, however, that some environmental variables, such as the road alignment, may be different for different case vehicles in the same collision.)

Accident Factors

Identification

Date

Time

Case Number

Publication Number

Location

Environment

Pre-Crash Factors

Case Vehicle

Emergency Services

Team Recommendations

(Matrix Cells)

Vehicle Malfunction. Vehicle mechanical malfunctions are coded only for the case vehicle. If the "other vehicle" had a tire blow-out but was not investigated as a case vehicle, the malfunction would not be recorded. To be coded, a malfunction must be suspected or alleged to have contributed to the accident. (For example, if a brake failure contributed to the severity of an accident that could not have been avoided even with good brakes, a malfunction is recorded.) Conversely, bad brakes on a parked car are not coded. The following broad categories of vehicle malfunction are used:

Vehicle Malfunction

Brake System

Exhaust System

Suspension System

Tires

Electrical System

Throttle Controls

Driver Controls

Power Train

Fuel System

Visibility Items

Other: _____

Unknown

Collision Description. The collision description is coded from the point of view of the case vehicle. Generally all of the configuration questions are independent of each other and are coded in combinations. Thus, if a case vehicle sideswipes a truck, strikes a guardrail, and then rolls over in the same accident, all three events are recorded. This convention contrasts to the usual Level-I or police accident data, where only one event is coded per accident.

For those interested in analyzing the collision configuration variables, some words of caution are in order. The sequence of events is not coded; i.e., if both a sideswipe and a head-on are coded, either may have preceded the other. The reported impact speed is, by convention, that of the first impact--and this is not necessarily the most damaging impact.

Collision Description

Collision Configuration

Vehicle to Object

Rollover

Ran-Off-Roadway

Vehicle to Vehicle

Other

Number of Vehicles

Objects Contacted

Case/Other Vehicle Speeds

Direction of Rollover

Total Energy Available

Because of the necessity for adequate collision damage data, a Damage Analysis Supplement was implemented in 1973 that relates speeds, configurations, object contacted, and inches of crush directly with the VDI/CDC. The Damage Analysis Supplement is described later in the section.

Vehicle Damage. The vehicle file contains a very extensive description of the damage sustained by the case vehicle. Thirty-eight variables describe the overall vehicle damage in terms of cost, Vehicle Damage Index or Collision Deformation Classification, and sheet metal damage/crush (8). Case vehicle exterior damage is described as seen by walking

around the vehicle counterclockwise: wheels and tires, front exterior, left exterior, rear exterior, right exterior. The descriptions of fire are included with exterior damage.

Exterior Damage

Cost
 Vehicle Damage Indexes (CDC's)
 Sheet Metal Damage/Crush
 Wheels and Tires
 Front Exterior:
 Hood
 Engine/Transmission Mounts
 Steering Flexible Coupling
 Telescoping Unit
 Fire
 Left Exterior:
 Pillars (A,B,C,D)
 Roof Side Rail
 Body Mount
 Doors
 Rear Exterior:
 Fuel Tank/Lines
 Trailer and Hitch
 Tailgate
 Trunk Lid
 Backlight Header
 Right Exterior:
 (like Left Exterior)

The case vehicle interior damage topics include the steering wheel, steering column, windshield, instrument panel, seats, and side interiors, as outlined below:

Interior Damage

Steering Wheel
 Steering Wheel EA Device
 Steering Column Features
 Column Movement
 Column EA Devices
 Column Rotation
 Compartment Deformation
 Windshield Performance
 Front Interior (Panel)
 Damage and Occ. Contacts
 Seats
 Adjustors
 Head Restraints
 Rear Seats
 Windows
 Left/Right Side
 Damage and Occ. Contacts
 Roof

Vehicle Driver. The vehicle file is also logically the driver file, as there is only one driver per case vehicle. It should be noted that all drivers in a particular accident will be represented only if all vehicles are investigated (i.e., become case vehicles). For example, if a drunk driver in an old car runs a stop signal, and old cars are not investigated, he may not be represented in the data bank.

Driver Factors

Impairment
 Driver Education
 Driver's Record
 Trip Plan
 Route Familiarity
 Psychological
 Physiological
 Pharmacological

Occupant Summary. The last vehicle file summarizes the occupant information for the case vehicle. These summary variables are created automatically during the file-building process, to provide the analyst the facility for occupant information on a vehicle-to-vehicle basis. For example, one may ask "what is the distribution of injury severity for the right front occupant in vehicles with a driver fatality?" Occupancy, Overall Injury Severity (AIS) (11), and Restraint Usage are recorded for five summary seat positions. The Overall Case Vehicle Injury Severity (AIS) is summarized by recording the highest overall injury severity sustained by any one case vehicle occupant. This is a useful variable for subsetting the file into three broad categories: property damage (AIS=10), injury producing (AIS=1-5), and fatality producing (AIS=6-10).

3.1.2 Occupant File Contents

There are 60 additional variables coded for each of the MDAI case vehicle occupants. Each occupant is recorded, whether injured or not, and each occupant record repeats the first 576 vehicle variables for each occupant in the case vehicle. Thus, a case vehicle with three occupants would be

processed into three occupant records, each containing identical information for the first 576 variables. One occupant record is processed for unoccupied case vehicles with the Occupant Number coded as (00) and the other variables as "unknown." The occupant variables can be grouped as follows:

Occupant File

Occupant Number
Seating
Age, Weight and Height
Restraint System
Areas Contacted
Ejection
Injury
Injury, Details

Occupant Age, Weight, and Height are automatically provided with bracketed ranges (e.g., 5-year, 25-lb., 6-inch ranges) during the file build process, although the analyst can transform each variable into other ranges at the time of analysis.

Occupant injury severity (tissue damage) is recorded according to the American Medical Association's Abbreviated Injury Scale (AIS). The occupant file user should note that fatal categories do not match the definition of fatality used in Level-I or mass accident data. The police will code a traffic fatality six months to a year after the collision. In the AIS, only occupants who die within 24 hours are coded as fatalities. Fatalities after 24 hours are coded as "Critical, survival uncertain." In order to record the true number of occupant fatalities, the "Treatment" question in the original CPiR had been expanded to "Treatment/Mortality," and a "Fatal after 24 hours" category has been added.

3.1.3 Injury File Contents

There are 10 variables coded for each injury sustained by a case vehicle occupant. For each injury an occupant receives, one injury record is stored with the first 636 variables repeated and 10 new injury variables, as below:

Injury File

Body Region
 Total Number of Injuries to Occupant
 Total Number of Injuries to Body Region
 Injury Number Counter
 Occupant Injury Counter
 Region Injury Counter
 Overall Body Region AIS
 Injury Description
 Injury Diagnosis
 Injury Severity (AIS)
 Areas Contacted

The injury file contains one record for each specific injury coded on the CPIR occupant injury detail page. For each injury, the corresponding Body Region and Injury Type/Diagnosis is recorded as outlined below. The overall injury severity and four contact areas for the injured region are also recorded.

<u>Body Region Codes</u>	<u>Injury Types</u>
(12) Internal Organs	(1) Fracture
(13) Brain	(2) Laceration
(14) Face	(3) Contusion
(15) Head	(4) Pain
(16) Neck	(5) Abrasion
(17) Shoulder Girdle	(6) Concussion
(18) Right Upper Limb	(7) Burn
(19) Left Upper Limb	(8) Hemorrhage
(20) Chest & Upper Back	(9) Other
(21) Lower Back	(0) Not Applicable
(22) Abdomen	
(23) Pelvic Girdle	
(24) Right Lower Limb	
(25) Left Lower Limb	
(26) Whole Body	
(00) Not Applicable	

Some cautions must be observed when applying the injury file to problems of injury causation. First, no record is stored of which area of contact caused a specific injury, particularly if there was more than one injury to a body region. Second, two distinct injuries of the same type (e.g., two independently caused facial lacerations) are coded as one injury. Third, the categories of Internal Organs and Brain

are not truly "geographical" regions of the body. This sometimes produces inconsistent coding of internal injuries, such as heart trauma. These inconsistencies result from the form in which the data have been reported, rather than from any limitations of the file construction.

Because of the necessity for adequate injury causation data, an Occupant Injury Classification (OIC) scheme was developed as part of the 1972 MDAI Report Automation contract and implemented as part of the Occupant Supplement described later in this section.

3.2 MDAI SPECIAL FILES

Three other special MDAI data forms were processed independently into separate computer files described in the remainder of this section. The three special MDAI files are the:

1. NHTSA Vehicle Condition and Maintenance Report (VCMR) File
2. Fatal Factors File (FFF)
3. Traffic Unit Compendium (TUC) File

Special files for the Occupant Supplement and the Damage Analysis Supplement were not implemented during the contract due to the higher priority of completing the backlog of unprocessed cases into the existing CPIR files. The two supplements are an integral part of the Annotated CPIR and were edited and keypunched for each case in anticipation of future data file implementation. A description of the Damage Analysis and Occupant Supplements is provided at the end of this section.

1. Vehicle Condition and Maintenance Report (VCMR) File

The Vehicle Condition and Maintenance Report (VCMR) File contains one logical record for each case vehicle reported on a NHTSA Vehicle Condition and Maintenance Report form by the MDAI teams. A subset of the Collision Performance and Injury Report (CPIR) Revision 3 variables was merged automatically

with each VCMR form processed in order to describe the case vehicle and other pre-crash variables. Hence, the VCMR file can be considered as an in-depth pre-crash accident factors file.

The first 151 variables were merged directly from the CPIR Revision 3 file. They include data elements as outlined below:

- Accident Identification
- Accident Environmental Factors
- Vehicle Malfunctions
- Collision Configuration, Objects Contacted, Speeds
- Driver Factors
- Team Conclusions/Recommendations
- Case Vehicle Identification
- Case Vehicle Damage
- Case Vehicle Equipment, Fire

The remaining 80 variables record the NHTSA Vehicle Condition and Maintenance Report form data elements. The content of these elements is outlined below:

- Tires:
 - Tread, Inflation, Damage, Wear, Repair, Defects
- Steering and Suspension:
 - Freeplay, Modifications, Degradation
- Exhaust:
 - Defects
- Drive Train:
 - Modifications, Defects
- Brakes:
 - Fluid Level, Contamination, Leakage
- General Information:
 - Switch Position, Windshield Wipers and Arms
- Glass:
 - Position (open/closed), Condition (Dirt, Crack, etc.)
- Maintenance and Inspection:
 - Lubrication and Inspection Stickers

The VCMR form is no longer actively used by the MDAI teams. Consequently the VCMR file has been updated only on an annual basis, as older VCMR forms are discovered and key-punched. There may be only one more VCMR file update, in December, 1975.

2. Fatal Factors File (FFF)

The NHTSA Accident Investigation Division (AID) created the "Human Factors Analysis Report Form" and the AID staff coded 141 MDAI fatal accidents. HSRI keypunched the forms and created a Fatal Factors File with the ADAAS keyword FFF and a computer codebook of 228 variables with code value frequency counts. An additional 192 cases were coded and processed by HSRI for a total of 333 FFF accident records. Access to the FFF has been limited to NHTSA users only, until more experience is gained with the file contents.

The following guidelines were used to construct the file.

(a) Any question with more than one response was built as several individual single-response variables preceded by a multiple-response variable (MRV).

(b) All "time" variables were built as four columns and with the first two columns as a separate variable (Hours are therefore truncated rather than rounded off).

(c) Column 34 on card 3 was assigned twice in the coding form, so item number 120, "Driver 3 Permanent Physiological Conditions Contributing to Collision," was dropped during keypunching. Since this is the third driver it is unlikely this will lose any critical information.

The file contains 52 accident variables that classify the collision and roadway types. The next variables describe vehicle 1 (striking vehicle). Details on the driver's record, age, sex, trip plan, conditions, and injury are included along with counts of all occupants in the vehicle. These variables are repeated for Vehicle 2 (struck) and vehicle 3 (struck). Twelve pedestrian variables are then followed by seven post-crash factor variables.

3. Traffic Unit Compendium (TUC) File

The Traffic Unit Compendium file provides the essential information on all the traffic units investigated in-depth by the professional teams in the United States and Canada. The file includes large trucks, buses, pedestrians, and

motorcycles in addition to passenger cars. The one hundred variables describe for each traffic unit: (1) the accident, (2) the traffic unit, (3) the driver and occupants, and (4) the processing status of the CPIR case.

The coded traffic units include all the traffic units (not just CPIR vehicles) reported in each new case received by HSRI. Previously processed CPIR cases with trucks, buses, motorcycles, or pedestrians as "other vehicles" or "objects struck" have also been coded on TUC forms, along with cases reported in the series of NHTSA "Multidisciplinary Accident Investigation Summaries."

Damage Analysis Supplement

The case vehicle Damage Analysis Supplement (DAS) is designed to give a more complete view of the damage incurred by the case vehicle. It consists of three parts: the Damage Analysis, the Sequence of Crash Events, and the Side Door Beam Information. The purpose is to record new information about the damage to the case vehicle and restructure information already coded in the CPIR form into a format that will more specifically detail the manner in which the damage occurred. As noted earlier, the CPIR form does not relate speeds, objects contacted, or other vehicle CDC/VDI with the case vehicle CDC/VDI's. Thus, although investigated, no record is stored of the circumstances in which case vehicle damage (CDC/VDI's) occurred.

The Damage Analysis portion of the file represents a reorganization of damage information for the "case vehicle" and the associated "other vehicle," which allows for a direct comparison of concurrent damage between the two vehicles. The Collision Deformation Classification (CDC), Inches Crush, Configuration, Crash Event Number, and Impact Speed for the primary and secondary deformation of the "case vehicle" are recorded, along with the corresponding CDC, crush, and speed for the "other vehicle." Provision for a Tertiary Collision Deformation Classification for the case vehicle has also been

included. For multiple-vehicle collisions the "other vehicle" is changed to be the one connected with each of the case vehicle impacts.

The Sequence of Events is recorded in the second set of variables. It is a chronological ordering of vehicle maneuvers and crash events that best describe the collision for the case vehicle, beginning with the first injury- or damage-producing event. With each event there is an entry for the specific vehicle or object struck, associated with that event. These events are numbered, enabling the specific deformations (and their associated Collision Deformation Classifications) to be related to the appropriate event in the collision sequence. This identifies the nature of the damage and circumstances producing that damage.

The third set of variables is concerned with the side structure performance of the case vehicle. It provides information for analysis of direct damage to side structures with and without door beams. It also includes information which relates the damage to the CDC's.

Occupant Supplement

The case vehicle Occupant Supplement (OS) is designed to record 17 additional data elements (variables) for each occupant as well as provide for the recording of injury causation using an expanded list of contact area codes and the Occupant Injury Classification (OIC) coding system. The 17 additional occupant questions expand upon several CPIR questions and provide for additional information as outlined below:

- Posture
- Non-Impact Medical Condition
- Occupant Alcohol Involvement
- Seat Belt Buzzer
- Ignition Interlock
- Passive Restraint
- Restraint System Malfunction
- Restraint System Effectiveness
- Treatment/Mortality
- EMS Contributory
- Autopsy Performed

Police Injury Severity
Ten Occupant Contact Areas
Highest Injury Severity (AIS) for each Body Region
Highest Injury Severity (AIS) for each Lesion Type
Highest Injury Severity (AIS) for each Body
System/Organ

Appropriate CPIR data variables for the corresponding OS-coded cases will be merged with the above outlined data in future OS file updates. These merged variables will include selected accident, case vehicle, and case vehicle occupant data elements.

The next set of questions records the specific injuries and contact points for each occupant injury. Each injury is described in terms of (a) four contact areas in rank order of confidence, (b) one primary Occupant Injury Classification, and (c) two associated OIC's that describe the lesions associated with each injury. Up to 15 injuries are recorded per occupant.

The OIC itself consists of four letters that record Body Region, Aspect (area of body region), Lesion/Diagnosis, and Body System/Organ; followed by the 0 to 6 AIS injury severity digit. A discussion of the origin and application of the OIC was presented in 1973 (12).

SECTION 4 OVERVIEW OF THE DATA SYSTEM

This section describes the accident data system provided to the National Highway Traffic Safety Administration as part of the MDAI data file program. The description of the overall system is followed by a discussion of the application of accident data and analysis tools.

4.1 ACCIDENT DATA SYSTEM

As part of this contract, NHTSA has been provided with access to a data system that contains over 130 accident data files, as listed in Appendix B. Figure 3 displays circles that locate the Level-III or clinical investigation teams in the United States and Canada. Table 8 summarizes the available files.

Access to the accident data system is provided through the University's Michigan Terminal System (MTS), a time-shared IBM 370/168 computer. The community of data users includes the NHTSA staff, six of the field MDAI teams*, Canadian Department of Transportation, and the automobile industry analysts. Users access the data system via interactive terminals (e.g., teletypes) from the privacy of their own office. Remote batch terminals are also operating from NHTSA and Southwest Research Institute.

Documentation of the contents of each data file was provided in the form of complete sets of computer codebooks. The code values and code definitions used for each variable or data element are displayed in the codebooks along with the frequency of usage for each code value. Codebooks for new or updated files were provided during the contract.

*Calspan, HSRI, Indiana University, Southwest Research Institute, Stanford Research Institute, and University of Southern California.

TABLE 8

Summary of Files Presently Available in the Data System

<u>SOURCE</u>	<u>DATA LEVEL</u>
MDAI Data Files	III
Michigan	
Washtenaw County (68-73)	I
Oakland County (68-73)	I
Washtenaw Driver Record (1969)	
Texas (69-73)	I
5% Sample, Fataals, Trucks, Bexar County, Vehicle Defects	
New York	
Calspan (70-74)	I,II
Florida	
Dade County (69-73)	I
Washington	
Seattle (69-73)	I
Colorado	
Denver (69-72)	I
Bureau Motor Carrier Safety (66-69, 71-72)	I
Turnpikes	
Indiana, Ohio, Pennsylvania	I

To readily analyze these files, a fairly extensive package of statistical analysis tools have also been made available in the HSRI Statistical Research System (SRS) (13). The more commonly used analysis programs and data files are made accessible through the Automated Data Access and Analysis System (ADAAS) (7) a keyword processing program that does not require the analyst to learn how data files are stored or how programs are loaded for execution.

While computerized storage and analysis is the only practical method of handling large data bases, it does introduce several difficulties for the user, who is usually not experienced in computer operations. The minute attention to detail required to operate computers tends to repel many potential users. Computers are designed for detailed tasks, however, and there is no reason that they should not be given operational tasks that are difficult for the novice. The

goal of the keyword Automated Data Access and Analysis System (ADAAS) is therefore clear: use of the computer itself to perform most of the detailed operations necessary to carry out an analysis task using the HSRI accident files. In implementing this goal, however, it is difficult to allow for all the possible manipulations that can be performed with MTS and SRS. Consequently, ADAAS is designed to handle the routine operations normally encountered; the user is still encouraged to use the full capabilities of SRS to carry out more sophisticated analysis operations.

The six basic ADAAS programs (Table 9) provide for (1) data set listing cases of interest (case retrieval), (2) bar-graphs, (3) univariate or one-way frequency and percentage distributions, (4) analysis of variance, (5) bivariate or two-way tables that compare any two variables and tables, and (6) subsetting existing files by variables and cases. The programs were modified to provide for the translation of numeric codes into alphabetic equivalents. This automatic interpretation of code values has considerably enhanced the readability of computer listings of MDAI and TUC cases. Preformatted one-page case-summary writers for the CPIR and TUC files were implemented in 1975.

The HSRI accident data system is itself comprised of four major systems:

1. MTS - The Michigan Terminal System

MTS is the controlling operating system for all tasks done at the University of Michigan Computing Center.

2. ADAAS - The Automated Data Access and Analysis System

ADAAS is a sublevel operating system (within MTS) to supervise the tasks required for accessing the HSRI accident data files and operating HSRI analysis programs.

3. SRS - The Statistical Research System

SRS is a package of analysis programs called by ADAAS to provide for analysis of the accident data.

4. HSRI Accident Files

An extensive set of accident data files maintained by HSRI. Data from country-wide sources and from a variety of investigative levels are incorporated.

More detailed information on the data system can be found in the users manual (7). The remainder of this section will discuss the application of these accident data and analysis tools, particularly with respect to the MDAI data file.

TABLE 9
Data Manipulation Functions Available in the ADAAS System

FUNCTION	DESCRIPTION	EXAMPLE
List	List the values of any selected variables for any chosen subset of the data file	List case number, age, and sex of driver, and severity of injury for all cases involving Fords damaged in the front and with a reported impact speed greater than 20 miles per hour
Bargraph	Print a pictorial display (bargraph) for any variable and for any subset of the data	Two bargraphs showing the number of head-on and the number of rear-end accidents by hour of the day
Univariate	Tabulate the distribution of the number of cases at each level of some variable for any chosen subset, and also present the mean, standard deviation, and kurtosis	Print the number of drivers in each age group for drivers involved in accidents during hours of darkness, and also print the average age and its standard deviation
Analysis of Variance (ANOVA)	Calculate the average value of some dependent variable for each level of another variable and display this mean, the standard deviation, and several statistics showing significance of the association.	Display the average age of female drivers for each day for the week; then display similar tables for cases in which the driver was drinking or not drinking
Bivariate	Tabulate a two-way table for any two variables and for any subset; present associated statistics when desired.	Display the number of accidents by severity and by day of the week; include also the row and column percentages with missing data excluded.
Subset	Produce a new file containing a subset of the original cases or variables	Produce a file containing only "Run off the road accidents."

4.2 UTILIZATION OF ACCIDENT DATA AND ANALYTIC TOOLS

The HSRI accident data files and statistical analysis tools described above will not be discussed from the application point of view, i.e., how one can utilize the existing system effectively. Because of the problems in drawing statistical inferences from existing accident data, a constant vigilance and questioning toward computer printouts must be maintained. One learns from analysis by closely examining the results at each step. This approach permits an analyst to exploit the data bank while taking account of the limitations of the information (14).

4.2.1 The Utilization of Accident Data

Given that one has a representative sample of traffic collisions, it is a fairly straightforward matter to employ statistical analyses to determine relationships in the sample that apply to the entire population of accidents. Unfortunately, few detailed random samples of vehicle crashes exist. Two kinds of accident data do exist. Essentially, the analyst is faced with either a large number of representative reports with little detail, or a small set of detailed reports from a poorly defined sample.

While police accident reports are collected in large quantities, they lack the detail or resolution necessary to aid a safety engineer's evaluation of specific safety features. Compilations of police reports at best only represent the geographical area in which they were collected, because of the significant variation in the level of reporting (e.g., towaways vs. \$200 damage) and in the uncertain interpretation of reported variables (e.g., variations in the use of A, B, and C injury categories*). Thus, even if every police jurisdiction were to agree to use a "national" accident report, the compiled results would still fail to be

*The percentage of "A" injuries (relatively serious) in police reports varies from 65 percent in Virginia, to 28 percent in North Carolina, and 12 percent in Oklahoma (14).

representative or contain sufficient detail to resolve many of the outstanding accident and injury causation questions.

The other source of accident data is a limited collection of unrepresentative but very detailed reports prepared by several in-depth accident investigation teams. The clinical (sometimes called Level-III) investigations are documented with full written descriptions, 35mm slides, Collision Performance and Injury Report (CPIR) Revision 3 (10) data forms and certain other supplementary data forms. These reports provide a level of detail not available elsewhere.

It is conceivable that a valid national accident sample could be established by adjusting the number, location, and sampling procedures of the professional investigation teams in order to provide representativeness as well as the already existing precision of measurement required for drawing national inferences. Because the existing in-depth data base is not a designed sample, it is not representative of the nation. As such it is not possible to validly determine how frequently any particular collision event occurs. While roll-overs, restraint system usage, and head fractures are accurately reported, the aggregation of all in-depth reports will not reveal the national frequency of any of these events. The same holds for pre-crash accident causation factors.

There has been a fair amount of criticism of and even hesitance in using the Multidisciplinary Accident Investigation (MDAI) files because they do not contain a cross-section of typical accidents. While there are difficult if not unsolvable problems in deriving national statistical inferences from the existing MDAI files, the MDAI files are a resource of accident data reported accurately to a level of detail not available elsewhere. It is possible to cautiously perform analyses of the existing in-depth accident data file to determine, for example, the interaction of such crash-phase variables as vehicle damage and injury causation.

In an ideal world each user request could be satisfied by a data collection protocol and sampling plan specific to

the stated problem. Similarly, the ideal librarian should compile a technically annotated bibliography for each user request. While both techniques can produce good results, they are not always the most appropriate or timely approaches. The approach taken in analysis is to consider the MDAI files as an existing library of accident cases and data elements collected with the general subject interests of NHTSA in mind. The MDAI data can be considered as having been collected in a manner similar to that of the librarian who acquires books of interest and indexes them before a user requests a book on that specific subject.

4.2.2 The Application of Analytic Tools

Three basic analytic techniques can be used: clinical case retrieval, descriptive statistics, and inferential statistics. With the first technique, the MDAI computer file is used like a highly detailed library card catalog of over eight thousand reports. The computer can be used to identify specific MDAI cases of anecdotal interest, which are subsequently retrieved in their original hard copy form for further clinical analysis. In fact, the most frequently performed MDAI file operation is case retrieval.

To conduct a clinical study of rib fracture, for example, the original case documentation may be pulled and reviewed. While the data bank records only "rib fracture," the original report documents which rib(s) fractured. One could, for example, then study whether there is a differential effect (i.e., which ribs fracture) for steering wheel vs. side door contact.

The second technique is descriptive statistics. Basically descriptive statistics are the computation of the frequency and/or percentage distributions of selected data variables (data elements). The most common form is the two-way (bivariate) table or bivariate that compares two variables. For example, a table of vehicle manufacturer vs. vehicle model year would display the number of vehicles by model year for each vehicle manufacturer in the data file.

The analysis involves selecting the variables of interest (e.g., manufacture, model year) and the subset of accident cases that best represents what is desired (e.g., American-made passenger cars). Using subsets of the in-depth file, it is also possible to make guarded inferences about the frequency of events. Descriptive statistics simply describe the population of specific sets of data being analyzed.

The third methodology involves inferential statistics. With inferential statistics one attempts to determine the direction, magnitude, and statistical significance of the relationship between the dependent variable and the independent variable(s). Other studies may entail the use of the regression and analysis-of-variance techniques.

For inferential purposes, the file of in-depth investigations can be considered as a collection of results from engineering experiments conducted to learn the functional relationships between the variables. The case-selection interest is in having a sufficient number of cases at each level of the independent variable. The approach, then, is to explore the data in terms of relationships between or among variables, and the degree to which changes in one variable affect levels of other variables. It is possible to review the relationship of, for example, restraint system usage and head fractures for cars of different sizes in accidents of varying severity.

SECTION 5
CONCLUSIONS AND RECOMMENDATIONS

As noted earlier, the primary emphasis of the 1974/1975 MDAI Data File contract was the timely elimination of the extensive backlog of MDAI case processing. This was accomplished, in part, by adhering to the already established case processing procedures, i.e., by not upgrading any of the file-construction and maintenance activities or allied documentation activities.

The backlog has been removed and generally new cases are now edited, keypunched, and returned to NHTSA within 30 days of receipt by HSRI. MDAI cases should (and will) continue to be processed on a timely basis. Moreover, a number of delayed data file and documentation enhancements should now be initiated, as outlined below.

A. FILE CONSTRUCTION AND MAINTENANCE

1. CPIR file (file checks, add vehicle names, new injury file, dual AIS coding of new cases, AIS recode of prior fatals, create an OIC to CPIR injury matrix conversion)
2. TUC file (inventory all team cases, all ACRS cases, and all DOT-HS publication numbers)
3. DAS + CPIR file (implement a merged Damage Analysis Supplement file, code equivalent barrier speed [EBS])
4. OS + CPIR file (implement a merged Occupant Supplement file with OIC variables, and OIC checker)
5. ACRS + CPIR file (design and implement an ACRS supplement file with matching cases)
6. FFF file (process additional cases)
7. VCMR + CPIR file (execute a final update)

B. DOCUMENTATION AND DATA RECORDING

1. Data Code Labels (for DAS, OS/OIC, and FFF files)
2. Enhance OIC Documentation (body region grid, trauma thesaurus, examples)
3. Editing Manual and Reference Information (update)
4. Condensed Coding Forms (remove redundancy, improve modularity)
5. Accident Causation Coding (explore other approaches)

Each of these points is discussed in more detail in the remainder of this section.

A. FILE CONSTRUCTION AND MAINTENANCE

A.1 CPIR files

There are three Collision Performance and Injury Report (CPIR) files organized by vehicle, occupant, and injury (see Section 3.1). The vehicle and occupant files have been updated quarterly and the injury file was last updated in September, 1974.

Recommendations:

a. To preclude the creation of any new backlogs, the goal of editing, keypunching, checking, and returning MDAI cases within 30 days of receipt should be retained. Any addition of new variables or forms revision should be executed so as not to delay current case processing. Quality control should continue to have a high priority. Computer edit checks should be performed at least monthly, and data base file builds should be conducted quarterly (current schedule), including file corrections as they are reported.

b. A new CPIR injury file should be designed and implemented. It should have a smaller, more workable set of variables (the current CPIR injury file is too big to fit on one tape and has become relatively expensive to process). It should be updated quarterly along with the vehicle and occupant files.

c. The injury coding (new AIS-6) of all remaining fatal CPIR occupants (approximately 1,000) should be reworked. The reworked cases would then be merged with other CPIR occupants to create a second set of CPIR files with the new AIS-6 definitions. The existing CPIR files would remain unaltered.

d. A procedure for dual AIS coding of fatal occupants for at least 1975 should be developed and implemented. To provide sufficient overlap in the application of the old and new AIS-6 coding, the new fatal occupants should be processed twice (in parallel), using both definitions. This will save going back and reworking them later, provide time for general acceptance and application of the new AIS-6 by field teams, and provide time to complete the rework of all previously processed fatal occupants.

e. A computer routine for converting OIC coding into the CPIR Occupant Injury Detail matrix should be developed. While the OIC system is a significant improvement over the injury detail table (or matrix) used by the original CPIR, the OIC has its origins in the CPIR. Consequently, converting a set of OIC's for one occupant back to the original CPIR format is a straightforward and easily automated algorithm. Once in use, this routine would permit field teams to code injuries using only the OIC and would avoid redundantly coding them in the original CPIR format (current practice). The computer would then convert the OIC's into the original CPIR format. This approach provides a chain of continuity with the first six years of CPIR data while permitting progress to the improved OIC system.

f. The full passenger car name should be computer coded into the CPIR file. A coding scheme for deriving the full passenger car name (e.g., Dodge Charger) rather than (as is currently done) just the make and model (e.g., Dodge, Intermediate) was developed under another HSRI project. The scheme is based upon the existing Vehicle Make/Model code and the V.I.N. Consequently, it may be possible to derive the full vehicle name code for many of the CPIR cars.

g. Data quality checks on previously processed CPIR cases should be performed. Naturally, our knowledge and skill for CPIR processing has continued to expand with experience. The earlier cases processed several years ago were not edited with as much insight as have been more current cases.

The important variables in the earlier cases should be computer reviewed. For example, the early CDC/VDI's should be subjected to the same computer checks that are routinely applied to the new cases. Since the checks made on the file in June to August, 1974, many cases have been added to the file. Although these are of higher quality than the earlier cases, it would be beneficial to repeat the checks of those important injury, crash, and vehicle variables.

A.2 TUC File

The TUC (Traffic Unit Compendium) is a brief set of 100 variables that summarize all in-depth traffic unit investigations including large trucks, buses, motorcycles, and pedestrians. All traffic units in MDAI cases are coded and made available in ADAAS.

Recommendations:

a. The TUC file should continue to be updated with new case information and thus serve as a current inventory of MDAI cases.

b. TUC's for previous MDAI cases should be actively sought and processed. This is in addition to the routine TUC processing of new cases covered by A4. The goal would be to actively search for and find all previously reported MDAI investigations by reviewing full-text case files, by reviewing team final reports, and by team-by-team contacts (via the CTM) where needed). The resultant TUC file would then provide a complete representation of the in-depth investigations to date, including all traffic unit types (e.g., motorcycles, large trucks, buses, pedestrians). Special emphasis should be placed on TUC processing of all air-bag cases, including

non-deployments and cases not covered by NHTSA-sponsored teams.

c. The remaining DOT-HS publication numbers for MDAI cases should be filled in and an annual cross-index produced. Most of the MDAI cases have DOT-HS numbers recorded in the CPIR or TUC files. The effort would entail filling in any missing numbers and producing cross-indexes of case number to DOT-HS number and vice versa. Also the index of DOT-HS numbers in the "MDAI Summary Volumes" should be updated. With these indexes anyone wishing to find the summary of an unpublished case could look up its DOT-HS number and then the appropriate "MDAI Summary Volume."

A.3 DAS + CPIR File

Approximately 3,000 Damage Analysis Supplements (DAS) have now been edited and keypunched. An early prototype DAS data file was built in 1973. Based on that experience, a more functional DAS file design was defined in detail but never implemented. The DAS data will prove very useful, as it directly relates each vehicle CDC/VDI with the other vehicle CDC/VDI and all the corresponding crush, speed, and crash configuration data. These relationships are not provided for in the existing CPIR file. For example, the CPIR primary VDI is not related to the recorded CPIR speeds, configurations, or other vehicle VDI.

Recommendations:

a. Data recorded on the DAS (Damage Analysis Supplement) need to be built into a computer file and merged with the corresponding CPIR case data. A DAS file build program should be implemented, a DAS codebook be prepared, and the existing DAS data be built into a file with appropriate CPIR variables merged for the matching cases. The file design is completely detailed, so implementation will be straightforward.

b. An equivalent barrier speed on DAS supplements should be coded. A technique for coding equivalent barrier

speed based upon vehicle crush was developed by K. Campbell of our staff while he was at General Motors (SAE 740565). The technique is routinely applied by GM CPIR coders. We suggest (1) coding the equivalent barrier speeds (EBS) for all new MDAI frontal crashes, (2) retrieving and coding EBS for all frontal fatal crashes already processed, and (3) coding EBS for new cases with other configurations when the technique is developed for them.

A.4 OS + CPIR File

The OS form has been used to record the OIC (Occupant Injury Classification) data for approximately 7,000 CPIR occupants to date. As with the DAS file above, an early 1973 draft file was prepared and a detailed file was designed but not implemented.

Recommendations:

a. Data recorded on the OS (Occupant Supplement) should be built into an OS file and appropriate CPIR variables merged from matching CPIR cases. Again the file build program implementation and OS file building/merging process will be fairly straightforward. There is a need to build a file of OIC data so that the review and analysis of OIC data can proceed.

b. Injury severity scores (ISS) for CPIR cases with OIC coding should be developed. Great interest in an ISS was generated when S. Baker first developed the approach a year ago. It seems entirely appropriate that severity score techniques be developed for the MDAI data--particularly with the advent of the OIC coding that will permit a replication of S. Baker's technique and variations. Execution of this task is dependent on significant progress or completion of the new AIS-6 coding of fatal occupants.

A.5 ACRS File

No ACRS (Air Cushion Restraint System) supplement data file exists, but its creation was implied in Task 2 of Contract DOT-HS-5-01134, "Data Preparation of MDAI Reports."

Over 30 in-depth ACRS investigations have been conducted to date and most of these have been reported on the ACRS supplement to the CPIR. The total number of ACRS vehicle involvements (including non-deployments) is considerably larger.

Recommendations:

An ACRS data file with merged CPIR variables that also includes matching CPIR non-ACRS cases should be created. Several specific criteria for "matching" (e.g., identical CDC/VDI and vehicle size) will be developed in consultation with NHTSA. Each case will have a code that indicates which match criterion or criteria each "match" case meets/satisfies.

A.6 FFF File

The Fatal Factors File (FFF) initiated under this contract contains 333 accidents. Access to the file has been restricted to NHTSA users until more experience is gained with the file contents.

Recommendations:

The coding of Fatal Factors Forms (FFF) should be continued, including the coding of fatal accidents investigated by NHTSA- or Canadian-sponsored teams. An inventory of all crash (and crash-related) fatal accidents (approximately 1,000) should be completed. Pre-crash fatals (e.g., pre-crash heart attack) should not be included.

A.7 VCMR + CPIR File

The VCMR (Vehicle Condition and Maintenance Report) forms are not coded by HSRI. They are keypunched and built only if supplied by the field teams.

Recommendation:

New VCMR forms should continue to be keypunched as received. A VCMR file update (with CPIR merge of matching case variables) should be performed in December, 1975. (A previous VCMR file build and codebook were prepared in December, 1974.) The VCMR file requires a minimal amount of

effort and should be updated at least once in 1975 to include VCMR forms as they appear in new cases.

B. DOCUMENTATION AND DATA RECORDING

B.1 Data Code Labels

The ADAAS analysis programs automatically label the analysis results (e.g., lists, tables) with code value definitions rather than code numbers. For example, sex codes print as "Male," "Female," or "Unknown" rather than "4, 5, or 0." A set of code value labels has already been constructed and is in use for the CPIR and TUC files.

Recommendation:

Label files for the DAS, OS/OIC, ACRS, and FFF data files should be built.

B.2 OIC Documentation

The OIC (Occupant Injury Classification) concept and technique is superior to present CPIR injury coding. The single greatest weakness is the lack of sufficiently clear and comprehensive documentation to make the OIC coding protocol self-evident to the occasional user, i.e., the field investigator. Better documentation would increase the ease and consistency with which the OIC is applied.

Recommendation:

The OIC application documentation should be significantly enhanced. Several suggestions have been made by the field teams for clearer text, better diagrams/tables (e.g., detailed body region grid with aspect codes included) and more examples. Besides implementing these suggestions, we also recommend constructing a "trauma thesaurus" of specific injuries and their corresponding OIC codes. Basically, it would resemble the AIS Injury Scale Dictionary in Appendix D of the "1974 AMA-SAE-AAAM Revision of the Abbreviated Injury Scale (AIS)" (1) with the OIC codes added for each injury. Provision would be made for organizing the trauma thesaurus

printout in several different arrangements (e.g., body region, organ, lesion). This tool would permit a coder to "look up" most OIC's.

B.3 Editing Manual and Reference Information

The Editing Manual and Reference Information have been published annually with a mid-year update. This includes the CPIR code editing instructions, vehicle reference information and documentation of the OIC system.

Recommendation:

The Editing Manual and Reference Information (3,4) should continue to be updated with mid-year update sheets and a complete republication annually. Existing tables should be cleaned up and new information should be sought, particularly for light trucks and imported vehicles. The NHTSA and field teams should also have input as to contents and arrangement.

B.4 Condensed Coding Forms

The 1969 Revision 3 CPIR form has had many patches and supplements over the last seven years. Many criticisms, codes, comments, critiques, contents, and configurations have been suggested over the same years--too many to be reviewed here. Moreover, car designs and the interests of accident investigators have changed considerably over the past seven years.

Recommendation:

Condense the current in-depth reporting forms into a more modular and less redundant draft coding form. Begin by developing a set of criteria for NHTSA approval (e.g., compatibility with existing data, ease of field application) and then develop a "draft" form for NHTSA-AID consideration. It is anticipated that there would be a number of drafts, e.g., the pre-crash prototype form that resulted from Task 2 (New variables).

B.5 Accident Causation Coding

While we were not satisfied with the results of our 1974 trial coding of 200 cases, the need for some practical scheme still exists. J. Treat has indicated that IU-IRPS has had some more success in this area.

Recommendation:

Continue work on accident causation coding. Review the more recent IU-IRPS work and explore the possibility of other techniques (e.g., natural language text searching) for processing and retrieving cases.

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APPENDIX A
CONTRACT REPORTS AND DOCUMENTATION

The following itemizes the reports and other documentation prepared and submitted as part of the 1974 MDAI Data File contract.

The appendix is organized into five sections as follows:

- A. Contract Reports
- B. New Data Elements and Accident Causation
- C. Files Built and Maintained
- D. Documentation of Data File Access
- E. Data File Analysis Programs

A. CONTRACT REPORTS

1. Multidisciplinary Accident Investigation Data File 1974 Final Report, On Contract No. DOT-HS-4-00898. March, 1975.
2. Twelve Monthly Progress Reports
3. Multidisciplinary Accident Investigation Data File Editing Manual and Reference Information
 - a. Update sheets for 1973 edition provided in July 1974
 - b. "Volume I - 1975 Editing Manual," March 1975
 - c. "Volume II - 1975 Reference Information," March 1975

B. NEW DATA ELEMENTS AND ACCIDENT CAUSATION

1. Trial coding of 1972 Accident and Traffic Unit Supplements including Accident Causation case documentation Documented by April 30 memo to Contract Technical Manager.
2. Prototype Pre-crash Supplements resulting from trial coding submitted April 30, 1975.

C. FILES BUILT AND MAINTAINED

Documentation for each of these files was submitted separately in the form of a computer-produced codebook that documents the frequency and definition of each code value.

1. Collision Performance and Injury Report, Revision 3. Contains 7,799 case vehicles as of March, 1975. CPIR codebooks were provided for the June, September, December, and March file updates.
2. NHTSA Vehicle Condition and Maintenance Report (VCMR). Contains 88 data elements that detail the condition of the case vehicle prior to impact. An additional 220 vehicle identification and all other pre-crash data elements from the primary MDAI file are merged with the VCMR data. The merged file contains 1,344 case vehicles and was updated (annually) in December, 1974.
3. The Traffic Unit Compendium (TUC) provides the essential information on all the traffic units investigated in-depth by the professional teams in the United States and Canada. The file includes large trucks, buses, pedestrians, and motorcycles in addition to passenger cars. The one hundred variables describe for each traffic unit: (1) the accident, (2) the traffic unit, (3) the driver and occupants, and (4) the processing status of the CPIR case. Codebooks for the October and March updates were provided.

4. The Fatal Factors File contains primarily pre-crash accident information for 333 MDAI cases. Preliminary code-books were submitted on December 27, 1974, and April 14, 1975.

D. DOCUMENTATION OF DATA FILE ACCESS

Documentation of access to the following files was provided via six SPAD and ADAAS Newsletters on the dates indicated.

1. Washtenaw County, Michigan
 - a. Four Years (1970-1973) - 6/17/74
2. Oakland County, Michigan
 - a. 1973 accidents - 9/10/74
3. Denver County, Colorado
 - a. 1973 accidents - 9/10/74
4. Texas
 - a. 1973 accidents, vehicle - 9/10/74
(5% sample, fatalities, trucks, Bexar County, Vehicle defects)
5. New York (Calspan)
 - a. Level II (1972) - 4/22/74
 - b. Level II (1973) - 4/22/74
 - c. Level II (1/4-1974) - 11/26/74
6. Dade County, Florida
 - a. 1973 accidents - 11/26/74
7. Washington State
 - a. King County (Seattle) 1973 - 10/28/74
 - b. Fatalities (1971-1973) - 10/28/74
8. BCMS
 - a. 1971-1972 accidents - 9/10/74

E. DATA FILE ANALYSIS PROGRAMS

1. Keyword access to all files and five basic programs was continued throughout the contract period. The Automated Data Access and Analysis System (ADAAS) was documented previously in the MDAI Report Automation and Utilization, Data Users Operating Manual, December 1973 (7).
2. A program for automatically producing one-page case summaries from the CPIR and TUC files was provided in January, 1975.

APPENDIX B
AVAILABLE ACCIDENT DATA FILES

The following is the current (January 31, 1975) list of accident files available to NHTSA via the time-shared keyword data access system (ADAAS) as part of the MDAI Data File contract. A list of current codebooks is also included.

HIGHWAY SAFETY RESEARCH INSTITUTE
LIST OF CURRENT FILES
January 31, 1975

FILE NAME -----	FILE DATA BASE TYPE KEYWORD -----	NUMBER OF CASES -----	NUMBER OF VARIABLES -----
Bureau Motor Carrier Safety			
1966 (1/2 Year)	A BMCS-66	24,405	42
1967	A BMCS-67	42,604	42
1968	A BMCS-68	46,320	42
1969	A BMCS-69	50,609	42
1966-1969	A BMCS	163,938	42
1971	A BMCS-71	58,549	42
1972	A BMCS-72	65,314	42
CPIR Revision 2			
Vehicle	V CPIR2VEH	716	320
Occupant	O CPIR2OCC	1,162	507
CPIR Revision 3			
Vehicle	V CPIR3VEH	7,291	576
Occupant	O CPIR3OCC	12,206	636
Occupant Subset	O CPIR3OCS	11,312	98
Injury	I CPIR3INJ	35,132	647
Injury Subset	I CPIR3INS	35,132	335
Traffic Unit Compendium	V TUC	8,896	100
Veh. Cond. & Maint. Report	V VCMP	1,344	228
Dade Co., Florida			
1969 (1/2 Year)	A DADE-69	31,056	83
1970	A DADE-70	61,767	83
1971	A DADE-71	64,046	84
1972	A DADE-72	64,190	84
1973	A DADE-73	70,503	84
Denver Co., Colorado			
1969	A DENV-69	25,581	234
1970	A DENV-70	29,432	217
1971	A DENV-71	29,585	217
1972	A DENV-72	33,166	217
1973	A DENV-73	32,436	217
Exposure			
National Sample	E NATEXP	8,007	152
Washtenaw Co., Michigan	E WASHEXP	448	189
Indiana Turnpike	A INDTRPK	5,744	145
Michigan			
Fatal			
1964 Accident	A MF64ACC	1,808	24
1964 Vehicle	V MF64VEH	2,715	43
1965 Accident	A MF65ACC	1,823	24
1965 Vehicle	V MF65VEH	2,749	43
1966 Accident	A MF66ACC	1,940	24
1966 Vehicle	V MF66VEH	2,946	43
1967 Accident	A MF67ACC	1,754	24
1967 Vehicle	V MF67VEH	2,606	43

FILE NAME	FILE TYPE	DATA BASE KEYWORD	NUMBER OF CASES	NUMBER OF VARIABLES
Michigan				
Fatal				
1968 Accident	A	MF68ACC	1,987	24
1968 Vehicle	V	MF68VEH	3,057	43
1969 Accident	A	MF69ACC	2,154	24
1969 Vehicle	V	MF69VEH	3,265	43
1970 Accident	A	MF70ACC	1,863	24
1970 Vehicle	V	MF70VEH	2,815	43
1964-1970 Accident	A	MFACC1	13,329	24
1964-1970 Vehicle	V	MFVEH1	20,153	43
1971 Accident	A	MF71ACC	1,889	46
1971 Vehicle	V	MF71VEH	3,287	120
1972 Accident	A	MF72ACC	1,997	46
1972 Vehicle	V	MF72VEH	3,453	121
1973 Accident	A	MF73ACC	1,949	46
1973 Vehicle	V	MF73VEH	3,386	121
1971-1973 Accident	A	MFACC	5,835	46
1971-1973 Vehicle	V	MFVEH	10,108	121
Oakland Co.				
1968 Accident	A	OAK-68	25,387	120
1969 Accident	A	OAK-69	29,265	213
1970 Accident	A	OAK-70	29,650	190
1971 Accident	A	OAK-71	29,362	233
1972 Accident	A	OAK-72	34,262	189
1972 Vehicle	V	OAK72VEH	60,900	125
1973 Accident	A	OAK-73	34,933	189
1973 Vehicle	V	OAK73VEH	62,276	125
Washtenaw Co.				
1970-1973 Accidents	A	WASH	32,272	185
1973 Accidents	A	WASH-73	8,973	185
Driver Sample	D	WASHDRIV	17,989	48
Mini-Car	O	MINICAR	372	118
New York Level I				
1970	A	CAL1-70	39,992	159
New York Level II				
Accident				
1970 (1/4) - 1971	A	NY71ACC	9,081	32
1972	A	NY72ACC	8,143	32
1973	A	NY73ACC	7,961	32
1974 (1/4 Year)	A	NY74ACC	2,335	32
Vehicle				
1970 (1/4) - 1971	V	NY71VEH	17,533	66
1972	V	NY72VEH	15,865	66
1973	V	NY73VEH	15,272	66
1974 (1/4 Year)	V	NY74VEH	4,452	66
Occupant				
1970 (1/4) - 1971	O	NY71OCC	24,914	81
1972	O	NY72OCC	22,134	81
1973	O	NY73OCC	20,876	81
1974 (1/4 Year)	O	NY74OCC	6,034	81

FILE NAME	FILE TYPE	DATA BASE KEYWORD	NUMBER OF CASES	NUMBER OF VARIABLES
Ohio Turnpike				
Accident	A	OTNEKACC	6,189	87
Vehicle	V	OTNEKVEH	8,663	49
Pennsylvania Turnpike	A	PENNTNPK	11,492	124
Texas				
Bexar Co.				
1969 Accident	A	BEX69ACC	26,673	56
1969 Vehicle	V	BEX69VEH	45,859	139
1970 Accident	A	BEX70ACC	27,458	56
1970 Vehicle	V	BEX70VEH	47,284	139
1971 Accident	A	BEX71ACC	27,254	56
1971 Vehicle	V	BEX71VEH	48,359	179
1972 Accident	A	BEX72ACC	32,329	56
1972 Vehicle	V	BEX72VEH	57,532	179
1973 Accident	A	BEX73ACC	34,391	56
1973 Vehicle	V	BEX73VEH	61,135	179
5% State Sample				
1969 Accident	A	TXS69ACC	18,837	56
1969 Vehicle	V	TXS69VEH	32,224	139
1970 Accident	A	TXS70ACC	19,392	56
1970 Vehicle	V	TXS70VEH	33,204	139
1971 Accident	A	TXS71ACC	19,098	56
1971 Vehicle	V	TXS71VEH	33,140	179
1972 Accident	A	TXS72ACC	21,000	56
1972 Vehicle	V	TXS72VEH	36,505	179
1973 Accident	A	TXS73ACC	22,531	56
1973 Vehicle	V	TXS73VEH	39,164	179
Fatal				
1969 Accident	A	TXF69ACC	2,913	56
1969 Vehicle	V	TXF69VEH	4,257	139
1970 Accident	A	TXF70ACC	2,965	56
1970 Vehicle	V	TXF70VEH	4,280	139
1971 Accident	A	TXF71ACC	2,993	56
1971 Vehicle	V	TXF71VEH	4,896	179
1972 Accident	A	TXF72ACC	3,099	56
1972 Vehicle	V	TXF72VEH	5,133	179
1973 Accident	A	TXF73ACC	3,074	56
1973 Vehicle	V	TXF73VEH	5,198	179
Truck				
1969 Accident	A	TXT69ACC	11,590	56
1969 Vehicle	V	TXT69VEH	20,641	139
1970 Accident	A	TXT70ACC	10,680	56
1970 Vehicle	V	TXT70VEH	19,088	139
1971 Accident	A	TXT71ACC	8,172	56
1971 Vehicle	V	TXT71VEH	14,467	179
1972 Accident	A	TXT72ACC	10,835	56
1972 Vehicle	V	TXT72VEH	19,530	179
1973 Accident	A	TXT73ACC	11,472	56
1973 Vehicle	V	TXT73VEH	20,724	179
Vehicle Defect				
1971 Accident	A	TXD71ACC	13,746	56
1971 Vehicle	V	TXD71VEH	20,474	179
1972 Accident	A	TXD72ACC	14,430	56
1972 Vehicle	V	TXD72VEH	21,469	179

FILE NAME	FILE TYPE	DATA BASE KEYWORD	NUMBER OF CASES	NUMBER OF VARIABLES
Texas				
Vehicle Defect				
1973 Accident	A	TXD73ACC	14,993	56
1973 Vehicle	V	TXD73VEH	22,751	179
Washington				
Fatal				
1971	A	WAF71ACC	732	236
1972	A	WAF72ACC	722	236
1973	A	WAF73ACC	655	236
1971-1973	A	WAFS1ACC	2,109	236
King Co.				
1969 (Seattle Metro Area)	A	KING-69	28,572	194
1970	A	KING-70	35,181	236
1971	A	KING-71	34,720	236
1972	A	KING-72	35,355	236
1973	A	KING-73	35,819	236

Legend of File Types

A Accident
V Vehicle
O Occupant
I Injury
D Driver Registration
F Vehicle Registration
E Exposure

HIGHWAY SAFETY RESEARCH INSTITUTE
LIST OF CURRENT CODEBOOKS
January 31, 1975

NAME -----	DATE -----
CFIR Revision 2	January 1971
CFIR Revision 3	September, 1974
Cornell Level 1	May 11, 1972
Dade County 1971	November 5, 1971
Dade County 1971	November 30, 1972
Dade County 1972	July, 1973
Dade County 1973	October, 1974
Denver County 1969	August 14, 1971
Denver County 1970	October 13, 1971
Denver County 1971	April 23, 1973
Denver County 1972	July, 1973
Denver County 1973	August, 1974
King County 1971	November 1972
King County 1972	July, 1973
King County 1973	September, 1974
New York Level III (Nov. 1970 - Dec. 1971)	July, 1973
New York Level III 1972	April, 1974
New York Level III 1973	April, 1974
Oakland County 1968	August 16, 1971
Oakland County 1969	August 16, 1971
Oakland County 1969 Supplement	November 30, 1972
Oakland County 1971	January 31, 1972
Oakland County 1971 Supplement	November 30, 1972
Oakland County 1971	*
Oakland County 1971 Supplement	October, 1973
Oakland County 1972	July, 1973
Oakland County 1973	August, 1974
Seattle 1969	August 17, 1971
Seattle 1970	November 30, 1972
Texas Accident 1969	August 12, 1971
Texas Vehicle 1969	August 11, 1971
Texas Accident 1970	December 3, 1971
Texas Vehicle 1970	December 3, 1971
Texas 1971 Accident and Vehicle	April, 1973
Texas 1972 Bexar County	July, 1973
Texas 1973 Bexar County	August, 1974
Texas 1973 5% Sample	August, 1974
Traffic Unit Compendium	October, 1974
Vehicle Condition and Maintenance Report	December, 1974
Washtenaw County	June, 1974
Washtenaw County Driver Record	March 22, 1972

*Codebook not dated; only one version has been released.

APPENDIX C
EXCERPTED CODEBOOK OF MDAI CASES

This excerpted codebook contains a computer dictionary of 40 selected variables with one-way frequency distributions. The variables were selected to provide a general description of the subset of 3,290 MDAI cases. The original CPIR variable numbers have been retained. The Calspan 1973 and 1974 (Level III) hybrid (A+B) cases have been included in this subset.

CPIR FILE
MAR 29, 1975

Variable Number -----	Variable Name -----	Field Width -----	Char Type -----	Number Of Responses -----	Page Number -----
1	ORIGINAL PCFM	1	Num.	1	1
5	TEAM NUMBER	2	Num.	1	1
6	TEAM SPONSCR	1	Num.	1	2
39	#MECH. MALFUNCTION CHECK	1	Num.	1	2
54	PRIMARY MALFUNCTION	2	Num.	1	2
56	VEHICLE TO OBJECT	1	Num.	1	3
57	ROLLOVER	1	Num.	1	3
58	RAN OFF THE ROADWAY	1	Num.	1	3
59	VEH TO VEH CONFIGURATION	1	Num.	1	3
63	TOTAL VEHICLES INVOLVED	1	Num.	1	4
68	OBJECTS CONTACTED	2	Num.	4	4
69	CASE VEH DRIVER IMPAIR.	2	Num.	2	5
73	UPDATE # (PROP DAM)	1	Num.	1	5
87	C. VEHICLE BODY MODEL	2	Num.	1	5
89	OTHER VEHICLE MODEL YEAR	2	Num.	1	7
116	CASE VEH MAKE (ABC)	3	Num.	1	8
117	CASE VEH MODEL (DE)	2	Num.	1	9
119	CASE VEHICLE MODEL YEAR	2	Num.	1	10
124	CASE VEH BODY STYLE	1	Num.	1	10
128	CASE VEH # OF OCCUPANTS	2	Num.	1	10
137	C. VEH. CDC (P) CLOCK	2	Num.	1	11
142	C. VEH. CDC (P)-EXTENT #	1	Num.	1	11
145	CV CDC (P)-HORIZ.DAM.#	2	Num.	1	12
146	CV CDC (P)-VERT. DAM. #	1	Num.	1	13
147	CV CDC (P)-DAM. DISTR. #	1	Num.	1	13

CPIR FILE
MAR 29, 1975

Variable Number -----	Variable Name -----	Field Width -----	Char Type -----	Number Of Responses -----	Page Number -----
200	EXTENT OF FIRE	1	Num.	1	13
518	PERMANENT PHYSIO.COND.	1	Num.	1	13
519	TRANSIENT PHYSIO CCND 1	2	Num.	1	14
520	TRANSIENT PHYSIO CCND 2	2	Num.	1	14
521	NON-IMPACT MEDICAL COND	1	Num.	1	15
522	PHARMACOLOGICAL AGENTS	1	Num.	1	15
576	OVERALL C VEH INJ SEV	2	Num.	1	15
580	SEAT LOCATION, POSITION	2	Num.	1	17
592	LAP BELT WORN	1	Num.	1	17
596	UPPER TORSC WORN	1	Num.	1	17
600	OVERALL OCC INJ SEVERITY	2	Num.	1	18
602	CHILD RESTRAINT CODE	2	Num.	1	18
603	10 AREAS CONTACT.BY OCC	2	Num.	10	19
604	DEGREE OF EJECTION	1	Num.	1	20
606	TREATMENT/MORTALITY	1	Num.	1	20

CPIR FILE
MAR 29, 1975

NOVEMBER 1974

--*-*-*
All Variables Have 1 Response And 0 Implied Dec. Places
Unless Otherwise Stated.
--*-*-*

Variable 1 ORIGINAL FORM M.D.Codes: 9, None
----- Field Width: 1, Numeric

FREQ. COLLISION PERFORMANCE AND INJURY REPORT (CPIR) FORM

2	0. CPIR, Revision 0 or No Form
1	1. CPIR, Revision 1
148	2. CPIR, Revision 2
3137	3. CPIR, Revision 3
2	9. Unknown Form

Variable 5 TEAM NUMBER M.D.Codes: 99, None
----- Field Width: 2, Numeric

FREQ. TEAM NUMBER

206	01. (AA) Ann Arbor, HSRI-III
78	02. (BA) Baylor College of Medicine
142	03. (BU) Boston University
0	04. (CA) Cornell Aeronautical Lab-IIIA
820	05. (CB) Cornell Aeronautical Lab-IIIB
0	06. (DT) Ministry of Transport, Ottawa, Canada
102	07. (GI) Georgia Institute of Technology
0	08. (HS) Highway Safety Research Institute
29	09. (IU) Indiana University
0	10. (MG) McGill University, Montreal
197	11. (MI) University of Miami
86	12. (ML) Maryland Medical/Legal Foundation
0	13. (MU) University of Montreal, Ecole Polytechnique
0	14. (NB) University of New Brunswick
135	15. (NM) University of New Mexico
0	38. (NS) Nova Scotia, see Frequency Below
56	16. (OK) Oakland Country, HSRI-III
108	17. (OS) Ohio State University
104	18. (RI) Research Triangle Institute
177	19. (RU) University of Rochester
117	20. (SC) University of Southern California
7	21. (SI) Stanford Research Institute (2)
46	22. (SF) Stanford Research Institute (1)
321	23. (SU) Stanford University
69	24. (SW) Southwest Research Institute
64	25. (IR) Trauma Research Group, UCLA
	26. (TU) Tulane University

CPIR FILE
MAR 29, 1975

FREQ.	TEAM NUMBER
0	27. (UC) University of California (MVMA)
0	28. (UH) University of Houston
64	29. (UK) University of Kentucky
0	30. (UM) University of Michigan (Huelke)
90	31. (UO) University of Oklahoma
0	32. (UT) University of Toronto
272	33. (UU) University of Utah
0	34. (VA) University of Alberta
0	35. (VE) University of British Columbia
0	36. (VM) University of Manitoba
0	37. (VS) University of Saskatchewan
0	38. (NS) Nova Scotia Technical College
0	99. Missing Data

Variable 6 TEAM SPONSOR M.D.Codes: 9, None

Field Width: 1, Numeric

FREQ.	TEAM SPONSOR
2470	1. NHTSA/DOT
0	2. MVMA
820	3. Joint MVMA, NHTSA
0	4. Ministry of Transport, Canada

Variable 39 #MECH. MALFUNCTION CHECK M.D.Codes: 9, None

Field Width: 1, Numeric

FREQ.	NUMBER OF MECHANICAL MALFUNCTION(S) INVOLVED
3145	0. No Malfunction
125	1. One Malfunction
14	2. Two Malfunctions
3	3. Three Malfunctions
2	4. Four Malfunctions
1	5. Five Malfunctions
0	9. Number of Malfunctions Involved Unknown

Variable 54 PRIMARY MALFUNCTION M.D.Codes: 99, None

Field Width: 2, Numeric

FREQ.	PRIMARY VEHICLE MALFUNCTION
3137	00. No Vehicle Malfunction
41	01. Brake System Malfunction
5	02. Exhaust System Malfunction
24	03. Steering System Malfunction
13	04. Suspension System Malfunction
35	05. Tire(s) Malfunction
3	06. Electrical System Malfunction
10	07. Throttle Controls Malfunction
2	08. Driver Controls Malfunction
4	09. Power Train Malfunction

FREQ. PRIMARY VEHICLE MALFUNCTION

2	10. Fuel System Malfunction
2	11. Visibility Items Malfunction
7	12. Other Malfunction
2	13. Applicable, But Unknown Malfunction
3	99. Unknown System Malfunction

Variable 56 VEHICLE TO OBJECT M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. VEHICLE TO OBJECT COLLISION CONFIGURATION

0	0. Vehicle To Object Collision Unknown
1074	1. Vehicle to Object Collision
2216	2. No Vehicle to Object Collision

Variable 57 ROLLOVER M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. ROLLOVER (90 DEG. OR MORE) CASE VEH.

0	0. Unknown if Rollover
361	1. Rollover
2929	2. No Rollover

Variable 58 RAN OFF THE ROADWAY M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. RAN OFF THE ROADWAY BEFORE FIRST IMPACT (CASE VEHICLE)

(i.e., First Impact Off of Roadway)

0	0. Ran Off The Roadway Unknown
816	1. Ran Off The Roadway
2474	2. Did Not Run Off The Roadway

Variable 59 VEH TO VEH CONFIGURATION M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. VEHICLE TO VEHICLE COLLISION CONFIGURATION

(Either Vehicle May Be Case Vehicle)

0	0. Vehicle To Vehicle Collision Unknown
0	1. Vehicle to Vehicle Collision, Configuration Unknown
804	2. No Vehicle to Vehicle Collision
463	3. Head-on (F to F) Collision
740	4. Intersection Type I (2/72) (T + L Before 2/72)
155	5. Side-swipe Collision
484	6. Rear-impact (F and B) Collision
39	7. Other:
605	8. Intersection Type T (2/72)

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Variable 63 TOTAL VEHICLES INVOLVED M.D.Codes: 0, None

Field Width: 1, Numeric

FREQ. TOTAL NUMBER OF VEHICLES INVOLVED IN ACCIDENT

0	0. Unknown Number of Vehicles Involved in Accident
800	1. One Vehicle Involved
2000	2. Two Vehicles Involved
387	3. Three Vehicles Involved
61	4. Four Vehicles Involved
25	5. Five Vehicles Involved
14	6. Six Vehicles Involved
1	7. Seven Vehicles Involved
2	8. Eight Vehicles Involved

Variable 68 OBJECTS CONTACTED M.D.Codes: 0, None

Field Width: 2, Numeric
Responses: 4

FREQ. FIRST THRU FOURTH OBJECTS IN ORDER CONTACTED

7	00. Unknown Object
7705	02. No Objects
2647	03. Other Automobile
358	04. Ground (Rollover or Airborne Only)
213	05. Guardrail
73	06. Bridge (Rail)
126	07. Sign
111	08. Ditch
106	09. Embankment (Snowbank)
36	10. Culvert
104	11. Fence
574	12. Pole or Tree
52	13. Pedestrian
15	14. Large Animal
52	15. Motorcycle
14	16. Large Truck-Type Unknown (See Codes 20-25)
35	17. Train
5	18. Pedalcycle (Bicycle+)
43	19. Building
140	20. Light Truck/Pickup Truck
3	22. Tractor Without Trailer (9/72)
23	23. Van Delivery Truck
87	24. Straight Truck
91	25. Tractor-trailer Combination
4	26. Multi-purpose vehicle (jeep)
18	28. Bus (6/74)
6	29. Trailer (6/74)
8	40. Object Disengaging From Other Veh. (9/72)
66	50. Hydrants, Short Posts, Stumps (9/72)
144	51. Mailbox (rural), Small Posts/Trees
36	52. Pier, Pillar (e.g, Bridge Support)
45	53. Retaining Wall, Abutment, Highway Fixtures
4	54. Impact Attenuator
4	55. Breakaway Fixture

FREQ. FIRST THRU FOURTH OBJECTS IN ORDER CONTACTED

205 99. Other Object

Variable 69 CASE VEH DRIVER IMPAIR. M.D.Codes: 0, None
----- Field Width: 2, Numeric
Responses: 2

FREQ. CASE VEHICLE DRIVER'S ABILITY TO DRIVE IMPAIRED BY

417 00. Unknown
3760 02. None
451 03. Drinking Involved (Broad)
248 04. Drunk
77 05. Asleep
168 06. Fatigue
204 07. Recklessness
729 08. Inattention
108 09. Lack of Training
188 10. Emotional State
40 11. Medication
24 12. Drugs (Narcotic or Otherwise)
47 13. Illness
41 14. Infirmities
24 15. Physically Handicapped
52 16. Other Impairment

Variable 73 UPDATE # (PROP DAM) M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. UPDATE NUMBER (PROPERTY DAMAGE BEFORE 4/74)

0 0. Unknown
1278 1. Property Damage
9 2. No Property Damage
200 3. Update of 4/74
958 4. Update of 8/74
514 5. Update of 12/74
331 6. Update of 3/75

Variable 87 0. VEHICLE BODY MODEL M.D.Codes: 0, None
----- Field Width: 2, Numeric

FREQ. OTHER VEHICLE BODY TYPE (DE)

846 00. Unknown

Passenger Cars

368 01. Intermediate (GM A Body)
690 02. Standard/Full Size (B Body)
93 03. Luxury (C Body) or Limousine (D Body)
1 04. Mini Specialty (Mustang 2)
57 05. Personal Luxury (E Body)

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FREQ.	OTHER VEHICLE BODY TYPE (DE)
155	06. Specialty/Pony (F Body)
19	07. Specialty Intermediate (A-Sp Body)
259	08. Compact (X Body & Y Body)
160	09. Sub-compact/Mini-Imported (VW)
14	10. Super Sport (Corvette)
	17. Pickup-Car (Ranchero)-See Frequency Below
	18. Sub-Compact/Mini-USA (H Body)-See Frequency Below
	19. Foreign Sports Cars (MG)-See Frequency Below
	20. Unknown Automobile Body-See Frequency Below
Small Trucks and Multipurpose Vehicles	
49	11. Small Van (Econoline)
113	12. Pickup Truck
1	13. Unknown Light Truck (<1-1/2 Tons)
6	14. Utility (Jeep, Bronco)
16	15. Carryall/Panel Truck
5	16. Pickup Truck With Canopy/Shell Cover
15	17. Pickup-Car (Or With Canopy/Shell Cover)
Small Passenger Cars and Unknown Automobile Body	
	04. Mini Specialty (Mustang 2)-See Frequency Above
	09. Sub-Compact/Mini-Imported (VW)-See Frequency Above
56	18. Sub-Compact/Mini-USA (H Body)
34	19. Foreign Sports Cars (MG)
60	20. Unknown Automobile Body
Trucks + Campers	
	11. Small Van (Econoline)-See Frequency Above
	12. Pickup-See Frequency Above
	13. Unknown Light Truck (<1-1/2 Tons)-See Above
	15. Carryall/Panel Truck-See Frequency Above
	16. Pickup-Camper (Canopy, Shell)-See Frequency Above
1	21. Motor Home
5	22. Pickup Truck With Slide-In Camper
0	23. Pickup-Car With Slide-In Camper
5	30. Unknown Truck Type
1	31. Chassis-Mounted Camper
11	33. Delivery Van (Walk-in)
70	34. Straight Truck
9	35. Truck-Tractor
1	36. Chassis-Cab
4	37. Unknown Heavy Truck (>1-1/2 Tons)
59	38. Tractor + Semi-Trailer (Semi)
5	39. Truck (or Semi) + Full Trailer(s)
Buses	
0	40. Unknown Bus Type
12	41. School Bus
5	42. Inter City (between)
4	43. Intra City (within)
0	44. Streetcar (on rails)
Motorcycles	
0	50. Unknown Motorcycle Type

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MAR 29, 1975

FREQ. OTHER VEHICLE MODEL YEAR

153	67. 1967
269	68. 1968
327	69. 1969
345	70. 1970
281	71. 1971
220	72. 1972
118	73. 1973
37	74. 1974
3	75. 1975
561	99. No Other Vehicle

Variable 116 CASE VEH MAKE (ABC) M.D. Codes: 0, None
----- Field Width: 3, Numeric

FREQ. CASE VEHICLE COUNTRY - CORPORATION - DIVISION (ABC)

0	000. Country - Corporation - Division Unknown
1	110. USA - General Motors Corp. - Division Unknown
132	111. USA - General Motors Corp. - Buick Division
49	112. USA - General Motors Corp. - Cadillac Division
762	113. USA - General Motors Corp. - Chevrolet Division
183	114. USA - General Motors Corp. - Oldsmobile Division
229	115. USA - General Motors Corp. - Pontiac Division
18	116. USA - General Motors Corp. - GMC Truck & Coach
759	121. USA - Ford Motor Company - Ford Division
137	122. USA - Ford Motor Company - Lincoln-Mercury Div.
40	131. USA - Chrysler Corporation - Chrysler Division
236	132. USA - Chrysler Corporation - Dodge Division
5	133. USA - Chrysler Corporation - Imperial Division
224	134. USA - Chrysler Corporation - Plymouth Division
1	135. USA - Chrysler Corporation - Desoto Division
106	141. USA - American Motors Corporation
1	151. USA - Checker Motors Corporation
9	152. USA - Kaiser Motors Corporation - Jeep Division
11	153. USA - International Harvester Company
4	154. USA - Studebaker/Avanti
3	422. England - Ford Motor Company Ltd.- Anglia,Cortina
4	451. England - British Leyland Ltd. - Austin
2	452. England - British Leyland Ltd. - Austin-Healy
11	453. England - British Leyland Ltd. - MG Division
5	455. England - British Leyland Ltd. - Jaguar, Daimler
7	456. England - British Leyland Ltd. - Triumph Div.
2	531. France - Chrysler France (Simca)
8	561. France - Regie Nationale Des Usines Renault
3	571. France - Automobiles Peugeot S.A.
35	618. Germany - Adam Opel AG (GM Buick)
9	622. Germany - Ford Werke AG - Capri Division
5	651. Germany - Daimler-Benz AG (Mercedes-Benz)
145	661. Germany - Volkswagenwerk AG - Volkswagen Division
13	662. Germany - Volkswagenwerk AG - Porsche Division
4	671. Germany - Bayerische Motoren Werke AG (BMW)
2	681. Germany - Audi NSU Auto Union AG - Audi
1	751. Italy - Alfa Romeo
13	761. Italy - Fiat S.p.A.

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FREQ. CASE VEHICLE BODY TYPE (DE)
9 22. Pickup Truck With Slide-In Camper

Variable 119 CASE VEHICLE MODEL YEAR M.D.Codes: 0, 99

Field Width: 2, Numeric

FREQ.	CASE VEHICLE MODEL YEAR
0	00. Vehicle Model Year Unknown
1	46. 1946
1	48. 1948
1	49. 1949
3	53. 1953
1	55. 1955
14	56. 1956
8	57. 1957
4	58. 1958
15	59. 1959
17	60. 1960
23	61. 1961
48	62. 1962
68	63. 1963
75	64. 1964
124	65. 1965
113	66. 1966
136	67. 1967
296	68. 1968
458	69. 1969
558	70. 1970
368	71. 1971
321	72. 1972
442	73. 1973
189	74. 1974
6	75. 1975

Variable 124 CASE VEH BODY STYLE M.D.Codes: 0, None

Field Width: 1, Numeric

FREQ.	CASE VEHICLE BODY STYLE
1	0. Body Style Unknown
976	1. 2-Door Hardtop (No Upper B Pillar)
839	2. 2-Door Sedan or Coupe (Any Upper B)
222	3. 4-Door Hardtop
537	4. 4-Door Sedan
277	5. Station Wagon or Pickup Car
129	6. Convertible - Soft or Hard Shell
85	7. Van (Not Walk-in)
205	8. Truck
19	9. Other (e.g. Bus, Jeep, Train)

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Variable 128 CASE VEH # OF OCCUPANTS M.D.Codes: 99, None

Field Width: 2, Numeric

FREQ.	CASE VEHICLE NUMBER OF OCCUPANTS
34	00. Zero Occupants
1878	01. One Occupant
818	02. Two Occupants
281	03. Three Occupants
155	04. Four Occupants
58	05. Five Occupants
48	06. Six Occupants
8	07. Seven Occupants
3	08. Eight Occupants
2	09. Nine Occupants
1	10. Ten Occupants
1	11. Eleven Occupants
1	12. Twelve Occupants
0	13. Thirteen Occupants
0	14. Fourteen Occupants
1	15. Fifteen Occupants
1	99. Unknown Number of Occupants

Variable 137 C. VEH. CDC (P) CLOCK M.D.Codes: 99, None

Field Width: 2, Numeric

FREQ.	CASE VEHICLE DIRECTION OF PRIMARY IMPACT FORCE
296	00. Non-Horizontal Impact Force
401	01. One O'Clock Impact Force
319	02. Two O'Clock Impact Force
88	03. Three O'Clock Impact Force
31	04. Four O'Clock Impact Force
34	05. Five O'Clock Impact Force
180	06. Six O'Clock Impact Force
45	07. Seven O'Clock Impact Force
41	08. Eight O'Clock Impact Force
101	09. Nine O'Clock Impact Force
272	10. Ten O'Clock Impact Force
540	11. Eleven O'Clock Impact Force
934	12. Twelve O'Clock Impact Force
8	99. Unknown or None

Variable 142 C. VEH. CDC (P)-EXTENT # M.D.Codes: 0, None

Field Width: 1, Numeric

FREQ.	CASE VEHICLE CDC PRIMARY DAMAGE EXTENT #
20	0. Unknown or None
620	1. Extent Zone 1
943	2. Extent Zone 2
843	3. Extent Zone 3
366	4. Extent Zone 4
204	5. Extent Zone 5

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FREQ.	CASE VEHICLE CDC PRIMARY DAMAGE EXTENT #
151	6. Extent Zone 6
62	7. Extent Zone 7
24	8. Extent Zone 8
57	9. Extent Zone 9

Variable 145 CV CDC (P) -HORIZ.DAM.# M.D.Codes: 0, None

Field Width: 2, Numeric

FREQ.	CASE VEHICLE CDC PRIMARY HORIZONTAL DAMAGE (NUM. RECODE)
7	00. Unknown or None
3	10.(FO) Frontal Area Damage, Specific Area Unknown
248	12.(FR) Front-Right Damage
308	14.(FL) Front-Left Damage
579	15.(FD) Front-Distributed Damage
108	16.(FC) Front-Center Damage
294	18.(FY) Front-Center + Left Damage
257	19.(FZ) Front-Center + Right Damage
0	20.(RC) Right Side Damage
115	21.(RF) Right Side-Front Damage
32	23.(RE) Right Side-Back Damage
50	25.(RD) Right Side-Distributed Damage
94	27.(RP) Right Side-Center Damage
126	28.(RY) Right Side-Front + Center Damage
69	29.(RZ) Right Side-Back + Center Damage
0	30.(BO) Back (Rear) Damage, Specific Area Unknown
27	32.(BR) Back-Right Damage
23	34.(BL) Back-Left Damage
95	35.(BD) Back-Distributed Damage
14	36.(BC) Back-Center Damage
35	38.(BY) Back-Center + Left Damage
32	39.(BZ) Back-Center + Right Damage
0	40.(LO) Left Side Damage, Specific Area Unknown
110	41.(LF) Left Side-Front Damage
41	43.(LB) Left Side-Back Damage
71	45.(LD) Left Side-Distributed Damage
99	47.(LE) Left Side-Center Damage
134	48.(LY) Left Side-Front + Center Damage
53	49.(LZ) Left Side-Back + Center Damage
1	50.(TC) Top Damage, Specific Area Unknown
5	51.(TF) Top-Front Damage
0	53.(TB) Top-Back Damage
57	55.(TD) Top-Distributed Damage
62	57.(TP) Top-Side Center Damage
54	58.(TY) Top-Front + Side Center Damage
20	59.(TZ) Top-Back + Side Center Damage
0	60.(UO) Undercarriage Damage, Specific Area Unknown
6	61.(UF) Undercarriage-Front Damage
1	63.(UB) Undercarriage-Back Damage
12	65.(UD) Undercarriage-Distributed Damage
1	67.(UF) Undercarriage-Side Center Damage
3	68.(UY) Undercarriage-Front + Side Center Damage
0	69.(UZ) Undercarriage-Back + Side Center Damage
0	70.(XC) Unclassifiable Damage, Specific Area Unknown

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FREQ. CASE VEHICLE CDC PRIMARY HORIZONTAL DAMAGE (NUM. RECODE)

2	71.(XF) Unclassifiable-Front Damage
0	72.(XF) Unclassifiable-Right Damage
0	73.(XF) Unclassifiable-Back Damage
0	74.(XL) Unclassifiable-Left Damage
40	75.(XD) Unclassifiable-Distributed Damage
0	76.(XC) Unclassifiable-Center Damage
0	77.(XP) Unclassifiable-Side Center Damage
0	78.(XY) Unclassifiable-Front + Side Center Damage
0	79.(XZ) Unclassifiable-Back + Side Center Damage

Variable 146 CV CDC (P) -VERT. DAM. # M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. CASE VEHICLE CDC PRIMARY VERT. DAMAGE (NUM. RECODE)

8	0. Unknown or None
372	1.(A) All (Below Frame to Top)
175	2.(H) Top of Frame to Top
2252	3.(E) Everything Below Glass
42	4.(L) Low (Below Top of Frame
327	5.(M) Middle (Top of Frame to Beltline or Hood)
83	6.(G) Glass and Above
31	7.(X) Undercarriage

Variable 147 CV CDC (P) -DAM. DISTR. # M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. CASE VEHICLE CDC PRIMARY DAMAGE DISTRIBUTION (NUM. RECODE)

7	0. Unknown or None
2354	1.(W) Wide Impact Area (Greater Than 16 Inches Wide)
298	2.(N) Narrow Impact Area (Less Than 16 Inches Wide)
82	3.(S) Side Swipe
247	4.(O) Roll Over
29	8.(A) Overhang
273	9.(E) Corner (Wheel Area)

Variable 200 EXTENT OF FIRE M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. EXTENT OF FIRE (TO CASE VEHICLE)

1	0. Unknown
3217	3. No Fire, Not Applicable
27	4. Minor - Easily Extinguished
45	5. Major (e.g., Entire Interior or Engine)

Variable 518 PERMANENT PHYSIO.COND. M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ. PERMANENT PHYSIOLOGICAL CONDITIONS

571	0. Unknown
46	1. Infirmities (Arthritis, Senility, Etc.)
23	2. Diabetes
23	3. Brain (Epilepsy, Stroke)
71	4. Cardio-Vascular (Heart Failure, Angina, Infection)
102	5. Vision/Hearing Restricted
22	6. Respiratory Condition
2	7. Paraplegic, Amputee
105	8. Other Permanent Physiological Condition
2325	9. None

Variable 519 TRANSIENT PHYSIO COND 1 M.D.Codes: 0, None
----- Field Width: 2, Numeric

FREQ. TRANSIENT PHYSIOLOGICAL CONDITION 1

341	00. Unknown
1984	02. None
38	03. Blackouts
56	04. Dczing
107	05. Fatigue
237	06. Drunk
407	07. Drinking Involved
52	08. Drug or Medication
22	09. Flu, Headcold, Etc.
0	10. Fractured Member
5	11. Menstrual Period
12	12. Pregnancy
1	13. Hangover
9	14. Not Wearing Corrective Lenses
19	99. Other

Variable 520 TRANSIENT PHYSIO COND 2 M.D.Codes: 0, None
----- Field Width: 2, Numeric

FREQ. TRANSIENT PHYSIOLOGICAL CONDITION 2

495	00. Unknown
2562	02. None
8	03. Blackouts
18	04. Dczing
94	05. Fatigue
5	06. Drunk
39	07. Drinking Involved
39	08. Drug or Medication
7	09. Flu, Headcold, Etc.
1	10. Fractured Member
1	11. Menstrual Period
1	12. Pregnancy

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FREQ. TRANSIENT PHYSIOLOGICAL CONDITION 2

0	13. Hangover
8	14. Not Wearing Corrective Lenses
12	99. Other

Variable 521 NON-IMPACT MEDICAL COND M.D.Codes: 9, None

Field Width: 1, Numeric

FREQ. NON-IMPACT MEDICAL CONDITION

2990	0. None
3	1. Yes - Time and Type Unknown
10	2. Pre-Crash Fatal (Clinical Death at Wheel)
101	3. Pre-Crash Non-Fatal (Prior Injury, Stroke)
2	4. Pre-Crash Unknown Type
16	5. Post-Crash Fatal (Drowning)
25	6. Post-Crash Non-Fatal
0	7. Post-Crash Unknown Type
2	8. Other
141	9. Unknown

Variable 522 PHARMACOLOGICAL AGENTS M.D.Codes: 0, None

Field Width: 1, Numeric

FREQ. PHARMACOLOGICAL AGENTS

499	0. Unknown
83	1. Yes, Unknown or Other:
2060	2. None Noted
4	3. Stimulants, Prescriptive/Narcotics (Amphetamines, Cocaine, Bennies)
2	4. Stimulants, Over-The-Counter (Caffeine, 'No Doz')
49	5. Depressants, Prescriptive/Narcotics (Barbiturates, Opiates, Tranquilizers)
569	6. Depressants, Over-The-Counter (Alcohol, Sleeping Compounds)
10	7. Antihistamines
1	8. Hallucinogens (LSD, DMT, Mescaline, Psilocybin)
13	9. Marijuana

Variable 576 OVERALL C VEH INJ SEV M.D.Codes: 98, None

Field Width: 2, Numeric

FREQ. OVERALL VEHICLE INJURY SEVERITY

411	00. None
1408	01. Minor
553	02. Non-Dangerous, Moderate
249	03. Non-Dangerous, Severe
87	04. Dangerous, Serious
68	05. Dangerous, Critical
179	06. Fatal Lesions in 1 Region
118	07. Fatal Lesions in 1 Region + Serious

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FREQ. OVERALL VEHICLE INJURY SEVERITY

127	08. Fatal Lesions in 2 Regions
55	09. Fatal Lesions in 3 or More Regions
9	10. Fatal, Details Unknown (9/72)
14	98. Unknown if Injured
12	99. Injured, Severity Unknown

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*****OCCUPANT FILE VARIABLES*****
(One Record per Occupant)

Variable 580 SEAT LOCATION, POSITION M.D.Codes: 0, None
----- Field Width: 2, Numeric

FREQ.	SEAT LOCATION, SEAT POSITION
46	00. Unknown Seat, Unknown Position
3252	44. Front Seat, Left Position
6	45. Front Seat, Left Center Position
191	46. Front Seat, Center Position
23	47. Front Seat, Right Center Position
1297	48. Front Seat, Right Position
64	50. Rear Seat, Unknown Position
273	54. Rear Seat, Left Position
20	55. Rear Seat, Left Center Position
133	56. Rear Seat, Center Position
24	57. Rear Seat, Right Center Position
334	58. Rear Seat, Right Position
9	59. Rear Seat, Lying on Seat
2	60. Third Seat, Unknown Position
3	64. Third Seat, Left Position
2	66. Third Seat, Center Position
4	68. Third Seat, Right Position
34	70. Other Location, Unknown Position
4	74. Other Location, Left Position
6	76. Other Location, Center Position
8	78. Other Location, Right Position
2	79. Other Location, Lying on Seat

Variable 592 LAP BELT WORN M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ.	BELT WORN BY OCCUPANT
113	0. Lap Belt Worn, Unknown
1022	1. Lap Belt Worn
3959	2. No Lap Belt Worn
643	3. No Lap Belt, Not Applicable

Variable 596 UPPER TORSO WORN M.D.Codes: 0, None
----- Field Width: 1, Numeric

FREQ.	UPPER TORSO FELT AND/OR AIR BAG USED
74	0. No Deployment or No Bag; Unknown if Torso Belt Worn
156	1. No Deployment or No Bag; Upper Belt Worn
2861	2. No Deployment or No Bag; Upper Belt Not Worn
2632	3. No Deployment or No Bag; No Upper Belt (Not Applicab

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Variable 603 10 APEAS CONTACT.BY OCC M.D.Codes: 99, None

Field Width: 2, Numeric
Responses: 10

FREQ. TEN APEAS CONTACTED BY OCCUPANT

600	00. Unknown Area Of Contact
61	01. Air Conditioning or Ventilation Outlet
206	02. Glove Compartment Area
123	03. Hardware Items In Front (Specific Item Unknown)
73	04. Heater or AC Duct
1251	05. Instrument Panel (Specific Area Unk.) (See 54-57)
279	06. Interior Rearview Mirror
48	07. Parking Brake Handle (Location Unknown) (See 84-85)
31	08. Radio
980	09. Steering Assembly (Specific Area Unk.) (See 65-66)
380	10. Sunvisor & Fittings, and/or Top Molding (Header)
46	11. Trans. Selector Lever (Location Unk.) (See 44,59)
1074	12. Windshield
180	13. Armrest (On Side Or Door)
387	14. A-Pillar
64	15. B-Pillar
14	16. C-Pillar
0	17. D-Pillar
7	18. Dome Light
136	19. Hardware (On Side Or Door)
1063	20. Surface of Side Interiors
195	21. Window Frame
369	22. Window Glass
22	23. Backlight (Rear Window)
6	24. Coat Hook
227	25. Roof or Convertible Top
160	26. Roof Side Rails
51	27. Console
163	28. Foot Control (Includes Parking Brake Pedal)
559	29. Front Seatback
84	30. Head Restraint
50	31. Interior Loose Object
271	32. Other Occupants
43	33. Restraint System Hardware
158	34. Restraint System Webbing
26	35. Hood Of Case Vehicle
162	36. Unknown Area/Object Exterior To Case Vehicle (See 70-80 For Specific Areas and Objects)
51	37. Outside Surface of Case Veh. (Specific Area Unk.) (See 60-64 For Specific Surface Areas)
216	38. Other
9	39. Backlight Header (12/71)
198	40. Floor (12/71)
39	44. Trans. Selector Lever On Floor Or Console (11/73)
0	48. Knee Restraint (3/75)
0	49. Armrest (On Seat) (1/75)
24	50. Rear Seat Cushion And Back (3/72)
21	51. Front Seat Cushion (3/72)
251	52. Internal Flying Glass (From Any Source) (3/72)
18	53. Parcel Tray (7/72)

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FREQ. TEN AREAS CONTACTED BY OCCUPANT

198	54. Upper Instrument Panel (X) (9/73)
67	55. Middle Instrument Panel (Y) (9/73)
488	56. Lower Instrument Panel (Z) (9/73)
54	57. Beneath Instrument Panel (9/73)
13	58. Add-On Tape Deck, Radio, Air Conditioner (11/73)
9	59. Trans. Selector Lever On Steering Column (11/73)
6	60. Case Veh. Exterior Hardware (11/73)
24	61. Other Vehicle (Penetrated Passenger Compartment)
1	62. Exterior Side Or Roof Rail Of Case Veh. (11/73)
1	63. Trunk Lid Of Case Vehicle (11/73)
3	64. Tires Of Case Vehicle (11/73)
534	65. Steering Wheel (9/73)
80	66. Steering Wheel Column (9/73)
8	67. Ignition Keys (11/73)
3	70. Hood Of Other Vehicle (11/73)
1	71. Other Veh. Exterior Hardware (11/73)
8	72. Penetrating Objects (Use 61 if O. Veh.) (11/73)
0	73. Exterior Side Or Roof Rail Of Other Veh. (11/73)
2	74. Headlight Or Front Grill Of Other Vehicle (11/73)
0	75. Trunk Of Other Vehicle (11/73)
16	76. Outside Surface of Other Vehicle (9/73)
	Specific Area Unknown/Other (See Codes 61,70-77)
0	77. Tires Of Other Vehicle (11/73)
139	78. Ground (9/73)
0	79. Water (11/73)
21	80. Exterior Object (Not Veh., Ground, Or Water) (9/73)
32	81. Ashtray (On Instrument Panel) (9/73)
6	82. Instruments (11/73)
46	83. Control Knobs and Levers (9/73)
28	84. Parking Brake Handle (In Front) (9/73)
4	85. Parking Brake Handle (On Floor Or Console) (11/73)
2	86. Vertical Console (11/73)
8	87. Air Cushion Skin (Airbag) (11/73)
2	88. Surface Of Rear Interior (11/73)
6	89. Under Seat Bottom (11/73)
743	98. Impact Force, "Whiplash", Hyperextension/Compression
44441	99. No Contact

Variable 604

DEGREE OF EJECTION

M.D. Codes:

0,

None

Field Width: 1,

Numeric

FREQ. DEGREE OF EJECTION

48	0. Unknown
5271	2. No Ejection
110	4. Partial Ejection
308	5. Complete Ejection

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Variable 606

TREATMENT/MORTALITY

M.D.Codes: 9, None
Field Width: 1, Numeric

FREQ.	TREATMENT/MORTALITY
1561	0. None
2317	1. First Aid-On-Scene or Outpatient
186	2. Hospitalized - Observation Under 24 Hours
948	3. Hospitalized - Significant Treatment or Over 24 Hrs
347	4. Fatal - Dead At Scene
200	5. Fatal - Dead on Arrival at Hospital
78	6. Fatal - Dead Within 24 Hours
36	7. Fatal - Dead 24 Hours to 1 Year
4	8. Fatal - Time of Death Unknown
60	9. Unknown

APPENDIX D

DOT-HS PUBLICATION NUMBER AND TEAM CASE NUMBER CROSS INDEXES

The first portion is ordered by DOT-HS report number and displays the corresponding team report number.

The second portion of the index is in order by MDAI team report number and displays the recorded DOT-HS report number. Some DOT-HS report numbers have not yet been automated.

The final portion of this cross-index indicates which NHTSA MDAI Summary Volumes contain specific DOT-HS report numbers. Thus, given a MDAI team report number, one can find its DOT-HS number (in portion 2) and then the appropriate summary volume containing that summary (in portion 3).

DOT-HS NUMBER-->CASE NUMBER

HS 500 506	MI 697110	HS 600 066	MCR 69 3
HS 600 002	OSU 5	HS 600 067	GIT 59
HS 600 003	GIT 54	HS 600 068	GIT 58
HS 600 004	OSU 4	HS 600 069	GIT 57
HS 600 005	GIT 49	HS 600 070	SPI-0006
HS 600 006	MI-697001	HS 600 071	GIT 64
HS 600 007	GIT 56	HS 600 072	UC 1023D
HS 600 008	RTI 5	HS 600 073	GIT 65
HS 600 009	GIT 47	HS 600 074	MCR 69 1
HS 600 010	RTI 7	HS 600 077	MVD 24
HS 600 011	UTAH 001-69	HS 600 078	MVD 25
HS 600 013	RTI 6	HS 600 079	MVD 26
HS 600 014	GIT 48	HS 600 080	MVD 27
HS 600 015	RTI 2	HS 600 081	MVD 29
HS 600 016	RTI 4	HS 600 082	MVD 30
HS 600 017	GIT 46	HS 600 084	GIT 63
HS 600 018	GIT 53	HS 600 085	GIT 66
HS 600 019	GIT 55	HS 600 086	MCR 69 4
HS 600 020	SWRI 6901	HS 600 087	MCR 69 6
HS 600 021	GIT 51	HS 600 088	MCR 69 8
HS 600 022	UTAH 002-69	HS 600 089	MI-697003
HS 600 023	SWRI-6913	HS 600 090	MI-697004
HS 600 024	SWRI-6911	HS 600 091	MI-697008
HS 600 025	OSU 8	HS 600 092	MI-697022
HS 600 026	OSU 7	HS 600 093	UNM 02
HS 600 027	GIT 62	HS 600 094	UNM 03
HS 600 029	GIT 60	HS 600 095	UNM 04
HS 600 030	GIT 61	HS 600 096	UNM 06
HS 600 031	UTAH 004-69	HS 600 097	UNM 07
HS 600 032	SWRI-6903	HS 600 099	RTI 10
HS 600 033	SWRI-6904	HS 600 100	RTI 11
HS 600 034	UTAH 003-69	HS 600 101	RTI 13
HS 600 035	OSU 2	HS 600 102	RTI 14
HS 600 036	SWRI-6906	HS 600 103	SWRI-6905
HS 600 037	UNM 01	HS 600 104	SWRI-6908
HS 600 038	RTI 1	HS 600 105	SWRI-6912
HS 600 039	OSU 3	HS 600 106	SWRI 6914
HS 600 040	UC 852D	HS 600 109	SWRI-7002
HS 600 041	UC 1090D	HS 600 110	SWRI-7005
HS 600 042	UC 1143D	HS 600 111	SWRI-7006
HS 600 045	UC 1182D	HS 600 112	SWRI-7008
HS 600 046	MVD 21	HS 600 113	SWRI-7009
HS 600 047	MVD 20	HS 600 114	UC 945D
HS 600 048	UTAH 005-69	HS 600 115	UC 1055D
HS 600 050	MI-697002	HS 600 116	UC 1120D
HS 600 051	MVD 23	HS 600 117	UC 1188D
HS 600 053	SPI-0009	HS 600 118	UTAH 007-69
HS 600 055	SPI-0007	HS 600 119	UTAH 009-69
HS 600 057	MVD 22	HS 600 121	MVD 1
HS 600 058	UC 1003D	HS 600 122	MVD 2
HS 600 060	RTI 9	HS 600 123	MVD 3
HS 600 061	GIT 52	HS 600 124	MVD 4
HS 600 062	GIT 50	HS 600 125	MVD 5
HS 600 063	UC 1183D	HS 600 126	MVD 6
HS 600 064	MCR 69 2	HS 600 128	MVD 8
HS 600 065	RTI 8	HS 600 129	MVD 9
		HS 600 130	MVD 10
		HS 600 131	MVD 11
		HS 600 134	MVD 14
		HS 600 135	MVD 15

DOT-HS NUMBER→→CASE NUMBER

HS 600 136	MVD 16	HS 600 214	MI-697007
HS 600 137	MVD 17	HS 600 215	MI-697009
HS 600 138	MVD 18	HS 600 216	MI-697010
HS 600 139	MVD 19	HS 600 217	MI-697011
HS 600 140	MVD 28	HS 600 219	MI-697018
HS 600 146	GIT 67	HS 600 220	MI-697019
HS 600 147	GIT 69	HS 600 221	MI-697020
HS 600 148	MT 697025	HS 600 222	MI-697021
HS 600 149	UNM 08	HS 600 223	MI-697023
HS 600 150	UNM 09	HS 600 225	MI-697026
HS 600 151	RTI 17	HS 600 226	MI-697027
HS 600 152	SWRI-7004	HS 600 227	MI-697029
HS 600 153	SWRI-7007	HS 600 228	MI-697031
HS 600 154	SWRI-7011	HS 600 229	MI-697032
HS 600 155	SWRI-7014	HS 600 230	MI-697033
HS 600 156	SWRI-7017	HS 600 231	MI-697034
HS 600 157	SPI-0028	HS 600 232	MI-697039
HS 600 159	TU 12P1670	HS 600 233	MI-697041
HS 600 160	UC 1000D	HS 600 235	UNM 05
HS 600 161	UC 1075D	HS 600 236	UNM 10
HS 600 162	UC 1172D	HS 600 237	UNM 11
HS 600 163	UC 1212D	HS 600 238	UNM 12
HS 600 164	UC 1289D	HS 600 239	UNM 13
HS 600 165	UTAH 006-69	HS 600 240	UNM 14
HS 600 167	CAL-70-25B	HS 600 241	UNM 15
HS 600 168	CAL-70-27B	HS 600 242	UNM 16
HS 600 169	CAL-70-28B	HS 600 243	UNM 17
HS 600 172	CAL-70-31B	HS 600 244	RTI 16
HS 600 173	CAL-70-32B	HS 600 245	RTI 18
HS 600 175	CAL-70-34B	HS 600 247	SWRI-6917
HS 600 176	CAL-70-35B	HS 600 248	SWRI-7012
HS 600 177	CAL-70-36B	HS 600 249	SWRI-7013
HS 600 178	CAL-70-37B	HS 600 250	SWRI-7018
HS 600 180	CAL-70-39B	HS 600 251	SWRI-7019
HS 600 181	CAL-70-40B	HS 600 252	SWRI-7020
HS 600 182	CAL-70-41B	HS 600 253	SWRI-7021
HS 600 184	CAL-70-43B	HS 600 254	SWRI-7022
HS 600 187	CAL-70-46B	HS 600 256	TU 13B2870
HS 600 188	CAL-70-47B	HS 600 257	UC 1014D
HS 600 189	CAL-70-50B	HS 600 258	UC 1107D
HS 600 192	GIT 68	HS 600 259	UC 1161D
HS 600 193	GIT 70	HS 600 260	UC 1164D
HS 600 194	MCR 69 5	HS 600 261	UC 1181D
HS 600 195	MCR 69 7	HS 600 262	UC 1227D
HS 600 196	MCR 69 9	HS 600 263	UC 1265D
HS 600 199	MCR 69 12	HS 600 264	UC 1266D
HS 600 200	MCR 69 13	HS 600 265	UC 1301D
HS 600 201	MCR 69 14	HS 600 266	UC 1302D
HS 600 202	MCR 69 15	HS 600 267	UC 1307D
HS 600 203	MCR 70 2	HS 600 268	UC 1318D
HS 600 204	MCR 70 6	HS 600 269	UTAH 008-69
HS 600 205	MCR 70 7	HS 600 271	4ME1
HS 600 206	MME-69-38	HS 600 272	4ME2
HS 600 207	MME-69-54	HS 600 273	4ME3
HS 600 208	MME-69-58	HS 600 274	4ME4
HS 600 209	MME-70-04	HS 600 275	4ME5
HS 600 210	MME-70-05	HS 600 276	4ME6
HS 600 211	MME-70-07	HS 600 277	4ME7
HS 600 212	MI-697005	HS 600 278	4ME8
HS 600 213	MI-697006	HS 600 279	4ME9

DOT-HS NUMBER-->CASE NUMBER

HS 600 280	4ME10	HS 600 363	UC 1261D
HS 600 289	CAL 70 53B	HS 600 364	UC 1263D
HS 600 290	CAL-70-56R	HS 600 365	UC 1267D
HS 600 291	CAL-70-57R	HS 600 366	UC 1273D
HS 600 292	CAL-70-58B	HS 600 368	UC 1278D
HS 600 293	CAL-70-59B	HS 600 370	UC 1292D
HS 600 294	CAL-70-60B	HS 600 371	UC 1294D
HS 600 296	CAL-70-62B	HS 600 372	UC 1303D
HS 600 297	CAL-70-65R	HS 600 373	UC 1305D
HS 600 298	CAL-70-44R	HS 600 374	UC 1316D
HS 600 298	CAL-70-68B	HS 600 376	UC 1342D
HS 600 299	GIT 71	HS 600 378	4ME12
HS 600 300	MCR 70 1	HS 600 379	4ME13
HS 600 301	MCR 70 3	HS 600 380	4ME15
HS 600 303	MCR 70 5	HS 600 381	4ME16
HS 600 305	UNM 19	HS 600 382	4ME17
HS 600 306	UNM 20	HS 600 383	4ME18
HS 600 307	UNM 21	HS 600 384	4ME19
HS 600 308	UNM 22	HS 600 385	4ME20
HS 600 309	UNM 23	HS 600 386	4ME21
HS 600 310	UNM 24	HS 600 387	4ME22
HS 600 312	UNM 27	HS 600 388	4ME23
HS 600 314	UNM 30	HS 600 389	4ME24
HS 600 316	RTI 20	HS 600 390	4ME25
HS 600 317	RTI 21	HS 600 391	4ME26
HS 600 319	RTI 23	HS 600 392	4ME27
HS 600 320	RTI 27	HS 600 393	4ME28
HS 600 321	RTI 29	HS 600 394	4ME29
HS 600 322	RTI 30	HS 600 395	4ME30
HS 600 323	TU 14B2770	HS 600 396	4ME31
HS 600 324	TU 18D2770	HS 600 397	4ME32
HS 600 325	TU 19F1170	HS 600 398	4ME33
HS 600 326	TU 20F2170	HS 600 399	4ME34
HS 600 327	TU 25F2165	HS 600 400	4ME35
HS 600 328	UC 927D	HS 600 401	4ME36
HS 600 329	UC 1010D	HS 600 402	4ME37
HS 600 330	UC 1264D	HS 600 403	4ME38
HS 600 331	UTAH 010-70	HS 600 404	4ME39
HS 600 334	CAL-70-64B	HS 600 405	4ME40
HS 600 335	CAL-70-66R	HS 600 408	CAL-70-63B
HS 600 336	MMF-69-39	HS 600 409	CAL-70-67B
HS 600 337	MMF-69-55	HS 600 410	CAL-70-69B
HS 600 338	MMF 70 3	HS 600 411	CAL-70-70B
HS 600 339	MMF-70-00	HS 600 412	CAL-70-71B
HS 600 340	MMF-70-08	HS 600 413	CAL-70-72B
HS 600 341	UNM 26	HS 600 414	CAL-70-73B
HS 600 342	UNM 29	HS 600 415	CAL-70-74B
HS 600 343	RTI 25	HS 600 417	CAL-70-95B
HS 600 344	RTI 28	HS 600 418	GIT 72
HS 600 345	SWRI-7024	HS 600 419	GIT 74
HS 600 346	TU 26F1470	HS 600 421	GIT 76
HS 600 347	UC 973D	HS 600 422	GIT 77
HS 600 350	UC 1067D	HS 600 423	GIT 79
HS 600 351	UC 1073D	HS 600 424	MCR 70 8
HS 600 354	UC 1176D	HS 600 425	MCR 70 9
HS 600 355	UC 1190D	HS 600 426	MMF-69-46
HS 600 356	UC 1204D	HS 600 427	MMF-69-49
HS 600 357	UC 1224D	HS 600 428	MMF-69-59
HS 600 361	UC 1240D	HS 600 430	MMF-70-10
HS 600 362	UC 1245D	HS 600 431	MIAMI-105

DOT-HS NUMBER→CASE NUMBER

HS 600 433	UNM 32	HS 600 505	MT 697109
HS 600 434	UNM 33	HS 600 507	MI 697112
HS 600 435	UNM 34	HS 600 508	MI 697103
HS 600 436	UNM 39	HS 600 509	MI 697117
HS 600 437	OSU 1	HS 600 510	MI 697118
HS 600 438	OSU 9	HS 600 511	MI 697119
HS 600 439	OSU 12	HS 600 512	MIAMI71 123
HS 600 440	RTI 19	HS 600 513	MI 697124
HS 600 441	RTI 24	HS 600 514	MI 697125
HS 600 442	RTI 32	HS 600 515	MI 697126
HS 600 452	SDI-C081	HS 600 516	MIAMI71 128
HS 600 453	SWRI-7023	HS 600 517	MIAMI71 129
HS 600 454	SWRI-7025	HS 600 518	MI 697130
HS 600 455	SWRI-7026	HS 600 520	UNM 31
HS 600 456	SWRI-7027	HS 600 521	UNM 35
HS 600 458	SWRI-7030	HS 600 522	UNM 36
HS 600 459	SWRI-7032	HS 600 523	UNM 37
HS 600 460	SWRI-7037	HS 600 524	UNM 38
HS 600 461	SWRI-7043	HS 600 525	UNM 40
HS 600 462	TU 5A0270	HS 600 526	UNM 41
HS 600 463	TU 24F0170	HS 600 527	UNM 42
HS 600 464	TU 29G0470	HS 600 528	UNM 43
HS 600 465	UTAH 011-70	HS 600 529	UNM 44
HS 600 466	UTAH 012-70	HS 600 530	UNM 45
HS 600 467	UTAH 013-70	HS 600 531	OSU 18
HS 600 469	4ME41	HS 600 532	OSU 21
HS 600 470	4ME42	HS 600 533	OSU 44
HS 600 471	4ME43	HS 600 534	OSU 48
HS 600 472	4ME44	HS 600 535	OSU 45
HS 600 473	4ME45	HS 600 536	RAI 32
HS 600 474	4ME46	HS 600 537	RAI 74
HS 600 475	4ME47	HS 600 538	RAI 77
HS 600 476	4ME48	HS 600 539	RAI 91
HS 600 477	4ME49	HS 600 540	RAI 92
HS 600 478	4ME50	HS 600 541	RAI 94
HS 600 479	BU 69 10	HS 600 542	RAI 95
HS 600 480	BU 69 11	HS 600 543	RAI 97
HS 600 481	BU 69 12	HS 600 544	RAI 99
HS 600 482	BU 69 13	HS 600 546	SWRI 7033
HS 600 483	BU 70 5	HS 600 547	SWRI 70 39
HS 600 484	BU 70 67	HS 600 548	SWRI 7040
HS 600 485	BU 70 8	HS 600 549	SWRI 7041
HS 600 486	BU 70 17	HS 600 550	SWRI 7042
HS 600 487	BU 70 18	HS 600 551	SWRI 7046
HS 600 489	CAL 71 76B	HS 600 552	SWRI 7049
HS 600 490	CAL 71 81B	HS 600 553	SWRI 7050
HS 600 491	CAL 71 82B	HS 600 554	SWRI 7052
HS 600 492	CAL 71 84B	HS 600 555	SWRI 7101
HS 600 493	CAL 71 86B	HS 600 556	SU 007
HS 600 494	GIT 78	HS 600 557	SU 009
HS 600 495	GIT 80	HS 600 558	SU 017
HS 600 496	GIT 81	HS 600 559	SU 019
HS 600 497	GIT 82	HS 600 560	SU 020
HS 600 498	GIT 83	HS 600 561	TU 27F2170
HS 600 499	GIT 85	HS 600 562	TU 31
HS 600 500	GIT 86	HS 600 563	TU 3261070
HS 600 501	GIT 88	HS 600 564	TU 35G2270
HS 600 502	MI 697101	HS 600 565	TU 44
HS 600 503	MI 697102	HS 600 566	UTAH 014 70
HS 600 504	MI 697107	HS 600 567	UTAH 015 70

DOT-HS NUMBER→→CASE NUMBER

HS 600 568	UTAH 016 70	HS 600 633	MI 697127
HS 600 569	UTAH 017 70	HS 600 634	UNM 47
HS 600 571	CAL 71 87B	HS 600 635	UNM 48
HS 600 572	CAL 71 88B	HS 600 636	UNM 49
HS 600 573	CAL 71 90B	HS 600 637	UNM 50
HS 600 574	CAL 71 91B	HS 600 638	UNM 51
HS 600 575	CAL 71 92B	HS 600 639	RTI 26
HS 600 576	CAL 71 96R	HS 600 640	RTI 35
HS 600 577	CAL 71 97B	HS 600 641	RTI 37
HS 600 578	CAL 71 100E	HS 600 642	RTI 41
HS 600 579	CAL 71 103B	HS 600 643	RTI 42
HS 600 580	CAL 71 105B	HS 600 644	RTI 44
HS 600 581	CAL 71 108B	HS 600 645	RTI 45
HS 600 582	CAL 71 109B	HS 600 646	RTI 46
HS 600 583	CAL 71 113B	HS 600 647	RTI 47
HS 600 584	VDP 70 1	HS 600 648	BU 69 18
HS 600 585	VDP 70 2	HS 600 649	BU 69 23
HS 600 586	VDP 70 5	HS 600 650	UNM 54
HS 600 587	VDP 70 6	HS 600 651	UNM 62
HS 600 588	VDP 70 7	HS 600 652	RTI 50
HS 600 589	VDP 70 11	HS 600 653	RTI 55
HS 600 590	VDP 70 12	HS 600 654	RAI 85
HS 600 591	VDP 70 17	HS 600 655	RAI 88
HS 600 592	UNM 46	HS 600 656	RAI 93
HS 600 593	UNM 52	HS 600 657	RAI 101
HS 600 594	SWRI 7102	HS 600 658	RAI 103
HS 600 595	SWRI 7103	HS 600 659	RAI 108
HS 600 597	BU 69 21	HS 600 660	RAI 109
HS 600 598	BU 69 22	HS 600 661	RAI 114
HS 600 599	BU 69 26	HS 600 662	RAI 115
HS 600 600	CAL 71 77B	HS 600 663	RAI 118
HS 600 601	CAL 71 104E	HS 600 664	SWRI 7109
HS 600 602	CAL 71 106B	HS 600 665	SWRI 7111
HS 600 603	CAL 71 110E	HS 600 666	SWRI 7112
HS 600 604	GIT 73	HS 600 667	SWRI 7113
HS 600 605	GIT 84	HS 600 668	SWRI 7115
HS 600 606	GIT 89	HS 600 669	SWRI 7116
HS 600 607	RTI 31	HS 600 670	SWRI 7117
HS 600 608	RTI 34	HS 600 671	SWRI 7120
HS 600 609	RTI 36	HS 600 672	SWRI 7121
HS 600 610	RTI 38	HS 600 676	BU 70 06
HS 600 611	RTI 39	HS 600 677	BU 70 10
HS 600 612	RTI 43	HS 600 678	CAL 70 79B
HS 600 613	RAI 67	HS 600 679	CAL 71 93B
HS 600 614	RAI 98	HS 600 680	CAL 71 101B
HS 600 616	SWRI 7106	HS 600 681	GIT 260 87
HS 600 617	SWRI 7107	HS 600 682	GIT 90
HS 600 618	SWRI 7108	HS 600 683	GIT 95
HS 600 619	SWRI 7110	HS 600 684	GIT 97
HS 600 621	UTAH 022 70	HS 600 685	UNM 55
HS 600 623	CAL 70 94B	HS 600 686	UNM 56 1
HS 600 624	GIT 91	HS 600 687	UNM 57
HS 600 625	GIT 92	HS 600 688	UNM 58
HS 600 626	GIT 93	HS 600 689	UNM 59
HS 600 627	GIT 94	HS 600 690	UNM 60
HS 600 628	MI 697123	HS 600 691	RTI 40
HS 600 629	MI 697124	HS 600 692	RTI 53
HS 600 630	MI 697114	HS 600 693	RAI 105
HS 600 631	MI 697120	HS 600 694	SWRI 7122
HS 600 632	MI 697122	HS 600 695	SWRI 7125

DOT-HS NUMBER→→CASE NUMBER

HS 600 696	SWRT 7127	HS 600 756	SWRI 7126
HS 600 697	SWRI 7128	HS 600 757	SWRI 7129
HS 600 698	TU 38HI770	HS 600 758	SWRI 7132
HS 600 699	TU 41	HS 600 759	SWRI 71 33
HS 600 700	SU 031	HS 600 760	SWRI 7134
HS 600 701	SU 018	HS 600 761	SWRI 7136
HS 600 702	HOU 12	HS 600 762	SWRI 7138
HS 600 703	HOU 7	HS 600 763	SWRI 7139
HS 600 704	HOU 15	HS 600 764	SWRI 7141
HS 600 705	HOU 3	HS 600 765	SWRI 7142
HS 600 706	SWRI 7165	HS 600 766	SWRI 7143
HS 600 707	SWRI 7166	HS 600 767	SWRI 7144
HS 600 708	SWRI 7169	HS 600 768	SWRI 7145
HS 600 709	SWRI 7171	HS 600 769	SWRI 7146
HS 600 710	SWRT 7173	HS 600 770	SWRI 7147
HS 600 711	SWRT 7174	HS 600 771	SWRI 7148
HS 600 712	SWRI 7175	HS 600 772	SWRI 7190
HS 600 713	SWRI 7176	HS 600 773	UNM 71
HS 600 714	SWRT 7178	HS 600 774	UNM 73
HS 600 715	SWRI 7183	HS 600 775	RAI 46
HS 600 716	SWRI 7195	HS 600 777	BU 69 19
HS 600 717	SWRT 7186	HS 600 780	SWRI 7149
HS 600 718	SWRI 7198	HS 600 781	BU 71 7
HS 600 719	SWRT 7191	HS 600 782	BU 71 8
HS 600 720	CAL 70 114B	HS 600 783	BU 71 10
HS 600 721	CAL 71 3B	HS 600 784	BU 69 14
HS 600 722	CAL 71 6B	HS 600 785	HOU 1
HS 600 723	CAL 71 12B	HS 600 786	HOU 2
HS 600 724	CAL 71 13B	HS 600 787	HOU 5
HS 600 725	CAL 71 14B	HS 600 788	HOU 6
HS 600 726	CAL 71 16B	HS 600 789	UNM 66
HS 600 727	CAL 71 27B	HS 600 791	UNM 82
HS 600 728	CAL-70-30B	HS 600 792	RAI 65
HS 600 728	CAL 71 30B	HS 600 793	RAI 81
HS 600 729	HOU 17	HS 600 794	RAI 82
HS 600 730	HOU 22	HS 600 795	RAI 83
HS 600 731	HOU 24	HS 600 796	RAI 84
HS 600 732	HOU 26	HS 600 797	RAI 102
HS 600 733	MIAMI72 219	HS 600 798	SWRI 7137
HS 600 734	RAI 43	HS 600 799	SWRI 7162
HS 600 735	SWRI 7150	HS 600 800	SWRI 7168
HS 600 736	SWRI 7153	HS 600 801	SWRI 7172
HS 600 737	SWRI 7154	HS 600 802	SWRI 7179
HS 600 738	SWRI 7155	HS 600 803	SWRI 7181
HS 600 739	SWRI 7156	HS 600 804	SWRI 7184
HS 600 740	SWRI 7157	HS 600 805	SWRI 7187
HS 600 741	SWRI 7158	HS 600 806	SWRI 7189
HS 600 742	SWRT 7159	HS 600 807	SWRI 7192
HS 600 743	SWRI 7160	HS 600 808	USC 71 11
HS 600 744	SWRI 7161	HS 600 809	BU 70 11
HS 600 745	SWRT 7163	HS 600 810	BU 70 12
HS 600 746	SWRI 7164	HS 600 811	BU 70 13
HS 600 747	SWRI 7167	HS 600 812	BU 70 15
HS 600 748	USC 71 8	HS 600 813	BU 70 20
HS 600 749	BU 69 15	HS 600 814	BU 70 21
HS 600 750	BU 69 16	HS 600 815	BU 70 22
HS 600 751	BU 69 17	HS 600 816	BU 70 25
HS 600 752	BU 69 20	HS 600 817	BU 70 27
HS 600 753	BU 69 24	HS 600 818	BU 70 28
HS 600 754	UNM 53	HS 600 819	GIT 96

DOT-HS NUMBER→→CASE NUMBER

HS 600 820	GIT 98	HS 600 882	UNM 65
HS 600 821	HOU 19	HS 600 883	UNM 76
HS 600 822	MIAMI-121	HS 600 884	RAI 112
HS 600 823	MIAMI72 201	HS 600 885	RAI 117
HS 600 824	MIAMI72 206	HS 600 886	RAI 131
HS 600 825	MIAMI72 207	HS 600 887	SWRI 7114
HS 600 826	MIAMI72 209	HS 600 888	SWRI 7182
HS 600 827	MIAMI72 220	HS 600 889	SWRI 7193
HS 600 828	MIAMI72 228	HS 600 890	SWRI 7209
HS 600 829	UNM 67	HS 600 891	SFI 2 001
HS 600 830	UNM 72	HS 600 892	SRI 2 002
HS 600 831	UNM 74	HS 600 893	SU 002
HS 600 832	UNY 75	HS 600 894	SU 003
HS 600 833	UNM 77	HS 600 896	SU 008
HS 600 834	UNM 78	HS 600 897	SU 011
HS 600 835	UNM 81	HS 600 898	SU 013
HS 600 836	UNM 83	HS 600 899	SU 014
HS 600 837	UNM 84	HS 600 900	SU 015
HS 600 838	UNY 85	HS 600 901	SU 023
HS 600 839	RAI 87	HS 600 902	SU 030
HS 600 840	RAI 89	HS 600 903	SU 032
HS 600 841	RAI 90	HS 600 904	SU 035
HS 600 842	RAI 113	HS 600 905	SU 038
HS 600 843	RAI 120	HS 600 906	USC 71 1
HS 600 844	SWRI 7180	HS 600 907	USC 71 2
HS 600 845	SWRI 7201	PS 600 908	USC 71 5
HS 600 846	SWRI 7202	HS 600 909	USC 71 07
HS 600 847	SWRI 7203	HS 600 909	USC 71 7
HS 600 848	SWRI 7205	HS 600 910	USC 71 9
HS 600 849	SU 034	PS 600 911	UTAH 018170
HS 600 850	SU 041	HS 600 913	CAL 71 56B
HS 600 851	SU 042	HS 600 914	UNM 79
HS 600 852	TU 71 1	HS 600 915	UNM 80
HS 600 853	TU 71 2	HS 600 916	SWRI 7210
HS 600 854	USC 71 3	HS 600 917	SWRI 7213
HS 600 855	USC 71 4	HS 600 918	SWRI 7221
HS 600 856	USC 71 6	HS 600 919	SU 039
HS 600 857	USC 71 10	HS 600 920	USC 71 21
PS 600 858	USC 71 12	HS 600 921	USC 71 22
HS 600 860	USC 71 23	HS 600 923	UNM 70
HS 600 862	BU 71 1	HS 600 924	USC 71 13
HS 600 863	BU 71 9	HS 600 925	USC 71 14
HS 600 864	CAL 71 8B	HS 600 926	USC 71 15
HS 600 865	CAL 71 9B	HS 600 927	SU 010
HS 600 866	CAL 71 11B	HS 600 929	CAL 71 50B
HS 600 867	CAL 71 20B	HS 600 930	CAL 71 53B
HS 600 868	CAL 71 31B	HS 600 931	RAI 119
HS 600 869	CAL 71 35B	HS 600 932	RAI 138
HS 600 870	CAL 71 38B	HS 600 933	MMF 71 8
HS 600 871	CAL 71 39B	HS 600 934	MMF 71 9
HS 600 872	CAL 71 40B	HS 600 935	MMF 71 19
HS 600 873	CAL 71 43B	HS 600 936	RAI 107
HS 600 874	CAL 71 49B	HS 600 937	RAI 139
HS 600 875	MMF 71 6	HS 600 938	RAI 133
HS 600 876	MMF 71 13	HS 600 939	TU 49AC571
HS 600 877	MMF 71 22	HS 600 940	TU 71 5
HS 600 878	MMF 71 23	HS 600 941	USC 71 16
HS 600 879	UNM 61	HS 600 942	USC 71 17
HS 600 880	UNM 63	HS 600 943	USC 71 19
HS 600 881	UNM 64	HS 600 944	USC 71 24

DOT-HS NUMBER → CASE NUMBER

HS 600 945	SWRI 7207	HS 601 012	TU 71 25
HS 600 946	SWRI 7208	HS 601 013	USC 72 32
HS 600 947	SWRI 7211	HS 601 014	USC 33
HS 600 948	SWRI 7212	HS 601 015	USC 72 34
HS 600 949	PAI 132	HS 601 016	USC 72 35
HS 600 950	SU 022	HS 601 017	USC 72 36
HS 600 951	SU 021	HS 601 018	USC 72 38
HS 600 952	SU 012	HS 601 019	USC 72 39
HS 600 953	SU 040	HS 601 020	USC 72 40
HS 600 954	SU 037	HS 601 021	USC 73 1
HS 600 955	SU 025	HS 601 023	USC 73 03
HS 600 956	SU 005	HS 601 024	CAL 71 10B
HS 600 957	TU 4211670	HS 601 025	CAL 71 7B
HS 600 958	TU 71 4	HS 601 026	CAL 71 51B
HS 600 959	USC 71 26	HS 601 027	SWRI 7215
HS 600 960	USC 71 25	HS 601 028	SWRI 7217
HS 600 961	USC 71 20	HS 601 029	SWRI 7220
HS 600 962	USC 71 18	HS 601 030	SWRI 7222
HS 600 963	TU 71 8	HS 601 031	CAL-70-115E
HS 600 964	TU 71 9	HS 601 032	CAL 71 57B
HS 600 965	TU 71 11	HS 601 034	CAL 71 29B
HS 600 966	TU 71 12	HS 601 035	UOK 72 1
HS 600 967	TU 71 13	HS 601 036	CAL 71 33B
HS 600 968	USC 71 27	HS 601 037	CAL-70-95B
HS 600 969	USC 28	HS 601 038	AA 177
HS 600 970	SWRI 7151	HS 601 039	AA 176
HS 600 971	SWRI 7170	HS 601 040	A175-0UM605
HS 600 972	USC 29	HS 601 041	A183-0UM619
HS 600 973	USC 30	HS 601 042	AA 182
HS 600 974	USC 31	HS 601 043	A181-0UM618
HS 600 975	TU 71 15	HS 601 044	A180-1UM616
HS 600 976	TU 71 16	HS 601 045	A178-0UM612
HS 600 978	TU 71 17	HS 601 046	AA 173
HS 600 985	CAL-70-111E	HS 601 047	A169-1UM598
HS 600 986	CAL 71 25B	HS 601 048	AA 166
HS 600 987	CAL 71 48B	HS 601 049	A165-1UM589
HS 600 988	HOU 10	HS 601 050	A164-0UM583
HS 600 989	HOU 16	HS 601 051	AA 163
HS 600 990	HOU 18	HS 601 052	AA 161
HS 600 991	HOU 20	HS 601 053	AA 159
HS 600 992	HOU 31	HS 601 054	AA 157
HS 600 993	HOU 37	HS 601 055	AA 156
HS 600 994	HOU 39	HS 601 056	AA 155
HS 600 995	HOU 23	HS 601 057	A206-0UM635
HS 600 996	HOU 20	HS 601 058	A205-1UM634
HS 600 997	HOU 30	HS 601 059	AA 148
HS 600 998	HOU 32	HS 601 060	AA 145
HS 600 999	HOU 35	HS 601 061	AA 144
HS 601 001	RTI 48	HS 601 062	AA 142
HS 601 002	RTI 095 49	HS 601 063	AA 151
HS 601 003	RAI 127	HS 601 064	AA 150
HS 601 004	RAI 134	HS 601 065	AA 149
HS 601 005	RAI 137	HS 601 066	AA 141
HS 601 006	SWRI 7214	HS 601 067	AA 139
HS 601 007	SRI 2 003	HS 601 068	A138-0UM550
HS 601 008	SRI 2 004	HS 601 069	AA 134
HS 601 009	321 KY 39	HS 601 070	AA 133
HS 601 009	TU 71 20	HS 601 071	AA 132
HS 601 010	TU 71 21	HS 601 072	AA 130
HS 601 011	TU 71 23	HS 601 073	AA 129

DOT-HS NUMBER-->CASE NUMBER

HS 601 074	AA 125		
HS 601 075	AA 115	HS 601 140	MMF 71 30
HS 601 076	AA 114	HS 601 141	MMF 71 27
HS 601 077	MIAMI72 208	HS 601 142	MIAMI72 211
HS 601 078	GIT 260 112	HS 601 143	MIAMI72 212
HS 601 079	GIT 260 111	HS 601 144	MIAMI72-215
HS 601 080	GIT 260 110	HS 601 145	MIAMI72 236
HS 601 081	GIT 260 108	HS 601 146	RTI 095 63
HS 601 082	GIT 260 107	HS 601 147	GIT 260 113
HS 601 083	GIT 260 106	HS 601 148	MIAMI72 214
HS 601 085	GIT 260 105	HS 601 149	RTI 095 70
HS 601 086	GIT 260 104	HS 601 150	RTI 095 71
HS 601 087	AA 194	HS 601 151	RTI 095 72
HS 601 088	AA 193	HS 601 152	RTI 095 73
HS 601 089	AA 192	HS 601 153	RTI 095 74
HS 601 090	AA 191	HS 601 154	SRI 2 011
HS 601 091	AA 190	HS 601 155	SRI 2 007
HS 601 092	AA 188	HS 601 156	SRI 2 005
HS 601 093	GIT 260 103	HS 601 157	USC 73 11
HS 601 094	GIT 260 102	HS 601 158	USC 73 8
HS 601 095	GIT 260 101	HS 601 159	SRI 2 012
HS 601 096	GIT 99	HS 601 160	USC 73 9
HS 601 097	AA 186	HS 601 161	USC 73 10
HS 601 098	HOU 33	HS 601 162	USC 73 07
HS 601 099	HOU 23	HS 601 163	SRI 2 009
HS 601 101	HOU 21	HS 601 164	SRI 2 008
HS 601 102	HOU 13	HS 601 165	SRI 2 006
HS 601 103	AA 202	HS 601 166	USC 73 5
HS 601 104	AA 197	HS 601 167	USC 73 06
HS 601 105	AA 195	HS 601 170	MIAMI72 216
HS 601 106	RTI 095 54	HS 601 171	MIAMI72 239
HS 601 107	RTI 095 56	HS 601 172	MIAMI72 232
HS 601 108	RTI 095 57	HS 601 173	MIAMI72 230
HS 601 109	RTI 095 58	HS 601 174	MIAMI72 227
HS 601 110	RTI 095 59	HS 601 175	MIAMI72 225
HS 601 111	RTI 095 60	HS 601 176	MIAMI72 229
HS 601 112	RTI 095 52	HS 601 177	MIAMI72 237
HS 601 114	MIAMI72 202	HS 601 178	MIAMI72 217
HS 601 115	MIAMI72 203	HS 601 179	MIAMI72 221
HS 601 116	MIAMI72 204	HS 601 180	MIAMI72 233
HS 601 117	USC 73 4	HS 601 181	MIAMI72 218
HS 601 118	CAL 71 52B	HS 601 182	MIAMI72 234
HS 601 119	CAL 71 4B	HS 601 183	MIAMI72 226
HS 601 120	CAL 71 41B	HS 601 184	MIAMI72 222
HS 601 121	CAL 71 26B	HS 601 185	MIAMI72 224
HS 601 122	CAL 71 34B	HS 601 186	MIAMI72 223
HS 601 123	RTI 095 69	HS 601 188	MIAMI72 231
HS 601 125	RTI 095 66	HS 601 189	MIAMI72 235
HS 601 126	RTI 095 65	HS 601 190	MIAMI72 239
HS 601 127	RTI 095 64	HS 601 191	MIAMI72 240
HS 601 128	RTI 095 62	HS 601 192	BU 70 30
HS 601 129	RTI 095 61	HS 601 193	BU 69 25
HS 601 130	SWRI 72025	HS 601 194	BU 70 14
HS 601 131	SWRI 7224	HS 601 195	BU 70 16
HS 601 132	SWRI 7223	HS 601 196	MMF-70-1
HS 601 133	SWRI 7219	HS 601 197	MMF-70-11
HS 601 134	BU 70 19	HS 601 198	MMF-70-2
HS 601 137	BU 70 26	HS 601 199	MMF-70-16
HS 601 139	HOU 57	HS 601 200	MMF-70-18
HS 601 139	MMF 71 25	HS 601 201	BU 70 23
		HS 601 202	BU 70 29

DOT-HS NUMBER→→CASE NUMBER

HS 601 203	BU 70 24	HS 601 267	OSU 22
HS 601 204	SWRI 7233	HS 601 268	OSU 23
HS 601 205	SWRI 7231	HS 601 269	OSU 24
HS 601 206	SWRI 72 4	HS 601 270	OSU 25
HS 601 207	SWRI 7226	HS 601 271	OSU 27
HS 601 208	SWRI 7227	HS 601 272	OSU 28
HS 601 209	SWRI 72 35	HS 601 273	OSU 51
HS 601 210	SWRI 7242	HS 601 274	OSU 32
HS 601 211	SWRI 7206	HS 601 275	OSU 56
HS 601 212	SWRI 7232	HS 601 276	OSU 29
HS 601 213	UOK 72 04	HS 601 277	OSU 15
HS 601 214	UOK 72 2	HS 601 278	OSU 13
HS 601 215	HOK 72 3	HS 601 279	SRI 2 016
HS 601 216	SWRI 72 18	HS 601 280	USC 73 18
HS 601 217	USC 73 12	HS 601 281	USC 73 16
HS 601 219	RTI 095 81	HS 601 282	USC 73 17
HS 601 220	RTI 095 80	HS 601 283	UOK 72 6
HS 601 221	RTI 095 82	HS 601 286	CAL 72 22B
HS 601 222	RTI 095 83	HS 601 287	MMF 72 15
HS 601 223	RTI 095 76	HS 601 288	MMF 72 24
HS 601 224	RTI 095 75	HS 601 289	MMF 72 25
HS 601 225	AA 143	HS 601 290	SRI 2 019
HS 601 226	A153-CU*562	HS 601 292	USC 73 15
HS 601 227	RTI 095 79	HS 601 293	USC 73 14
HS 601 228	RTI 095 78	HS 601 294	GIT 260 115
HS 601 230	SRI 2 014	HS 601 295	GIT 260 119
HS 601 231	SRI 2 013	HS 601 296	TU 71 31
HS 601 232	CAL 71 42B	HS 601 297	TU 71 26
HS 601 234	CAL 71 17B	HS 601 298	TU 71 28
HS 601 235	CAL 71 55B	HS 601 299	RTI 095 77
HS 601 236	CAL 71 5B	HS 601 300	321 KY 16
HS 601 237	CAL 71 47B	HS 601 301	321 KY 18
HS 601 238	RAI 110	HS 601 302	321 KY 20
HS 601 239	RAI 111	HS 601 303	MIAMI 72 306
HS 601 240	RAI 116	HS 601 304	SWR 7243
HS 601 241	RAI 106	HS 601 306	CAL 72 8B
HS 601 242	CAL 71 44B	HS 601 307	CAL 72 19B
HS 601 243	CAL 71 37B	HS 601 308	CAL 71 19B
HS 601 245	CAL 71 28B	HS 601 309	UNM 89
HS 601 246	USC 72 37	HS 601 310	BU 73 02
HS 601 247	USC 73 13	HS 601 312	BU 71 5
HS 601 248	UOK 72 07	HS 601 313	BU 71 2
HS 601 249	UOK 72 5	HS 601 314	BU 72 14
HS 601 250	SWRI 72 34	HS 601 315	USC 73 21
HS 601 251	SWRI 72 27	HS 601 316	BU 72 11
HS 601 252	SWR 7238	HS 601 317	USC 73 20
HS 601 253	SWRI 72 28	HS 601 318	USC 73 19
HS 601 254	UNM 88	HS 601 319	HOU 45
HS 601 255	321 KY 01	HS 601 320	HOU 34
HS 601 256	OSU 30	HS 601 321	HOU 27
HS 601 257	OSU 31	HS 601 322	HOU 43
HS 601 258	OSU 35	HS 601 323	HOU 42
HS 601 259	OSU 39	HS 601 324	HOU 48
HS 601 260	OSU 47	HS 601 325	HOU 44
HS 601 261	OSU 53	HS 601 326	HOU 63
HS 601 262	OSU 11	HS 601 327	HOU 68
HS 601 263	OSU 14	HS 601 328	HOU 72
HS 601 264	OSU 17	HS 601 329	HOU 73
HS 601 265	OSU 19	HS 601 330	HOU 70
HS 601 266	OSU 20	HS 601 331	HOU 59

DOT-HS NUMBER→CASE NUMBER

HS 601 332	HOU 52	HS 601 396	A199-00M628
HS 601 333	HOU 56	HS 601 397	AA 326
HS 601 334	HOU 51	HS 601 398	AA 331
HS 601 335	HOU 58	HS 601 399	AA 318
HS 601 336	HOU 55	HS 601 400	AA 336
HS 601 337	HOU 11	HS 601 401	AA 327
HS 601 338	HOU 4	HS 601 402	A328-1UM723
HS 601 339	HOU 74	HS 601 403	AA 340
HS 601 340	HOU 62	HS 601 404	AA 329
HS 601 341	CAL 72 15B	HS 601 405	AA 325
HS 601 342	CAL 72 16B	HS 601 410	MMF 72 18
HS 601 344	GIT 260 114	HS 601 411	MMF 73 1
HS 601 345	GIT 109	HS 601 412	MMF 72 20
HS 601 346	321 KY 14	HS 601 413	MMF 72 31
HS 601 347	321 KY 04	HS 601 414	MMF 72 33
HS 601 348	321 KY SF	HS 601 415	AA 345
HS 601 349	GIT 260 121	HS 601 416	CAL 72 26P
HS 601 350	HOU 40	HS 601 417	CAL 72 34B
HS 601 351	TU 71 24	HS 601 417	CAL 72 32B
HS 601 352	USC 73 22	HS 601 418	CAL 72 35B
HS 601 353	SRI 2 020	HS 601 419	SRI 2 018
HS 601 355	USC 73 24	HS 601 420	USC 73 38
HS 601 356	USC 73 25	HS 601 421	USC 73 37
HS 601 357	USC 73 23	HS 601 422	USC 73 36
HS 601 358	SRI 2 017	HS 601 423	USC 73 35
HS 601 359	SRI2 022	HS 601 425	CAL 72 33B
HS 601 360	SRI 2 021	HS 601 426	MMF 72 16
HS 601 361	SRI2 025	HS 601 427	MMF 72 10
HS 601 362	SRI2 024	HS 601 428	SRI 2 033
HS 601 363	GIT 260 122	HS 601 429	SRI 2 036
HS 601 364	CR7228CA188	HS 601 430	SRI2 032
HS 601 365	CAL 72 24B	HS 601 432	AA 348
HS 601 366	CAL 72 23B	HS 601 433	AA 351
HS 601 367	CAL 72 31B	HS 601 434	AA 352
HS 601 368	CAL 72 75B	HS 601 435	A355-1UM786
HS 601 369	CAL 72 27B	HS 601 436	AA 174
HS 601 370	CAL 71E 1P	HS 601 437	AA 171
HS 601 371	RAI 123	HS 601 438	AA 338
HS 601 372	RAI 71	HS 601 439	AA 350
HS 601 373	RAT 125	HS 601 440	AA 349
HS 601 374	RAI 126	HS 601 441	AA 344
HS 601 375	RAI 124	HS 601 442	AA 342
HS 601 376	RAI 122	HS 601 443	A343-1UM760
HS 601 377	RAT 128	HS 601 444	AA 341
HS 601 378	RAT 121	HS 601 445	AA 322
HS 601 379	SWPT 72 30	HS 601 446	AA 305
HS 601 380	USC 73 27	HS 601 448	A332-1UM738
HS 601 381	USC 73 26	HS 601 449	AA 333
HS 601 382	SRI2 029	HS 601 450	AA 323
HS 601 383	SRI 2 028	HS 601 451	AA 337
HS 601 384	SRI 2 027	HS 601 452	A321-00M706
HS 601 385	SRI 2 026	HS 601 453	AA 335
HS 601 386	USC 73 032	HS 601 454	AA302
HS 601 387	USC 73 35	HS 601 455	A303-1UM660
HS 601 388	USC 73 33	HS 601 456	AA 312
HS 601 389	USC 73 29	HS 601 457	AA 314
HS 601 390	USC 73 29	HS 601 458	AA 319
HS 601 391	USC 73 30	HS 601 460	MMF 71 3
HS 601 392	USC 73 31	HS 601 461	MMF 71 7
HS 601 393	SRI 2 030	HS 601 462	MMF 71 12

DOTHS NUMBER CASE NUMBER

HS 601 463	MMF 73 05	HS 601 528	USC 74 3
HS 601 465	CAL 72 36B	HS 601 529	USC 74 4
HS 601 466	CAL 72 37B	HS 601 530	USC 74 5
HS 601 467	CAL 72 40B	HS 601 531	USC 74 6
HS 601 468	CAL 72 40B	HS 601 532	AA 184
HS 601 469	CAL 72 42B	HS 601 533	HOU 60
HS 601 470	CAL 72 44B	HS 601 534	HOU 64
HS 601 471	CAL 72 45B	HS 601 535	HOU 53
HS 601 472	CAL 72 48B	HS 601 536	HOU 69
HS 601 473	CAL 72 50B	HS 601 537	HOU 47
HS 601 474	SWRI 7246	HS 601 538	HOU 66
HS 601 475	SWRI 7240	HS 601 539	HOU 65
HS 601 476	SWRI 7247	HS 601 540	HOU 49
HS 601 477	UNM 94	HS 601 541	HOU 8
HS 601 478	UNM 086	HS 601 542	HOU 46
HS 601 479	UNM 95	HS 601 543	HOU 9
HS 601 480	UNM 96	HS 601 544	HOU 61
HS 601 481	UNM 93	HS 601 545	UOK 72 8
HS 601 482	UNM 90	HS 601 546	UOK 72 10
HS 601 483	UNM 92	HS 601 547	MMF 71 4
HS 601 484	UNM 91	HS 601 548	AA 121
HS 601 485	MMF-70-12	HS 601 549	AA 120
HS 601 485	MMF 72 30	HS 601 550	AA 119
HS 601 487	MMF 71 16	HS 601 552	AA 116
HS 601 488	MMF 71 31	HS 601 553	AA 101
HS 601 489	MMF 72 3	HS 601 554	AA 162
HS 601 490	MMF 72 7	HS 601 555	A160-CUM569
HS 601 491	CAL 71 58B	HS 601 556	A152-CUM563
HS 601 492	CAL 72 3B	HS 601 557	AA 146
HS 601 494	CAL 71 24B	HS 601 558	AA 122
HS 601 495	GIT 260 118	HS 601 559	AA 105
HS 601 496	GIT 260 117	HS 601 560	AA 136
HS 601 497	TU 71 30	HS 601 561	AA 204
HS 601 498	SRI 2 035	HS 601 562	AA 100 (SPL)
HS 601 500	SRI 2 031	HS 601 563	AA 201
HS 601 501	SRI 2 023	HS 601 564	AA 170
HS 601 502	SRI 2 034	HS 601 565	USC 74 8
HS 601 503	SRI 2 037	HS 601 566	USC 74 7
HS 601 504	SRI 2 039	HS 601 568	UTAH 046 70
HS 601 505	SRI 2 040	HS 601 569	UTAH 024 70
HS 601 507	HOU 75	HS 601 570	AA 316
HS 601 508	HOU 71	HS 601 571	AA 126
HS 601 509	HOU 67	HS 601 572	AA 154
HS 601 510	HOU 41	HS 601 573	AA 168
HS 601 511	MMF 69 35	HS 601 574	AA 301
HS 601 512	MMF 69 44	HS 601 575	AA 324
HS 601 513	MMF 69 56	HS 601 576	AA 354
HS 601 514	MMF 69 57	HS 601 577	A346-1UM768
HS 601 515	MMF 69 47	HS 601 578	AA 353
HS 601 516	MMF 69 48	HS 601 579	AA 304
HS 601 517	MMF 69 53	HS 601 580	A330-1UM737
HS 601 519	A308-1UM673	HS 601 581	MMF 71 15
HS 601 520	AA 315	HS 601 582	MMF-70-19
HS 601 521	AA 140	HS 601 583	MMF 71 10
HS 601 522	AA 147	HS 601 584	MMF-70-14
HS 601 523	AA 200	HS 601 585	MMF 71 17
HS 601 524	AA 196	HS 601 586	MMF 71 11
HS 601 525	A172-CUM601	HS 601 587	MMF 71 26
HS 601 526	USC 74 2	HS 601 588	MMF 71 24
HS 601 527	USC 74 1	HS 601 589	MMF 71 32

DOT-HS NUMBER→→CASE NUMBER

HS 601 590	MMF 71 18	HS 601 658	USC 74 12
HS 601 592	MMF 72 19	HS 601 659	MMF 72 28
HS 601 593	MMF 72 27	HS 601 660	MMF 72 29
HS 601 594	MMF 71 28	HS 601 661	CAL 72 04B
HS 601 595	MMF 71 20	HS 601 662	SWRI 73 06
HS 601 596	MMF 71 29	HS 601 663	SWRI 7305
HS 601 597	MMF 72 14	HS 601 664	MI 333
HS 601 598	BU 71 13	HS 601 665	MI 316
HS 601 599	MMF 72 17	HS 601 666	TU 71 32
HS 601 600	MMF 72 13	HS 601 667	MI 323
HS 601 601	BU 72 12	HS 601 668	MI 318
HS 601 603	BU 71 4	HS 601 669	GIT 260 116
HS 601 604	UOK 72 10	HS 601 670	UOK 72 26
HS 601 605	USC 74 9	HS 601 671	UOK 72 12
HS 601 606	UOK 72 16	HS 601 672	BU 73 06
HS 601 607	BU 71 3	HS 601 673	BU 73 05
HS 601 608	BU 71 6	HS 601 674	MMF 73 4
HS 601 609	MMF 73 10	HS 601 675	MMF 73 11
HS 601 610	UOK 72 12	HS 601 676	UOK 72 27
HS 601 612	MMF 73 8	HS 601 677	UOK 72 21
HS 601 613	MMF 73 7	HS 601 678	UOK 72 20
HS 601 614	MMF 71 14	HS 601 679	OSU 62
HS 601 615	MMF 72 17	HS 601 680	UTAH 066 71
HS 601 616	MMF 70 20	HS 601 681	UTAH 058 70
HS 601 617	MMF 70 13	HS 601 682	UTAH 067 71
HS 601 618	MMF-70-15	HS 601 683	UTAH 073 71
HS 601 619	MMF 71 5	HS 601 684	UTAH 036 70
HS 601 620	MMF 71 2	HS 601 685	UTAH 078 71
HS 601 621	MMF 71 1	HS 601 686	UTAH 082 71
HS 601 622	SWRI 73 04	HS 601 687	UTAH 026 70
HS 601 623	SWRI 7245	HS 601 688	UTAH 075 71
HS 601 624	UTAH 039 70	HS 601 689	UTAH 077 71
HS 601 625	UTAH 038 70	HS 601 690	UTAH 064 71
HS 601 626	UTAH 020 70	HS 601 691	UTAH 085 71
HS 601 627	RAI 148	HS 601 692	UOK 72 30
HS 601 628	RAI 151	HS 601 693	MMF 72 32
HS 601 629	RAI 153	HS 601 694	MMF 72 26
HS 601 630	RAI 146	HS 601 695	MMF 72 01
HS 601 633	MI 312	HS 601 696	MMF 72 22
HS 601 634	MI 311	HS 601 697	MMF 72 23
HS 601 635	MI 337	HS 601 698	UOK 72 38
HS 601 636	UOK 72 15	HS 601 699	UOK 72 23
HS 601 637	UOK 72 19	HS 601 700	CAL 71 36B
HS 601 638	UOK 72 14	HS 601 701	CAL 71 15B
HS 601 639	OK 72 11	HS 601 702	CAL 71 23B
HS 601 640	UOK 72 22	HS 601 703	CAL 71 45B
HS 601 641	MI 338	HS 601 704	CAL 71E 3B
HS 601 642	MI 317	HS 601 706	CAL 72 1B
HS 601 643	USC 74 10	HS 601 707	CAL 72 11B
HS 601 644	RAI 69	HS 601 708	CAL 72 13B
HS 601 645	UTAH 030 70	HS 601 710	BU 72 09
HS 601 646	MI 322	HS 601 711	HOU 50
HS 601 647	MI 340	HS 601 712	HOU 38
HS 601 648	7122B71168A	HS 601 713	HOU 14
HS 601 650	CAL 72 5B	HS 601 714	HOU 54
HS 601 651	CAL 72 14B	HS 601 715	BU 71 15
HS 601 652	CAL 72 17B	HS 601 716	MMF 73 25
HS 601 653	CAL 72 29B	HS 601 717	MMF 73 24
HS 601 656	UOK 72 24	HS 601 718	MMF 73 22
HS 601 657	USC 74 11	HS 601 719	SWRI 74 01

DOT-HS NUMBER-->CASE NUMBER

HS 601 802	SWRI 7310	HS 601 863	BU 73 14
HS 601 803	SWRI 72 44	HS 601 864	BU 73 15
HS 601 804	SWRI 7302	HS 601 865	UTAH 104 72
HS 601 805	SWRI 73 16	HS 601 866	BU 73 16
HS 601 806	SWRI 73 15	HS 601 867	OSU 37
HS 601 807	SWRI 7320	HS 601 867	SRI 8096 08
HS 601 808	SWRI 73 19	HS 601 868	UTAH 116 72
HS 601 809	SWRI 73 09	HS 601 870	MMF 73 12
HS 601 810	SWRI 73 25	HS 601 871	MMF 73 17
HS 601 811	SWRI 7328	HS 601 875	USC 74 25
HS 601 812	SWRI 73 08	HS 601 876	USC 74 32
HS 601 813	SWRI 7301	HS 601 877	USC 74 33
HS 601 814	SWRI 7313	HS 601 878	USC 74 34
HS 601 815	CAL 72 2B	HS 601 881	USC 74 37
HS 601 816	CAL 72 6B	HS 601 882	USC 74 38
HS 601 818	UTAH 093 72	HS 601 883	USC 74 39
HS 601 819	UTAH 092 72	HS 601 884	USC 74 40
HS 601 820	BU 71 14	HS 601 885	SRI 8096 09
HS 601 821	SRI 8096 01	HS 601 886	SRI 8096 10
HS 601 822	SWRI 73 07	HS 601 887	SRI 8096 11
HS 601 823	SWRI 7311	HS 601 888	BU 73 18
HS 601 824	SWRI 7317	HS 601 889	BU 73 19
HS 601 825	SWRI 73 22	HS 601 890	UTAH 107-72
HS 601 826	SWRI 73 23	HS 601 891	UOK 72 36
HS 601 827	SWRI 7324	HS 601 892	UOK 72 34
HS 601 828	SWRI 7326	HS 601 893	BU 73 13
HS 601 829	SWRI 7327	HS 601 894	UOK 72 39
HS 601 830	SWRI 7402	HS 601 895	PAI 130
HS 601 831	BU 72 06	HS 601 896	UTAH 105 72
HS 601 832	MIAMI72 304	HS 601 897	A203-00M633
HS 601 833	SWRI 7318	HS 601 898	AA 307
HS 601 834	RTI 095 68	HS 601 899	BU 73 03
HS 601 835	USC 74 27	HS 601 900	MIAMI72 310
HS 601 836	UTAH 089 72	HS 601 901	MIAMI72 313
HS 601 837	UTAH 091 72	HS 601 902	MI 72 325
HS 601 838	UTAH 094 72	HS 601 903	MI 72 326
HS 601 839	UTAH 096-72	HS 601 904	MI 72 327
HS 601 840	UTAH 97 720	HS 601 905	MIAMI73 331
HS 601 841	UTAH 098 72	HS 601 906	UTAH 166 74
HS 601 842	UTAH 100 72	HS 601 907	UTAH 167 74
HS 601 843	UTAH 101 72	HS 601 909	371 KY 9
HS 601 844	UTAH 102 72	HS 601 910	321 KY 12
HS 601 845	UTAH 103 72	HS 601 911	321 KY 13
HS 601 846	UTAH 72 106	HS 601 912	KY 321 15
HS 601 847	UTAH 160 73	HS 601 913	321 KY 17
HS 601 848	UTAH 161 73	HS 601 914	KY 321 22
HS 601 849	UTAH 163 74	HS 601 915	321 KY 23
HS 601 850	UTAH 164 74	HS 601 916	321 KY 24
HS 601 851	CAL 72 9B	HS 601 917	321 KY 25
HS 601 852	USC 74 28	HS 601 918	321 KY 26
HS 601 853	AA 347	HS 601 919	UTAH 117 72
HS 601 854	USC 74 26	HS 601 920	321 KY 27
HS 601 855	USC 74 29	HS 601 921	321 KY 28
HS 601 856	USC 74 30	HS 601 922	321 KY 30
HS 601 857	USC 74 31	HS 601 923	321 KY 32
HS 601 858	SRI 8096 05	HS 601 924	KY 321 33
HS 601 859	MIAMI72 305	HS 601 925	KY 321 34
HS 601 860	UTAH 165 74	HS 601 926	321 KY 37
HS 601 861	SRI 8096 06	HS 601 927	321 KY 38
HS 601 862	SRI 8096 07	HS 601 928	321 KY 40

DOT-HS NUMBER-->CASE NUMBER

HS 601 929	321 KY 41	HS 602 102	BU 74 03
HS 601 930	MMF 72 05	HS 602 103	BU 72 7
HS 601 931	OSU 16	HS 602 104	BU 72 01
HS 601 932	OSU 38	HS 602 105	MMF 72 2
HS 601 933	OSU 40	HS 602 106	MMF 72 6
HS 601 934	OSU 43	HS 602 107	MMF 72 8
HS 601 935	OSU 46	HS 602 108	MMF 72 09
HS 601 936	OSU 49	HS 602 109	MMF 72 11
HS 601 937	OSU 59	HS 602 110	MMF 72 12
HS 601 938	OSU 61	HS 602 111	MMF 73 06
HS 601 939	OSU 64	HS 602 112	MMF 73 13
HS 601 940	OSU 66	HS 602 113	MMF 73 14
HS 601 941	OSU 68	HS 602 114	ML 73 16
HS 601 942	321 KY 02	HS 602 115	MMF 73 18
HS 601 943	321 KY 03	HS 602 119	MMF 73 02
HS 601 944	321 KY 05	HS 602 123	UTAH 121 72
HS 601 945	AA 334	HS 602 124	UTAH 113 72
HS 601 946	321 KY 06	HS 602 125	UTAH 114 72
HS 601 948	321 KY 29	HS 602 126	UTAH 115 72
HS 601 949	BU 73 20	HS 602 127	BU 73 10
HS 601 950	MIAMI72 307	HS 602 128	BU 73 11
HS 601 951	MIAMI72 309	HS 602 129	BU 73 12
HS 601 952	MIAMI72 301	HS 602 130	BU 74 04
HS 601 953	MIAMI72 302	HS 602 132	BU 74 05
HS 601 954	MIAMI72 315	HS 602 133	UTAH 170 74
HS 601 955	MIAMI72 330	HS 602 134	UTAH 171 74
HS 601 956	MIAMI73 334	HS 602 135	UTAH 175 74
HS 601 957	MIAMI72 335	HS 602 136	MIAMI72 314
HS 601 958	MIAMI72 336	HS 602 137	MIAMI72 319
HS 601 959	BU 73 21	HS 602 138	MIAMI72 320
HS 601 960	UTAH 168 74	HS 602 139	MIAMI72 321
HS 601 961	SPI 8096 13	HS 602 140	MIAMI72 324
HS 601 991	UTAH 72 118	HS 602 141	MIAMI72 329
HS 601 998	MIAMI72 339	HS 602 142	BU 72 10
HS 601 999	MI 72 328	HS 602 143	BU 72 8
HS 602 000	UTAH 99 72	HS 602 155	UTAH 176 74
HS 602 001	321 KY 7	HS 602 156	AA 401
HS 602 002	321 KY 10	HS 602 158	CAL 74 95
HS 602 003	321 KY 11	HS 602 159	CAL 74 100
HS 602 004	321 KY 19	HS 602 160	CAL 74 111
HS 602 005	321 KY 21	HS 602 161	CAL 74 112
HS 602 006	321 KY 31	HS 602 162	CAL 74 114
HS 602 007	KY 35	HS 602 163	CB 74 115
HS 602 008	321 KY 36	HS 602 164	CAL 74 119
HS 602 016	CAL 72 07B	HS 602 165	CAL 74 119
HS 602 017	CAL 72 18B	HS 602 166	CAL 74 122
HS 602 018	CAL 72 20B	HS 602 167	CAL 74 124
HS 602 019	CAL 72 12B	HS 602 168	CAL 74 126
HS 602 020	UTAH 169 74	HS 602 169	CAL 74 127
HS 602 021	UTAH 172 74	HS 602 170	CAL 74 129
HS 602 025	UTAH 119 72	HS 602 171	CAL 74 130
HS 602 025	UTAH 173 74	HS 602 172	CAL 74 25
HS 602 029	UTAH 108 72	HS 602 173	CAL 74 116
HS 602 046	UTAH 72 109	HS 602 174	CAL 74 120
HS 602 047	UTAH 110-72	HS 602 175	CAL 74 123
HS 602 050	UTAH 111 72	HS 602 176	CAL 74 125
HS 602 065	UTAH 112 72	HS 602 177	CAL 74 128
HS 602 066	UTAH 120 72	HS 602 179	CAL 74 139
HS 602 076	UTAH 174 74	HS 602 180	CAL 74 143
HS 602 101	BU 72 13	HS 602 183	UTAH 181 74

DOT-HS NUMBER→→CASE NUMBER

HS 602 184	UTAH 182 74	HS 602 298	SRI 8096 27
HS 602 185	UTAH 177 74	HS 602 299	MIAMI 72 303
HS 602 186	UTAH 178 74	HS 602 300	MMF 72 04
HS 602 187	UTAH 179 74	HS 602 302	UTAH 72 124
HS 602 188	UTAH 180 74	HS 602 303	UTAH 72 125
HS 602 189	SRI 8096 15	HS 602 304	UTAH 72 126
HS 602 190	UTAH 184 74	HS 602 305	UTAH 72 127
HS 602 196	UTAH 72 122	HS 602 306	UTAH 72 128
HS 602 197	SRI 8096 12	HS 602 307	UTAH 129 72
HS 602 198	SRI 8096 16	HS 602 308	UTAH 130 72
HS 602 199	UTAH 183 74	HS 602 309	UTAH 131 73
HS 602 200	UTAH 186 74	HS 602 310	UTAH 73 123
HS 602 201	UTAH 189 74	HS 602 311	UTAH 133 73
HS 602 202	SRI 8096 17	HS 602 312	UTAH 134-73
HS 602 203	SRI 8096 19	HS 602 313	UTAH 73 135
HS 602 204	UTAH 162 74	HS 602 314	UTAH 136-73
HS 602 205	UTAH 185 74	HS 602 315	UTAH 73 137
HS 602 209	CAL 74 131	HS 602 316	UTAH 73 138
HS 602 210	CAL 74 132	HS 602 317	UTAH 139 73
HS 602 211	CAL 74 133	HS 602 318	UTAH 140 73
HS 602 212	CAL 74 136	HS 602 319	UTAH 141 73
HS 602 213	CAL 74 137	HS 602 320	UTAH 142 73
HS 602 218	SRI 8096 18	HS 602 321	UTAH 143 73
HS 602 228	CAL 74 150	HS 602 322	UTAH 73 144
HS 602 230	CAL 74 164	HS 602 323	UTAH 145 73
HS 602 231	CAL 74 166	HS 602 324	UTAH 73 146
HS 602 232	CAL 74 167	HS 602 325	UTAH 147 73
HS 602 233	AA 404	HS 602 326	UTAH 148 73
HS 602 234	UTAH 187 74	HS 602 327	UTAH 149 73
HS 602 235	UTAH 188 74	HS 602 328	UTAH 150 73
HS 602 236	UTAH 190 74	HS 602 329	UTAH 151 73
HS 602 242	UOK 73 47	HS 602 330	UTAH 73 152
HS 602 245	CAL 74 153	HS 602 331	UTAH 153 73
HS 602 246	CAL 74 154	HS 602 332	UTAH 154 73
HS 602 247	CAL 74 160	HS 602 333	UTAH 155 73
HS 602 248	CAL 74 161	HS 602 334	UTAH 156 73
HS 602 249	CAL 74 169	HS 602 335	UTAH 157 73
HS 602 250	CAL 74 171	HS 602 336	UTAH 158 73
HS 602 251	CAL 74 174	HS 602 337	UTAH 159 73
HS 602 252	CAL 74 182	HS 602 338	UOK 73 55
HS 602 253	UTAH 193 74	HS 602 339	AA 403
HS 602 254	UOK 73 48	HS 602 342	SRI 8096 26
HS 602 255	UTAH 123 72	HS 602 343	UOK 73 53
HS 602 256	CAL 74 145	HS 602 348	UOK 73 57
HS 602 258	CAL 74 172	HS 602 249	UOK 73 58
HS 602 259	CAL 74 175	HS 602 350	UOK 73 59
HS 602 260	CAL 74 181	HS 602 351	CAL 74 185
HS 602 261	CB 74 190	HS 602 352	CAL 74 186
HS 602 262	CAL 74 193	HS 602 353	CAL 74 189
HS 602 263	UTAH 191 74	HS 602 355	CAL 74 192
HS 602 264	UTAH 192 74	HS 602 356	CAL 74 196
HS 602 266	UOK 73 45	HS 602 357	CAL 74 197
HS 602 267	UOK 73 49	HS 602 358	CAL 74 198
HS 602 273	UOK 73 42	HS 602 360	CAL 74 200
HS 602 274	SRI 8096 23	HS 602 361	CAL 74 202
HS 602 275	SRI 8096 20	HS 602 363	SWRI 7412
HS 602 280	SRI 8096 24	HS 602 363	AA 402
HS 602 281	UOK 73 50	HS 602 364	SWRI 7413
HS 602 282	SRI 8096 22	HS 602 365	UOK 73 52
HS 602 297	SRI 8096 25	HS 602 366	UOK 73 54

DOT-HS NUMBER-->CASE NUMBER

HS 602 367	UOK 73 60
HS 602 369	CAL 74 108
HS 602 370	CAL 74 180
HS 602 371	CAL 74 188
HS 602 372	CAL 74 203
HS 602 373	CAL 74 205
HS 602 375	CAL 74 209
HS 602 376	CAL 74 210
HS 602 377	CAL 74 212
HS 602 378	CAL 74 213
HS 602 379	CAL 74 214
HS 602 380	CAL 74 215
HS 602 381	CAL 74 218
HS 602 382	CAL 74 222
HS 602 383	CAL 74 223
HS 602 384	CAL 74 224
HS 602 385	CAL 74 226
HS 602 386	CAL 74 230
HS 602 387	CAL 74 231
HS 602 388	CAL 74 232
HS 602 389	CAL 74 233
HS 602 390	CAL 74 234
HS 602 405	CAL 74 187
HS 602 406	CAL 74 195
HS 602 407	CAL 74 204
HS 602 408	CAL 74 211
HS 602 410	CAL 74 242
HS 602 411	CAL 74 245
HS 602 412	CAL 74 246
HS 602 414	CAL 74 250
HS 602 415	CAL 74 253
HS 801 301	TAC SP 74 4
113073	HSRI 1230

CASE NUMBER-->DOT-HS NUMBER

AA 100 (SPL)	HS 601 562	A 193-0UM619	HS 601 041
AA 101	HS 601 553	AA 184	HS 601 532
AA 105	HS 601 559	AA 186	HS 601 097
AA 114	HS 601 076	AA 188	HS 601 092
AA 115	HS 601 075	AA 190	HS 601 091
AA 116	HS 601 552	AA 191	HS 601 090
AA 119	HS 601 550	AA 192	HS 601 089
AA 120	HS 601 549	AA 193	HS 601 088
AA 121	HS 601 548	AA 194	HS 601 087
AA 122	HS 601 558	AA 195	HS 601 105
AA 125	HS 601 074	AA 196	HS 601 524
AA 126	HS 601 571	AA 197	HS 601 104
AA 129	HS 601 073	A199-0UM628	HS 601 396
AA 130	HS 601 072	AA 200	HS 601 523
AA 132	HS 601 071	AA 201	HS 601 563
AA 133	HS 601 070	AA 202	HS 601 103
AA 134	HS 601 069	A203-0UM633	HS 601 897
AA 136	HS 601 560	AA 204	HS 601 561
A138-0UM550	HS 601 068	A205-1UM634	HS 601 058
AA 139	HS 601 067	A206-0UM635	HS 601 057
AA 140	HS 601 521	AA 301	HS 601 574
AA 141	HS 601 066	AA 302	HS 601 454
AA 142	HS 601 062	A303-1UM660	HS 601 455
AA 143	HS 601 225	AA 304	HS 601 579
AA 144	HS 601 061	AA 305	HS 601 446
AA 145	HS 601 060	AA 307	HS 601 898
AA 146	HS 601 557	A308-1UM673	HS 601 519
AA 147	HS 601 522	AA 312	HS 601 456
AA 148	HS 601 059	AA 314	HS 601 457
AA 149	HS 601 065	AA 315	HS 601 520
AA 150	HS 601 064	AA 316	HS 601 570
AA 151	HS 601 063	AA 318	HS 601 399
A152-0UM563	HS 601 556	AA 319	HS 601 458
A153-0UM562	HS 601 226	A321-0UM706	HS 601 452
AA 154	HS 601 572	AA 322	HS 601 445
AA 155	HS 601 056	AA 323	HS 601 450
AA 156	HS 601 055	AA 324	HS 601 575
AA 157	HS 601 054	AA 325	HS 601 405
AA 159	HS 601 053	AA 326	HS 601 397
A160-0UM569	HS 601 555	AA 327	HS 601 401
AA 161	HS 601 052	A328-1UM723	HS 601 402
AA 162	HS 601 554	AA 329	HS 601 404
AA 163	HS 601 051	A330-1UM737	HS 601 580
A164-0UM583	HS 601 050	AA 331	HS 601 398
A165-1UM589	HS 601 049	A332-1UM738	HS 601 448
AA 166	HS 601 048	AA 333	HS 601 449
AA 168	HS 601 573	AA 334	HS 601 945
A169-1UM598	HS 601 047	AA 335	HS 601 453
AA 170	HS 601 064	AA 336	HS 601 400
AA 171	HS 601 437	AA 337	HS 601 451
A172-0UM601	HS 601 525	AA 338	HS 601 438
AA 173	HS 601 046	AA 340	HS 601 403
AA 174	HS 601 436	AA 341	HS 601 444
A175-0UM605	HS 601 040	AA 342	HS 601 442
AA 176	HS 601 039	A343-1UM760	HS 601 443
AA 177	HS 601 038	AA 344	HS 601 441
A178-0UM612	HS 601 045	AA 345	HS 601 415
A180-1UM616	HS 601 044	A346-1UM768	HS 601 577
A181-0UM618	HS 601 043	AA 347	HS 601 853
AA 182	HS 601 042	AA 348	HS 601 432

AA 349	HS 601 440	4ME25	HS 600 390
AA 350	HS 601 439	4ME26	HS 600 391
AA 351	HS 601 433	4ME27	HS 600 392
AA 352	HS 601 434	4ME28	HS 600 393
AA 353	HS 601 578	4ME29	HS 600 394
AA 354	HS 601 576	4ME30	HS 600 395
A355-1UM786	HS 601 435	4ME31	HS 600 396
AA 401	HS 602 156	4ME32	HS 600 397
AA 402	HS 602 363	4ME33	HS 600 398
AA 403	HS 602 339	4ME34	HS 600 399
AA 404	HS 602 233	4ME35	HS 600 400
MVD 1	HS 600 121	4ME36	HS 600 401
MVD 2	HS 600 122	4ME37	HS 600 402
MVD 3	HS 600 123	4ME38	HS 600 403
MVD 4	HS 600 124	4ME39	HS 600 404
MVD 5	HS 600 125	4ME40	HS 600 405
MVD 6	HS 600 126	4ME41	HS 600 469
MVD 8	HS 600 128	4ME42	HS 600 470
MVD 9	HS 600 129	4ME43	HS 600 471
MVD 10	HS 600 130	4ME44	HS 600 472
MVD 11	HS 600 131	4ME45	HS 600 473
MVD 14	HS 600 134	4ME46	HS 600 474
MVD 15	HS 600 135	4ME47	HS 600 475
MVD 16	HS 600 136	4ME48	HS 600 476
MVD 17	HS 600 137	4ME49	HS 600 477
MVD 18	HS 600 138	4ME50	HS 600 478
MVD 19	HS 600 139	BU 69 10	HS 600 479
MVD 20	HS 600 047	BU 69 11	HS 600 480
MVD 21	HS 600 046	BU 69 12	HS 600 481
MVD 22	HS 600 057	BU 69 13	HS 600 482
MVD 23	HS 600 051	BU 69 14	HS 600 784
MVD 24	HS 600 077	BU 69 15	HS 600 749
MVD 25	HS 600 078	BU 69 16	HS 600 750
MVD 26	HS 600 079	BU 69 17	HS 600 751
MVD 27	HS 600 080	BU 69 18	HS 600 648
MVD 28	HS 600 140	BU 69 19	HS 600 777
MVD 29	HS 600 081	BU 69 20	HS 600 752
MVD 30	HS 600 082	BU 69 21	HS 600 597
4ME1	HS 600 271	BU 69 22	HS 600 598
4ME2	HS 600 272	BU 69 23	HS 600 649
4ME3	HS 600 273	BU 69 24	HS 600 753
4ME4	HS 600 274	BU 69 25	HS 601 193
4ME5	HS 600 275	BU 69 26	HS 600 599
4ME6	HS 600 276	BU 70 5	HS 600 483
4ME7	HS 600 277	BU 70 06	HS 600 676
4ME8	HS 600 278	BU 70 07	HS 600 484
4ME9	HS 600 279	BU 70 8	HS 600 485
4ME10	HS 600 280	BU 70 10	HS 600 677
4ME12	HS 600 378	BU 70 11	HS 600 809
4ME13	HS 600 379	BU 70 12	HS 600 810
4ME15	HS 600 380	BU 70 13	HS 600 811
4ME16	HS 600 381	BU 70 14	HS 601 194
4ME17	HS 600 382	BU 70 15	HS 600 812
4ME18	HS 600 383	BU 70 16	HS 601 195
4ME19	HS 600 384	BU 70 17	HS 600 486
4ME20	HS 600 385	BU 70 18	HS 600 487
4ME21	HS 600 386	BU 70 19	HS 601 134
4ME22	HS 600 387	BU 70 20	HS 600 813
4ME23	HS 600 388	BU 70 21	HS 600 814
4ME24	HS 600 389	BU 70 22	HS 600 815

CASE NUMBER→→DOT-HS NUMBER

BU 70 23	HS 601 201	CAL-70-37B	HS 600 178
BU 70 24	HS 601 203	CAL-70-39B	HS 600 180
BU 70 25	HS 600 816	CAL-70-40B	HS 600 181
BU 70 26	HS 601 137	CAL-70-41B	HS 600 182
BU 70 27	HS 600 817	CAL-70-42B	HS 600 184
BU 70 28	HS 600 318	CAL-70-44B	HS 600 298
BU 70 29	HS 601 202	CAL-70-46B	HS 600 187
BU 70 30	HS 601 192	CAL-70-47B	HS 600 188
BU 71 1	HS 600 862	CAL-70-50B	HS 600 189
BU 71 2	HS 601 313	CAL 70 53B	HS 600 289
BU 71 3	HS 601 607	CAL-70-56B	HS 600 290
BU 71 4	HS 601 603	CAL-70-57B	HS 600 291
BU 71 5	HS 601 312	CAL-70-58B	HS 600 292
BU 71 6	HS 601 608	CAL-70-59B	HS 600 293
BU 71 7	HS 600 781	CAL-70-60B	HS 600 294
BU 71 8	HS 600 782	CAL-70-62B	HS 600 296
BU 71 9	HS 600 863	CAL-70-63B	HS 600 408
BU 71 10	HS 600 783	CAL-70-64B	HS 600 334
BU 71 13	HS 601 598	CAL-70-65B	HS 600 297
BU 71 14	HS 601 820	CAL-70-66B	HS 600 335
BU 71 15	HS 601 715	CAL-70-67B	HS 600 409
BU 72 01	HS 602 104	CAL-70-68B	HS 600 298
BU 72 06	HS 601 831	CAL-70-69B	HS 600 410
BU 72 7	HS 602 103	CAL-70-70B	HS 600 411
BU 72 8	HS 602 143	CAL-70-71B	HS 600 412
BU 72 09	HS 601 710	CAL-70-72B	HS 600 413
BU 72 10	HS 602 142	CAL-70-73B	HS 600 414
BU 72 11	HS 601 316	CAL-70-74B	HS 600 415
BU 72 12	HS 601 601	CAL-70-95B	HS 600 417
BU 72 13	HS 602 101	CAL 70 79B	HS 600 678
BU 72 14	HS 601 314	CAL 70 94B	HS 600 623
BU 73 02	HS 601 310	CAL-70-95B	HS 601 037
BU 73 03	HS 601 899	CAL-70-111B	HS 600 985
BU 73 04	HS 3103595	CAL-70-115B	HS 601 031
BU 73 05	HS 601 673	CAL 70 114B	HS 600 720
BU 73 06	HS 601 672	CAL 71 3B	HS 600 721
BU 73 07	HS 3103595	CAL 71 4B	HS 601 119
BU 73 10	HS 602 127	CAL 71 5B	HS 601 236
BU 73 11	HS 602 128	CAL 71 6B	HS 600 722
BU 73 12	HS 602 129	CAL 71 7B	HS 601 025
BU 73 13	HS 601 893	CAL 71 8B	HS 600 864
BU 73 14	HS 601 863	CAL 71 9B	HS 600 865
BU 73 15	HS 601 864	CAL 71 10B	HS 601 024
BU 73 16	HS 601 866	CAL 71 11B	HS 600 866
BU 73 18	HS 601 888	CAL 71 12B	HS 600 723
BU 73 19	HS 601 889	CAL 71 13B	HS 600 724
BU 73 20	HS 601 949	CAL 71 14B	HS 600 725
BU 73 21	HS 601 959	CAL 71 15B	HS 601 701
BU 74 03	HS 602 102	CAL 71 16B	HS 600 726
BU 74 04	HS 602 130	CAL 71 17B	HS 601 234
BU 74 05	HS 602 132	CAL 71 19B	HS 601 308
CAL-70-25B	HS 600 167	CAL 71 20B	HS 600 867
CAL-70-27B	HS 600 168	7122B71168M	HS 601 648
CAL-70-28B	HS 600 169	CAL 71 23B	HS 601 702
CAL-70-30B	HS 600 728	CAL 71 24B	HS 601 494
CAL-70-31B	HS 600 172	CAL 71 25B	HS 600 986
CAL-70-32B	HS 600 173	CAL 71 26B	HS 601 121
CAL-70-34B	HS 600 175	CAL 71 27B	HS 600 727
CAL-70-35B	HS 600 176	CAL 71 28B	HS 601 245
CAL-70-36B	HS 600 177	CAL 71 29B	HS 601 034

CASE NUMBER→→DOT-HS NUMBER

CAL 71 30B	HS 600 728	CAL 72 9B	HS 601 851
CAL 71 31B	HS 600 868	CAL 72 11B	HS 601 707
CAL 71 33B	HS 601 036	CAL 72 12B	HS 602 019
CAL 71 34B	HS 601 122	CAL 72 13B	HS 601 708
CAL 71 35B	HS 600 869	CAL 72 14B	HS 601 651
CAL 71 36B	HS 601 700	CAL 72 15B	HS 601 341
CAL 71 37B	HS 601 243	CAL 72 16B	HS 601 342
CAL 71 38B	HS 600 870	CAL 72 17B	HS 601 652
CAL 71 39B	HS 600 871	CAL 72 18B	HS 602 017
CAL 71 40B	HS 600 872	CAL 72 19B	HS 601 307
CAL 71 41B	HS 601 120	CAL 72 20B	HS 602 018
CAL 71 42B	HS 601 232	CAL 72 22B	HS 601 286
CAL 71 43B	HS 600 873	CAL 72 23B	HS 601 366
CAL 71 44B	HS 601 242	CAL 72 24B	HS 601 365
CAL 71 45B	HS 601 703	CAL 72 25B	HS 601 368
CAL 71 47B	HS 601 237	CAL 72 26B	HS 601 416
CAL 71 48B	HS 600 987	CAL 72 27B	HS 601 369
CAL 71 49B	HS 600 874	CB7228CA188	HS 601 364
CAL 71 50B	HS 600 929	CAL 72 29B	HS 601 653
CAL 71 51B	HS 601 026	CAL 72 31B	HS 601 367
CAL 71 52B	HS 601 118	CAL 72 32B	HS 601 417
CAL 71 53B	HS 600 930	CAL 72 33B	HS 601 425
CAL 71 55B	HS 601 235	CAL 72 34B	HS 601 417
CAL 71 56B	HS 600 913	CAL 72 35B	HS 601 418
CAL 71 57B	HS 601 032	CAL 72 36B	HS 601 465
CAL 71 58B	HS 601 491	CAL 72 37B	HS 601 466
CAL 71 76B	HS 600 489	CAL 72 40B	HS 601 467
CAL 71 77B	HS 600 600	CAL 72 40B	HS 601 468
CAL 71 81B	HS 600 490	CAL 72 42B	HS 601 469
CAL 71 82B	HS 600 491	CAL 72 44B	HS 601 470
CAL 71 84B	HS 600 492	CAL 72 45B	HS 601 471
CAL 71 86B	HS 600 493	CAL 72 48B	HS 601 472
CAL 71 87B	HS 600 571	CAL 72 50B	HS 601 473
CAL 71 88B	HS 600 572	CAL 74 25	HS 602 172
CAL 71 90B	HS 600 573	CAL 74 95	HS 602 158
CAL 71 91B	HS 600 574	CAL 74 100	HS 602 159
CAL 71 92B	HS 600 575	CAL 74 108	HS 602 369
CAL 71 93B	HS 600 679	CAL 74 111	HS 602 160
CAL 71 96B	HS 600 576	CAL 74 112	HS 602 161
CAL 71 97B	HS 600 577	CAL 74 114	HS 602 162
CAL 71 100B	HS 600 578	CB 74 115	HS 602 163
CAL 71 101B	HS 600 680	CAL 74 116	HS 602 173
CAL 71 103B	HS 600 579	CAL 74 118	HS 602 164
CAL 71 104B	HS 600 601	CAL 74 119	HS 602 165
CAL 71 105B	HS 600 580	CAL 74 120	HS 602 174
CAL 71 106B	HS 600 602	CAL 74 122	HS 602 166
CAL 71 108B	HS 600 581	CAL 74 123	HS 602 175
CAL 71 109B	HS 600 582	CAL 74 124	HS 602 167
CAL 71 110B	HS 600 603	CAL 74 125	HS 602 176
CAL 71 113B	HS 600 583	CAL 74 126	HS 602 168
CAL 71E 1B	HS 601 370	CAL 74 127	HS 602 169
CAL 71F 3B	HS 601 704	CAL 74 128	HS 602 177
CAL 72 1E	HS 601 706	CAL 74 129	HS 602 170
CAL 72 2B	HS 601 815	CAL 74 130	HS 602 171
CAL 72 3B	HS 601 492	CAL 74 131	HS 602 209
CAL 72 04B	HS 601 661	CAL 74 132	HS 602 210
CAL 72 5B	HS 601 650	CAL 74 133	HS 602 211
CAL 72 6B	HS 601 816	CAL 74 136	HS 602 212
CAL 72 07B	HS 602 016	CAL 74 137	HS 602 213
CAL 72 8B	HS 601 306	CAL 74 139	HS 602 179

CASE NUMBER→→DOT-HS NUMBER

CAL 74 143	HS 602 180	GIT 49	HS 600 005
CAL 74 145	HS 602 256	GIT 50	HS 600 062
CAL 74 150	HS 602 228	GIT 51	HS 600 021
CAL 74 153	HS 602 245	GIT 52	HS 600 061
CAL 74 154	HS 602 246	GIT 53	HS 600 018
CAL 74 160	HS 602 247	GIT 54	HS 600 003
CAL 74 161	HS 602 248	GIT 55	HS 600 019
CAL 74 164	HS 602 230	GIT 56	HS 600 007
CAL 74 166	HS 602 231	GIT 57	HS 600 069
CAL 74 167	HS 602 232	GIT 58	HS 600 068
CAL 74 169	HS 602 249	GIT 59	HS 600 067
CAL 74 171	HS 602 250	GIT 60	HS 600 029
CAL 74 172	HS 602 258	GIT 61	HS 600 030
CAL 74 174	HS 602 251	GIT 62	HS 600 027
CAL 74 175	HS 602 259	GIT 63	HS 600 084
CAL 74 180	HS 602 370	GIT 64	HS 600 071
CAL 74 181	HS 602 260	GIT 65	HS 600 073
CAL 74 182	HS 602 252	GIT 66	HS 600 085
CAL 74 185	HS 602 351	GIT 67	HS 600 146
CAL 74 186	HS 602 352	GIT 68	HS 600 192
CAL 74 187	HS 602 405	GIT 69	HS 600 147
CAL 74 188	HS 602 371	GIT 70	HS 600 193
CAL 74 189	HS 602 353	GIT 71	HS 600 299
CB 74 190	HS 602 261	GIT 72	HS 600 418
CAL 74 192	HS 602 355	GIT 73	HS 600 604
CAL 74 193	HS 602 262	GIT 74	HS 600 419
CAL 74 195	HS 602 406	GIT 76	HS 600 421
CAL 74 196	HS 602 356	GIT 77	HS 600 422
CAL 74 197	HS 602 357	GIT 78	HS 600 494
CAL 74 198	HS 602 358	GIT 79	HS 600 423
CAL 74 200	HS 602 360	GIT 80	HS 600 495
CAL 74 202	HS 602 361	GIT 81	HS 600 496
CAL 74 203	HS 602 372	GIT 82	HS 600 497
CAL 74 204	HS 602 407	GIT 83	HS 600 498
CAL 74 205	HS 602 373	GIT 84	HS 600 605
CAL 74 209	HS 602 375	GIT 85	HS 600 499
CAL 74 210	HS 602 376	GIT 96	HS 600 500
CAL 74 211	HS 602 408	GIT 260 87	HS 600 681
CAL 74 212	HS 602 377	GIT 88	HS 600 501
CAL 74 213	HS 602 378	GIT 89	HS 600 606
CAL 74 214	HS 602 379	GIT 90	HS 600 682
CAL 74 215	HS 602 380	GIT 91	HS 600 624
CAL 74 218	HS 602 381	GIT 92	HS 600 625
CAL 74 222	HS 602 382	GIT 93	HS 600 626
CAL 74 223	HS 602 383	GIT 94	HS 600 627
CAL 74 224	HS 602 384	GIT 95	HS 600 683
CAL 74 226	HS 602 385	GIT 96	HS 600 819
CAL 74 230	HS 602 386	GIT 97	HS 600 684
CAL 74 231	HS 602 387	GIT 98	HS 600 820
CAL 74 232	HS 602 388	GIT 99	HS 601 096
CAL 74 233	HS 602 389	GIT 260 101	HS 601 095
CAL 74 234	HS 602 390	GIT 260 102	HS 601 094
CAL 74 242	HS 602 410	GIT 260 103	HS 601 093
CAL 74 245	HS 602 411	GIT 260 104	HS 601 086
CAL 74 246	HS 602 412	GIT 260 105	HS 601 085
CAL 74 250	HS 602 414	GIT 260 106	HS 601 083
CAL 74 253	HS 602 415	GIT 260 107	HS 601 082
GIT 46	HS 600 017	GIT 260 108	HS 601 081
GIT 47	HS 600 009	GIT 109	HS 601 345
GIT 48	HS 600 014	GIT 260 110	HS 601 080

CASE NUMBER-->DOT-HS NUMBER

GIT 260 111	HS 601 079	MI-697026	HS 600 225
GIT 260 112	HS 601 078	MI-697027	HS 600 226
GIT 260 113	HS 601 147	MI-697029	HS 600 227
GIT 260 114	HS 601 344	MI-697031	HS 600 228
GIT 260 115	HS 601 294	MI-697032	HS 600 229
GIT 260 116	HS 601 669	MI-697033	HS 600 230
GIT 260 117	HS 601 496	MI-697034	HS 600 231
GIT 260 118	HS 601 495	MI-697039	HS 600 232
GIT 260 119	HS 601 295	MI-697041	HS 600 233
GIT 260 121	HS 601 349	MI 697101	HS 600 502
GIT 260 122	HS 601 363	MI 697102	HS 600 503
HSRI 1230	113073	MI 697103	HS 600 628
MCR 69 1	HS 600 074	MI 697104	HS 600 629
MCR 69 2	HS 600 064	MIAMI-105	HS 600 431
MCR 69 3	HS 600 066	MI 697107	HS 600 504
MCR 69 4	HS 600 086	MI 697109	HS 600 505
MCR 69 5	HS 600 194	MI 697110	HS 500 506
MCR 69 6	HS 600 087	MI 697112	HS 600 507
MCR 69 7	HS 600 195	MI 697103	HS 600 508
MCR 69 8	HS 600 088	MI 697114	HS 600 630
MCR 69 9	HS 600 196	MI 697117	HS 600 509
MCR 69 12	HS 600 139	MI 697118	HS 600 510
MCR 69 13	HS 600 200	MI 697119	HS 600 511
MCR 69 14	HS 600 201	MI 697120	HS 600 631
MCR 69 15	HS 600 232	MIAMI-121	HS 600 822
MCR 70 1	HS 600 300	MI 697122	HS 600 632
MCR 70 2	HS 600 203	MIAMI71 123	HS 600 512
MCR 70 3	HS 600 301	MI 697124	HS 600 513
MCR 70 5	HS 600 303	MI 697125	HS 600 514
MCR 70 6	HS 600 204	MI 697126	HS 600 515
MCR 70 7	HS 600 205	MI 697127	HS 600 633
MCR 70 8	HS 600 424	MIAMI71 128	HS 600 516
MCR 70 9	HS 600 425	MIAMI71 129	HS 600 517
VDP 70 1	HS 600 584	MI 697130	HS 600 518
VDP 70 2	HS 600 585	MIAMI72 201	HS 600 823
VDP 70 5	HS 600 586	MIAMI72 202	HS 601 114
VDP 70 6	HS 600 587	MIAMI72 203	HS 601 115
VDP 70 7	HS 600 588	MIAMI72 204	HS 601 116
VDP 70 11	HS 600 589	MIAMI72 206	HS 600 824
VDP 70 12	HS 600 590	MIAMI72 207	HS 600 825
VDP 70 17	HS 600 591	MIAMI72 208	HS 601 077
TAC SP 74 4	HS 801 301	MIAMI72 209	HS 600 826
MI-697001	HS 600 206	MIAMI72 211	HS 601 142
MI-697002	HS 600 050	MIAMI72 212	HS 601 143
MI-697003	HS 600 089	MIAMI72 214	HS 601 148
MI-697004	HS 600 090	MIAMI72-215	HS 601 144
MI-697005	HS 600 212	MIAMI72 216	HS 601 170
MI-697006	HS 600 213	MIAMI72 217	HS 601 178
MI-697007	HS 600 214	MIAMI72 218	HS 601 181
MI-697008	HS 600 091	MIAMI72 219	HS 600 733
MI-697009	HS 600 215	MIAMI72 220	HS 600 827
MI-697010	HS 600 216	MIAMI72 221	HS 601 179
MI-697011	HS 600 217	MIAMI72 222	HS 601 184
MI-697018	HS 600 219	MIAMI72 223	HS 601 186
MI-697019	HS 600 220	MIAMI72 224	HS 601 185
MI-697020	HS 600 221	MIAMI72 225	HS 601 175
MI-697021	HS 600 222	MIAMI72 226	HS 601 183
MI-697022	HS 600 092	MIAMI72 227	HS 601 174
MI-697023	HS 600 223	MIAMI72 228	HS 600 828
MI 697025	HS 600 148	MIAMI72 229	HS 601 176

CASE NUMBER-->DOT-HS NUMBER

MIAMI72 230	HS 601 173	MMF 69 56	HS 601 513
MIAMI72 231	HS 601 188	MMF 69 57	HS 601 514
MIAMI72 232	HS 601 172	MMF-69-58	HS 600 208
MIAMI72 233	HS 601 180	MMF-69-59	HS 600 428
MIAMI72 234	HS 601 182	MMF-70-1	HS 601 196
MIAMI72 235	HS 601 189	MMF-70-2	HS 601 198
MIAMI72 236	HS 601 145	MMF 70 3	HS 600 338
MIAMI72 237	HS 601 177	MMF-70-04	HS 600 209
MIAMI72 238	HS 601 171	MMF-70-05	HS 600 210
MIAMI72 239	HS 601 190	MMF-70-06	HS 600 339
MIAMI72 240	HS 601 191	MMF-70-07	HS 600 211
MIAMI72 301	HS 601 952	MMF-70-08	HS 600 340
MIAMI72 302	HS 601 953	MMF-70-10	HS 600 430
MIAMI72 303	HS 602 299	MMF-70-11	HS 601 197
MIAMI72 304	HS 601 832	MMF-70-12	HS 601 485
MIAMI72 305	HS 601 859	MMF 70 13	HS 601 617
MIAMI72 306	HS 601 303	MMF-70-14	HS 601 584
MIAMI72 307	HS 601 950	MMF-70-15	HS 601 618
MIAMI72 309	HS 601 951	MMF-70-16	HS 601 199
MIAMI72 310	HS 601 900	MMF 70 17	HS 601 615
MI 311	HS 601 634	MMF-70-18	HS 601 200
MI 312	HS 601 633	MMF-70-19	HS 601 582
MIAMI72 313	HS 601 901	MMF 70 20	HS 601 616
MIAMI72 314	HS 602 136	MMF 71 1	HS 601 621
MIAMI72 315	HS 601 954	MMF 71 2	HS 601 620
MI 316	HS 601 665	MMF 71 3	HS 601 460
MI 317	HS 601 642	MMF 71 4	HS 601 547
MI 318	HS 601 668	MMF 71 5	HS 601 619
MIAMI72 319	HS 602 137	MMF 71 6	HS 600 875
MIAMI72 320	HS 602 138	MMF 71 7	HS 601 461
MIAMI72 321	HS 602 139	MMF 71 8	HS 600 933
MI 322	HS 601 646	MMF 71 9	HS 600 934
MI 323	HS 601 667	MMF 71 10	HS 601 583
MIAMI72 324	HS 602 140	MMF 71 11	HS 601 586
MI 72 325	HS 601 902	MMF 71 12	HS 601 462
MI 72 326	HS 601 903	MMF 71 13	HS 600 876
MI 72 327	HS 601 904	MMF 71 14	HS 601 614
MI 72 328	HS 601 999	MMF 71 15	HS 601 581
MIAMI72 329	HS 602 141	MMF 71 16	HS 601 487
MIAMI72 330	HS 601 955	MMF 71 17	HS 601 585
MIAMI73 331	HS 601 905	MMF 71 18	HS 601 590
MI 333	HS 601 664	MMF 71 19	HS 600 935
MIAMI73 334	HS 601 956	MMF 71 20	HS 601 595
MIAMI72 335	HS 601 957	MMF 71 22	HS 600 877
MIAMI72 336	HS 601 958	MMF 71 23	HS 600 878
MI 337	HS 601 635	MMF 71 24	HS 601 538
MI 338	HS 601 641	MMF 71 25	HS 601 139
MIAMI72 339	HS 601 998	MMF 71 26	HS 601 587
MI 340	HS 601 647	MMF 71 27	HS 601 141
MMF 69 35	HS 601 511	MMF 71 28	HS 601 594
MMF-69-38	HS 600 206	MMF 71 29	HS 601 596
MMF-69-39	HS 600 336	MMF 71 30	HS 601 140
MMF 69 44	HS 601 512	MMF 71 31	HS 601 488
MMF-69-46	HS 600 426	MMF 71 32	HS 601 589
MMF 69 47	HS 601 515	MMF 72 01	HS 601 695
MMF 69 48	HS 601 516	MMF 72 2	HS 602 105
MMF-69-49	HS 600 427	MMF 72 3	HS 601 489
MMF 69 53	HS 601 517	MMF 72 04	HS 602 300
MMF-69-54	HS 600 207	MMF 72 05	HS 601 930
MMF-69-55	HS 600 337	MMF 72 6	HS 602 106

CASE NUMBER-->DOT-HS NUMBER

MMF 72 7	HS 601 490	UNM 17	HS 600 243
MMF 72 8	HS 602 107	UNM 19	HS 600 305
MMF 72 09	HS 602 108	UNM 20	HS 600 306
MMF 72 10	HS 601 427	UNM 21	HS 600 307
MMF 72 11	HS 602 109	UNM 22	HS 600 308
MMF 72 12	HS 602 110	UNM 23	HS 600 309
MMF 72 13	HS 601 600	UNM 24	HS 600 310
MMF 72 14	HS 601 597	UNM 26	HS 600 341
MMF 72 15	HS 601 287	UNM 27	HS 600 312
MMF 72 16	HS 601 426	UNM 29	HS 600 342
MMF 72 17	HS 601 599	UNM 30	HS 600 314
MMF 72 18	HS 601 410	UNM 31	HS 600 520
MMF 72 19	HS 601 592	UNM 32	HS 600 433
MMF 72 20	HS 601 412	UNM 33	HS 600 434
MMF 72 22	HS 601 696	UNM 34	HS 600 435
MMF 72 23	HS 601 697	UNM 35	HS 600 521
MMF 72 24	HS 601 288	UNM 36	HS 600 522
MMF 72 25	HS 601 289	UNM 37	HS 600 523
MMF 72 26	HS 601 694	UNM 38	HS 600 524
MMF 72 27	HS 601 593	UNM 39	HS 600 436
MMF 72 28	HS 601 659	UNM 40	HS 600 525
MMF 72 29	HS 601 660	UNM 41	HS 600 526
MMF 72 30	HS 601 485	UNM 42	HS 600 527
MMF 72 31	HS 601 413	UNM 43	HS 600 528
MMF 72 32	HS 601 693	UNM 44	HS 600 529
MMF 72 33	HS 601 414	UNM 45	HS 600 530
MMF 73 1	HS 601 411	UNM 46	HS 600 592
MMF 73 02	HS 602 119	UNM 47	HS 600 634
MMF 73 4	HS 601 674	UNM 48	HS 600 635
MMF 73 05	HS 601 463	UNM 49	HS 600 636
MMF 73 06	HS 602 111	UNM 50	HS 600 637
MMF 73 7	HS 601 613	UNM 51	HS 600 638
MMF 73 8	HS 601 612	UNM 52	HS 600 593
MMF 73 10	HS 601 609	UNM 53	HS 600 754
MMF 73 11	HS 601 675	UNM 54	HS 600 650
MMF 73 12	HS 601 870	UNM 55	HS 600 685
MMF 73 13	HS 602 112	UNM 56 1	HS 600 686
MMF 73 14	HS 602 113	UNM 57	HS 600 687
ML 73 16	HS 602 114	UNM 58	HS 600 688
MMF 73 17	HS 601 871	UNM 59	HS 600 689
MMF 73 18	HS 602 115	UNM 60	HS 600 690
MMF 73 22	HS 601 718	UNM 61	HS 600 879
MMF 73 24	HS 601 717	UNM 62	HS 600 651
MMF 73 25	HS 601 716	UNM 63	HS 600 880
UNM 01	HS 600 037	UNM 64	HS 600 881
UNM 02	HS 600 093	UNM 65	HS 600 882
UNM 03	HS 600 094	UNM 66	HS 600 789
UNM 04	HS 600 095	UNM 67	HS 600 829
UNM 05	HS 600 235	UNM 70	HS 600 923
UNM 06	HS 600 096	UNM 71	HS 600 773
UNM 07	HS 600 097	UNM 72	HS 600 830
UNM 08	HS 600 149	UNM 73	HS 600 774
UNM 09	HS 600 150	UNM 74	HS 600 831
UNM 10	HS 600 236	UNM 75	HS 600 832
UNM 11	HS 600 237	UNM 76	HS 600 883
UNM 12	HS 600 238	UNM 77	HS 600 833
UNM 13	HS 600 239	UNM 78	HS 600 834
UNM 14	HS 600 240	UNM 79	HS 600 914
UNM 15	HS 600 241	UNM 80	HS 600 915
UNM 16	HS 600 242	UNM 81	HS 600 835

CASE NUMBER→→DOT-HS NUMBER

UNM 82	HS 600 791	OSU 62	HS 601 679
UNM 83	HS 600 836	OSU 64	HS 601 939
UNM 84	HS 600 837	OSU 66	HS 601 940
UNM 85	HS 600 838	OSU 68	HS 601 941
UNM 086	HS 601 473	RTI 1	HS 600 038
UNM 88	HS 601 254	RTI 2	HS 600 015
UNM 89	HS 601 309	PTI 4	HS 600 016
UNM 90	HS 601 482	RTI 5	HS 600 008
UNM 91	HS 601 484	PTI 6	HS 600 013
UNM 92	HS 601 483	RTI 7	HS 600 010
UNM 93	HS 601 481	RTI 8	HS 600 065
UNM 94	HS 601 477	PTI 9	HS 600 060
UNM 95	HS 601 479	RTI 10	HS 600 099
UNM 96	HS 601 480	PTI 11	HS 600 100
OSU 1	HS 600 437	PTI 13	HS 600 101
OSU 2	HS 600 035	RTI 14	HS 600 102
OSU 3	HS 600 039	PTI 16	HS 600 244
OSU 4	HS 600 004	PTI 17	HS 600 151
OSU 5	HS 600 002	PTI 18	HS 600 245
OSU 7	HS 600 026	PTI 19	HS 600 440
OSU 8	HS 600 025	PTI 20	HS 600 316
OSU 9	HS 600 438	PTI 21	HS 600 317
OSU 11	HS 601 262	RTI 23	HS 600 319
OSU 12	HS 600 439	RTI 24	HS 600 441
OSU 13	HS 601 278	PTI 25	HS 600 343
OSU 14	HS 601 263	PTI 26	HS 600 639
OSU 15	HS 601 277	PTI 27	HS 600 320
OSU 16	HS 601 931	RTI 28	HS 600 344
OSU 17	HS 601 264	PTI 29	HS 600 321
OSU 18	HS 600 531	PTI 30	HS 600 322
OSU 19	HS 601 265	PTI 31	HS 600 607
OSU 20	HS 601 266	PTI 32	HS 600 442
OSU 21	HS 600 532	PTI 34	HS 600 608
OSU 22	HS 601 267	RTI 35	HS 600 640
OSU 23	HS 601 268	PTI 36	HS 600 609
OSU 24	HS 601 269	PTI 37	HS 600 641
OSU 25	HS 601 270	PTI 38	HS 600 610
OSU 27	HS 601 271	PTI 39	HS 600 611
OSU 28	HS 601 272	PTI 40	HS 600 691
OSU 29	HS 601 276	RTI 41	HS 600 642
OSU 30	HS 601 256	RTI 42	HS 600 643
OSU 31	HS 601 257	PTI 43	HS 600 612
OSU 32	HS 601 274	RTI 44	HS 600 644
OSU 35	HS 601 258	RTI 45	HS 600 645
OSU 37	HS 601 867	PTI 46	HS 600 646
OSU 38	HS 601 932	PTI 47	HS 600 647
OSU 39	HS 601 259	PTI 48	HS 601 001
OSU 40	HS 601 933	RTI 095 49	HS 601 002
OSU 43	HS 601 934	PTI 50	HS 600 652
OSU 44	HS 600 533	RTI 095 52	HS 601 112
OSU 45	HS 600 535	RTI 53	HS 600 692
OSU 46	HS 601 935	RTI 095 54	HS 601 106
OSU 47	HS 601 260	RTI 55	HS 600 653
OSU 48	HS 600 534	RTI 095 56	HS 601 107
OSU 49	HS 601 936	PTI 095 57	HS 601 108
OSU 51	HS 601 273	RTI 095 58	HS 601 109
OSU 53	HS 601 261	RTI 095 59	HS 601 110
OSU 56	HS 601 275	RTI 095 60	HS 601 111
OSU 59	HS 601 937	RTI 095 61	HS 601 129
OSU 61	HS 601 938	RTI 095 62	HS 601 128

CASE NUMBER→→DOT-HS NUMBER

PTI 095 63	HS 601 146	RAI 116	HS 601 240
RTI 095 64	HS 601 127	RAI 117	HS 600 885
RTI 095 65	HS 601 126	RAI 118	HS 600 663
RTI 095 66	HS 601 125	RAI 119	HS 600 931
RTI 095 68	HS 601 834	RAI 120	HS 600 843
RTI 095 69	HS 601 123	RAI 121	HS 601 378
RTI 095 70	HS 601 149	RAI 122	HS 601 376
RTI 095 71	HS 601 150	RAI 123	HS 601 371
RTI 095 72	HS 601 151	RAI 124	HS 601 375
RTI 095 73	HS 601 152	RAI 125	HS 601 373
RTI 095 74	HS 601 153	RAI 126	HS 601 374
RTI 095 75	HS 601 224	RAI 127	HS 601 003
RTI 095 76	HS 601 223	RAI 128	HS 601 377
RTI 095 77	HS 601 299	RAI 130	HS 601 895
RTI 095 78	HS 601 228	RAI 131	HS 600 886
RTI 095 79	HS 601 227	RAI 132	HS 600 949
RTI 095 80	HS 601 220	RAI 133	HS 600 938
RTI 095 81	HS 601 219	RAI 134	HS 601 004
RTI 095 82	HS 601 221	RAI 137	HS 601 005
RTI 095 83	HS 601 222	RAI 138	HS 600 932
PAI 33	HS 600 536	RAI 139	HS 600 937
PAI 43	HS 600 734	RAI 146	HS 601 630
PAI 46	HS 600 775	RAI 148	HS 601 627
PAI 65	HS 600 792	RAI 151	HS 601 628
PAI 67	HS 600 613	RAF 153	HS 601 629
PAI 69	HS 601 644	USC 71 1	HS 600 906
PAI 71	HS 601 372	USC 71 2	HS 600 907
PAI 74	HS 600 537	USC 71 3	HS 600 854
PAI 77	HS 600 538	USC 71 4	HS 600 855
PAI 81	HS 600 793	USC 71 5	HS 600 908
PAI 82	HS 600 794	USC 71 6	HS 600 856
PAI 83	HS 600 795	USC 71 7	HS 600 909
PAI 84	HS 600 796	USC 71 8	HS 600 748
PAI 85	HS 600 654	USC 71 9	HS 600 910
PAI 87	HS 600 339	USC 71 10	HS 600 857
PAI 88	HS 600 655	USC 71 11	HS 600 808
PAI 89	HS 600 840	USC 71 12	HS 600 858
PAI 90	HS 600 841	USC 71 13	HS 600 924
PAI 91	HS 600 539	USC 71 14	HS 600 925
PAI 92	HS 600 540	USC 71 15	HS 600 926
PAI 93	HS 600 656	USC 71 16	HS 600 941
PAI 94	HS 600 541	USC 71 17	HS 600 942
PAI 95	HS 600 542	USC 71 18	HS 600 962
PAI 97	HS 600 543	USC 71 19	HS 600 943
PAI 98	HS 600 614	USC 71 20	HS 600 961
PAI 99	HS 600 544	USC 71 21	HS 600 920
PAI 101	HS 600 657	USC 71 22	HS 600 921
PAI 102	HS 600 797	USC 71 23	HS 600 860
PAI 103	HS 600 658	USC 71 24	HS 600 944
PAI 105	HS 600 693	USC 71 25	HS 600 960
PAI 106	HS 601 241	USC 71 26	HS 600 959
PAI 107	HS 600 936	USC 71 27	HS 600 968
PAI 108	HS 600 659	USC 28	HS 600 969
PAI 109	HS 600 660	USC 29	HS 600 972
PAI 110	HS 601 238	USC 30	HS 600 973
PAI 111	HS 601 239	USC 31	HS 600 974
PAI 112	HS 600 884	USC 72 32	HS 601 013
PAI 113	HS 600 842	USC 33	HS 601 014
PAI 114	HS 600 661	USC 72 34	HS 601 015
PAI 115	HS 600 662	USC 72 35	HS 601 016

CASE NUMBER-->DUI-HS NUMBER

USC 72 36	HS 601 017	USC 74 30	HS 601 856
USC 72 37	HS 601 246	USC 74 31	HS 601 857
USC 72 38	HS 601 018	USC 74 32	HS 601 876
USC 72 39	HS 601 019	USC 74 33	HS 601 877
USC 72 40	HS 601 020	USC 74 34	HS 601 878
USC 71 07	HS 600 909	USC 74 37	HS 601 881
USC 73 1	HS 601 021	USC 74 38	HS 601 882
USC 73 03	HS 601 023	USC 74 39	HS 601 883
USC 73 4	HS 601 117	USC 74 40	HS 601 884
USC 73 5	HS 601 166	SRI 2 001	HS 600 891
USC 73 06	HS 601 167	SRI 2 002	HS 600 892
USC 73 07	HS 601 162	SRI 2 003	HS 601 007
USC 73 8	HS 601 158	SRI 2 004	HS 601 008
USC 73 9	HS 601 160	SRI 2 005	HS 601 156
USC 73 10	HS 601 161	SRI 2 006	HS 601 165
USC 73 11	HS 601 157	SRI 2 007	HS 601 155
USC 73 12	HS 601 217	SRI2 008	HS 601 164
USC 73 13	HS 601 247	SRI 2 009	HS 601 163
USC 73 14	HS 601 293	SRI 2 011	HS 601 154
USC 73 15	HS 601 292	SRI 2 012	HS 601 159
USC 73 16	HS 601 281	SRI 2 013	HS 601 231
USC 73 17	HS 601 282	SRI 2 014	HS 601 230
USC 73 18	HS 601 280	SRI 2 016	HS 601 279
USC 73 19	HS 601 318	SRI 2 017	HS 601 358
USC 73 20	HS 601 317	SRI 2 018	HS 601 419
USC 73 21	HS 601 315	SRI2 019	HS 601 290
USC 73 22	HS 601 352	SRI 2 020	HS 601 353
USC 73 23	HS 601 357	SRI 2 021	HS 601 360
USC 73 24	HS 601 355	SRI2 022	HS 601 359
USC 73 25	HS 601 356	SRI2 023	HS 601 501
USC 73 26	HS 601 381	SRI2 024	HS 601 362
USC 73 27	HS 601 380	SRI2 025	HS 601 361
USC 73 28	HS 601 389	SRI 2 026	HS 601 385
USC 73 29	HS 601 390	SRI 2 027	HS 601 384
USC 73 30	HS 601 391	SRI 2 028	HS 601 383
USC 73 31	HS 601 392	SRI2 029	HS 601 382
USC 73 032	HS 601 386	SRI 2 030	HS 601 393
USC 73 33	HS 601 388	SRI 2 031	HS 601 500
USC 73 35	HS 601 423	SRI2 032	HS 601 430
USC 73 35	HS 601 387	SRI 2 033	HS 601 428
USC 73 36	HS 601 422	SRI 2 034	HS 601 502
USC 73 37	HS 601 421	SRI 2 035	HS 601 498
USC 73 38	HS 601 420	SRI 2 036	HS 601 429
USC 74 1	HS 601 527	SRI 2 037	HS 601 503
USC 74 2	HS 601 526	SRI 2 039	HS 601 504
USC 74 3	HS 601 528	SRI 2 040	HS 601 505
USC 74 4	HS 601 529	SRI 8096 01	HS 601 821
USC 74 5	HS 601 530	SRI 8096 05	HS 601 858
USC 74 6	HS 601 531	SRI 8096 06	HS 601 861
USC 74 7	HS 601 566	SRI 8096 07	HS 601 862
USC 74 8	HS 601 565	SRI 8096 08	HS 601 867
USC 74 9	HS 601 605	SRI 8096 09	HS 601 885
USC 74 10	HS 601 643	SRI 8096 10	HS 601 886
USC 74 11	HS 601 657	SRI 8096 11	HS 601 887
USC 74 12	HS 601 658	SRI 8096 12	HS 602 197
USC 74 25	HS 601 875	SRI 8096 13	HS 601 961
USC 74 26	HS 601 854	SRI 8096 15	HS 602 189
USC 74 27	HS 601 835	SRI 8096 16	HS 602 198
USC 74 28	HS 601 852	SRI 8096 17	HS 602 202
USC 74 29	HS 601 855	SRI 8096 18	HS 602 218

CASE NUMBER→→DOT-HS NUMBER

SRI 8096 19	HS 602 203	SWRI-7007	HS 600 153
SRI 8096 20	HS 602 275	SWRI-7008	HS 600 112
SRI 8096 22	HS 602 282	SWRI-7009	HS 600 113
SRI 8096 23	HS 602 274	SWRI-7011	HS 600 154
SRI 8096 24	HS 602 280	SWRI-7012	HS 600 248
SRI 8096 25	HS 602 297	SWRI-7013	HS 600 249
SRI 8096 26	HS 602 342	SWRI-7014	HS 600 155
SRI 8096 27	HS 602 298	SWRI-7017	HS 600 156
SRI-0006	HS 600 070	SWRI-7018	HS 600 250
SRI-0007	HS 600 055	SWRI-7019	HS 600 251
SRI-0009	HS 600 053	SWRI-7020	HS 600 252
SRI-0012	HS 190 738	SWRI-7021	HS 600 253
SRI-0028	HS 600 157	SWRI-7022	HS 600 254
SRI-0081	HS 600 452	SWRI-7023	HS 600 453
SU 002	HS 600 893	SWRI-7024	HS 600 345
SU 003	HS 600 894	SWRI-7025	HS 600 454
SU 005	HS 600 956	SWRI-7026	HS 600 455
SU 007	HS 600 556	SWRI-7027	HS 600 456
SU 008	HS 600 896	SWRI-7030	HS 600 458
SU 009	HS 600 557	SWRI-7032	HS 600 459
SU 010	HS 600 927	SWRI 7033	HS 600 546
SU 011	HS 600 897	SWRI-7037	HS 600 460
SU 012	HS 600 952	SWRI 70 39	HS 600 547
SU 013	HS 600 898	SWRI 7040	HS 600 548
SU 014	HS 600 899	SWRI 7041	HS 600 549
SU 015	HS 600 900	SWRI 7042	HS 600 550
SU 017	HS 600 558	SWRI-7043	HS 600 461
SU 018	HS 600 701	SWRI 7046	HS 600 551
SU 019	HS 600 559	SWRI 7049	HS 600 552
SU 020	HS 600 560	SWRI 7050	HS 600 553
SU 021	HS 600 951	SWRI 7052	HS 600 554
SU 022	HS 600 950	SWRI 7101	HS 600 555
SU 023	HS 600 901	SWRI 7102	HS 600 594
SU 025	HS 600 955	SWRI 7103	HS 600 595
SU 030	HS 600 902	SWRI 7106	HS 600 616
SU 031	HS 600 700	SWRI 7107	HS 600 617
SU 032	HS 600 903	SWRI 7108	HS 600 618
SU 034	HS 600 849	SWRI 7109	HS 600 664
SU 035	HS 600 904	SWRI 7110	HS 600 619
SU 037	HS 600 954	SWRI 7111	HS 600 665
SU 038	HS 600 905	SWRI 7112	HS 600 666
SU 039	HS 600 919	SWRI 7113	HS 600 667
SU 040	HS 600 953	SWRI 7114	HS 600 887
SU 041	HS 600 850	SWRI 7115	HS 600 668
SU 042	HS 600 851	SWRI 7116	HS 600 669
SWRI 6901	HS 600 020	SWRI 7117	HS 600 670
SWRI-6903	HS 600 032	SWRI 7120	HS 600 671
SWRI-6904	HS 600 033	SWRI 7121	HS 600 672
SWRI-6905	HS 600 103	SWRI 7122	HS 600 694
SWRI-6906	HS 600 036	SWRI 7125	HS 600 695
SWRI-6908	HS 600 104	SWRI 7126	HS 600 756
SWRI-6911	HS 600 024	SWRI 7127	HS 600 696
SWRI-6912	HS 600 105	SWRI 7128	HS 600 697
SWRI-6913	HS 600 023	SWRI 7129	HS 600 757
SWRI 6914	HS 600 106	SWRI 7132	HS 600 758
SWRI-6917	HS 600 247	SWRI 71 33	HS 600 759
SWRI-7003	HS 600 109	SWRI 7134	HS 600 760
SWRI-7004	HS 600 152	SWRI 7136	HS 600 761
SWRI-7005	HS 600 110	SWRI 7137	HS 600 798
SWRI-7006	HS 600 111	SWRI 7138	HS 600 762

CASE NUMBER-->DOT-HS NUMBER

SWRI 7139	HS 600 763	SWRI 7209	HS 600 890
SWRI 7141	HS 600 764	SWRT 7210	HS 600 916
SWRI 7142	HS 600 765	SWRI 7211	HS 600 947
SWRT 7143	HS 600 766	SWRI 7212	HS 600 948
SWRI 7144	HS 600 767	SWRI 7213	HS 600 917
SWRI 7145	HS 600 768	SWRT 7214	HS 601 006
SWRI 7146	HS 600 769	SWRT 7215	HS 601 027
SWRI 7147	HS 600 770	SWRT 7217	HS 601 028
SWRI 7148	HS 600 771	SWRI 72 18	HS 601 216
SWRI 7149	HS 600 780	SWRI 7219	HS 601 133
SWRI 7150	HS 600 735	SWRI 7220	HS 601 029
SWRT 7151	HS 600 970	SWRT 7221	HS 600 918
SWRI 7153	HS 600 736	SWRI 7222	HS 601 030
SWRI 7154	HS 600 737	SWRI 7223	HS 601 132
SWRT 7155	HS 600 738	SWRI 7224	HS 601 131
SWRI 7156	HS 600 739	SWRT 72025	HS 601 130
SWRI 7157	HS 600 740	SWRI 7226	HS 601 207
SWRI 7158	HS 600 741	SWRI 7227	HS 601 208
SWRT 7159	HS 600 742	SWRI 72 28	HS 601 253
SWRI 7160	HS 600 743	SWRI 7231	HS 601 205
SWRI 7161	HS 600 744	SWRI 7232	HS 601 212
SWRI 7162	HS 600 799	SWRI 7233	HS 601 204
SWRI 7163	HS 600 745	SWRI 72 34	HS 601 250
SWRT 7164	HS 600 746	SWRI 72 35	HS 601 209
SWRI 7165	HS 600 706	SWRI 72 37	HS 601 251
SWRI 7166	HS 600 707	SWR 7238	HS 601 252
SWRI 7167	HS 600 747	SWRI 72 39	HS 601 379
SWRT 7168	HS 600 800	SWRI 7240	HS 601 475
SWRI 7169	HS 600 708	SWRI 7242	HS 601 210
SWRT 7170	HS 600 971	SWR 7243	HS 601 304
SWRI 7171	HS 600 709	SWRI 72 44	HS 601 803
SWRI 7172	HS 600 801	SWRI 7245	HS 601 623
SWRI 7173	HS 600 710	SWRT 7246	HS 601 474
SWRI 7174	HS 600 711	SWRT 7247	HS 601 476
SWRI 7175	HS 600 712	SWRI 7301	HS 601 813
SWRI 7176	HS 600 713	SWRT 7302	HS 601 804
SWRI 7178	HS 600 714	SWRI 73 04	HS 601 622
SWRI 7179	HS 600 802	SWRI 7305	HS 601 663
SWRI 7180	HS 600 844	SWRI 73 06	HS 601 662
SWRI 7181	HS 600 803	SWRI 73 07	HS 601 822
SWRI 7182	HS 600 888	SWRT 73 08	HS 601 812
SWRI 7183	HS 600 715	SWRI 73 09	HS 601 809
SWRI 7184	HS 600 804	SWRT 7310	HS 601 802
SWRI 7185	HS 600 716	SWRI 7311	HS 601 823
SWRI 7186	HS 600 717	SWRI 7313	HS 601 814
SWRI 7187	HS 600 805	SWRI 73 15	HS 601 806
SWRI 7188	HS 600 718	SWRI 73 16	HS 601 805
SWRI 7189	HS 600 806	SWRI 7317	HS 601 824
SWRI 7190	HS 600 772	SWRI 7318	HS 601 833
SWRI 7191	HS 600 719	SWRI 73 19	HS 601 808
SWRI 7192	HS 600 807	SWRI 7320	HS 601 807
SWRI 7193	HS 600 889	SWRI 73 22	HS 601 825
SWRI 7201	HS 600 845	SWRI 73 23	HS 601 826
SWRI 7202	HS 600 846	SWRI 7324	HS 601 827
SWRI 7203	HS 600 847	SWRI 73 25	HS 601 810
SWRI 72 4	HS 601 206	SWRI 7326	HS 601 828
SWRI 7205	HS 600 848	SWRI 7327	HS 601 829
SWRI 7206	HS 601 211	SWRI 7328	HS 601 811
SWRI 7207	HS 600 945	SWRI 74 01	HS 601 719
SWRI 7208	HS 600 946	SWRI 7402	HS 601 830

CASE NUMBER-->DOT-HS NUMBER

SWRI 7412	HS 602 363	TU 24F0170	HS 600 463
SWRI 7413	HS 602 364	TU 25F2165	HS 600 327
UC 852F	HS 600 040	TU 26F1470	HS 600 346
UC 927D	HS 600 328	TU 27F2170	HS 600 561
UC 945D	HS 600 114	TU 29G0470	HS 600 464
UC 973D	HS 600 347	TU 31	HS 600 562
UC 1000D	HS 600 160	TU 3261070	HS 600 563
UC 1003D	HS 600 058	TU 35G2270	HS 600 564
UC 1010D	HS 600 329	TU 38HI770	HS 600 698
UC 1014D	HS 600 257	TU 41	HS 600 699
UC 1023D	HS 600 072	TU 42I1670	HS 600 957
UC 1055D	HS 600 115	TU 44	HS 600 565
UC 1067D	HS 600 350	TU 49A0571	HS 600 939
UC 1073D	HS 600 351	TU 71 1	HS 600 852
UC 1075D	HS 600 161	TU 71 2	HS 600 853
UC 1090D	HS 600 041	TU 71 4	HS 600 958
UC 1107D	HS 600 258	TU 71 5	HS 600 940
UC 1120D	HS 600 116	TU 71 8	HS 600 963
UC 1143D	HS 600 042	TU 71 9	HS 600 964
UC 1161D	HS 600 259	TU 71 11	HS 600 965
UC 1164D	HS 600 260	TU 71 12	HS 600 966
UC 1172D	HS 600 162	TU 71 13	HS 600 967
UC 1176D	HS 600 354	TU 71 15	HS 600 975
UC 1181D	HS 600 261	TU 71 16	HS 600 976
UC 1182D	HS 600 045	TU 71 17	HS 600 978
UC 1183D	HS 600 063	TU 71 20	HS 601 009
UC 1188D	HS 600 117	TU 71 21	HS 601 010
UC 1190D	HS 600 355	TU 71 23	HS 601 011
UC 1204D	HS 600 356	TU 71 24	HS 601 351
UC 1212D	HS 600 163	TU 71 25	HS 601 012
UC 1224D	HS 600 357	TU 71 26	HS 601 297
UC 1227D	HS 600 262	TU 71 28	HS 601 298
UC 1240D	HS 600 361	TU 71 30	HS 601 497
UC 1245D	HS 600 362	TU 71 31	HS 601 296
UC 1261D	HS 600 363	TU 71 32	HS 601 666
UC 1263D	HS 600 364	HOU 1	HS 600 785
UC 1264D	HS 600 330	HOU 2	HS 600 786
UC 1265D	HS 600 263	HOU 3	HS 600 705
UC 1266D	HS 600 264	HOU 4	HS 601 338
UC 1267D	HS 600 365	HOU 5	HS 600 787
UC 1273D	HS 600 366	HOU 6	HS 600 788
UC 1278D	HS 600 368	HOU 7	HS 600 703
UC 1289D	HS 600 164	HOU 8	HS 601 541
UC 1292D	HS 600 370	HOU 9	HS 601 543
UC 1294D	HS 600 371	HOU 10	HS 600 988
UC 1301D	HS 600 265	HOU 11	HS 601 337
UC 1302D	HS 600 266	HOU 12	HS 600 702
UC 1303D	HS 600 372	HOU 13	HS 601 102
UC 1305D	HS 600 373	HOU 14	HS 601 713
UC 1307D	HS 600 267	HOU 15	HS 600 704
UC 1316D	HS 600 374	HOU 16	HS 600 989
UC 1318D	HS 600 268	HOU 17	HS 600 729
UC 1342D	HS 600 376	HOU 18	HS 600 990
TU 5A0270	HS 600 462	HOU 19	HS 600 821
TU 12B1670	HS 600 159	HOU 20	HS 600 991
TU 13B2870	HS 600 256	HOU 21	HS 601 101
TU 14B2770	HS 600 323	HOU 22	HS 600 730
TU 18D2770	HS 600 324	HOU 23	HS 601 099
TU 19E1170	HS 600 325	HOU 24	HS 600 731
TU 20F2170	HS 600 326	HOU 26	HS 600 732

CASE NUMBER-->DOT-HS NUMBER

HOU 27	HS 601 321	321 KY 14	HS 601 346
HOU 28	HS 600 995	KY 321 15	HS 601 912
HOU 29	HS 600 996	321 KY 16	HS 601 300
HOU 30	HS 600 997	321 KY 17	HS 601 913
HOU 31	HS 600 992	321 KY 18	HS 601 301
HOU 32	HS 600 998	321 KY 19	HS 602 004
HOU 33	HS 601 098	321 KY 20	HS 601 302
HOU 34	HS 601 320	321 KY 21	HS 602 005
HOU 35	HS 600 999	KY 321 22	HS 601 914
HOU 37	HS 600 993	321 KY 23	HS 601 915
HOU 38	HS 601 712	321 KY 24	HS 601 916
HOU 39	HS 600 994	321 KY 25	HS 601 917
HOU 40	HS 601 350	321 KY 26	HS 601 918
HOU 41	HS 601 510	321 KY 27	HS 601 920
HOU 42	HS 601 323	321 KY 28	HS 601 921
HOU 43	HS 601 322	321 KY 29	HS 601 948
HOU 44	HS 601 325	321 KY 30	HS 601 922
HOU 45	HS 601 319	321 KY 31	HS 602 006
HOU 46	HS 601 542	321 KY 32	HS 601 923
HOU 47	HS 601 537	KY 321 33	HS 601 924
HOU 48	HS 601 324	KY 321 34	HS 601 925
HOU 49	HS 601 540	KY 35	HS 602 007
HOU 50	HS 601 711	321 KY 36	HS 602 008
HOU 51	HS 601 334	321 KY 37	HS 601 926
HOU 52	HS 601 332	321 KY 38	HS 601 927
HOU 53	HS 601 535	321 KY 39	HS 601 009
HOU 54	HS 601 714	321 KY 40	HS 601 928
HOU 55	HS 601 336	321 KY 41	HS 601 929
HOU 56	HS 601 333	321 KY SP	HS 601 348
HOU 57	HS 601 139	UOK 72 1	HS 601 035
HOU 58	HS 601 335	UOK 72 2	HS 601 214
HOU 59	HS 601 331	UOK 72 3	HS 601 215
HOU 60	HS 601 533	UOK 72 04	HS 601 213
HOU 61	HS 601 544	UOK 72 5	HS 601 249
HOU 62	HS 601 340	UOK 72 6	HS 601 283
HOU 63	HS 601 326	UOK 72 07	HS 601 248
HOU 64	HS 601 534	UOK 72 8	HS 601 545
HOU 65	HS 601 539	UOK 72 10	HS 601 546
HOU 66	HS 601 538	OK 72 11	HS 601 639
HOU 67	HS 601 509	UOK 72 12	HS 601 671
HOU 68	HS 601 327	UOK 72 13	HS 601 610
HOU 69	HS 601 536	UOK 72 14	HS 601 638
HOU 70	HS 601 330	UOK 72 15	HS 601 636
HOU 71	HS 601 538	UOK 72 16	HS 601 606
HOU 72	HS 601 328	UOK 72 18	HS 601 604
HOU 73	HS 601 329	UOK 72 19	HS 601 637
HOU 74	HS 601 339	UOK 72 20	HS 601 678
HOU 75	HS 601 507	UOK 72 21	HS 601 677
321 KY 01	HS 601 255	UOK 72 22	HS 601 640
321 KY 02	HS 601 942	UOK 72 23	HS 601 699
321 KY 03	HS 601 943	UOK 72 24	HS 601 656
321 KY 04	HS 601 347	UOK 72 26	HS 601 670
321 KY 05	HS 601 944	UOK 72 27	HS 601 676
321 KY 06	HS 601 946	UOK 72 30	HS 601 692
321 KY 7	HS 602 001	UOK 72 36	HS 601 891
371 KY 9	HS 601 909	UOK 72 34	HS 601 892
321 KY 10	HS 602 002	UOK 72 38	HS 601 698
321 KY 11	HS 602 003	UOK 72 39	HS 601 894
321 KY 12	HS 601 910	UOK 73 42	HS 602 273
321 KY 13	HS 601 911	UOK 73 45	HS 602 266

UOK 73 47	HS 602 242	UTAH 102 72	HS 601 844
UOK 73 48	HS 602 254	UTAH 103 72	HS 601 845
UOK 73 49	HS 602 267	UTAH 104 72	HS 601 865
UOK 73 50	HS 602 281	UTAH 105 72	HS 601 896
UOK 73 52	HS 602 365	UTAH 72 106	HS 601 846
UOK 73 53	HS 602 343	UTAH 107-72	HS 601 890
UOK 73 54	HS 602 366	UTAH 108 72	HS 602 029
UOK 73 55	HS 602 338	UTAH 72 109	HS 602 046
UOK 73 57	HS 602 348	UTAH 110-72	HS 602 047
UOK 73 58	HS 602 349	UTAH 111 72	HS 602 050
UOK 73 59	HS 602 350	UTAH 112 72	HS 602 065
UOK 73 60	HS 602 367	UTAH 113 72	HS 602 124
UTAH 001-69	HS 600 011	UTAH 114 72	HS 602 125
UTAH 002-69	HS 600 022	UTAH 115 72	HS 602 126
UTAH 003-69	HS 600 034	UTAH 116 72	HS 601 868
UTAH 004-69	HS 600 031	UTAH 117 72	HS 601 919
UTAH 005-69	HS 600 048	UTAH 72 118	HS 601 991
UTAH 006-69	HS 600 165	UTAH 119 72	HS 602 025
UTAH 007-69	HS 600 118	UTAH 120 72	HS 602 066
UTAH 008-69	HS 600 269	UTAH 121 72	HS 602 123
UTAH 009-69	HS 600 119	UTAH 72 122	HS 602 196
UTAH 010-70	HS 600 331	UTAH 123 72	HS 602 255
UTAH 011-70	HS 600 465	UTAH 72 124	HS 602 302
UTAH 012-70	HS 600 466	UTAH 72 125	HS 602 303
UTAH 013-70	HS 600 467	UTAH 72 126	HS 602 304
UTAH 014 70	HS 600 566	UTAH 72 127	HS 602 305
UTAH 015 70	HS 600 567	UTAH 72 128	HS 602 306
UTAH 016 70	HS 600 568	UTAH 129 72	HS 602 307
UTAH 017 70	HS 600 569	UTAH 130 72	HS 602 308
UTAH 018 70	HS 600 911	UTAH 131 73	HS 602 309
UTAH 020 70	HS 601 626	UTAH 73 123	HS 602 310
UTAH 022 70	HS 600 621	UTAH 133 73	HS 602 311
UTAH 024 70	HS 601 569	UTAH 134-73	HS 602 312
UTAH 026 70	HS 601 687	UTAH 73 135	HS 602 313
UTAH 030 70	HS 601 645	UTAH 136-73	HS 602 314
UTAH 036 70	HS 601 684	UTAH 73 137	HS 602 315
UTAH 038 70	HS 601 625	UTAH 73 138	HS 602 316
UTAH 039 70	HS 601 624	UTAH 139 73	HS 602 317
UTAH 046 70	HS 601 568	UTAH 140 73	HS 602 318
UTAH 058 70	HS 601 681	UTAH 141 73	HS 602 319
UTAH 064 71	HS 601 690	UTAH 142 73	HS 602 320
UTAH 066 71	HS 601 680	UTAH 143 73	HS 602 321
UTAH 067 71	HS 601 682	UTAH 73 144	HS 602 322
UTAH 073 71	HS 601 683	UTAH 145 73	HS 602 323
UTAH 075 71	HS 601 688	UTAH 73 146	HS 602 324
UTAH 077 71	HS 601 689	UTAH 147 73	HS 602 325
UTAH 078 71	HS 601 685	UTAH 148 73	HS 602 326
UTAH 082 71	HS 601 686	UTAH 149 73	HS 602 327
UTAH 085 71	HS 601 691	UTAH 150 73	HS 602 328
UTAH 089 72	HS 601 836	UTAH 151 73	HS 602 329
UTAH 091 72	HS 601 837	UTAH 73 152	HS 602 330
UTAH 092 72	HS 601 819	UTAH 153 73	HS 602 331
UTAH 093 72	HS 601 818	UTAH 154 73	HS 602 332
UTAH 094 72	HS 601 838	UTAH 155 73	HS 602 333
UTAH 096-72	HS 601 839	UTAH 156 73	HS 602 334
UTAH 97 720	HS 601 840	UTAH 157 73	HS 602 335
UTAH 098 72	HS 601 841	UTAH 158 73	HS 602 336
UTAH 99 72	HS 602 000	UTAH 159 73	HS 602 337
UTAH 100 72	HS 601 842	UTAH 160 73	HS 601 847
UTAH 101 72	HS 601 843	UTAH 161 73	HS 601 848

CASE NUMBER→→DOT-HS NUMBER

UTAH	162	74	HS	602	204
UTAH	163	74	HS	601	849
UTAH	164	74	HS	601	850
UTAH	165	74	HS	601	860
UTAH	166	74	HS	601	906
UTAH	167	74	HS	601	907
UTAH	168	74	HS	601	960
UTAH	169	74	HS	602	020
UTAH	170	74	HS	602	133
UTAH	171	74	HS	602	134
UTAH	172	74	HS	602	021
UTAH	173	74	HS	602	025
UTAH	174	74	HS	602	076
UTAH	175	74	HS	602	135
UTAH	176	74	HS	602	155
UTAH	177	74	HS	602	185
UTAH	178	74	HS	602	186
UTAH	179	74	HS	602	187
UTAH	180	74	HS	602	188
UTAH	181	74	HS	602	183
UTAH	182	74	HS	602	184
UTAH	183	74	HS	602	199
UTAH	184	74	HS	602	190
UTAH	185	74	HS	602	205
UTAH	186	74	HS	602	200
UTAH	187	74	HS	602	234
UTAH	188	74	HS	602	235
UTAH	189	74	HS	602	201
UTAH	190	74	HS	602	236
UTAH	191	74	HS	602	263
UTAH	192	74	HS	602	264
UTAH	193	74	HS	602	253

Case DOT-HS Number → MDAI Summary Volume

Ranges of individual MDAI case DOT-HS publication numbers are listed numerically on the left with the corresponding MDAI Summary Volume (and DOT-HS number on left). Some volumes are listed more than once if individual cases were out of order. While all of the DOT-HS numbers in each range may not be valid MDAI case DOT-HS numbers, all the valid numbers fall in the ranges displayed.

<u>MDAI Case</u> <u>DOT-HS Publication Number</u>		<u>MDAI Summary Volume</u>		
<u>From:</u>	<u>To:</u>	<u>Vol.</u>	<u>No.</u>	<u>DOT-HS Number</u>
600 077	600 119	V1	N2	600 120
600 121	600 165	V1	N3	600 166
600 167	600 269	V1	N4	600 270
600 271	600 331	V1	N5	600 332
(not numbered)		V1	N6	600 377
600 378	600 466	V2	N1	600 468
600 469	600 518	V2	N2	600 519
600 520	600 569	V2	N3	600 570
600 571	600 621	V2	N4	600 622
600 623	600 672	V2	N5	600 673
600 675	600 725	V3	N2	600 776
600 726	600 774	V3	N1	600 775
600 781	600 833	V3	N3	600 859
600 834	600 874	V3	N4	600 912
600 875	600 878	V3	N5	600 928
600 879	---	V3	N4	600 912
600 880	600 925	V3	N5	600 928
600 926	600 976	V3	N6	600 977
600 978	---	V3	N7	601 033
600 985	601 032	V3	N7	601 033
601 034	601 083	V3	N8	601 084
601 137	601 186	V4	N1	601 187
601 188	601 238	V4	N2	601 244
601 239	601 290	V4	N3	601 291
601 292	601 342	V4	N4	601 343
601 344	601 347	V4	N5	601 395
601 348	---	V4	N6	601 447
601 349	601 394	V4	N5	601 395
601 396	601 446	V4	N6	601 447
601 448	601 498	V4	N7	601 499
601 500	601 550	V4	N8	601 551
601 522	601 601	V4	N9	601 602
601 603	601 653	V4	N10	601 654
601 655	601 704	V5	N1	601 705
601 706	601 761	V5	N2	601 762
601 765	601 816	V5	N3	601 817
601 818	601 867	V5	N4	801 303
601 869	601 918	V5	N5	801 312
601 920	601 969	V5	N6	801 304
601 970	602 020	V5	N7	801 305
602 026	602 072	V6	N1	801 356
602 073	602 122	V6	N2	801 357



