This report describes the development and performance of a new crash test device aptly named, "Repeatable Pete." The general goal of the project was the development of an adequate crash test device to aid in the evaluation of the injury reducing potential of automotive passenger restraint systems. The general design criteria were:

1. Repeatability of test results
2. Reproducibility of test results
3. Human-like responses in a moderate automotive crash environment
4. Non-frailibility

Biomechanical data describing the dynamic impact responses of unembalmed cadavers was used as the basis for humanlike performance.

New and uniquely repeatable joints were developed. A urethane head and chest with more human-like dynamic response was also developed. Self-skinning urethane foam was used extensively. Great care was used throughout to insure proper isolation of vital components.

Extensive sled testing of two devices was done to verify performance.
APPENDIX A

HSRI TEST PROCEDURES
Preparation of the Cadaver

The specimens used in this study are fresh, unembalmed cadavers obtained from the Anatomy Department of The University of Michigan Medical School. They are stored at 37°F for two of the three days between time of death and impact. The cadavers are transported to HSRI and allowed to reach room temperature before testing. These procedures insure that the effects of rigor mortis have disappeared and the blood is again fluid.

A-P Head Impacts - Targets and Instrumentation

The axis of the impactor is in the mid-sagittal plane and is normal to the surface of the skull at the point of initial impact. The cadaver is positioned so that the inferior aspect of the four-inch diameter impactor is adjacent to the glabella and therefore no part of the impactor comes in contact with the subject's nose. The point of impact is located two inches superior to the glabella in the mid-sagittal plane. This arrangement is designed to allow the impactor to contact the forehead in such a way as to load upon as large and flat a surface as possible.

The targets used for photographic analysis are in a plane extending in the L-R direction, common to the axis of impact. They are located two inches posterior and one inch anterior to the intersection of a line perpendicular to the axis of impact passing through the external acoustic meatus, with the above described plane. The biaxial accelerometer pack is mounted at a point on the occupant, directly opposite to the point of impact. The Class 1000 frequency response values for filtering was used for all head accelerations as recommended by J211.

All targets and accelerometers are mounted on small wood screws, which are then driven into the skull. (Figure 1a)
Cadaver A-P Head Impact Set-Up

After being targeted and equipped with accelerometers, the cadaver is placed in a chair, which was modified for this impact study. All surfaces against which the cadaver might come in contact with in its post-impact movements are thickly padded with styrofoam to prevent damage to the cadaver. A special foam apparatus is employed to absorb the energy of the head and protect the accelerometers from damage.

The cadaver is carefully positioned so that its head is in the correct position relative to the impactor and at the same time the whole cadaver acts as a free body.

The head is suspended and held in place by four strands of 000 thickness surgical thread. This thread supports only the weight of the head, and breaks easily on impact. The impacts were carried out in the HSRI Impact Facility. (Figure 2)

Two kinds of impacting surfaces are used. The first surface is a four-inch diameter rigid metal disc. The second surface consists of the same metal disc with three inches of polystyrene foam (density = 1.78 lb/ft$^3$), fixed to the contacting surface of the disc to pad the impact.

Pre-impact travel of the impact piston is 1.5 inches for both padded and unpadded impactors. The post-impact travel is five inches for the padded impactors and three inches for the unpadded impactors. At the end of this travel, its motion is arrested mechanically and the cadaver head and torso continue their motion unimpeded.

L-R Head Impacts

The point of impact is the left temporal region, two inches superior to the external acoustic meatus. The photographic targets for L-R head impacts are located on the supra-orbital ridge, two inches on either side of the glabella (i.e., two inches either side of the mid-sagittal plane).
FIGURE 1(a). TARGETING AND INSTRUMENTATION FOR FRONT HEAD IMPACTS.

FIGURE 1(b). TARGETING AND INSTRUMENTATION FOR SIDE HEAD IMPACTS.
The biaxial accelerometer pack is mounted on a screw, which is driven into the skull at a point directly opposite to the point of impact. Care is taken so that the accelerometer axes are normal and parallel to the impacting surface, not to the skull. (Figure 1b) The cadaver is positioned and suspended in the same manner as discussed above.

A-P Chest Impacts

The cadaver is thoroughly manipulated so that the flexibility of its neck, arms, and entire torso approach that of a living human.

The cadaver is positioned in a heavily padded chair with no back support and is supported in an upright sitting posture by positioning its arms on a pair of specially designed arm rests.

The cadaver's head is held out of the path of the impactor by an adjustable elastic band. Care is taken not to put (undue) tension on the neck, which could distort the cadaver's torso from its relaxed position.

A two-inch x two-inch target is fixed to the cadaver's back at the point directly opposite the point of impact. The post-impact travel of the piston is four inches.

The impactor is a six-inch diameter rigid cylinder with a 1/2-inch edge radius weighing 22 lbs. It is centered medially over the fourth interspace. Impact velocities were 13 mph ± 1 mph. Impact forces were measured with an inertia compensated load cell. Chest displacements were measured photometrically by comparing targets on the impactor and a cadaver back target aligned with the axis of the impactor.

Crash Test Device Tests

Performance tests comparing cadaver responses will be performed in exactly the same manner as the above described cadaver tests.
This pneumatically operated testing machine was constructed especially for impact studies at HSRI. It is designed to produce a specific velocity to determine the behavior of objects under impact conditions that simulate accident kinematics.

The machine consists of an air reservoir, and a ground and honed cylinder with two carefully fitted pistons. One, the transfer piston, is propelled by compressed air through the cylinder and transfers its momentum to the impact piston. A striker plate, attached to the impact piston, travels a distance of about four inches, when an inversion tube absorbs the energy of the impact piston and halts its movement.

The machine may be operated over a velocity range of 3 to 60 miles per hour with a 20 pound impact piston, and 6 to 120 miles per hour with a 6 pound impact piston, using a maximum of 100 psi pressure in the air reservoir. The maximum available energy is 22,000 foot-pounds when a compressed air bottle is used to pressurize the reservoir to 500 psi.

An accelerometer and inertia compensated force transducer are mounted directly behind the striker plate, and the impact piston displacement is recorded by a phototransistorized optical transducer. Data recording by an oscilloscope allows force-time, displacement-time, or acceleration-time recording. High speed cameras are available for extensive photographic coverage.
APPENDIX B

Sled Test Summary Data
SUMMARY OF TEST DATA

Test Number: A-641
Test Type: Lap and Torso
Dummy: SRIR Repeatabl Pete
Sled Velocity: 29.7 miles/hr
Belts

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g^2 sec/division
Test Number: A-642

Dummy: HSRI Repeatable Pete (1)

Sled Velocity: 30.3 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²·sec/division
SUMMARY DATA ON HEAD ACCELERATIONS

Test Number A-643
Dummy HSRI Repeatable Pete (1)
Sled Velocity 29.7 miles/hr

Test Type: Lap and Torso
Belts

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g/s/division
Filtered
Class 1000

Severity Index
100 g²/sec/division

Class 1088
Test Number: A-644
Dummy: HSRI-Repeatable Pete (1)
Sled Velocity: 30.4 miles/hr

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
10 g/s/division
Filtered
Class 1000

Severity Index
100 g^2/sec/division

Test Type: Lap and Torso Belts

INSTRUMENTS DIVISION GÖULD INC
EVELAND, OHIO  PRINTED IN U.S.A
SUMMARY DATA

Test Number: A-645
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 30.2 miles/hr

Test Type: Lap and Torso Belts.

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g/s/division
Filtered
Class 1000

Severity Index
100 g^2/sec/division
SUMMARY DATA HEAD ACCELERATION

Test Number A-646
Dummy HSRI-Repeatably Pete (1)
Sled Velocity 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-647

Dummy: OGLE/WTRA 50% M

Sled Velocity: 30.2 miles/hr

Test Type: Lap and Torso

Belts:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Lap and Torso</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belts</td>
<td>-</td>
</tr>
</tbody>
</table>

Sled Pulse:
10 g's/division
Filtered
Class 60

Anterior-Posterior Head Acceleration:
12.5 g's/division
Filtered
Class 1000

Superior-Inferior Head Acceleration:
12.5 g's/division
Filtered
Class 1000

Left-Right Head Acceleration:
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration:
10 g's/division
Filtered
Class 1000

Severity Index:
100 g^2.5 sec/division
Test Number: A-672
Dummy HR-Repeatable Pete (2)
Sled Velocity: 30.6 miles/hr

**Sled Pulse**
10 g's/division
Filtered
Class 60

**Anterior-Posterior**
Head Acceleration
12.5 g's/division
Filtered
Class 1000

**Superior-Inferior**
Head Acceleration
12.5 g's/division
Filtered
Class 1000

**Left-Kigh**
Head Acceleration
12.5 g's/division
Filtered
Class 1000

**Resultant Head Acceleration**
10 g's/division
Filtered
Class 1000

**Severity Index**
100 g^2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-673

Dummy: HSRI Repeatable Pete (2)

Sled Velocity: 30.3 miles/hr

Test Type: Lap and Torso

Belts

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Superior-Inferior Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Left-Right Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
10 g/s/division
Filtered
Class 1000

Severity Index
100 g²/sec/division

Analysis and interpretation of the data would follow here.
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<thead>
<tr>
<th>Test Number</th>
<th>A-674</th>
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<td>Dummy</td>
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<td>Sled Velocity</td>
<td>30.4 miles/hr</td>
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<table>
<thead>
<tr>
<th>Test Type</th>
<th>Lap and Torso</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belts</td>
<td></td>
</tr>
</tbody>
</table>

**Sled Pulse**
- 10 g's/division
- Filtered
- Class 60

**Anterior-Posterior Head Acceleration**
- 12.5 g's/division
- Filtered
- Class 1000

**Superior-Inferior Head Acceleration**
- 12.5 g's/division
- Filtered
- Class 1000

**Left-Right Head Acceleration**
- 12.5 g's/division
- Filtered
- Class 1000

**Resultant Head Acceleration**
- 10 g's/division
- Filtered
- Class 1000

**Severity Index**
- 100 g \( \frac{2.5}{\text{sec/di-\text{vision}}} \)
### SUMMARY DATA HEAD ACCELERATIONS

<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-675</th>
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<td>Dummy</td>
<td>MSRI Repeatability Rate (2)</td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>29.9 miles/hr</td>
</tr>
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<td>Test Type</td>
<td>Lap and Torso</td>
</tr>
<tr>
<td>Belts</td>
<td></td>
</tr>
</tbody>
</table>

**Sled Pulse**
- 10 g's/division
- Filtered
- Class 60

**Anterior-Posterior**
- Head Acceleration
- 12.5 g's/division
- Filtered
- Class 100C

**Superior-Inferior**
- Head Acceleration
- 12.5 g's/division
- Filtered
- Class 100C

**Left-Right**
- Head Acceleration
- 12.5 g's/division
- Filtered
- Class 100C

**Resultant Head Acceleration**
- 10 g's/division
- Filtered
- Class 1000

**Severity Index**
- 100 g²·sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-676
Test Type: Lap and Torso Belts

Sled Velocity: 29.9 miles/hr

Dummy: MSRL-Repeatability Rate (2)

Sled Pulse
10 g's/division
Filtered
Class: 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class: 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class: 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class: 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class: 1000

Severity Index
100 g^2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-677
Dummy: HSRI-Repeateable (2)
Sled Velocity: 30.1 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right:
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²·sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-648
Dummy HSRI Repeatable Pete (1)
Sled Velocity 26.5 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g/s/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g/s/division
Filtered
Class 1000

Severity Index
2.5 g/sec/division

BRUSH INSTRUMENTS DIVIS
CLEVELAND, OHIO
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-649
Dummy HSRI Repeatable Petes (1)
Sled Velocity 26.2 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g^2/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-650
Dummy: HSRI Repeatable Pete [1]
Sled Velocity: 29.5 miles/hr

Test Type: Preinflated Airbag

<table>
<thead>
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<th>Acceleration Type</th>
<th>Peak Acceleration</th>
<th>Unit</th>
<th>Severity Index</th>
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<tr>
<td>Sled Pulse</td>
<td>10 g's/division</td>
<td>Filtered</td>
<td></td>
</tr>
<tr>
<td>Anterior-Posterior Head Acceleration</td>
<td>12.5 g's/division</td>
<td>Filtered</td>
<td></td>
</tr>
<tr>
<td>Superior-Inferior Head Acceleration</td>
<td>12.5 g's/division</td>
<td>Filtered</td>
<td></td>
</tr>
<tr>
<td>Left-Right: Head Acceleration</td>
<td>12.5 g's/division</td>
<td>Filtered</td>
<td></td>
</tr>
<tr>
<td>Resultant Head Acceleration</td>
<td>10 g's/division</td>
<td>Filtered</td>
<td></td>
</tr>
<tr>
<td>Severity Index</td>
<td>100 g^2/5 sec/division</td>
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<td></td>
</tr>
</tbody>
</table>
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-651
Dummy: HSRI-Repeatable Pete (1)
Sled Velocity: 27.9 miles/hr

Test Type: Preinflated Airbag

- **Sled Pulse**
  - 10 g's/division
  - Filtered
  - Class 60

- **Anterior-Posterior**
  - Head Acceleration
  - 12.5 g's/division
  - Filtered
  - Class 1000

- **Superior-Inferior**
  - Head Acceleration
  - 12.5 g's/division
  - Filtered
  - Class 1000

- **Left-Right**
  - Head Acceleration
  - 12.5 g's/division
  - Filtered
  - Class 1000

- **Resultant Head Acceleration**
  - 10 g's/division
  - Filtered
  - Class 1000

- **Severity Index**
  - 100 g²·sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-652

Test Type: Preinflated Airbag

Dummy: HSRI-Repeatable Pete (1)

Sled Velocity: 30.1 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right:
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²·sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-653
Dummy HSRI Repeatable Pete (1)
Sled Velocity 29.7 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g's/2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-654
Test Type Preinflated Airbag
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g^2 sec/division

BRUSH INSTRUMENT
CLEVELAND OH
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-655
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-656

Sled Velocity 30.3 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right:
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g²/sec/division

Test Type: Preinflated Airbag
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-657
Dummy: HSRI Repeatable Peta (1)
Sled Velocity: 30.7 miles/hr

Test Type: Reinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g^2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-658
Dummy HSRI Repeateable Part (1)
Sled Velocity 30.6 miles/hr

Test Type: Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000

Resultant Head Acceleration
10 g's/division
Filtered
Class 1000

Severity Index
100 g² sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-659
Test Type: Preinflated Airbag
Dummy: HSRI Repeatability Rate
Sled Velocity: 30.2 miles/hr

Sled Pulse
10 g/s/division
Filtered
Class: 60

Anterior-Posterior
Head Acceleration
12.5 g/s/division
Filtered
Class: 1000

Superior-Inferior
Head Acceleration
12.5 g/s/division
Filtered
Class: 1000

Left-Right
Head Acceleration
12.5 g/s/division
Filtered
Class: 1000

Resultant Head
Acceleration
10 g/s/division
Filtered
Class: 1000

Severity Index
100 g^2/sec/division
SUMMARY DATA: HEAD ACCELERATIONS

Test Number A-661
 Dummy HSRI Repeatable Pete (2)
 Sled Velocity 30.3 miles/hr  

Test Type: Dash/Windshield
 Impact

Sled Pulse
10 g's/division
Filtered
Class 80

Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head Acceleration
40 g's/division
Filtered
Class 1000

Severely Index
1000 g²/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-662
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.8 miles/hr

Test Type Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
40 g's/division
Filtered
Class 1000

Severity Index
1000 g^2 sec/division
SUMMARY DATA: HEAD ACCELERATION

Test Number: A-663
Dummy: HSRI Repeatable Peta (2)
Sled Velocity: 30.3 miles/hr

- Sled Pulse
  - 10 g's/division
  - Filtered
  - Class 60

- Anterior-Posterior
  - Head Acceleration
  - 50 g's/division
  - Filtered
  - Class 1000

- Superior-Inferior
  - Head Acceleration
  - 50 g's/division
  - Filtered
  - Class 1000

- Left-Right
  - Head Acceleration
  - 50 g's/division
  - Filtered
  - Class 1000

- Resultant Head
  - Acceleration
  - 40 g's/division
  - Filtered
  - Class 1000

- Severity Index
  - 1000 g2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-664
Dummy HSRI Repeatable Pete (2)
Sled Velocity 28.4 miles/hr

Test Type Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head Acceleration
40 g's/division
Filtered
Class 1000

Severity Index
1000 g²·sec/division
<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-665</th>
<th>Test Type</th>
<th>Dash/Windshield</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy HSR</td>
<td>Repeatability</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>30.2 miles/hr</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sled Pulse</th>
<th>10 g's/division</th>
<th>Filtered</th>
<th>Class 60</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Anterior-Posterior Head Acceleration</th>
<th>50 g's/division</th>
<th>Filtered</th>
<th>Class 1000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Superior-Inferior Head Acceleration</th>
<th>50 g's/division</th>
<th>Filtered</th>
<th>Class 1000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Left-Right Head Acceleration</th>
<th>50 g's/division</th>
<th>Filtered</th>
<th>Class 1000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Resultant Head Acceleration</th>
<th>40 g's/division</th>
<th>Filtered</th>
<th>Class 1000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Severity Index</th>
<th>$1000 \text{ g}^{2.5} \text{ sec/division}$</th>
</tr>
</thead>
</table>

Graphs showing the data for each type of head acceleration.
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-666
Dummy: HSRI-Repeatable Pine (2)
Sled Velocity: 30.5 miles/hr

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
50 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g/s/division
Filtered
Class 1000

Resultant Head
Acceleration
40 g/s/division
Filtered
Class 1000

Severity Index
1000 g^2/sec/division
SUMMARY DATA: HEAD ACCELERATION

Test Number: A-667
Dummy: SRHI Repeatable Peté (1)
Sled Velocity: 30.3 miles/hr

Test Type: Dash/Windshield

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
50 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
40 g/s/division
Filtered
Class 1000

Severity Index
1000 g\(^2\) sec/division
Test Number: A-668
Dummy HSRI Repeatable Pete (1)
Sled Velocity: 30.3 miles/hr

Test Type: Dash/Windshield Impact

Sled Pulse
10 g's/division
Filtered
Class 50

Anterior-Posterior Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head Acceleration
40 g's/division
Filtered
Class 1000

Severity Index
1000 g's sec/division

Graphs showing data for different types of head accelerations.
SUMMARY DATA: HEAD ACCELERATIONS

Test Number: A-669
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 30.1 miles/hr

Test Type: Dash/Windshield Impact

Sled Pulse:
10 g's/division
Filtered
Class 60

Anterior-Posterior Head Acceleration:
50 g's/division
Filtered
Class 1000

Superior-Inferior Head Acceleration:
50 g's/division
Filtered
Class 1000

Left-Right Head Acceleration:
50 g's/division
Filtered
Class 1000

Resultant Head Acceleration:
40 g's/division
Filtered
Class 1000

Severity Index:
1000 g^2.5/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-670
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
40 g's/division
Filtered
Class 1000

Severity Index
1000 g2.5 sec/division
SUMMARY DATA: HEAD ACCELERATIONS

Test Number A-671
 Dummy HSRI Repeatable Pete (1)
 Sled Velocity 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000

Resultant Head Acceleration
40 g's/division
Filtered
Class 1000

Severity Index
1000 g^2 sec/division

BRUSH INSTRUMENTS DIVISION, GOULD INC
CLEVELAND, OHIO PRINTED IN U.S.A
### SUMMARY DATA HEAD ACCELERATIONS

<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-678</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bunny: HSRI Repetable Pate (2)</td>
<td></td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>30.0 miles/hr</td>
</tr>
</tbody>
</table>

#### Test Type: Steering Wheel Impact

<table>
<thead>
<tr>
<th>Sled Pulse</th>
<th>10 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anterior-Posterior Head Acceleration</th>
<th>25 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Superior-Inferior Head Acceleration</th>
<th>25 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left-Right Head Acceleration</th>
<th>25 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resultant Head Acceleration</th>
<th>20 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity Index</th>
<th>200 g·sec/division</th>
</tr>
</thead>
</table>
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-679

<table>
<thead>
<tr>
<th>Dummy Type</th>
<th>Repeatability Rate</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dumpy E (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sled</td>
<td>29.8 miles/hr</td>
<td></td>
</tr>
</tbody>
</table>

Sled Pulse
10 g's/division
Filtered
Class 80

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g^2/sec/division
SUMMARY DATA HEAD ACCELERATIONS

<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-680</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy HSRI</td>
<td>Repeatability: Repeate (2)</td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>29.9 miles/hr</td>
</tr>
</tbody>
</table>

- **Sled Pulse**
  - 10 g's/division
  - Filtered
  - Class 60

- **Anterior-Posterior**
  - Head Acceleration
  - 25 g's/division
  - Filtered
  - Class 1000

- **Superior-Inferior**
  - Head Acceleration
  - 25 g's/division
  - Filtered
  - Class 1000

- **Left-Right**
  - Head Acceleration
  - 25 g's/division
  - Filtered
  - Class 1000

- **Resultant Head Acceleration**
  - 20 g's/division
  - Filtered
  - Class 1000

- **Severity Index**
  - 200 g^2.5 sec/division

Test Type: Steering Wheel
Impact: 

![Graphs showing various accelerations and severity index](image-url)
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-681
Dummy: HSRI-Repeatability Pete(2)
Sled Velocity: 30.2 miles/hr

Test Type: Steering Wheel
Impact:...

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number A-682
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g^2 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-683
Dummy: HCAR Repeatable Date: (2)
Sled Velocity: 30.2 miles/hr

Test Type: Steering Wheel
Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g^2.5 sec/division
<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-684</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy HSRI</td>
<td>Repeatable Pate (1)</td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>30.3 miles/hr</td>
</tr>
<tr>
<td>Test Type</td>
<td>Steering Wheel</td>
</tr>
<tr>
<td>Impacts</td>
<td></td>
</tr>
</tbody>
</table>

| Sled Pulse | 10 g's/division |
| Filtered | Class 60 |

| Anterior-Posterior Head Acceleration | 25 g's/division |
| Filtered | Class 1000 |

| Superior-Inferior Head Acceleration | 25 g's/division |
| Filtered | Class 1000 |

| Left-Right Head Acceleration | 25 g's/division |
| Filtered | Class 1000 |

| Resultant Head Acceleration | 20 g's/division |
| Filtered | Class 1000 |

<table>
<thead>
<tr>
<th>Severity Index</th>
<th>200 g^2.5 sec/division</th>
</tr>
</thead>
</table>
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-685
Dummy: HSRI Repeatable Data (1)
Sled Velocity: 30.0 miles/hr

Test Type: Steering Wheel Impact

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
20 g/s/division
Filtered
Class 1000

Severity Index
200 g²/5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-686

Test Type: Steering Wheel

Dummy: USSI

Repeatability: 1

Sled Velocity: 30.0 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head
Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g^2sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-687
Dummy HSRI Repeatability Date: (1)
Sled Velocity: 30.1 miles/hr

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Steering Wheel</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>pi ~ hppl</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
20 g/s/division
Filtered
Class 1000

Severity Index
200 g²/sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-688
Test Type: Steering Wheel Impact

Dummy: HSRI Repeatable Petz (1)
Sled Velocity: 30.1 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000

Resultant Head Acceleration
20 g's/division
Filtered
Class 1000

Severity Index
200 g's/2.5 sec/division
SUMMARY DATA HEAD ACCELERATIONS

Test Number: A-689
Dummy: HSRI Repeatable Data (1)
Sled Velocity: 30.3 miles/hr

Test Type: Steering Wheel Impact

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Superior-Inferior
Head Acceleration
25 g/s/division
Filtered
Class 1000

Left-Right
Head Acceleration
25 g/s/division
Filtered
Class 1000

Resultant Head Acceleration
20 g/s/division
Filtered
Class 1000

Severity Index
200 g^2.5/sec/division

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SUMMARY DATA CHEST ACCELERATIONS

Test Number A-641
Dummy HRMI-Repeatable Data (1)
Sled Velocity 29.7 miles/hr

Test Type Lap and Torso Belts

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g²/sec/division

2.5
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-642
Dummy HSR1 Repeatable Test (1)
Sled Velocity 30.3 miles/hr

Test Type Lap and Torso
Belts

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g^2/ sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-643
DummyHSRI Repeatable Pete (1)
Sled Velocity 29.7 miles/hr

Test Type Lap and Torso
Belts

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g²/sec/division
SUMMARY OF CHEST ACCELERATIONS

Test Number: A-644
Dummy: ISRI Repeatable Plate (1)
Sled Velocity: 30.4 miles/hr

Test Type: Lap and Torso Belts

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g² sec/division
<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-645</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy HSRI Repeatable Pets (1)</td>
<td></td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>30.2 miles/hr</td>
</tr>
</tbody>
</table>

**Test Type:** Lap and Torso

**Belts**

<table>
<thead>
<tr>
<th>Sled Pulse</th>
<th>10 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 60</td>
</tr>
</tbody>
</table>

**Anterior-Posterior**

<table>
<thead>
<tr>
<th>Chest Acceleration</th>
<th>12.5 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 600</td>
</tr>
</tbody>
</table>

**Superior-Inferior**

<table>
<thead>
<tr>
<th>Chest Acceleration</th>
<th>12.5 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 600</td>
</tr>
</tbody>
</table>

**Left-Right**

<table>
<thead>
<tr>
<th>Chest Acceleration</th>
<th>12.5 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
<td>Class 600</td>
</tr>
</tbody>
</table>

**Resultant Chest Acceleration**

<table>
<thead>
<tr>
<th>10 g's/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtered</td>
</tr>
</tbody>
</table>

| Class 600       |

**Severity**  

| 100 g²/sec/division |

**Severities**

<table>
<thead>
<tr>
<th>ndx.x</th>
</tr>
</thead>
</table>

**INSTRUMENTS DIVISION, Gould INC**

**Eveland, Ohio**

**Preprint A**
SUMMARY OF CHST ACCELERATIONS

Test Number: A-646
Dummy: HSRI Repeatability Plate (1)
Sled Velocity: 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g2.5 sec/division
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-647

Dumput: CRFP/NTRA 50K M
Sled Velocity: 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g2.5 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-672
Dummy MSRI Repeatable Pete (2)
Sled Velocity 30.6 miles/hr

Test Type Lap and Torso
Belts

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity 'Index
100 g2.5/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-673
Dummy: HSRI Repeatability Pete (2)
Sled Velocity: 30.3 miles/hr

Test Type: Lap and Torso Belts

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g^2.5^sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-676
Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
2.5
100 g²/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-675
Dummy HSRD Repeatable Pete (2)
Sled Velocity 29.9 miles/hr

Test Type Lap and Torso
Belts

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g2 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-676
Dummy: HSRI-Repeatable Data (2)
Sled Velocity: 60.9 miles/hr

Test Type: Lap and Torso
Belts

Sled Pulse
10 g's/division
Filtered
Class 600

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g^2 sec/division
SUMMARY 5H. CHEST ACCELERATIONS

Test Number: A-648  Test Type: Preinflated Airbag
Dummy: HSRI Repeatable Peta (1)
Sled Velocity: 26.5 miles/hr

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g²/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-649
Dummy HSRI Repeatable Pete (1)
Sled Velocity 26.2 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g²·sec/division
SUMMARY CHEST ACCELERATIONS

Test Number: A-650
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 29.5 miles/hr

Test Type: Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
2.5
100 g"/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-651
Dummy HSRI Repeatable Rate (1)
Sled Velocity 27.9 miles/hr

Test Type: Preinflated Airbag

Sled Pulse
10 gs/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 gs/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 gs/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 gs/division
Filtered
Class 600

Resultant Chest Acceleration
10 gs/division
Filtered
Class 600

Severity Index
100 gs/2.5 sec/division
**SUMMARY OF CHEST ACCELERATIONS**

Test Number: A-652  
Dummy: HSRI Repeatable Pete (1)  
Sled Velocity: 30.1 miles/hr

- **Sled Pulse**
  - 10 g's/division
  - Filtered  
  - Class 60

- **Anterior-Posterior Chest Acceleration**
  - 12.5 g's/division
  - Filtered  
  - Class 600

- **Superior-Inferior Chest Acceleration**
  - 12.5 g's/division
  - Filtered  
  - Class 600

- **Left-Right Chest Acceleration**
  - 12.5 g's/division
  - Filtered  
  - Class 600

- **Resultant Chest Acceleration**
  - 10 g's/division
  - Filtered  
  - Class 600

- **Severity Index**
  - 100 g·2.5 sec/division

---

Test Type: Preinflated Airbag
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-653

Dummy HSRI Repeatable Pete (1)

Sled Velocity 29.7 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g 2.5 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-654
Dummy HSRI Repeatable Test (2)
Sled Velocity 30.3 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
2.5
100 g²-sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-655
Dummy HSRI Repeatable Petes (2)
Sled Velocity 30.2 miles/hr

Test Type Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g^2.5 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-656
Dummy: HSRI Repeatable Pete (2)
Sled Velocity: 30.3 miles/hr

Test Type: Preinflated Airbag

- Sled Pulse:
  - 10 g's/division
  - Filtered
  - Class 60

- Anterior-Posterior Chest Acceleration:
  - 12.5 g's/division
  - Filtered
  - Class 600

- Superior-Inferior Chest Acceleration:
  - 12.5 g's/division
  - Filtered
  - Class 600

- Left-Right Chest Acceleration:
  - 12.5 g's/division
  - Filtered
  - Class 600

- Resultant Chest Acceleration:
  - 10 g's/division
  - Filtered
  - Class 600

- Severity Index:
  - 100 g's/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-657
Dummy HSRI: Repeatable Pete (2)
Sled Velocity: 30.7 miles/hr

Test Type: Preinflated Airbag

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Right
Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest
Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g^2/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-658
Dummy HSRI Repeatability Peta (2)
Sled Velocity 30.6 miles/hr

Test Type Preinflated Airbag.

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Left-Riql Chest Acceleration
12.5 g/s/division
Filtered
Class 600

Resultant Chest Acceleration
10 g/s/division
Filtered
Class 600

Severity Index
100 g²/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-659
Dummy: HSRI Repeatable Pete (2)
Sled Velocity: 30.2 miles/hr

Test Type: Preinflated Airbag

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
12.5 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
12.5 g's/division
Filtered
Class 600

Resultant Chest Acceleration
10 g's/division
Filtered
Class 600

Severity Index
100 g's/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-661
Dummy: HSRI Repeateable Pete (2)
Sled Velocity: 30.3 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior- Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g's^2/sec/division
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-662
Dummy: KS11-Repeatably Perfect (2)
Sled Velocity: 30.0 miles/hr

- Test Type: Dash/Windshield

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g2.5 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-663
Dummy: CR-1 Repeatable Pete (2)
Sled Velocity: 30.3 miles/hr

Test Type: Dash/Windshield Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g2/s2/sec/division
SUMMARY DAT.: CHEST ACCELERATIONS

Test Number: A-664
Dummy: HSRT Repeatable Pate (2)
Sled Velocity: 28.4 miles/hr

1. Occurrence: Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g^2/sec/division

BRUSH INSTRUMENTS DIVISION, GOULD INC
CLEVELAND, OHIO
PRINTED IN U.S.A.
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-665
Dummy: HSRI Repeatable Peta (2)
Sled Velocity: 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g^2/s^2/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-666  
Dummy: HSRI-Repeatable Pete (2)  
Sled Velocity: 30.5 miles/hr  

Test Type: Dash/Windshield  
Impact:  

Sled Pulse  
10 g's/division  
Filtered  
Class 60  

Anterior-Posterior  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Superior-Inferior  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Left-Right  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Resultant Chest  
Acceleration  
20 g's/division  
Filtered  
Class 600  

Severity Index  
200 2.5 sec/division  

BRUSH INSTRUMENTS DIVISION, GOULD INC  
CLEVELAND, OHIO  PRINTED IN U.S.A  

LDR
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-667
Dummy Type: HSRI-Repeatabile Pete (I)
Sled Velocity: 30.3 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g²/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number  A-668
 Dummy: U.S. Repeatable Peta (1)
 Sled Velocity: 30.3 miles/hr

Test Type: Dash/Windshield: Impact

Sled Pulse:
10 g's/division
Filtered
Class 60

Anterior-Posterior:
Chest Acceleration:
25 g's/division
Filtered
Class 600

Superior-Inferior:
Chest Acceleration:
25 g's/division
Filtered
Class 600

Left-Right:
Chest Acceleration:
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration:
20 g's/division
Filtered
Class 600

Severity Index:
200 g^2/sec/division

BRUSH INSTRUMENT:
CLEVELAND, OHIO
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-669
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 30.1 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g/sec^2/division
Summary Data Chest Accelerations

Test Number: A-670
Dummy: HSR1 Repeatable Pete (1)
Sled Velocity: 30.2 miles/hr

Test Type: Dash/Windshield

Sled Pulse
10 g/s/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g/s/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g/s/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g/s/division
Filtered
Class 600

Resultant Chest Acceleration
20 g/s/division
Filtered
Class 600

Severity Index
200 g^2 sec/division
SUMMARY DATA: CHEST ACCELERATIONS

Test Number: A-671
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 30.2 miles/hr

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g²/sec/division

Impact Type: Dash/windshield
SUMMARY DATA CHEST ACCELERATIONS

Test Number A-678
Dummy: NSRI Repeateable Pete (2)
Sled Velocity 30.0 miles/hr

Test Type: Steering Wheel
Impacts: (2)

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/second
Filtered
Class 600

Severity Index
200 g²/sec/division
<table>
<thead>
<tr>
<th>Test Type</th>
<th>Steering Wheel Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy: HSRI Repeatable Pete (2)</td>
<td></td>
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<tr>
<td>Sled Velocity</td>
<td>29.9 miles/hr</td>
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<thead>
<tr>
<th>Category</th>
<th>Acceleration</th>
<th>Division</th>
<th>Filtered</th>
<th>Class</th>
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</thead>
<tbody>
<tr>
<td>Sled Pulse</td>
<td>10 g's/</td>
<td></td>
<td></td>
<td>Class 60</td>
</tr>
<tr>
<td>Anterior-Posterior</td>
<td>25 g's/</td>
<td></td>
<td></td>
<td>Class 600</td>
</tr>
<tr>
<td>Superior-Inferior</td>
<td>25 g's/</td>
<td></td>
<td></td>
<td>Class 600</td>
</tr>
<tr>
<td>Left-Right</td>
<td>25 g's/</td>
<td></td>
<td></td>
<td>Class 600</td>
</tr>
<tr>
<td>Resultant Chest</td>
<td>20 g's/</td>
<td></td>
<td></td>
<td>Class 600</td>
</tr>
</tbody>
</table>

Severity Index: 200 g²/sec/division
SUMMARY DATA LIWEST ACCELERATION

Test Number A-681
Dummy: HSRI Repeatable Rest (2)
Sled Velocity 30.2 miles/hr

SLED PULSE
70 g/s/division
Filtered
Class 60

ANTERIOR-POSTERIOR
Chest Acceleration
25 g/s/division
Filtered
Class 600

SUPERIOR-INFERIOR
Chest Acceleration
25 g/s/division
Filtered
Class 600

LEFT-RIGHT
Chest Acceleration
25 g/s/division
Filtered
Class 600

RESULTANT CHEST
ACCELERATION
20 g/s/division
Filtered
Class 600

SEVERITY INDEX
200 g^2 sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-682  
Test Type: Steering Wheel  
Impact:  

Dummy/Repeatability: Repeatability  
Sled Velocity: 30.2 miles/hr  

Sled Pulse  
10 g's/division  
Filtered  
Class 60  

Anterior-Posterior  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Superior-Inferior  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Left-Right  
Chest Acceleration  
25 g's/division  
Filtered  
Class 600  

Resultant Chest  
Acceleration  
20 g's/division  
Filtered  
Class 600  

Severity Index  
200 g²/sec/division  

YUMENTS DIVISION, GOULD INC  
ID: OHIO  
PRINTED IN USA
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-684
Dummy: HSRI Repeatable Pete (1)
Sled Velocity: 30.3 miles/hr

Test Type: Steering Wheel

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g^2.5 sec/division
<table>
<thead>
<tr>
<th>Test Type</th>
<th>Dummy</th>
<th>Test Number</th>
<th>Impact</th>
<th>Dummy</th>
<th>Test Number</th>
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<tbody>
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<td>Steering Wheel</td>
<td>USRI</td>
<td>A-685</td>
<td>(1)</td>
<td>USRI</td>
<td>A-685</td>
</tr>
<tr>
<td>Sled Velocity</td>
<td>30.0</td>
<td>miles/hr</td>
<td></td>
<td>30.0</td>
<td>miles/hr</td>
</tr>
</tbody>
</table>

| Sled Pulse          | 10 g/s/division | Filtered | Class 60 | 10 g/s/division | Filtered | Class 60 |

| Anterior-Posterior  | Chest Acceleration | 25 g/s/division | Filtered | Class 600 |
| Superior-Inferior   | Chest Acceleration | 25 g/s/division | Filtered | Class 600 |
| Left-Right          | Chest Acceleration | 25 g/s/division | Filtered | Class 600 |

| Resultant Chest     | Acceleration      | 20 g/s/division | Filtered | Class 600 |

| Severity Index      | 200 g^2/sec/division |
**Summary Data Chest Accelerations**

<table>
<thead>
<tr>
<th>Test Number</th>
<th>A-686</th>
<th>Test Type</th>
<th>Steering Wheel</th>
<th>Impact</th>
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</thead>
<tbody>
<tr>
<td>Dummy</td>
<td>HSR1</td>
<td>Repeatable Rate</td>
<td>1</td>
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<tr>
<td>Sled Velocity</td>
<td>30.0 miles/hr</td>
<td></td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Sled Pulse</th>
<th>10 g's/division</th>
<th>Filtered</th>
<th>Class 60</th>
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</table>

<table>
<thead>
<tr>
<th>Anterior-Posterior</th>
<th>Chest Acceleration</th>
<th>25 g's/division</th>
<th>Filtered</th>
<th>Class 600</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Superior-Inferior</th>
<th>Chest Acceleration</th>
<th>25 g's/division</th>
<th>Filtered</th>
<th>Class 600</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Left-Right</th>
<th>Chest Acceleration</th>
<th>25 g's/division</th>
<th>Filtered</th>
<th>Class 600</th>
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<table>
<thead>
<tr>
<th>Resultant Chest</th>
<th>Acceleration</th>
<th>20 g's/division</th>
<th>Filtered</th>
<th>Class 600</th>
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</table>

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<tr>
<th>Severity Index</th>
<th>200 g² sec/ division</th>
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</thead>
</table>
SUMMARY DATA (CHEST ACCELERATION)

Test Number A-607
Dummy NCAT Repeatable Data (1)
Sled Velocity 30.1 miles/hr

Test Type Steering Wheel Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right:
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g²/sec/division
SUMMARY DATA CHEST ACCELERATIONS

Test Number: A-600
Dummy: HSB1 Repeatable Pate (1)
Sled Velocity: 30.1 miles/hr

Test Type: Steering Wheel
Impact: 

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest
Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g^2 sec/division
SUMMARY DATA CHEST ACCELERATION

Test Number: A-688
Dummy: HGM-Repeatable Data (1)
Sled Velocity: 30.3 miles/hr

Test Type: Steering Wheel Impact

Sled Pulse
10 g's/division
Filtered
Class 60

Anterior-Posterior Chest Acceleration
25 g's/division
Filtered
Class 600

Superior-Inferior Chest Acceleration
25 g's/division
Filtered
Class 600

Left-Righ Chest Acceleration
25 g's/division
Filtered
Class 600

Resultant Chest Acceleration
20 g's/division
Filtered
Class 600

Severity Index
200 g's/2.5 sec/division