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<p>16. Abstract</p> <p>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:</p> <ol style="list-style-type: none"> 1. Repeatability of test results 2. Reproducibility of test results 3. Human-like responses in a moderate automotive crash environment 4. Non-fragility <p>Biomechanical data describing the dynamic impact responses of unembalmed cadavers was used as the basis for humanlike performance.</p> <p>New and uniquely repeatable joints were developed. A urethane head and chest with more humelike dynamic response was also developed. Self-skinning urethane foam was used extensively. Great care was used throughout to insure proper isolation of metal components.</p> <p>Extensive sled testing of two devices was done to verify performance.</p>			
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APPENDIX A
HSRI TEST PROCEDURES

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.

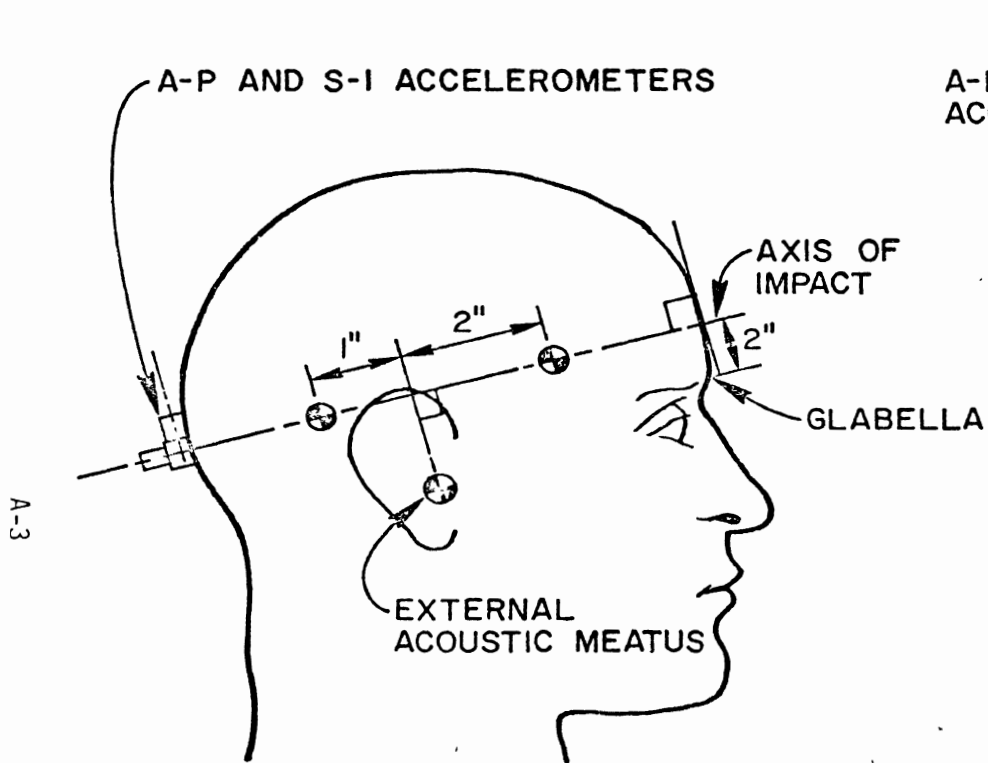
The head is suspended and held in place by four strands of 000 thickness surgical thread. This thread supports only the weight of the head, and breaks easily on impact. The impacts were carried out in the HSRI Impact Facility. (Figure 2)

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/ft³), 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).



A-3

FIGURE 1(a). TARGETING AND INSTRUMENTATION FOR FRONT HEAD IMPACTS.

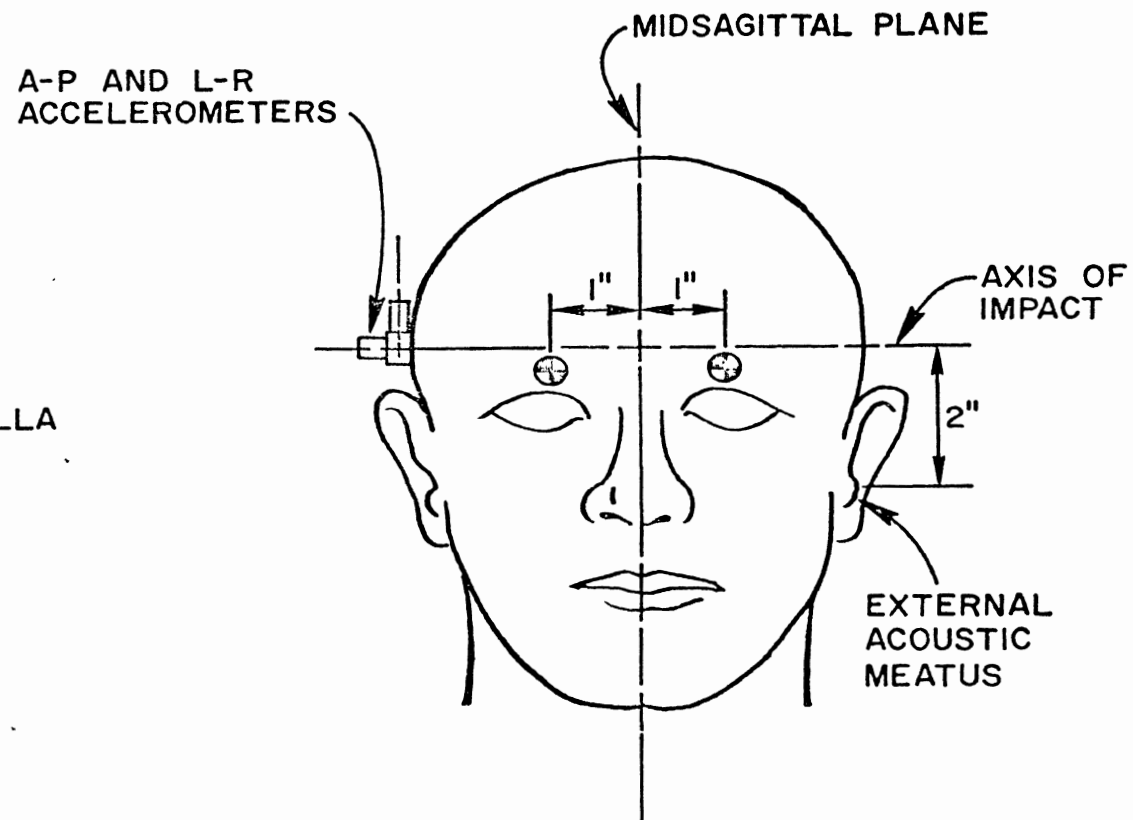


FIGURE 1(b). TARGETING AND INSTRUMENTATION FOR SIDE HEAD IMPACTS.

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.

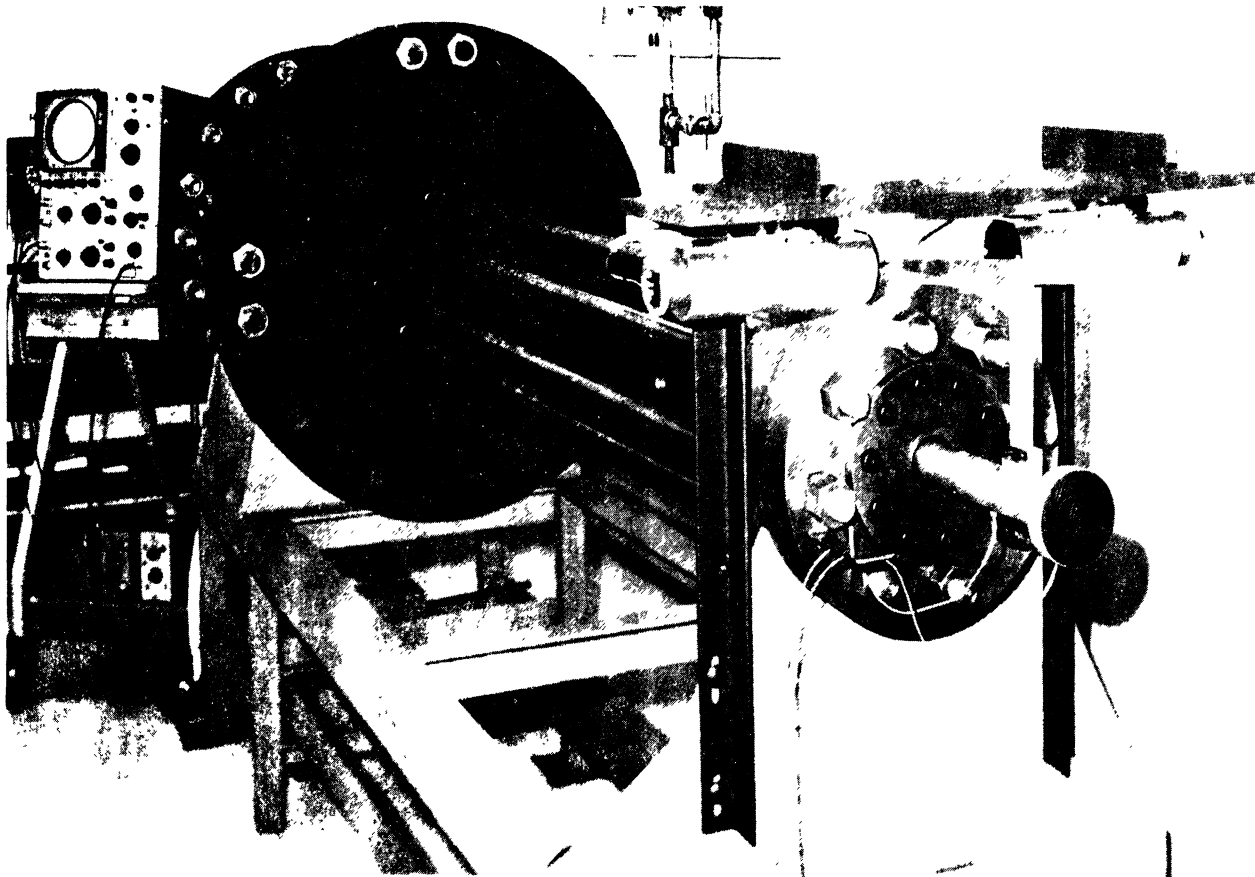
The impactor is a six-inch diameter rigid cylinder with a 1/2-inch edge radius weighing 22 lbs. It is centered medially over the fourth interspace. Impact velocities were 13 mph \pm 1 mph. Impact forces were measured with an inertia compensated load cell. Chest displacements were measured photo-metrically 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.

BIOMEDICAL LABORATORY

IMPACT FACILITY



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 photo-transistorized 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.

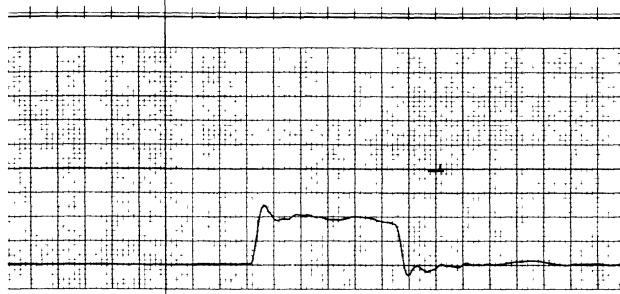
APPENDIX B
Sled Test Summary Data

SUMMARY DATA HEAD ACCELERATIONS

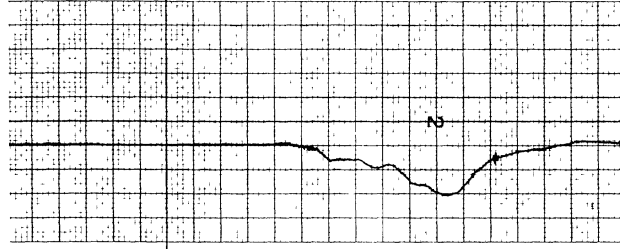
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Test Type Lap and Torso
Belts

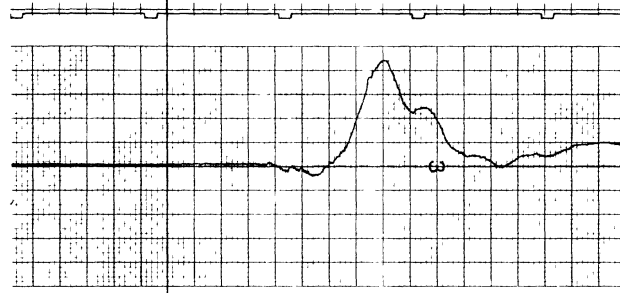
Sled Pulse
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Filtered
Class 60



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



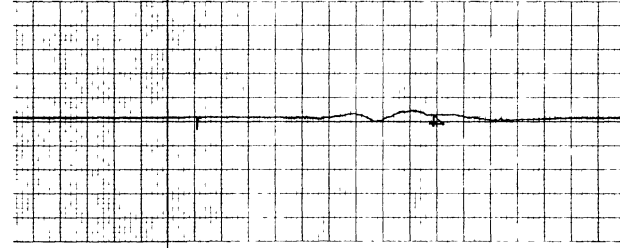
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Head Acceleration
12.5 g's/division
Filtered
Class 1000



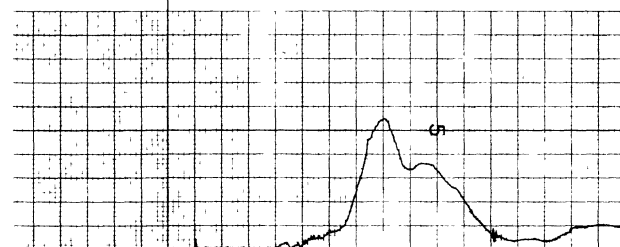
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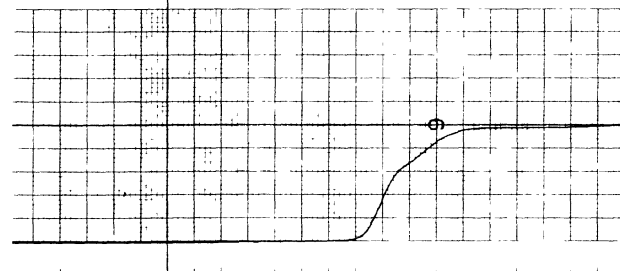
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

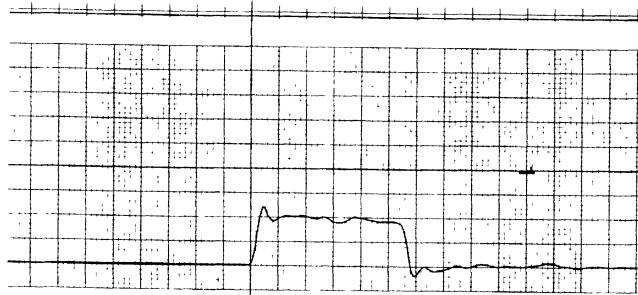


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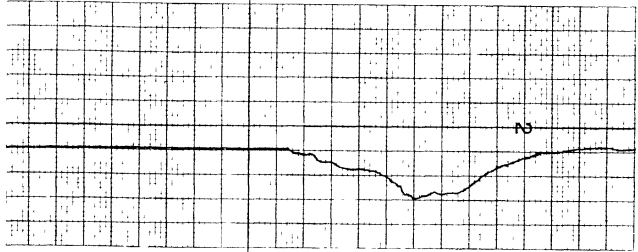
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Test type Lap and Torso
 Belts _____

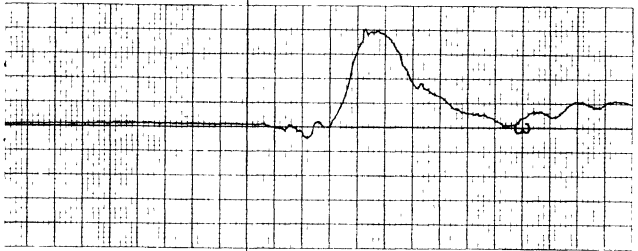
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 Filtered
 Class 60



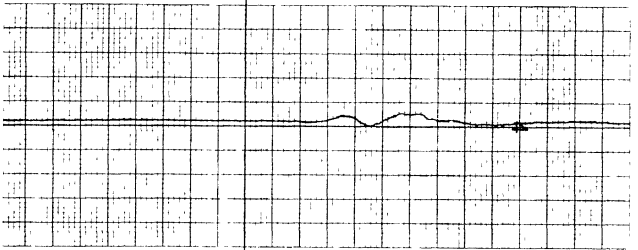
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Superior-Inferior
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 Filtered
 Class 1000



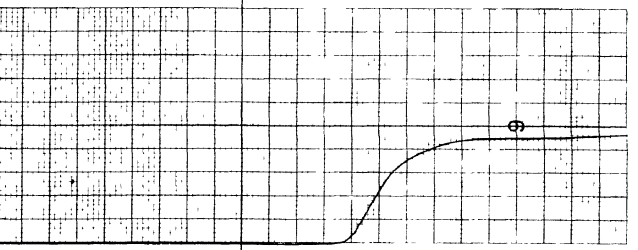
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Resultant Head
 Acceleration
 10 g's/division
 Filtered
 Class 1000



Severity Index
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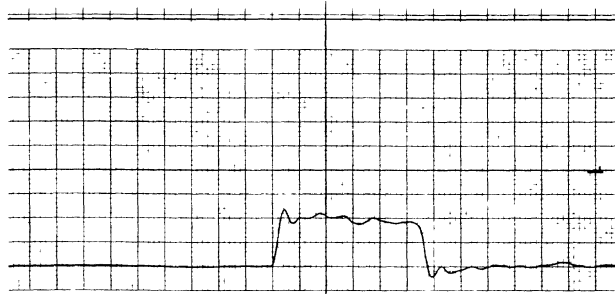


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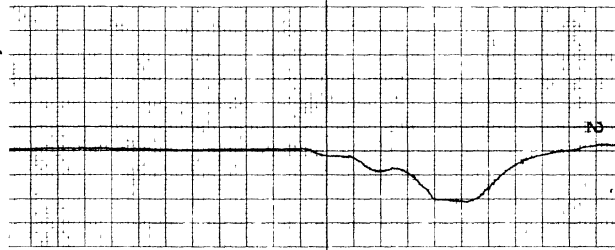
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Test Type Lap and Torso
Belts

Sled Pulse
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Class 60



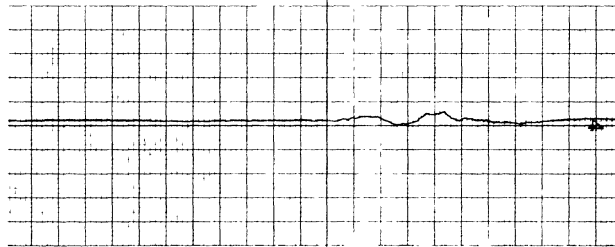
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Head Acceleration
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Filtered
Class 1000



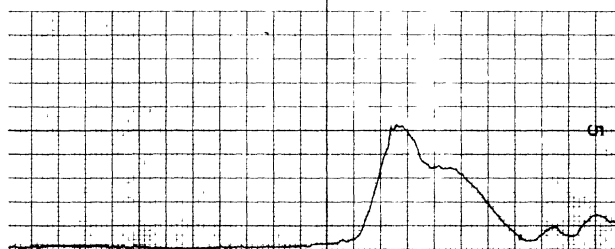
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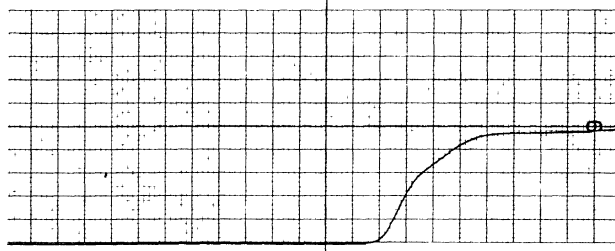
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Head Acceleration
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Resultant Head
Acceleration
10 g's/division
Filtered
Class 1000



Severity Index
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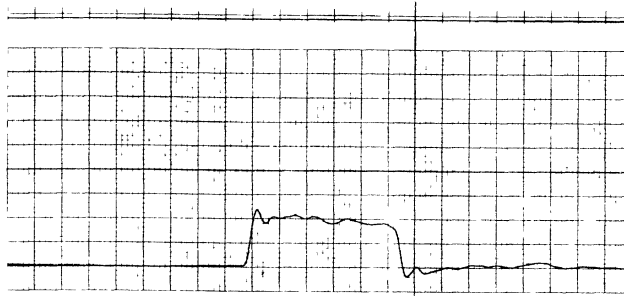


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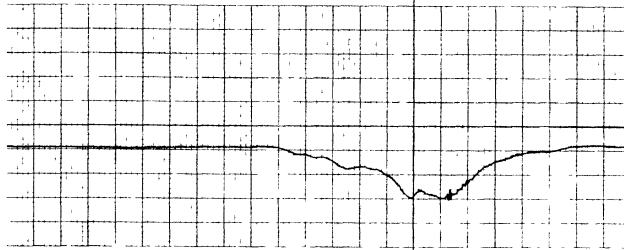
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Sled Velocity 30.4 miles/hr

Test Type Lap and Torso
Belts

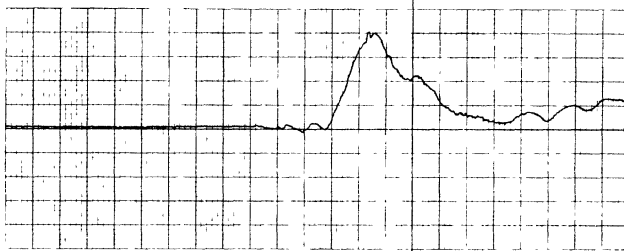
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Class 60



Anterior-Posterior
Head Acceleration
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Filtered
Class 1000



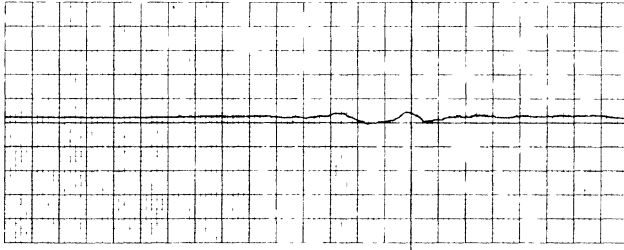
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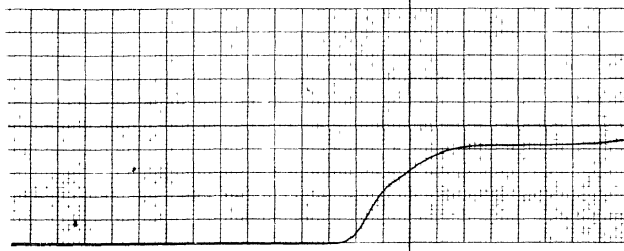
Left-Right
Head Acceleration
12.5 g's/division
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Class 1000



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



Severity Index
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sion

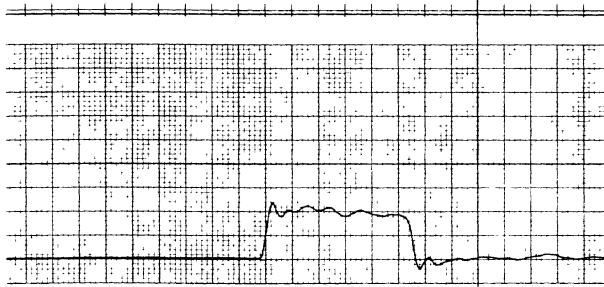


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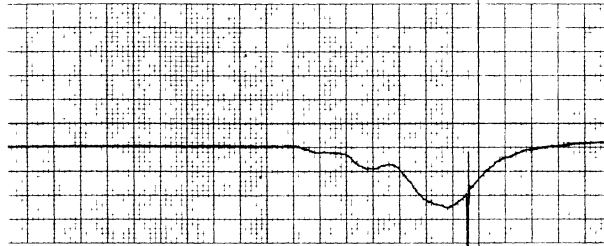
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Test Type Lap and Torso
Belts.

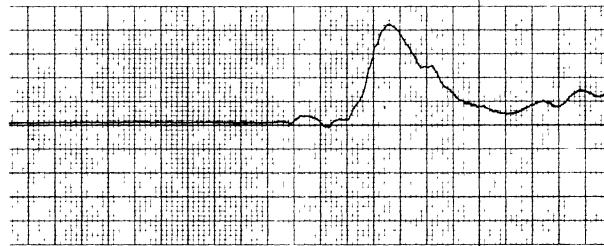
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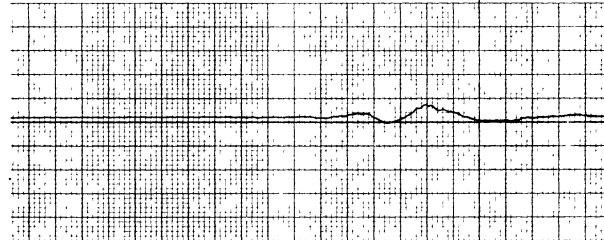
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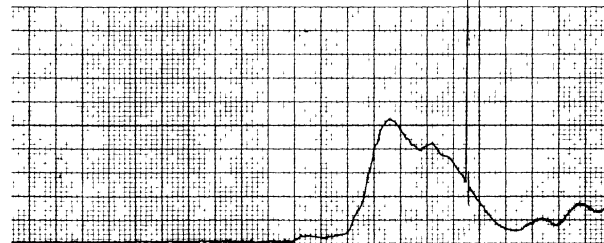
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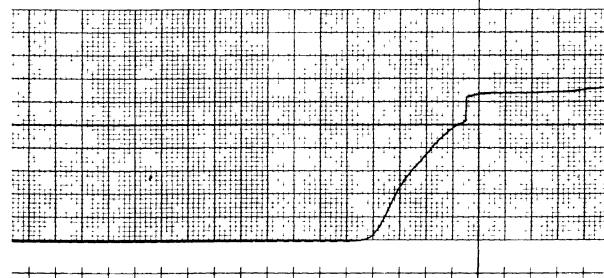
Left-Right
Head Acceleration
12.5 g's/division
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Class 1000



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



Severity Index
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sion

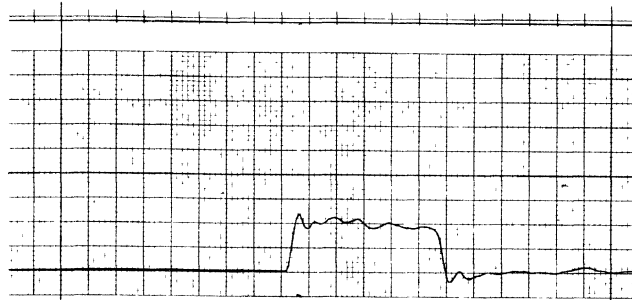


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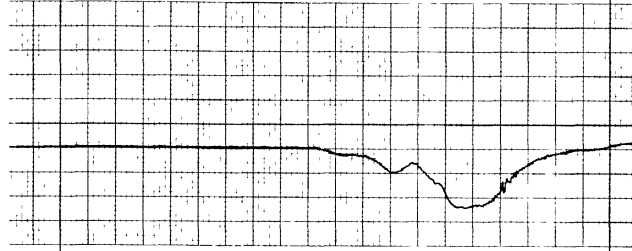
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Test Type Lap and Torso
Belts

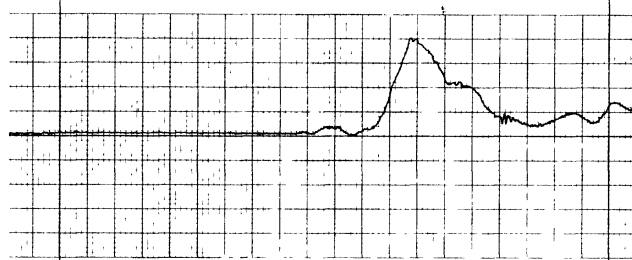
Sled Pulse
10 g's/division
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Class 60



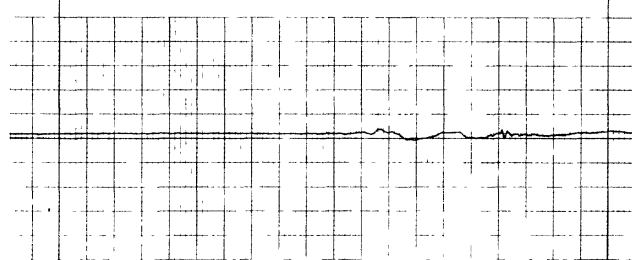
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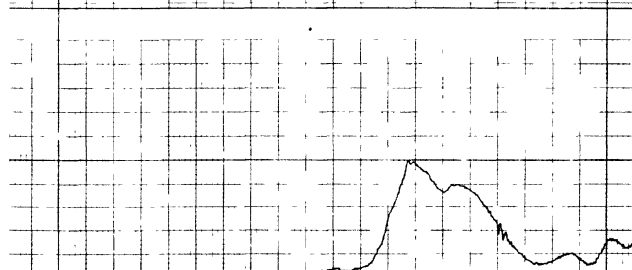
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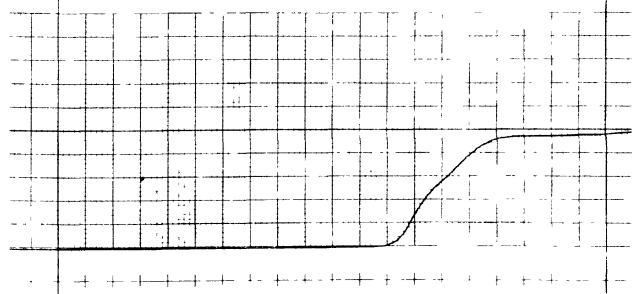
Left-Right
Head Acceleration
12.5 g's/division
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Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

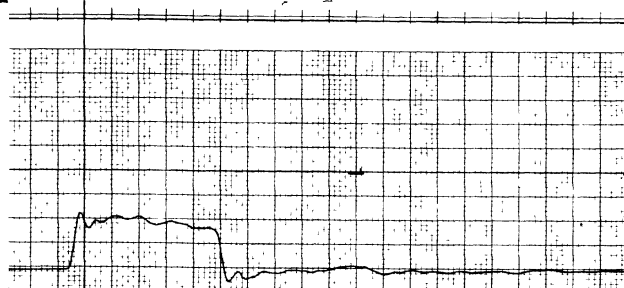


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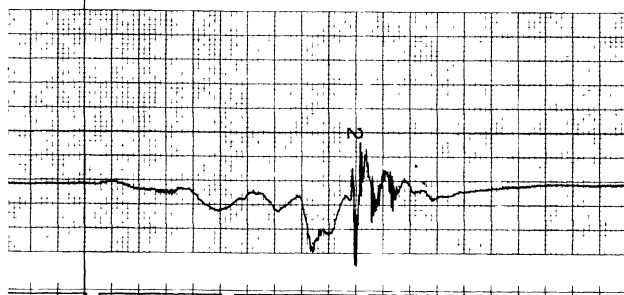
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Test Type Lap and Torso
Belts

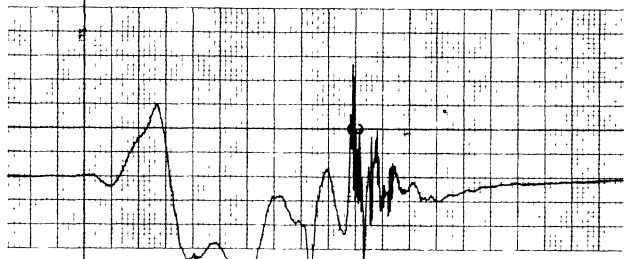
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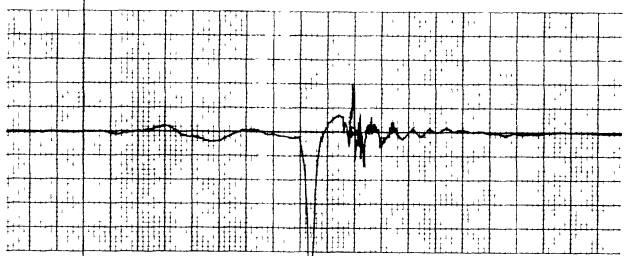
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Head Acceleration
12.5 g's/division
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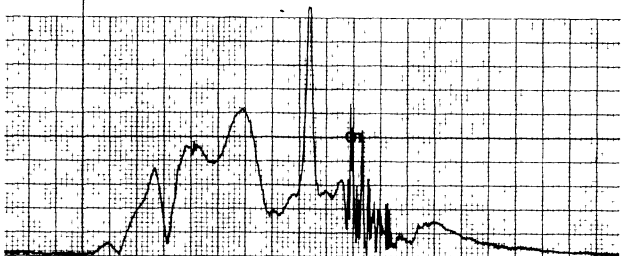
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Head Acceleration
12.5 g's/division
Filtered
Class 1000



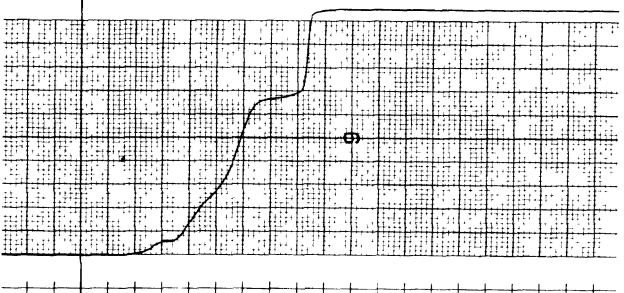
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

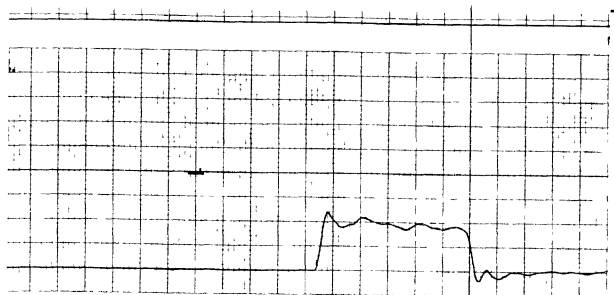


SUMMARY DATA HEAD ACCELERATIONS

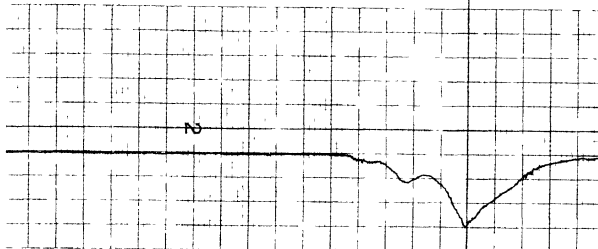
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Test Type Lap and Torso
Belts

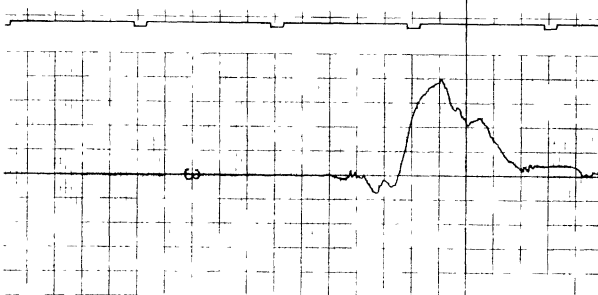
Sled Pulse
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 Class 60



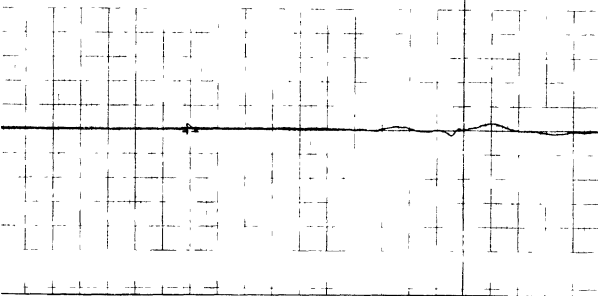
Anterior-Posterior
 Head Acceleration
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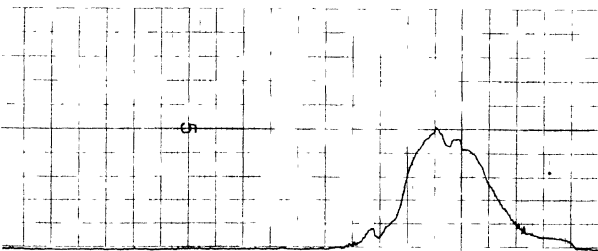
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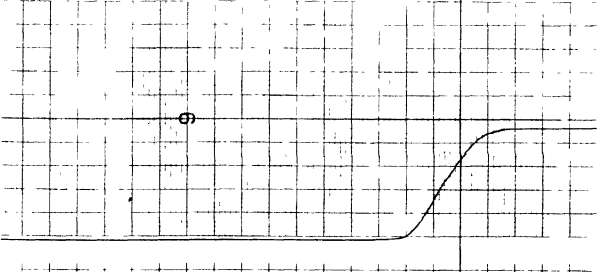
Left-Right+
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



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



Severity Index
 100 g^{2.5}sec/divi-
 sion

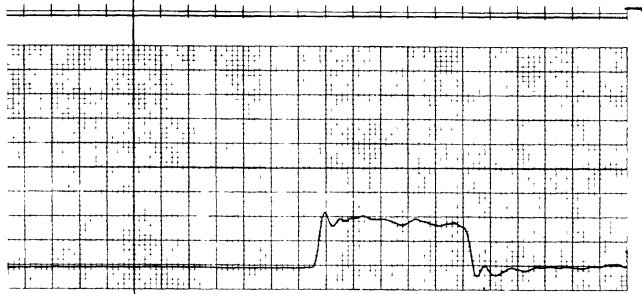


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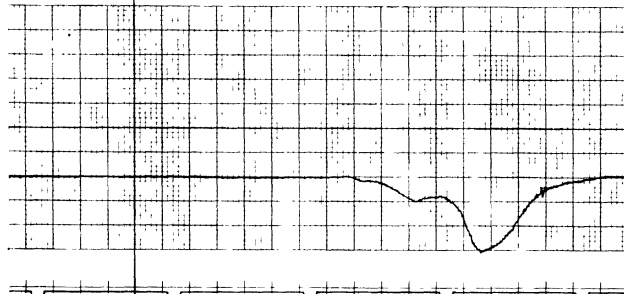
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Test Type Lap and Torso
Belts

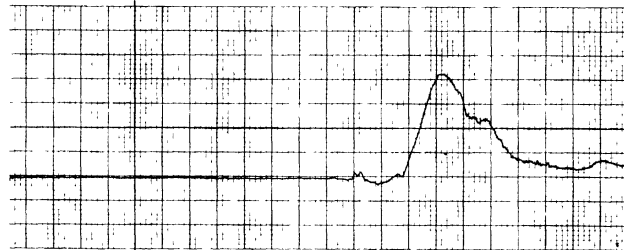
Sled Pulse
10 g's/division
Filtered
Class 60



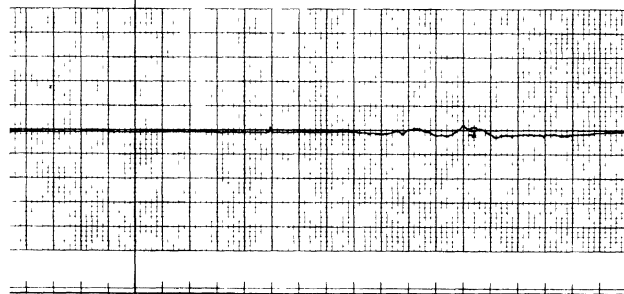
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



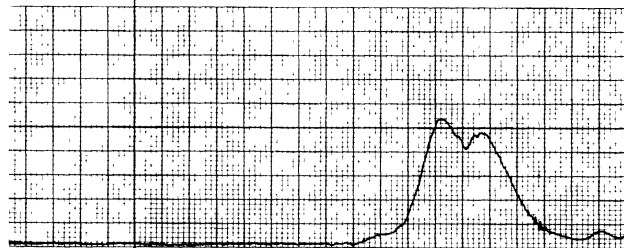
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



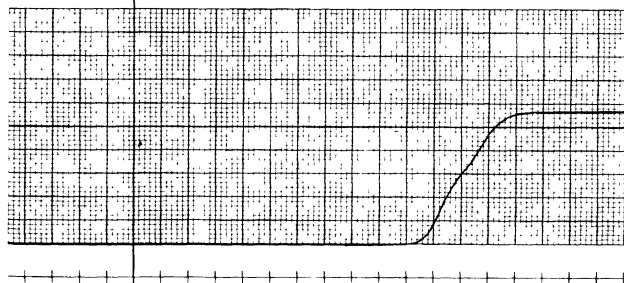
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

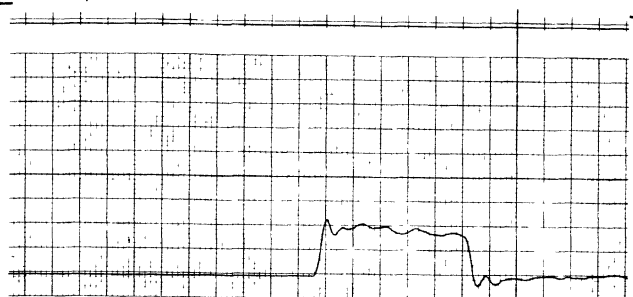


SUMMARY DATA HEAD ACCELERATIONS

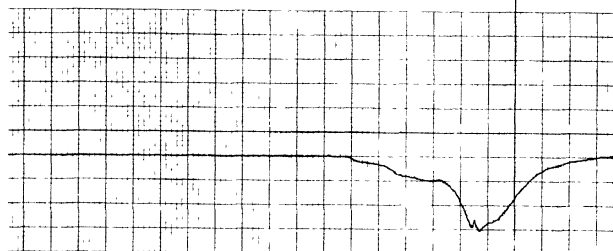
Test Number A-674
Dummy HSRI-Repeatable Pete (2)
Sled Velocity 30.4 miles/hr

Test Type Lap and Torso
Belts

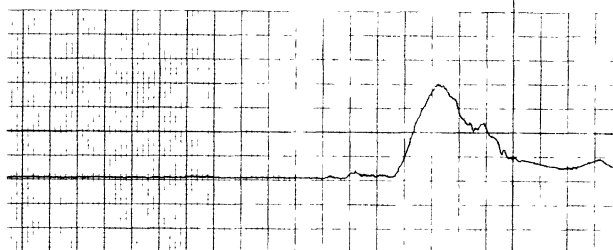
Sled Pulse
10 g's/division
Filtered
Class 60



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



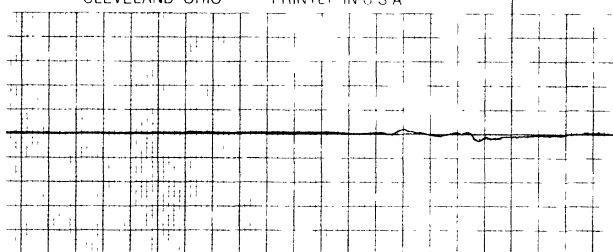
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



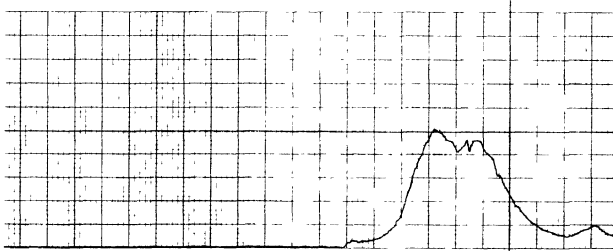
BRUSH INSTRUMENTS DIVISION GOULD INC

CLEVELAND OHIO PRINTED IN U.S.A

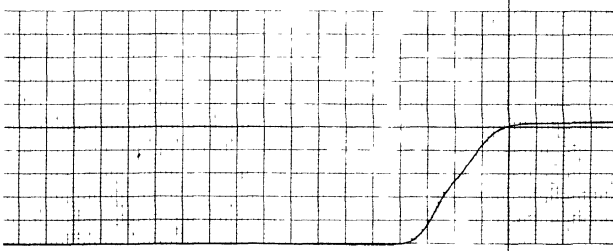
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5} sec/divi-
sion

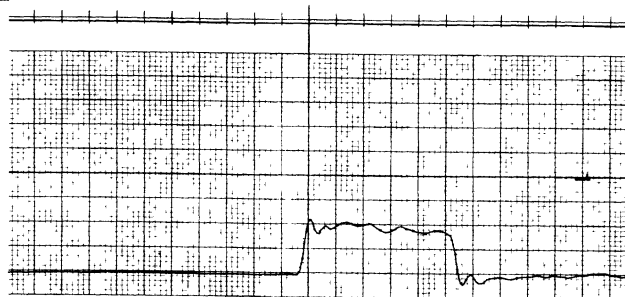


SUMMARY DATA HEAD ACCELERATIONS

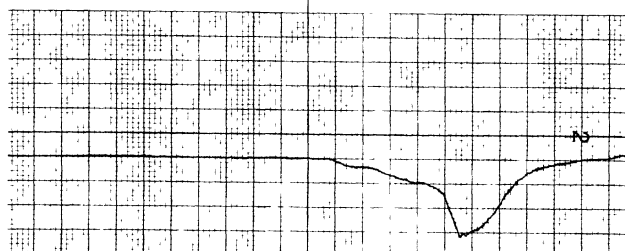
Test Number A-675
 Dummy HSRI Repeatable Pate (2)
 Sled Velocity 29.9 miles/hr

Test Type Lap and Torso
Belts

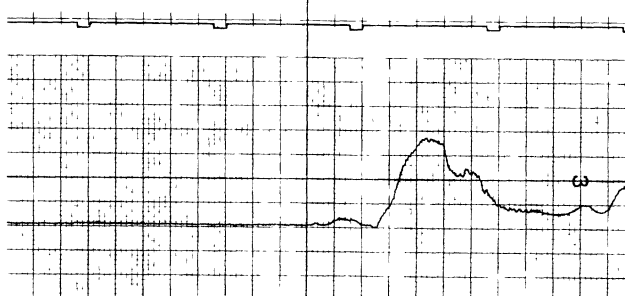
Sled Pulse
 10 g's/division
 Filtered
 Class 60



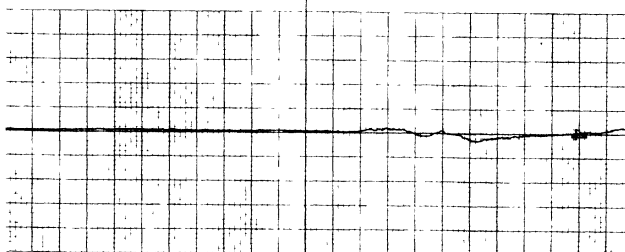
Anterior-Posterior
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



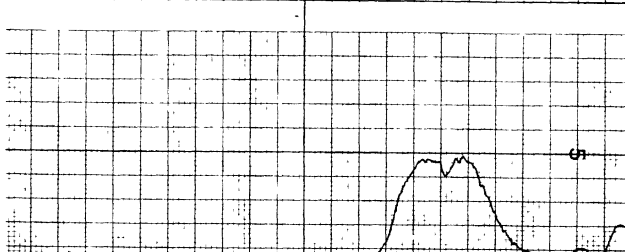
Superior-Inferior
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



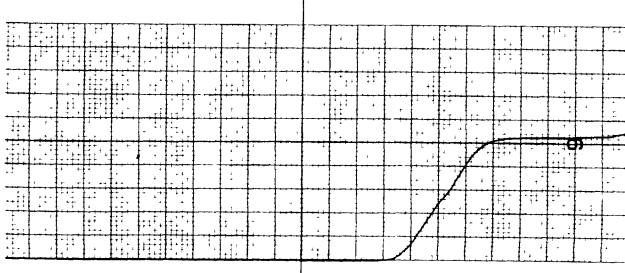
Left-Right
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



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



Severity Index
 100 g^{2.5}sec/divi-
 sion



SUMMARY DATA HEAD ACCELERATIONS

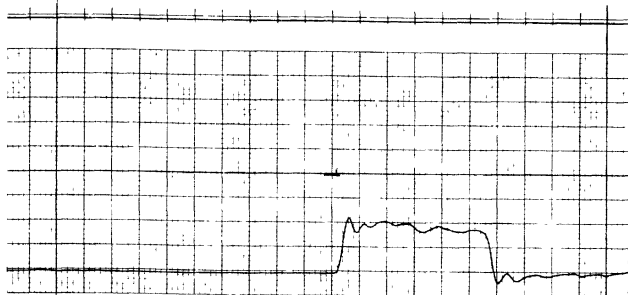
Test Number A-676

Test Type Lap and Torso Belts

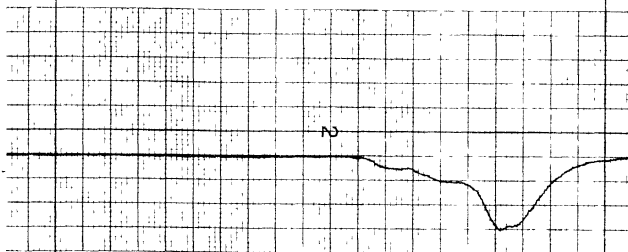
Dummy HSRI-Repeatable Pate (2)

Sled Velocity 29.9 miles/hr

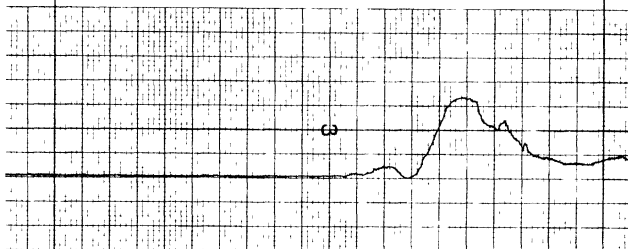
Sled Pulse
10 g's/division
Filtered
Class 60



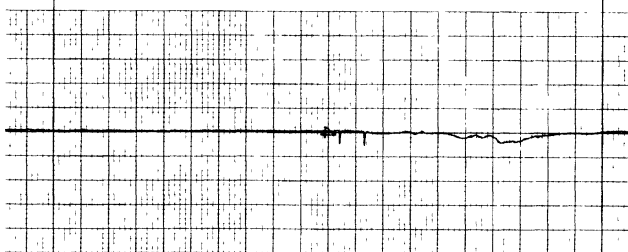
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



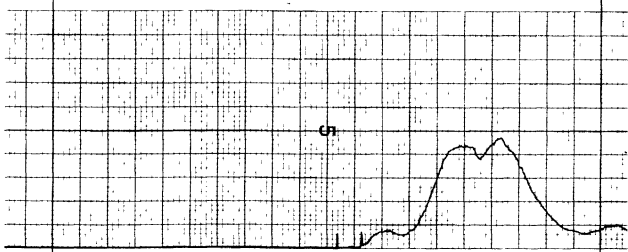
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



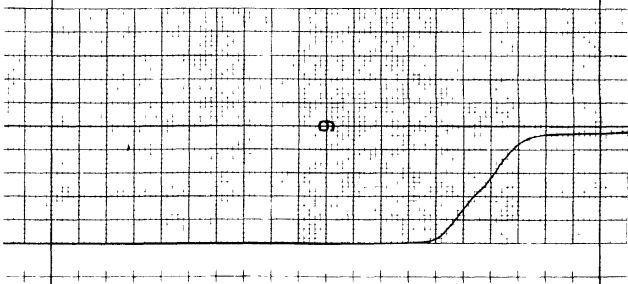
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

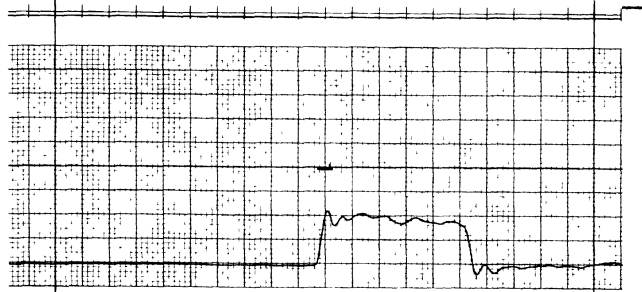


SUMMARY DATA HEAD ACCELERATIONS

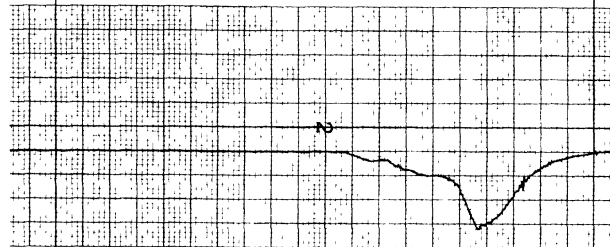
Test Number A-677
Dummy HSRI-Repeatable Pete (2)
Sled Velocity 30.1 miles/hr

Test Type Lap and Torso Belts

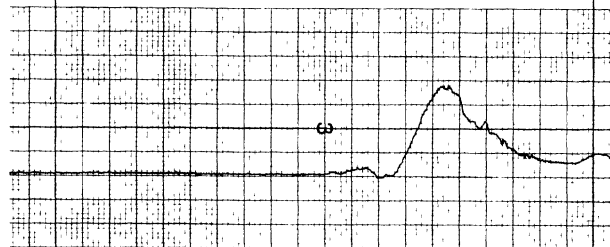
Sled Pulse
10 g's/division
Filtered
Class 60



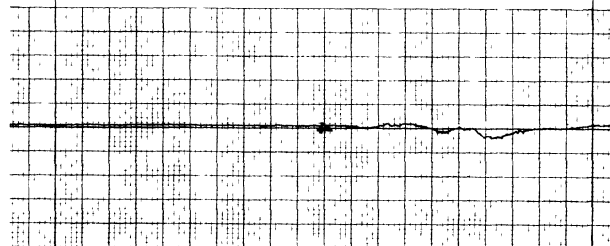
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



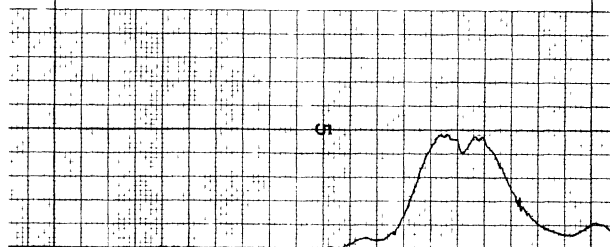
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



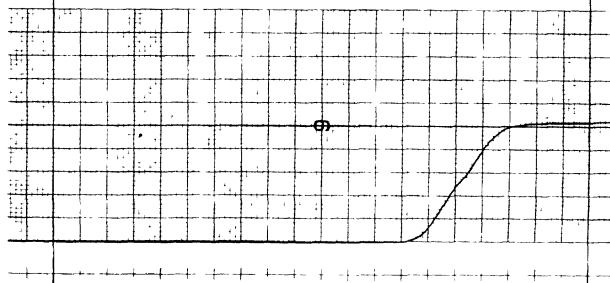
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

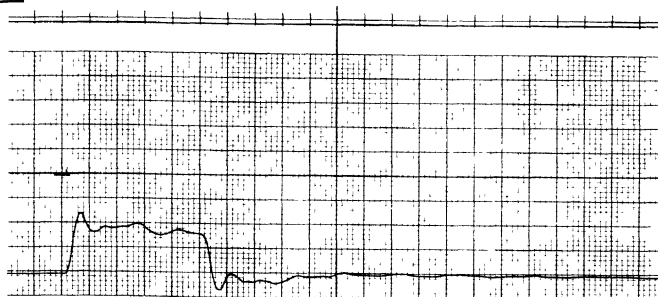


SUMMARY DATA HEAD ACCELERATIONS

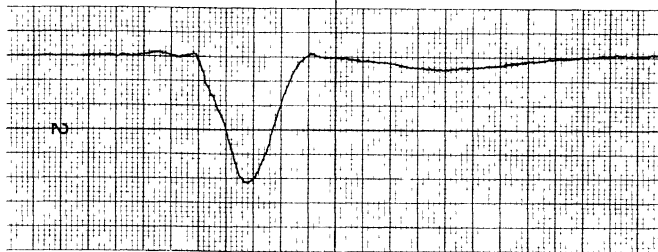
Test Number A-648
 Dummy HSRI Repeatable Pete (i)
 Sled Velocity 26.5 miles/hr

Test Type Preinflated Airbag

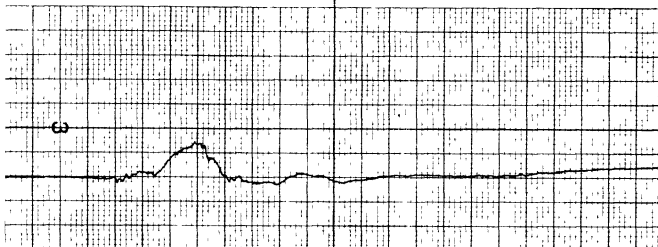
Sled Pulse
 10 g's/division
 Filtered
 Class 60



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



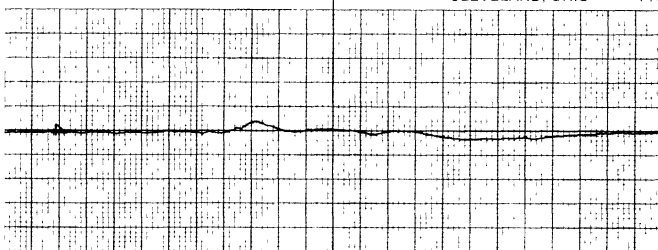
Superior-Inferior
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



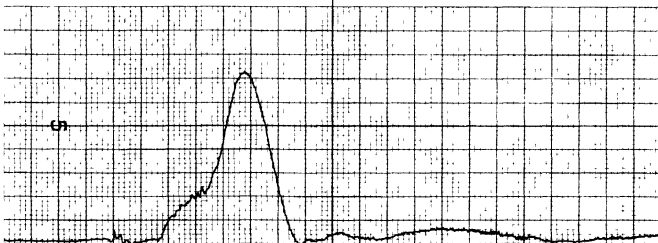
BRUSH INSTRUMENTS DIVIS

CLEVELAND, OHIO PRI

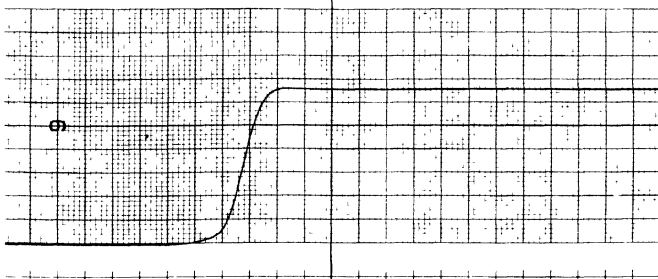
Left-Right
 Head Acceleration
 12.5 g's/division
 Filtered
 Class 1000



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



Severity Index
 100 g^{2.5}sec/division

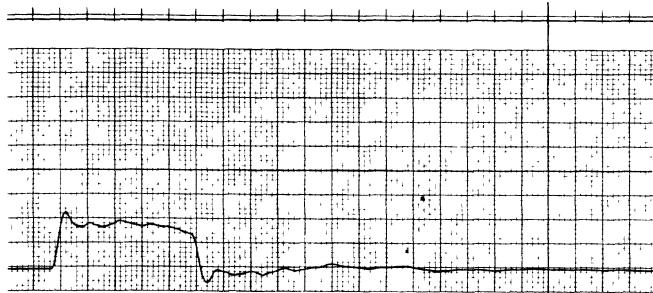


SUMMARY DATA HEAD ACCELERATIONS

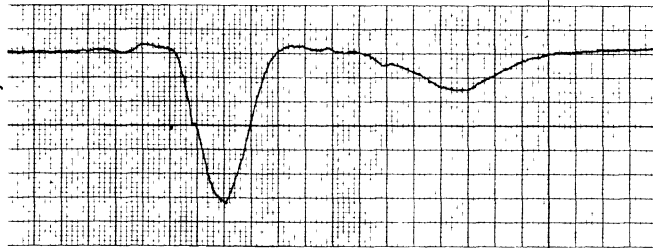
Test Number A-649
Dummy HSRI Repeatable Pete (1)
Sled Velocity 26.2 miles/hr

Test Type Preinflated Airbag

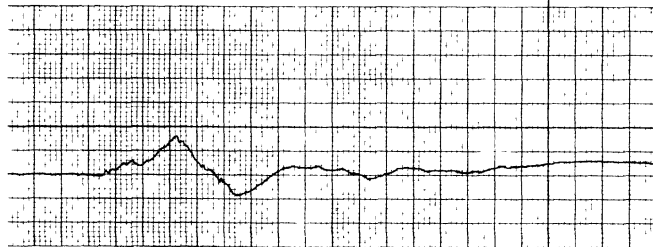
Sled Pulse
10 g's/division
Filtered
Class 60



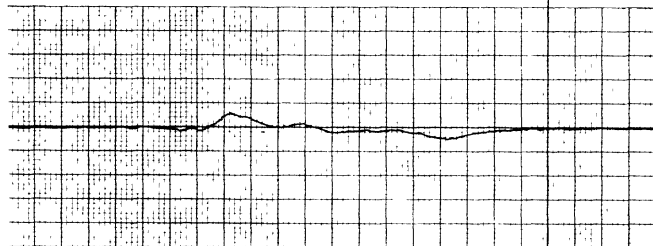
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



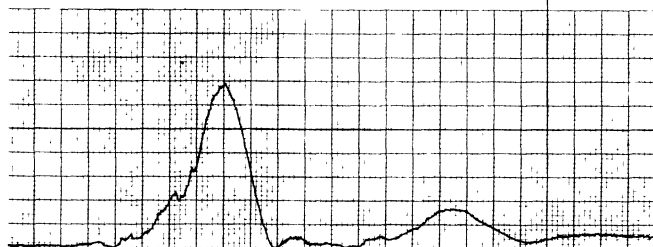
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



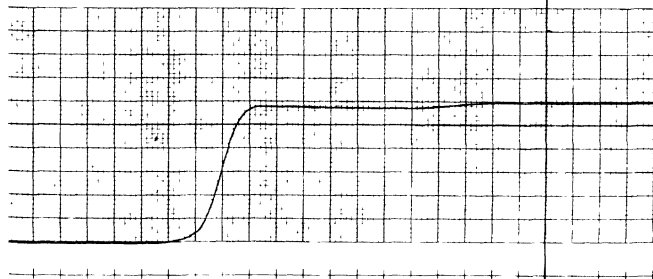
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

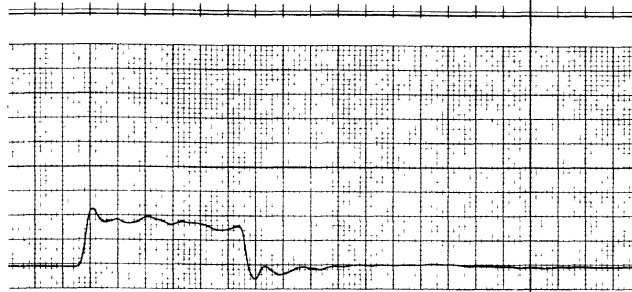


SUMMARY DATA HEAD ACCELERATIONS

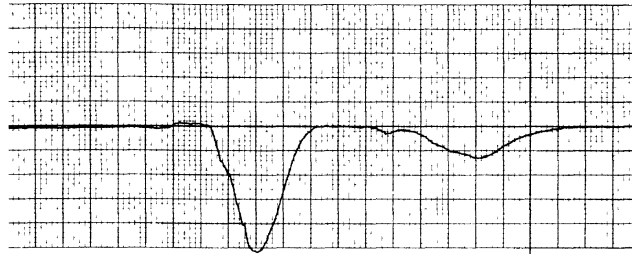
Test Number A-650
Dummy HSRI Repeatable Pete (1)
Sled Velocity 29.5 miles/hr

Test Type Preinflated Airbag

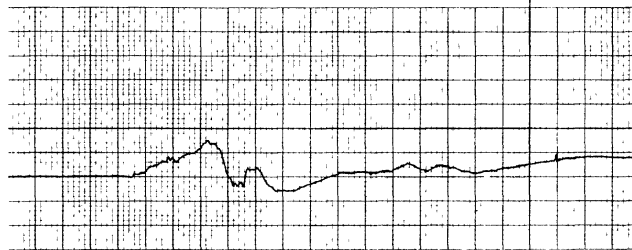
Sled Pulse
10 g's/division
Filtered
Class 60



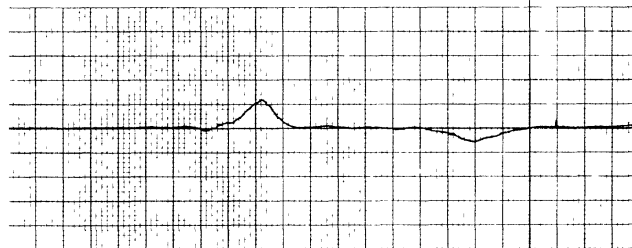
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



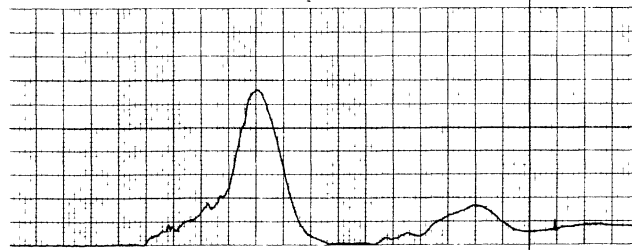
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



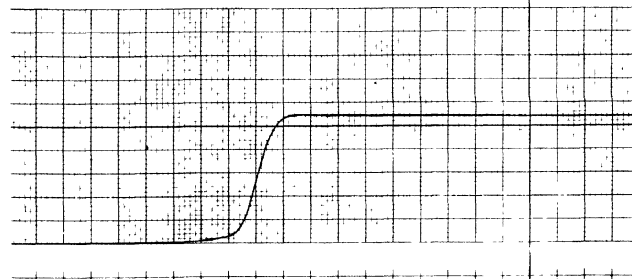
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

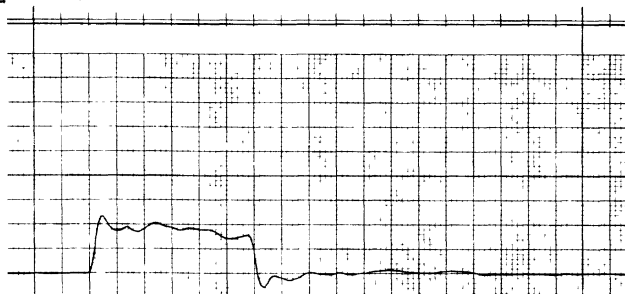


SUMMARY DATA HEAD ACCELERATIONS

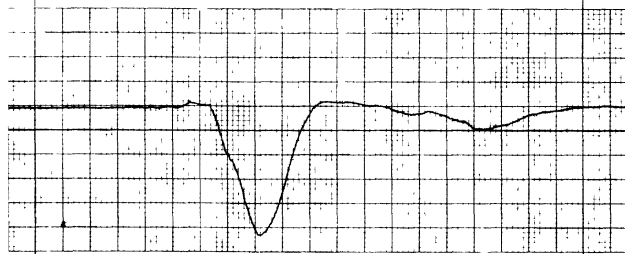
Test Number A-651
Dummy HSRI-Repeatable Pete (1)
Sled Velocity 27.9 miles/hr

Test Type Preinflated Airbag

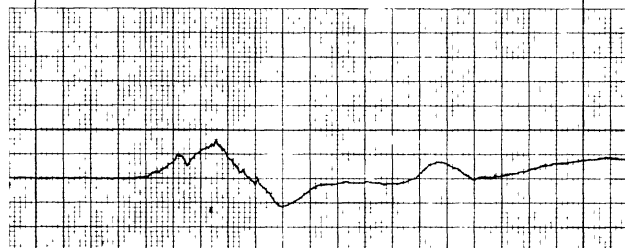
Sled Pulse
10 g's/division
Filtered
Class 60



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



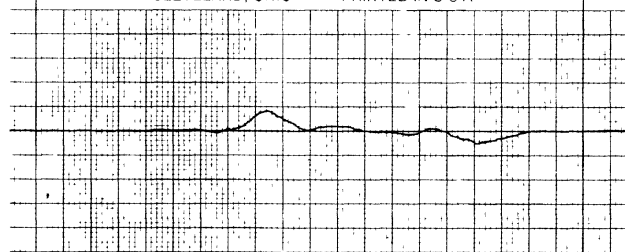
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



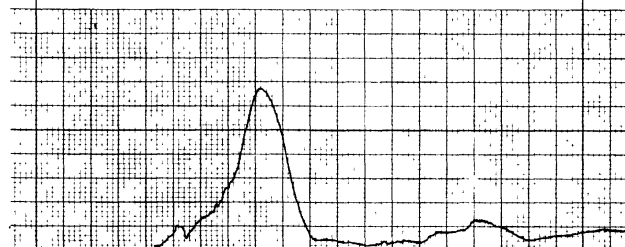
BRUSH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U S A

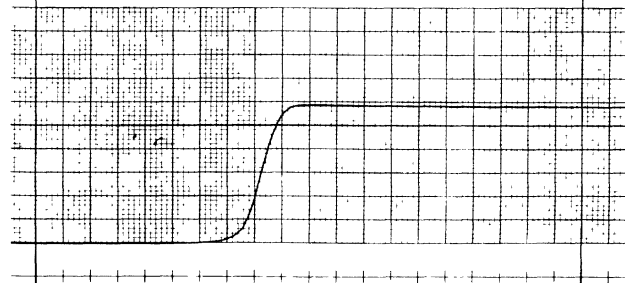
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

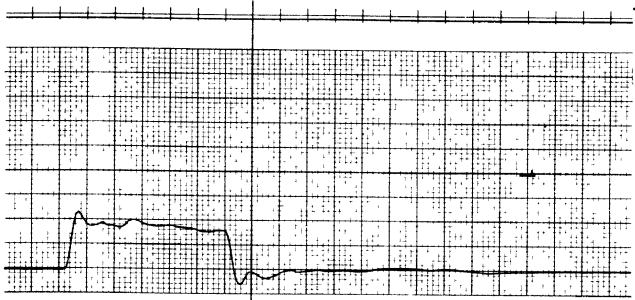


SUMMARY DATA HEAD ACCELERATIONS

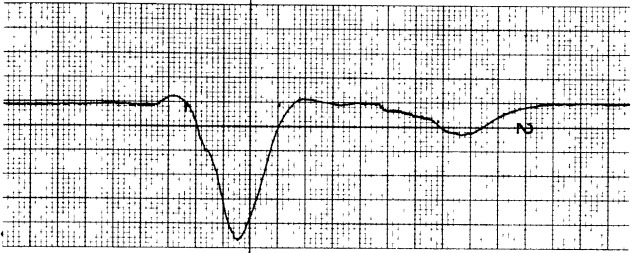
Test Number A-652
Dummy HSRI-Repeatable Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Preinflated Airbag

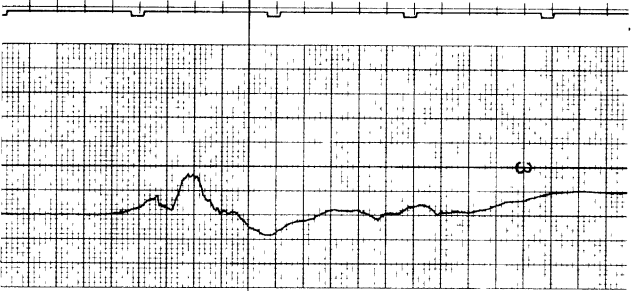
Sled Pulse
10 g's/division
Filtered
Class 60



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



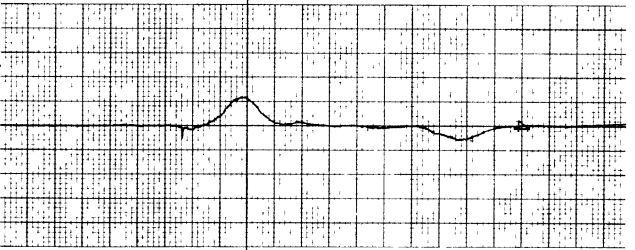
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



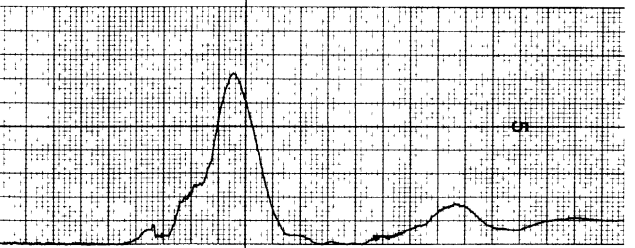
VISION, GOULD INC

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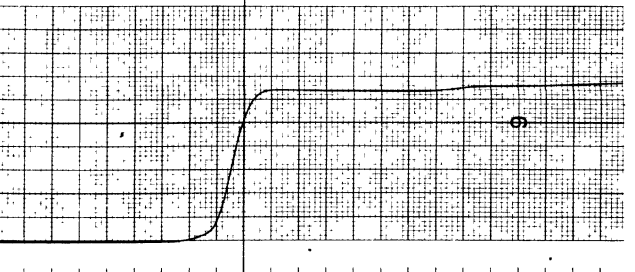
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion



SUMMARY DATA HEAD ACCELERATIONS

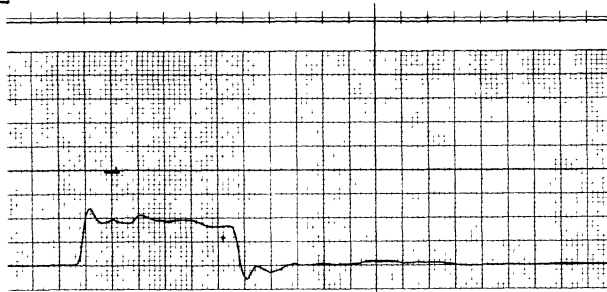
Test Number A-653

Test Type Preinflated Airbag

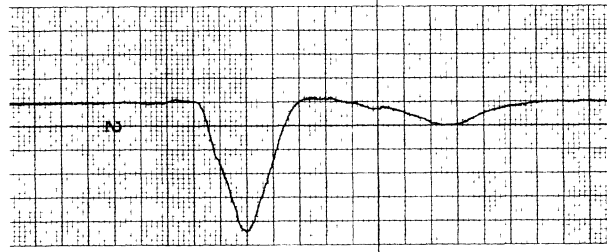
Dummy HSRI Repeatable Pete (1)

Sled Velocity 29.7 miles/hr

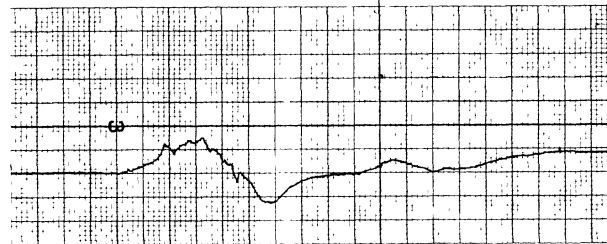
Sled Pulse
10 g's/division
Filtered
Class 60



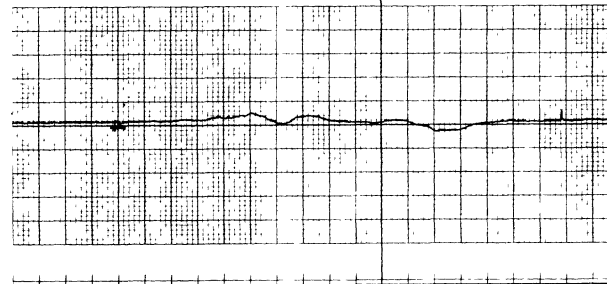
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



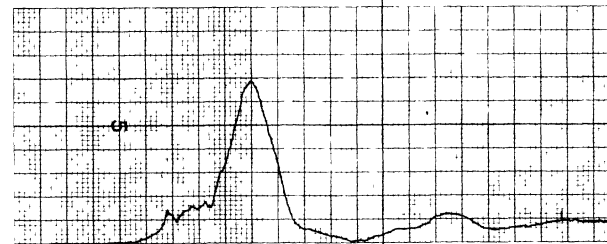
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



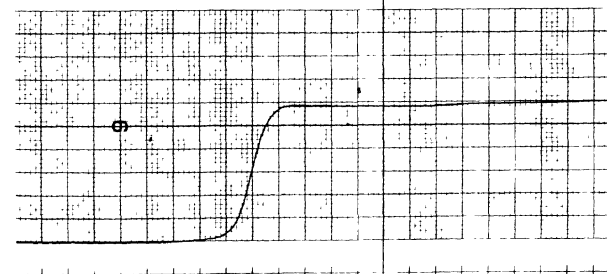
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

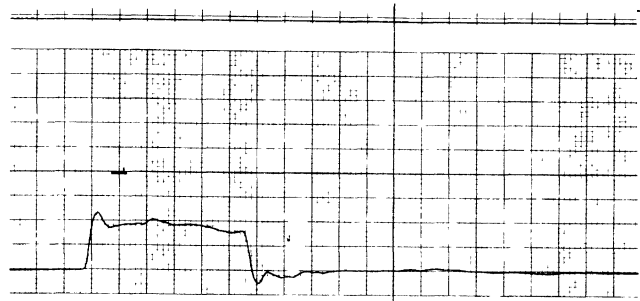


SUMMARY DATA HEAD ACCELERATIONS

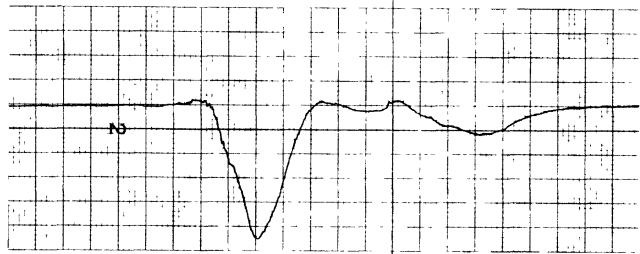
Test Number A-654
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Preinflated Air-
bag

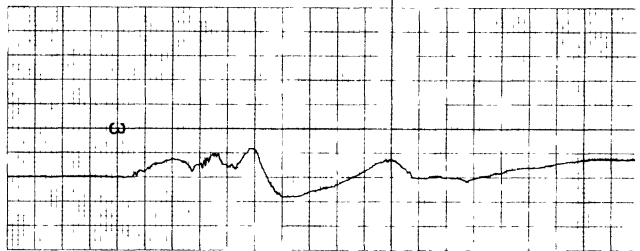
Sled Pulse
10 g's/division
Filtered
Class 60



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



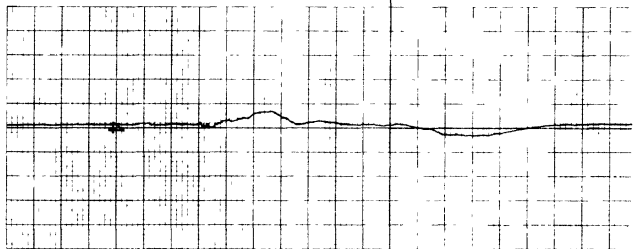
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



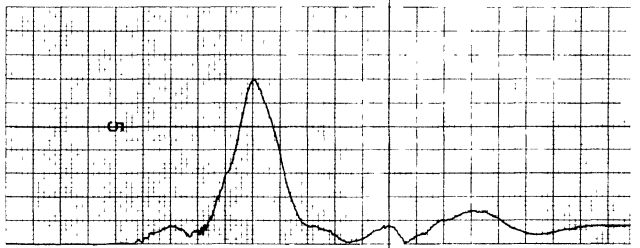
BRUSH INSTRUMENT

CLEVELAND OH

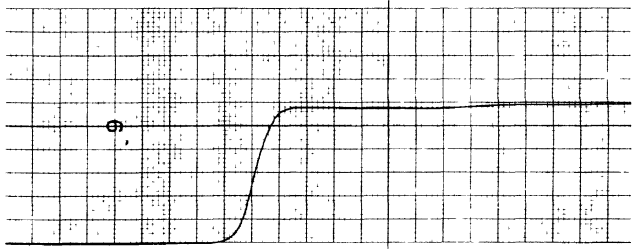
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

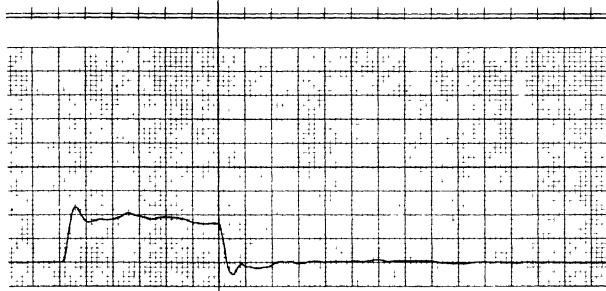


SUMMARY DATA HEAD ACCELERATIONS

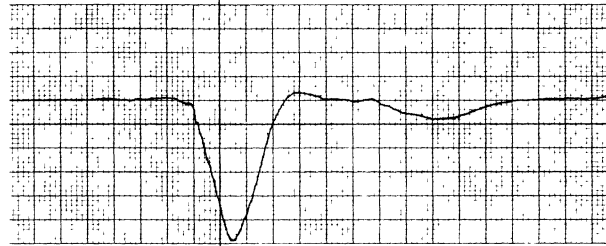
Test Number A-655
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Preinflated Airbag

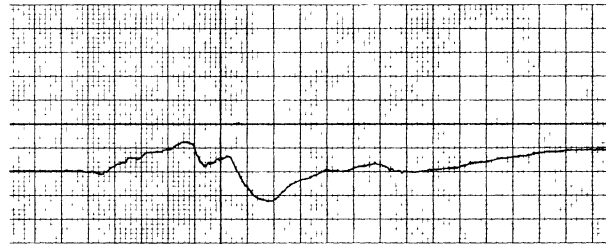
Sled Pulse
10 g's/division
Filtered
Class 60



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



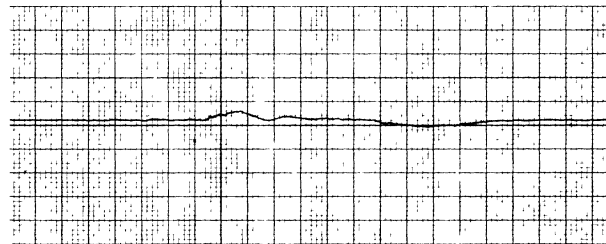
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



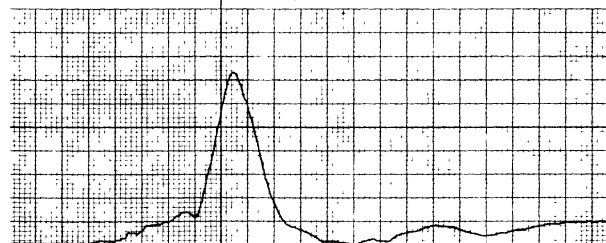
BRUSH INSTRUMENTS DIVISION, GO

CLEVELAND, OHIO PRINTED IN U

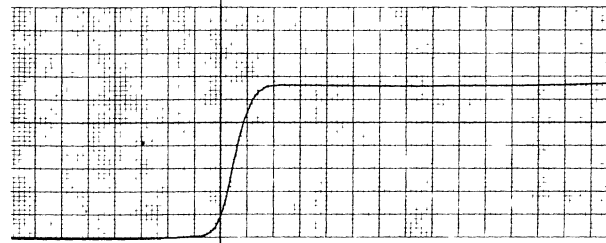
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

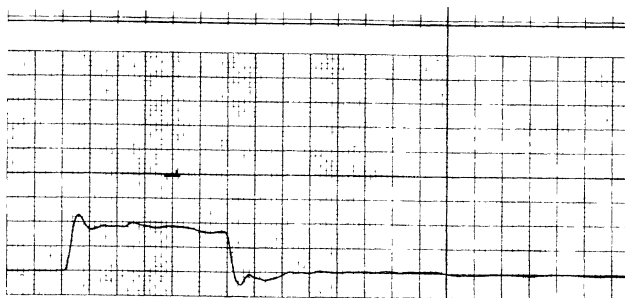


SUMMARY DATA HEAD ACCELERATIONS

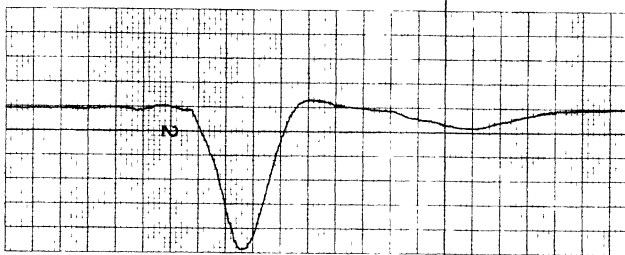
Test Number A-656
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Preinflated Airbag

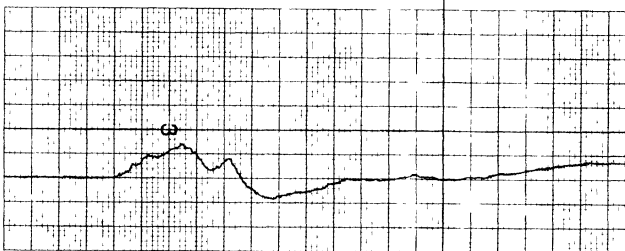
Sled Pulse
10 g's/division
Filtered
Class 60



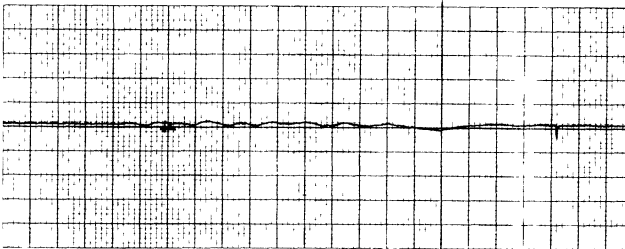
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



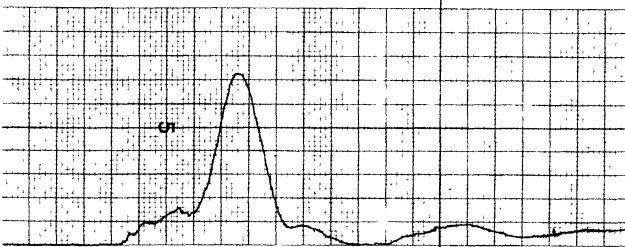
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



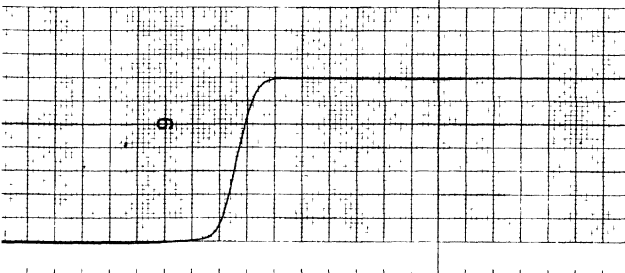
Left-Right:
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

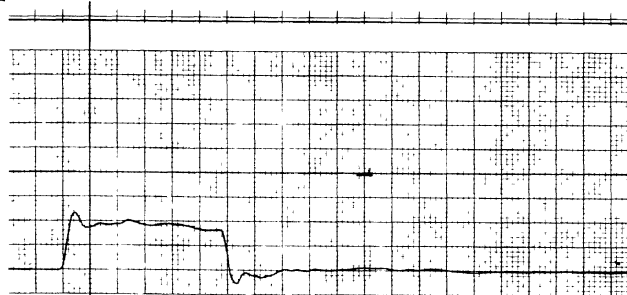


SUMMARY DATA HEAD ACCELERATIONS

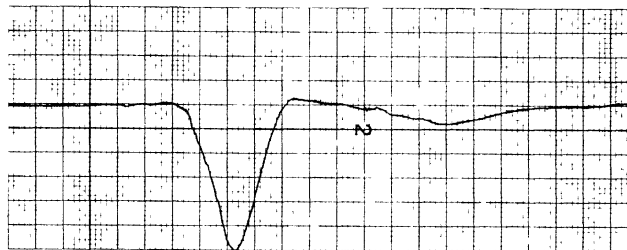
Test Number A-657
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.7 miles/hr

Test Type Preinflated Airbag

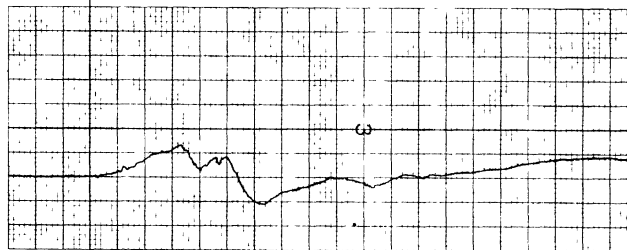
Sled Pulse
10 g's/division
Filtered
Class 60



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

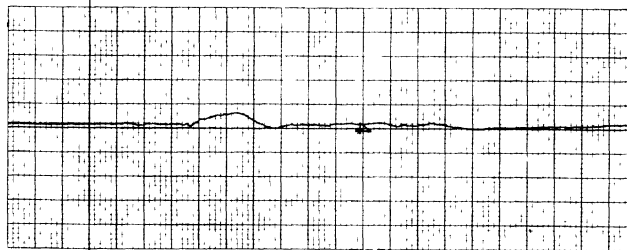


Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000

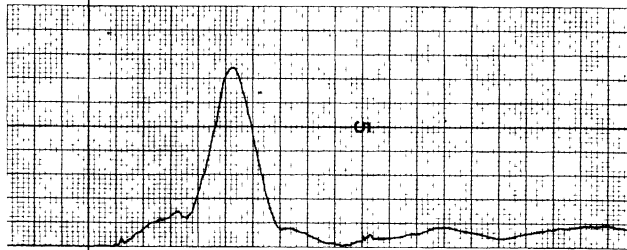


C

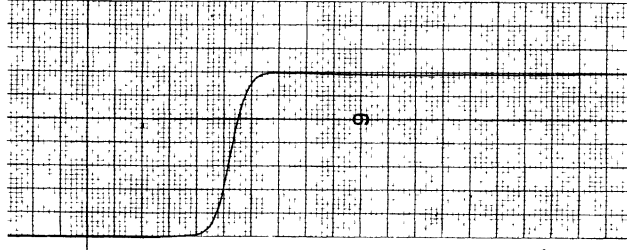
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

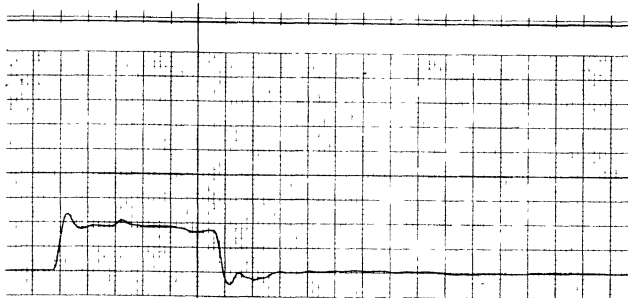


SUMMARY DATA HEAD ACCELERATIONS

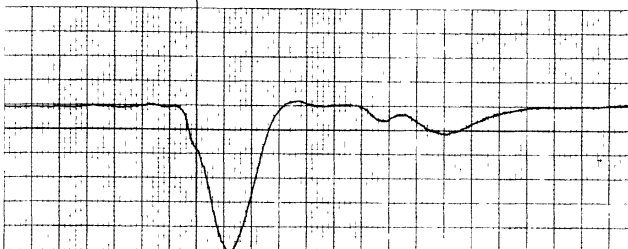
Test Number A-658
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.6 miles/hr

Test Type Preinflated Airbag

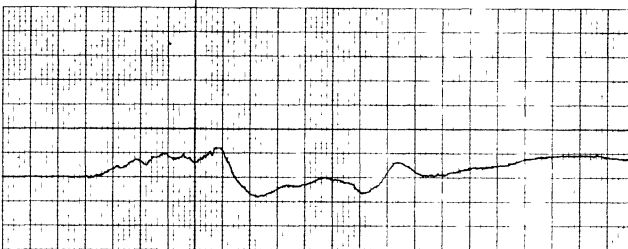
Sled Pulse
10 g's/division
Filtered
Class 60



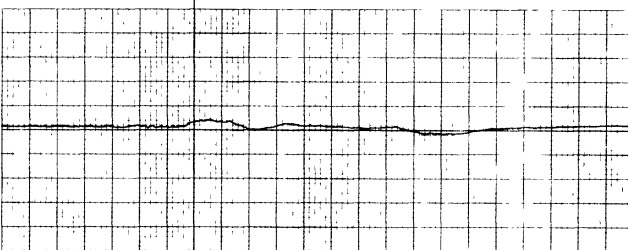
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



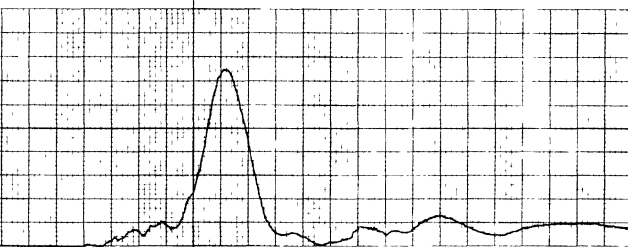
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



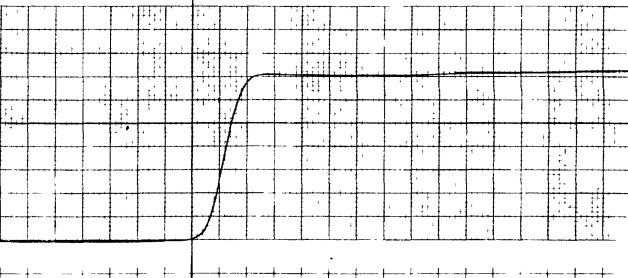
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

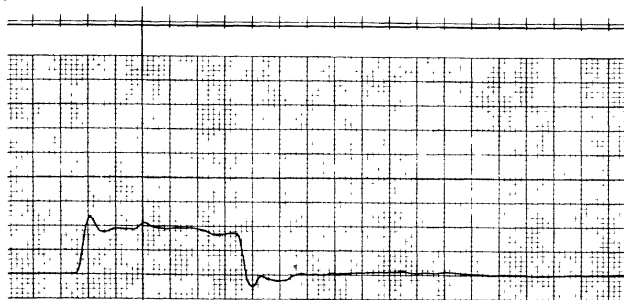


SUMMARY DATA HEAD ACCELERATIONS

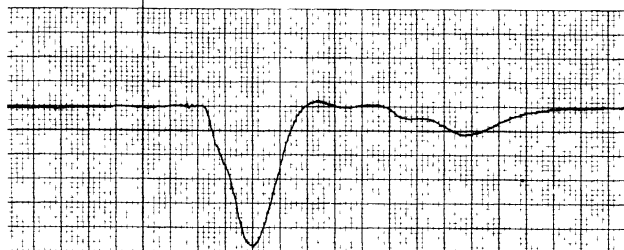
Test Number A-659
Dummy HSRI Repeatable Pete
Sled Velocity 30.2 miles/hr

Test Type Preinflated Airbag

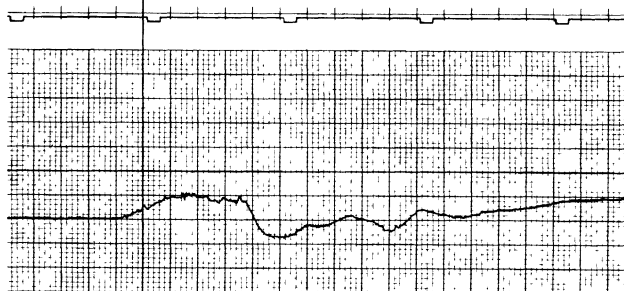
Sled Pulse
10 g's/division
Filtered
Class 60



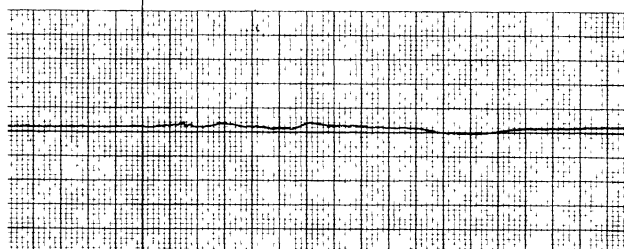
Anterior-Posterior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



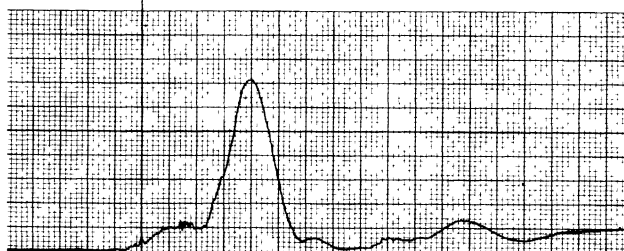
Superior-Inferior
Head Acceleration
12.5 g's/division
Filtered
Class 1000



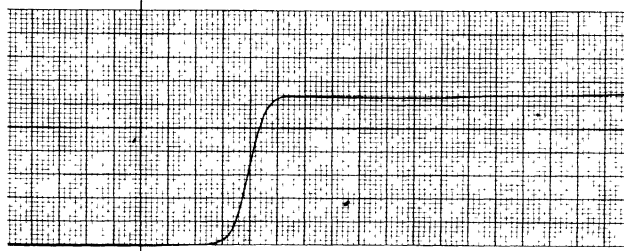
Left-Right
Head Acceleration
12.5 g's/division
Filtered
Class 1000



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



Severity Index
100 g^{2.5}sec/divi-
sion

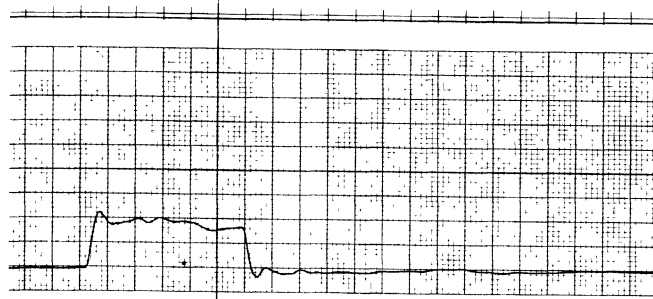


SUMMARY DATA HEAD ACCELERATIONS

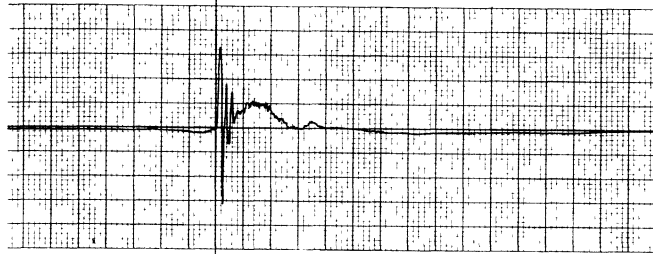
Test Number A-661
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

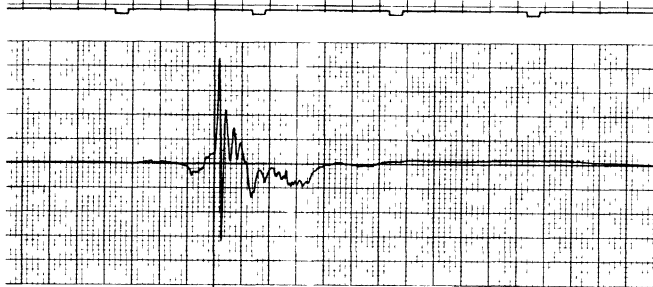
Sled Pulse
10 g's/division
Filtered
Class 60



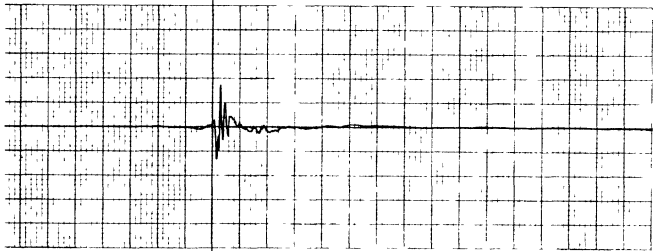
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



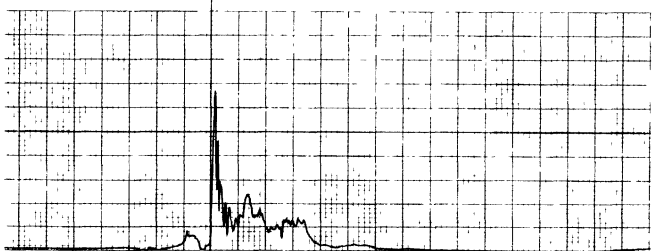
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



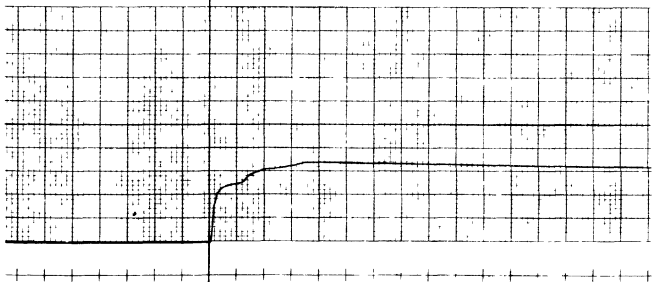
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

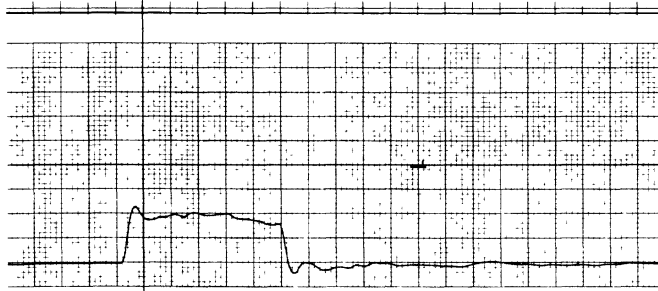


SUMMARY DATA HEAD ACCELERATIONS

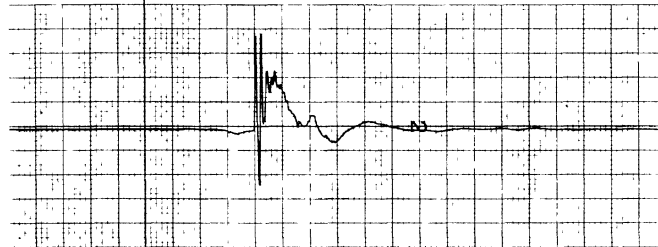
Test Number A-662
Dummy HSRI Repeatabl Pete (2)
Sled Velocity 30.8 miles/hr

Test Type Dash/Windshield
Impact

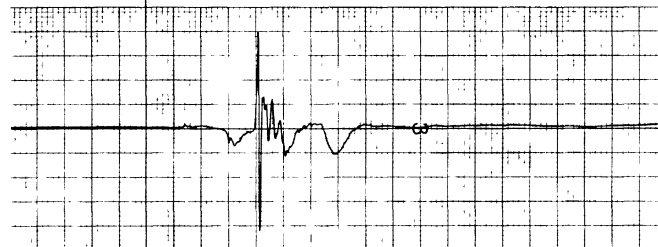
Sled Pulse
10 g's/division
Filtered
Class 60



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



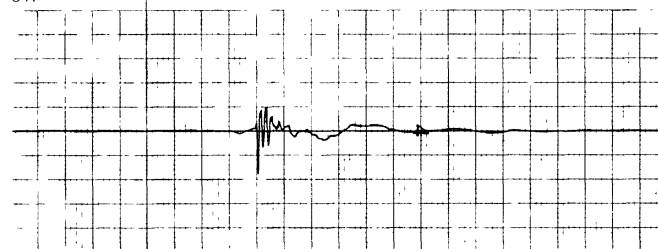
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



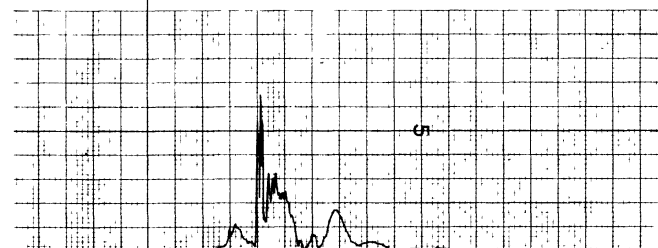
JLD INC

SA

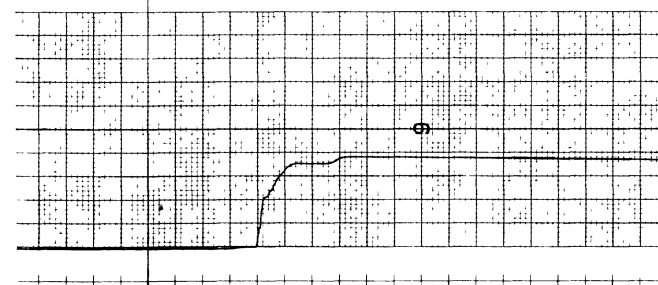
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

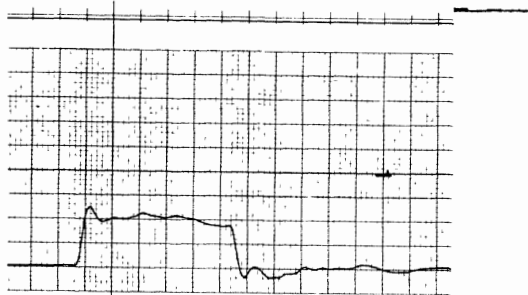


SUMMARY DATA HEAD ACCELERATION'S

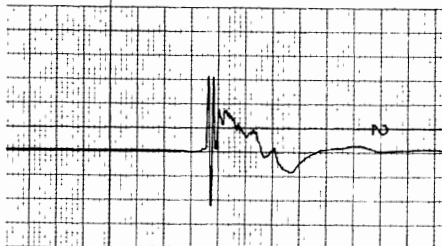
Test Number A-663
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60



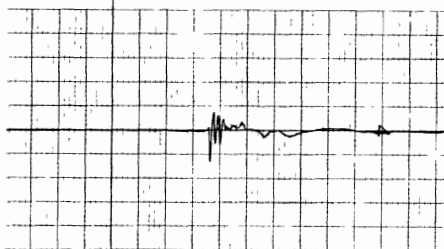
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



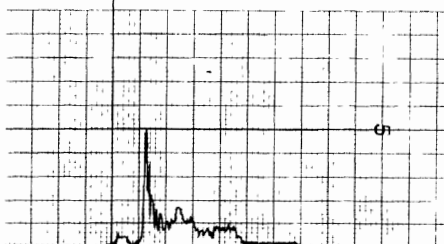
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



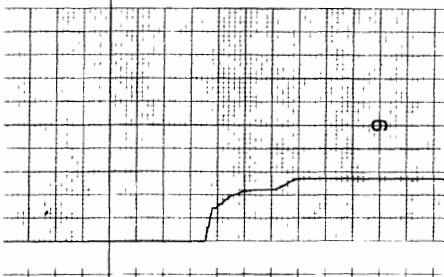
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

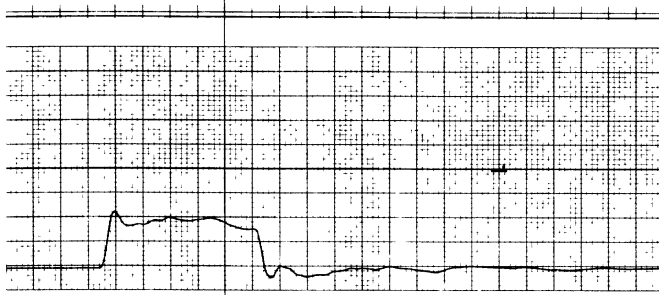


SUMMARY DATA HEAD ACCELERATIONS

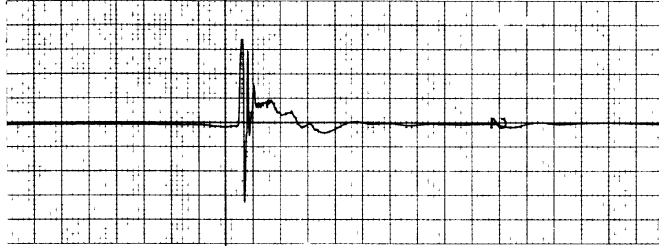
Test Number A-664
Dummy HSRI Repeatable Pete (2)
Sled Velocity 28.4 miles/hr

Test Type Dash/Windshield
Impact

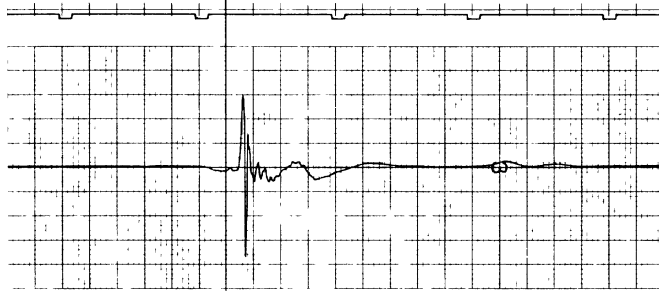
Sled Pulse
10 g's/division
Filtered
Class 60



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



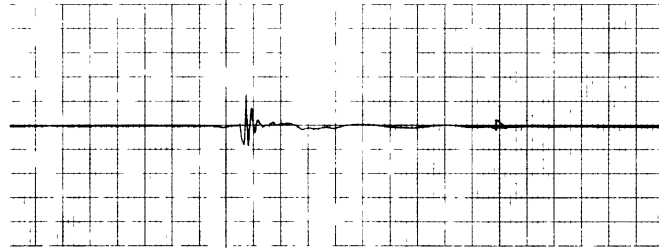
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



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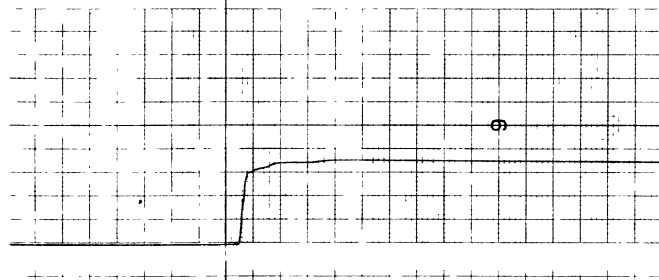
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

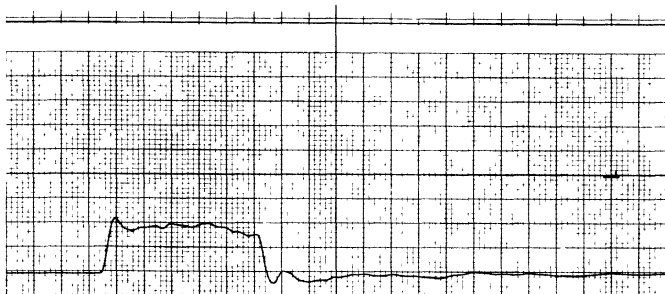


SUMMARY DATA HEAD ACCELERATIONS

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

Test Type Dash/Windshield
Impact

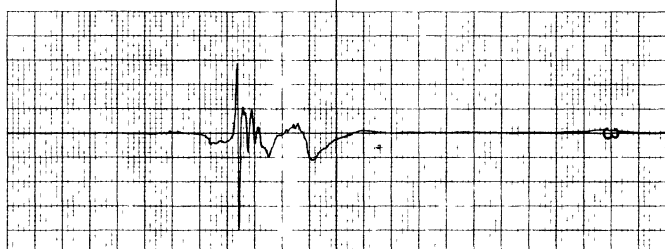
Sled Pulse
 10 g's/division
 Filtered
 Class 60



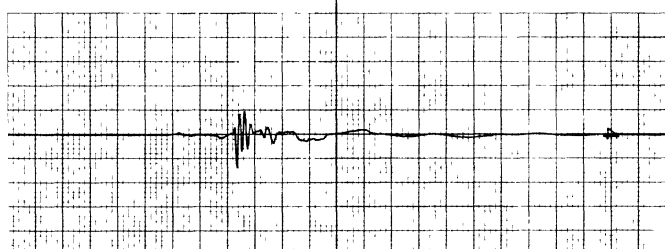
Anterior-Posterior
 Head Acceleration
 50 g's/division
 Filtered
 Class 1000



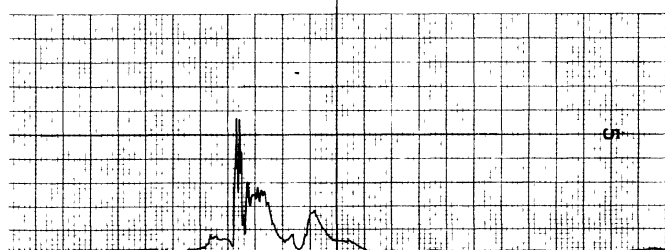
Superior-Inferior
 Head Acceleration
 50 g's/division
 Filtered
 Class 1000



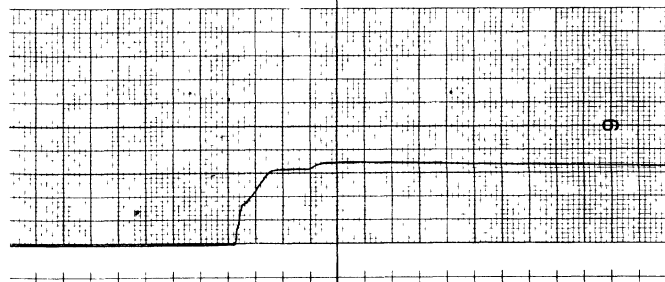
Left-Right
 Head Acceleration
 50 g's/division
 Filtered
 Class 1000



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



Severity Index
 1000 g^{2.5}sec/divi-
 sion

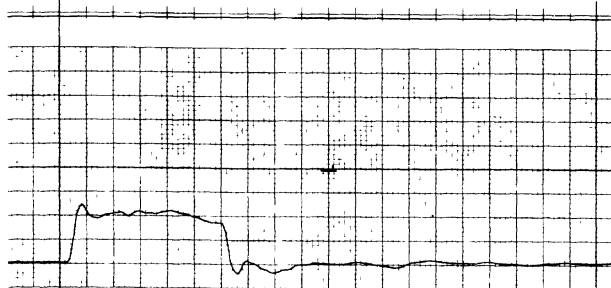


SUMMARY DATA HEAD ACCELERATIONS

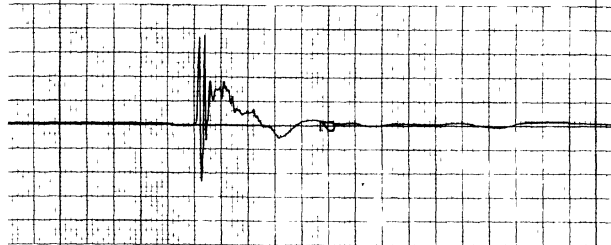
Test Number A-666
Dummy HSRI-Repeatable Pete (2)
Sled Velocity 30.5 miles/hr

Test Type Dash/Windshield
Impact

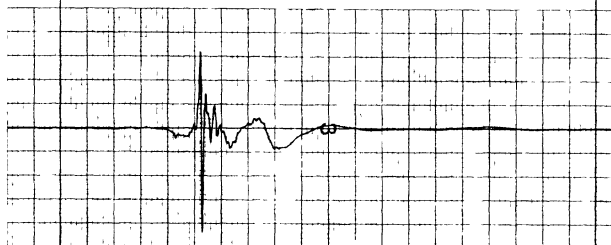
Sled Pulse
10 g's/division
Filtered
Class 60



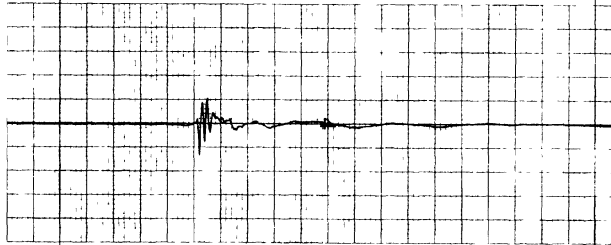
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



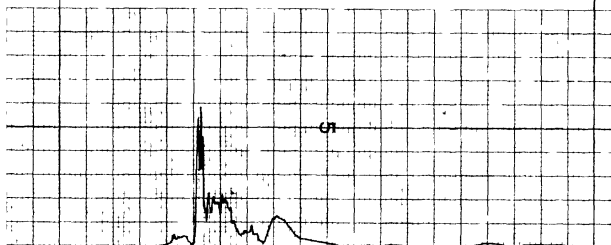
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



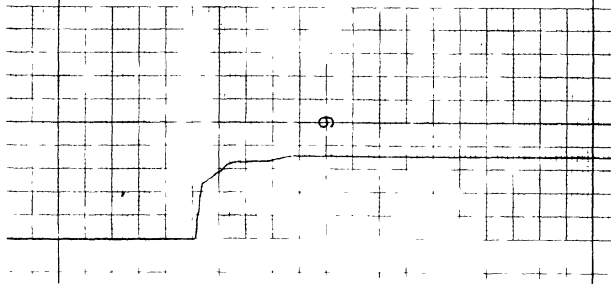
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

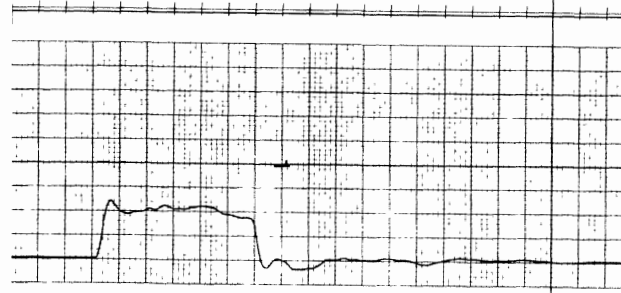


SUMMARY DATA HEAD ACCELERATIONS

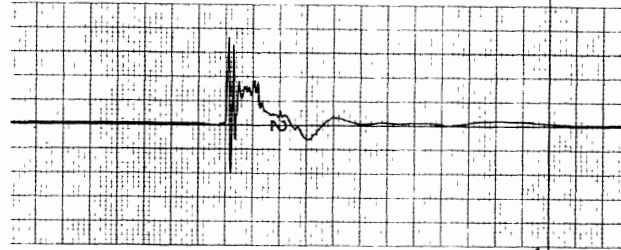
Test Number A-667
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

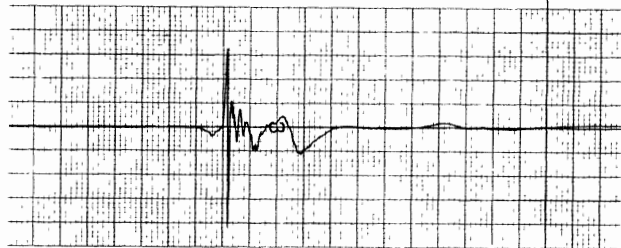
Sled Pulse
10 g's/division
Filtered
Class 60



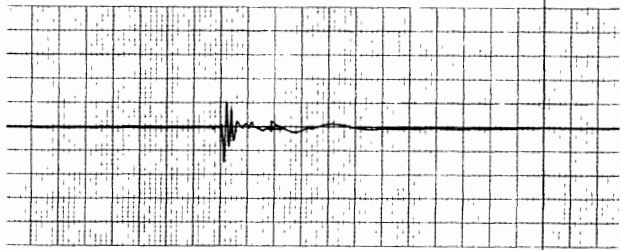
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



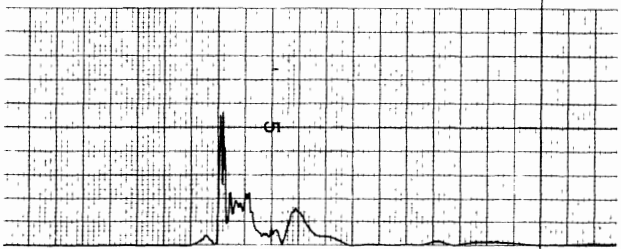
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



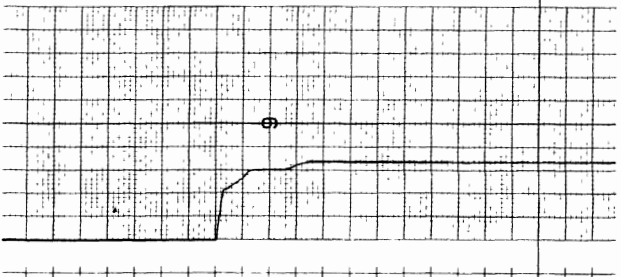
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

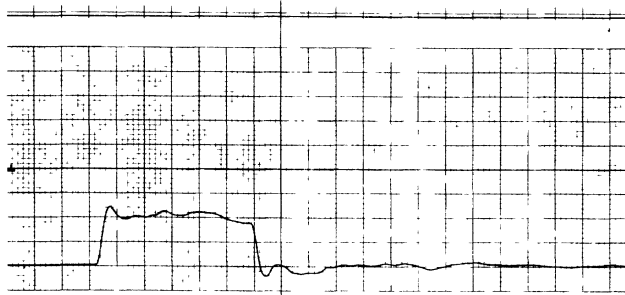


SUMMARY DATA HEAD ACCELERATIONS

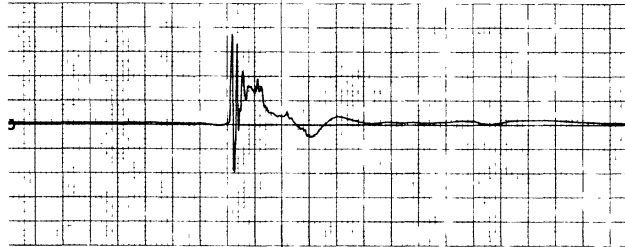
Test Number A-668
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

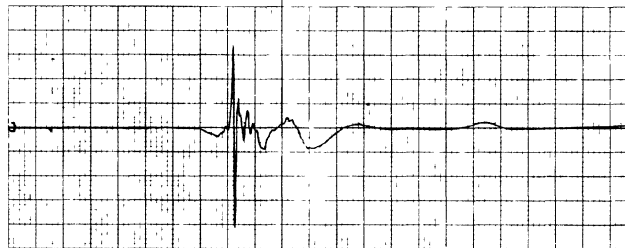
Sled Pulse
10 g's/division
Filtered
Class 60



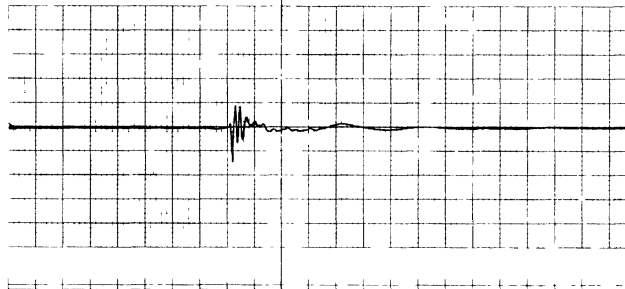
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



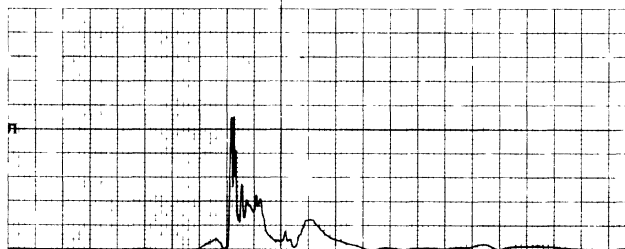
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



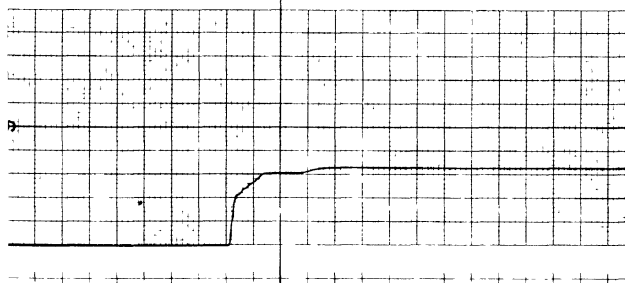
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

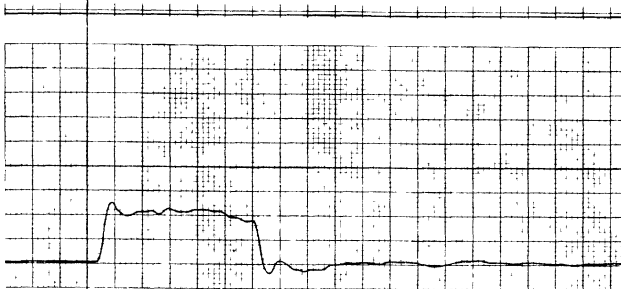


SUMMARY DATA HEAD ACCELERATION'S

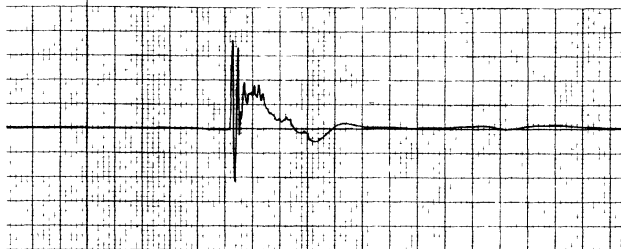
Test Number A-669
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Dash/Windshield
Impact

Sled Pulse
10 g's/division
Filtered
Class 60



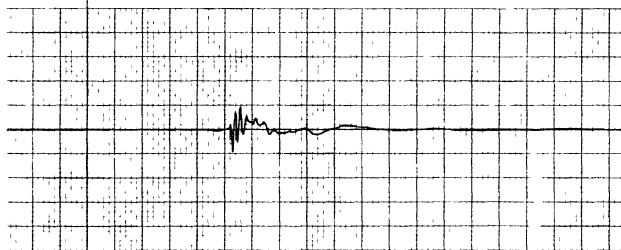
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



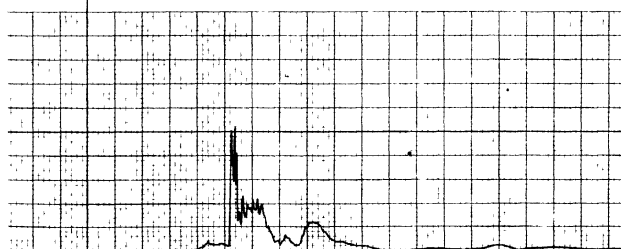
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



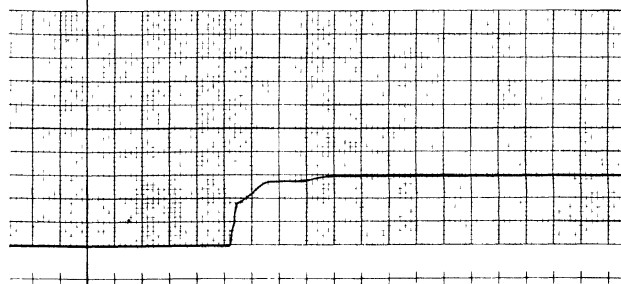
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

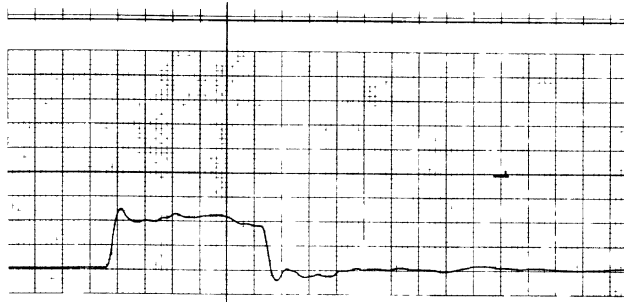


SUMMARY DATA HEAD ACCELERATIONS

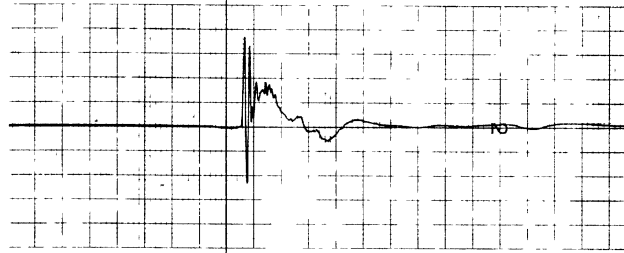
Test Number A-670
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield
Impact

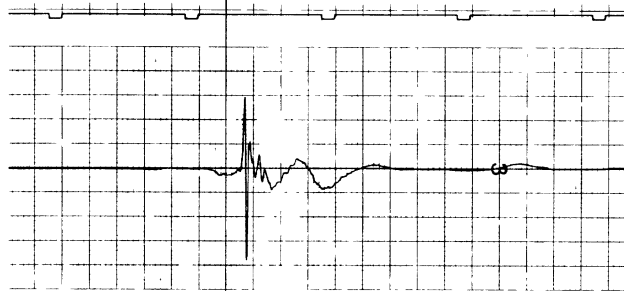
Sled Pulse
10 g's/division
Filtered
Class 60



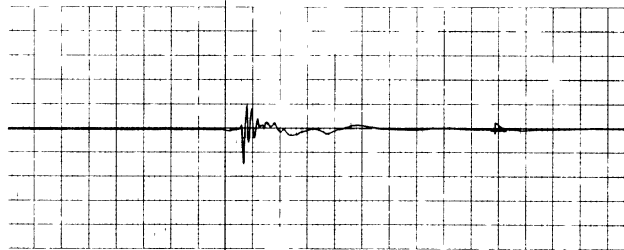
Anterior-Posterior
Head Acceleration
50 g's/division
Filtered
Class 1000



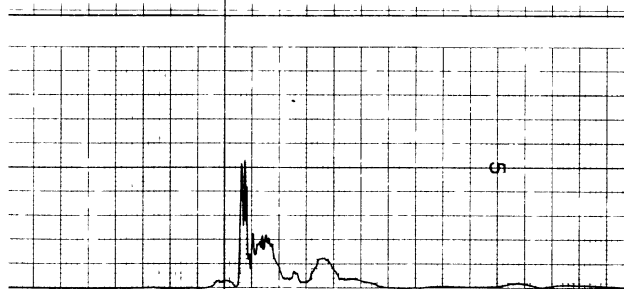
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



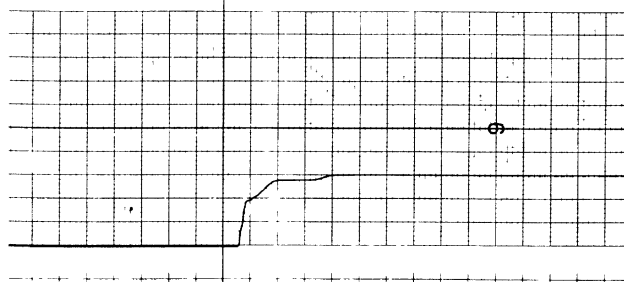
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5}sec/divi-
sion

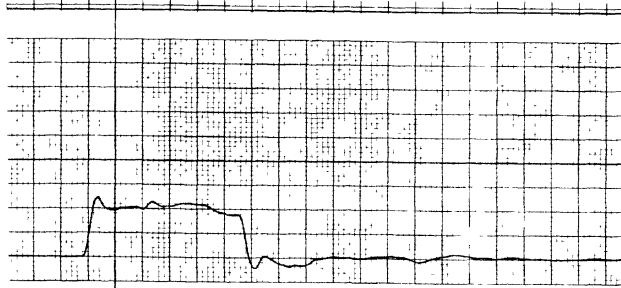


SUMMARY DATA HEAD ACCELERATIONS

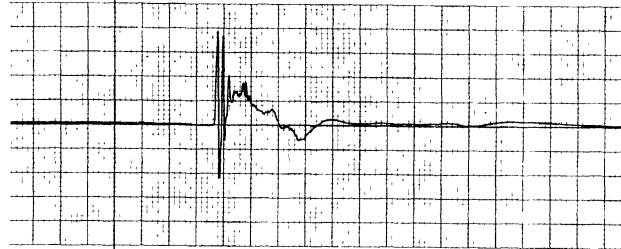
Test Number A-671
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield/
Impact

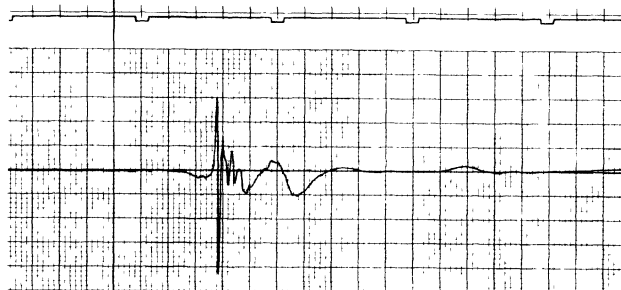
Sled Pulse
10 g's/division
Filtered
Class 60



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



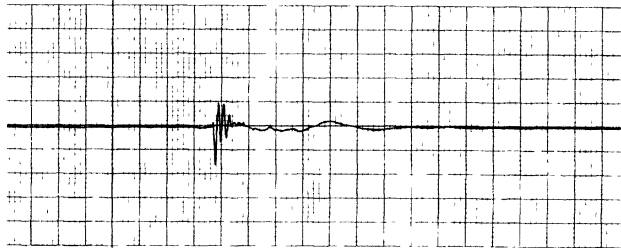
Superior-Inferior
Head Acceleration
50 g's/division
Filtered
Class 1000



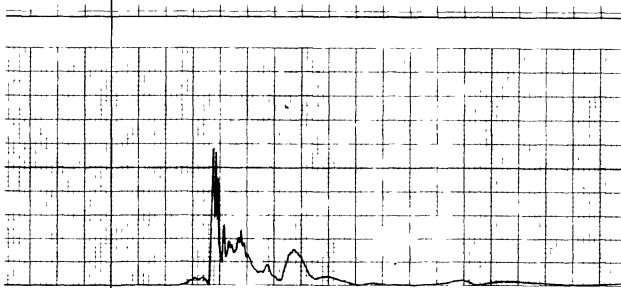
BRUSH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U.S.A.

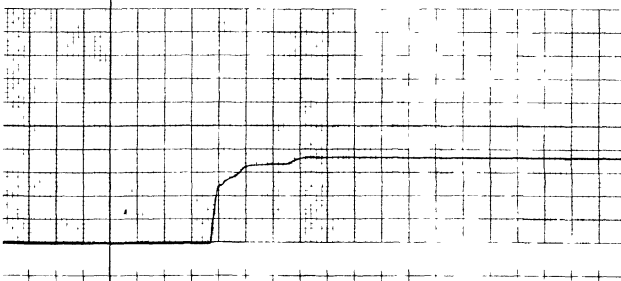
Left-Right
Head Acceleration
50 g's/division
Filtered
Class 1000



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



Severity Index
1000 g^{2.5} sec/divi-
sion

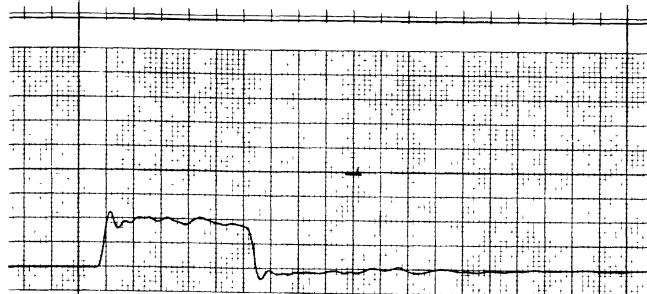


SUMMARY DATA HEAD ACCELERATIONS

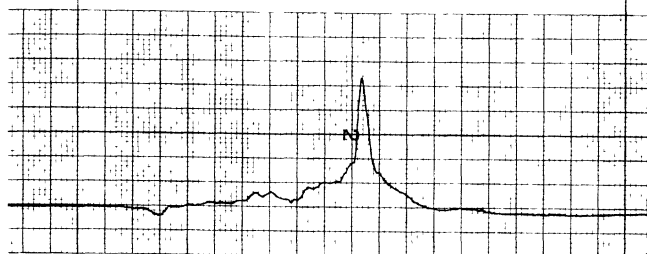
Test Number A-678
 Dummy HSRI Repeatable Pete (2)
 Sled Velocity 30.0 miles/hr

Test Type Steering Wheel
Impact

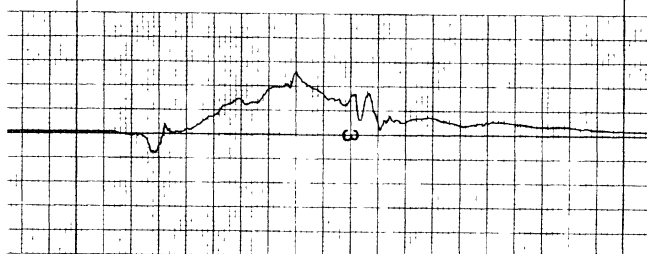
Sled Pulse
 10 g's/division
 Filtered
 Class 60



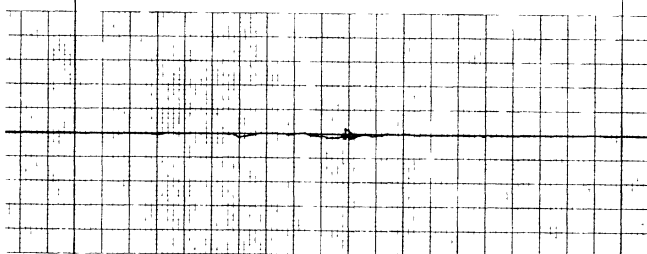
Anterior-Posterior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



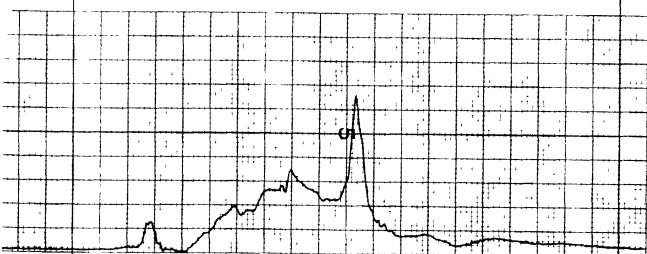
Superior-Inferior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



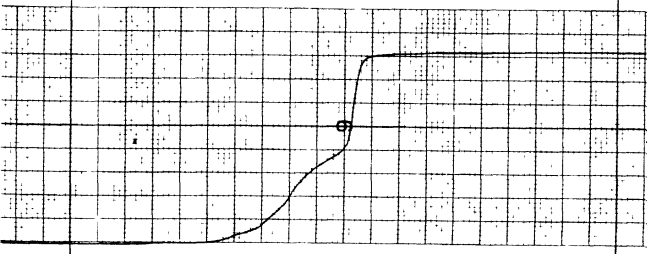
Left-Right
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



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



Severity Index
 200 $g^{2.5}$ sec/division

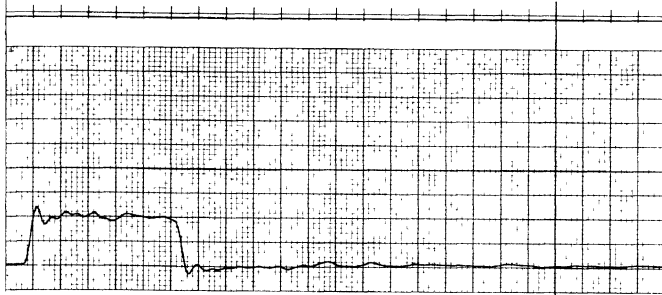


SUMMARY DATA HEAD ACCELERATIONS

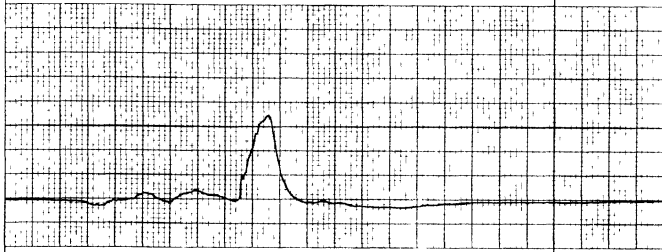
Test Number A-679
Dummy HSRI - Repeatable Pete (2)
Sled Velocity 29.8 miles/hr

Test Type Steering Wheel
Impact

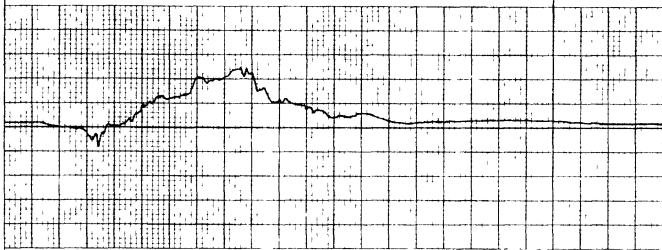
Sled Pulse
10 g's/division
Filtered
Class 60



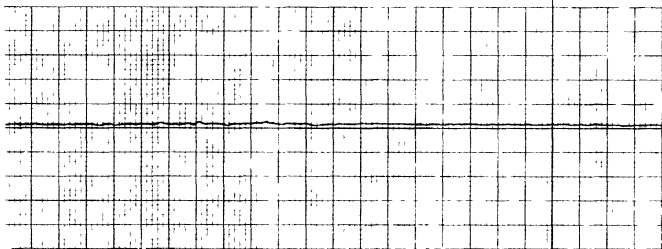
Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000



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



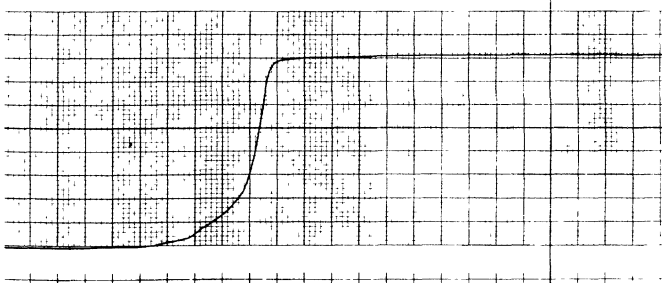
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5}sec/divi-
sion

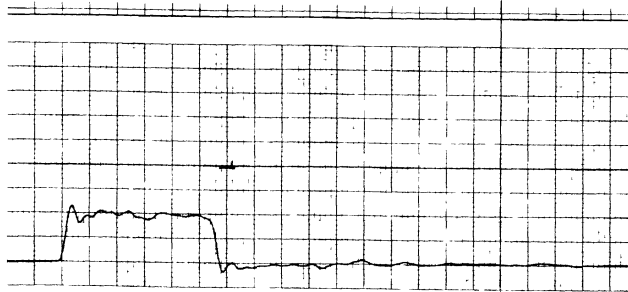


SUMMARY DATA HEAD ACCELERATIONS

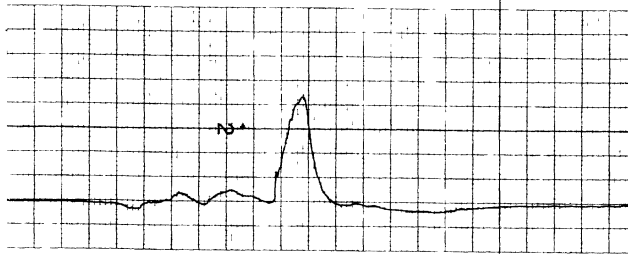
Test Number A-680
Dummy HSRI Repeatable Pete (2)
Sled Velocity 29.9 miles/hr

Test Type Steering Wheel
Impact

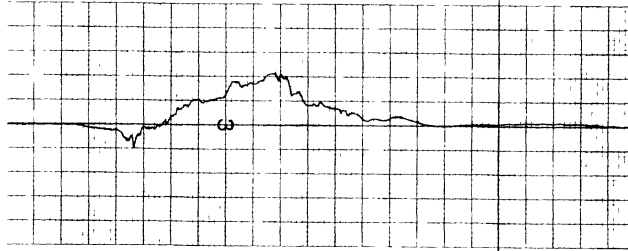
Sled Pulse
10 g's/division
Filtered
Class 60



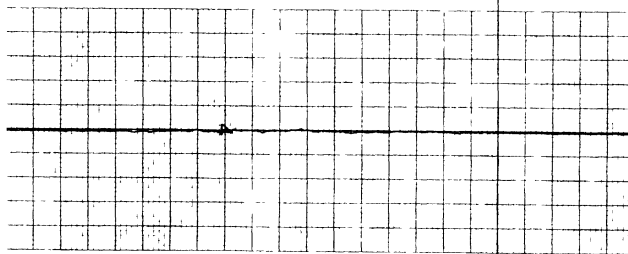
Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000



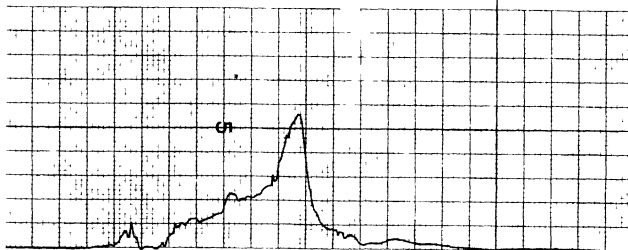
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



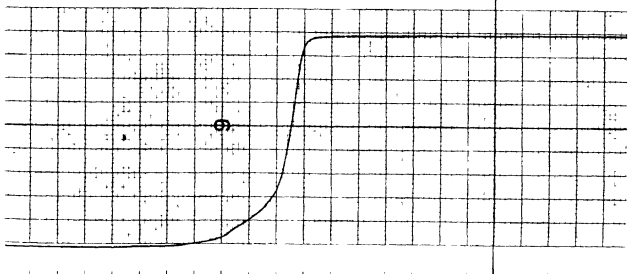
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5}sec/divi-
sion



SUMMARY DATA HEAD ACCELERATIONS

Test Number A-681

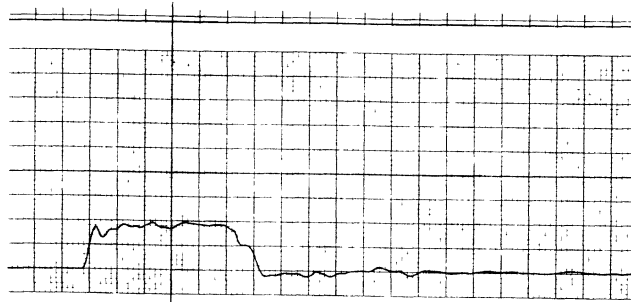
Test Type Steering Wheel

Dummy HSRI-Repeatable Pete(2)

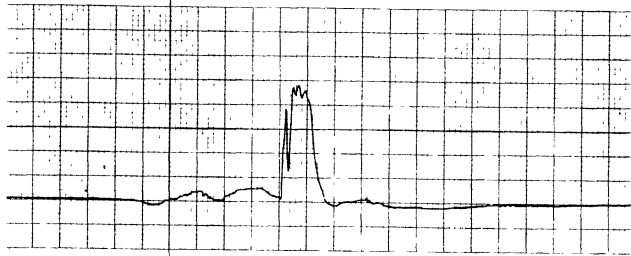
Impact

Sled Velocity 30.2 miles/hr

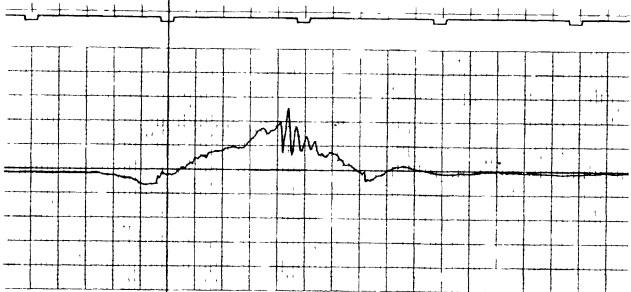
Sled Pulse
10 g's/division
Filtered
Class 60



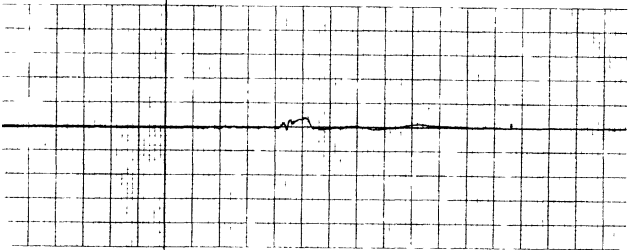
Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000



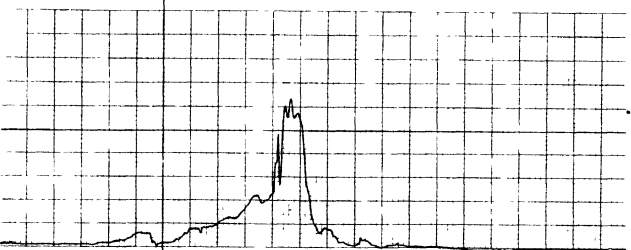
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



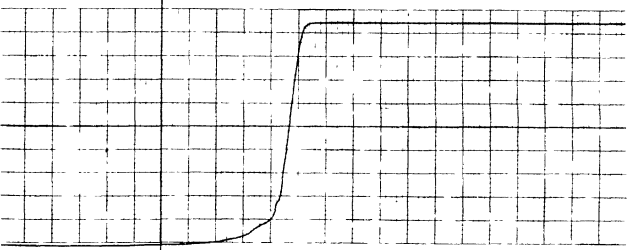
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5}sec/divi-
sion

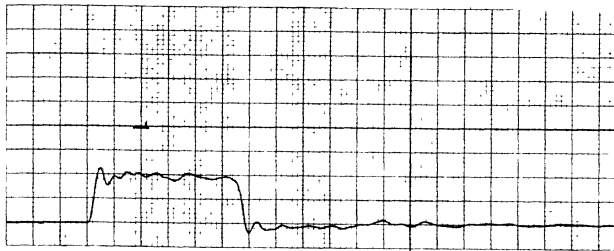


SUMMARY DATA HEAD ACCELERATIONS

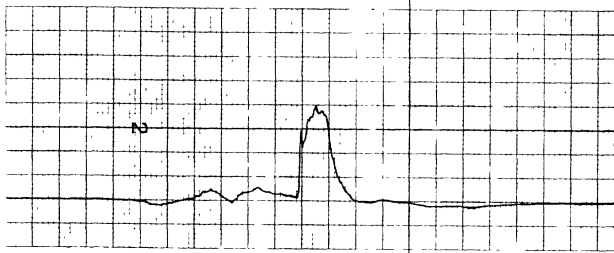
Test Number A-682
 Dummy HSRI Repeatable Pete (2)
 Sled Velocity 30.2 miles/hr

Test Type Steering Wheel
Impact

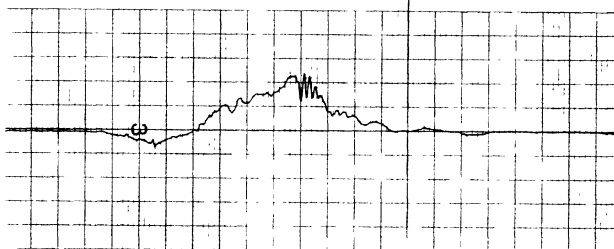
Sled Pulse
 10 g's/division
 Filtered
 Class 60



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



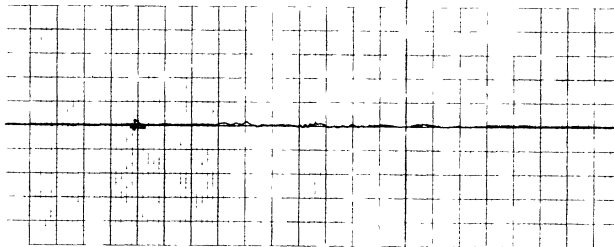
Superior-Inferior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



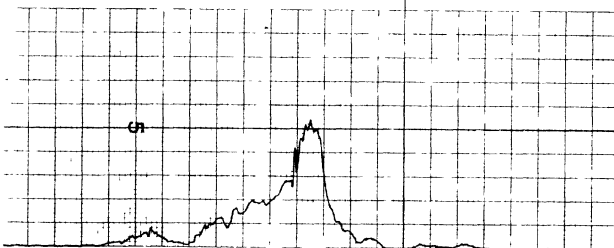
BRUSH INSTRUI

CLEVELAND

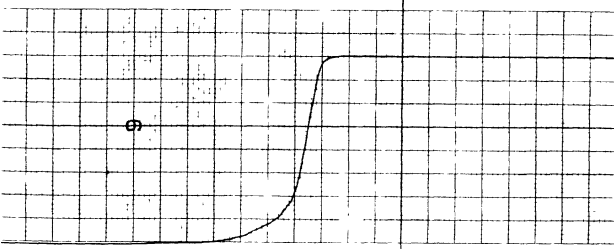
Left-Right
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



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



Severity Index
 200 g^{2.5}sec/divi-
 sion

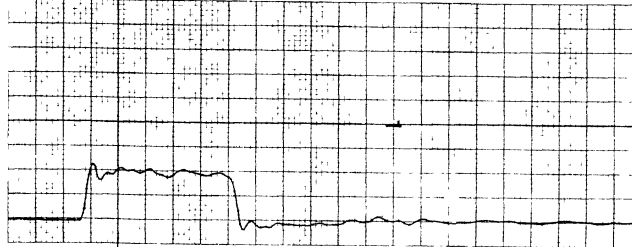


SUMMARY DATA HEAD ACCELERATIONS

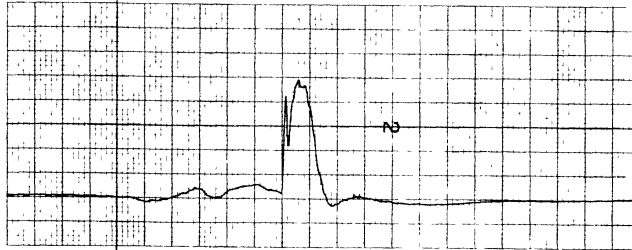
Test Number A-683
 Dummy HSRI Repeatable Pete (2)
 Sled Velocity 30.2 miles/hr

Test Type Steering Wheel
Impact

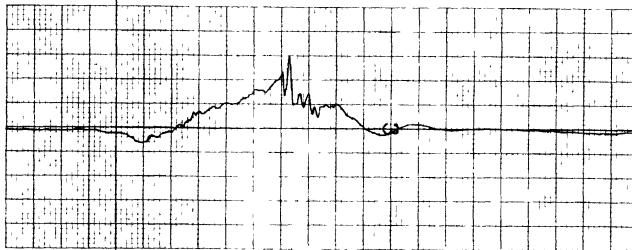
Sled Pulse
 10 g's/division
 Filtered
 Class 60



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

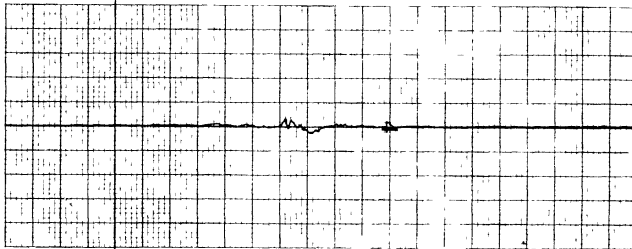


Superior-Inferior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000

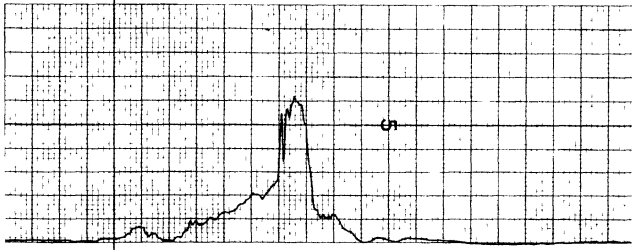


INC

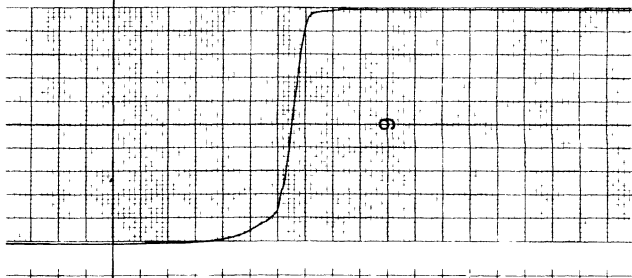
Left-Right
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



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



Severity Index
 200 g^{2.5}sec/divi-
 sion

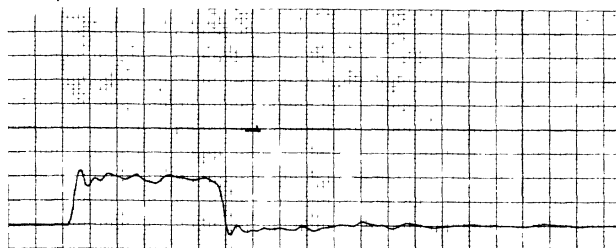


SUMMARY DATA HEAD ACCELERATIONS

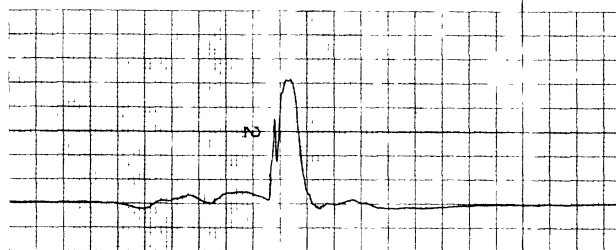
Test Number A-684
 Dummy HSRI Repeatable Pete (1)
 Sled Velocity 30.3 miles/hr

Test Type Steering Wheel
Impacts

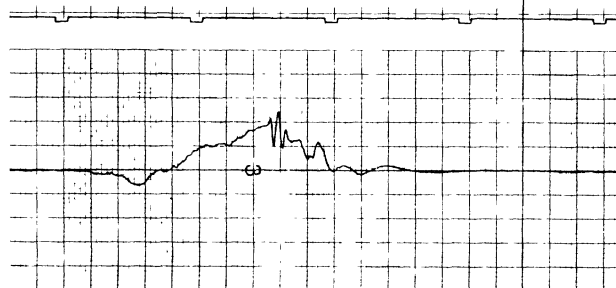
Sled Pulse
 10 g's/division
 Filtered
 Class 60



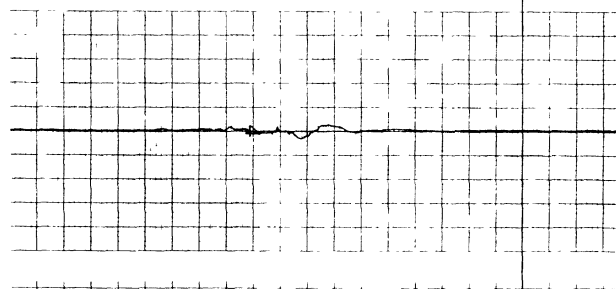
Anterior-Posterior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



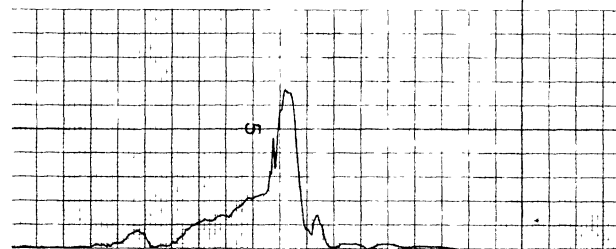
Superior-Inferior
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



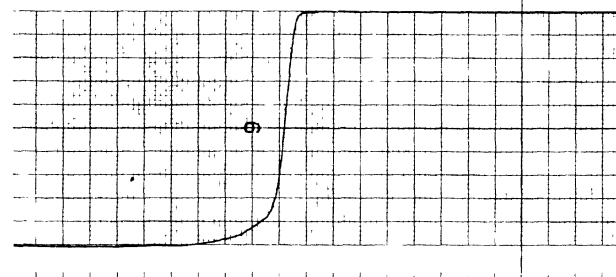
Left-Right
 Head Acceleration
 25 g's/division
 Filtered
 Class 1000



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



Severity Index
 200 g^{2.5} sec/divi-
 sion

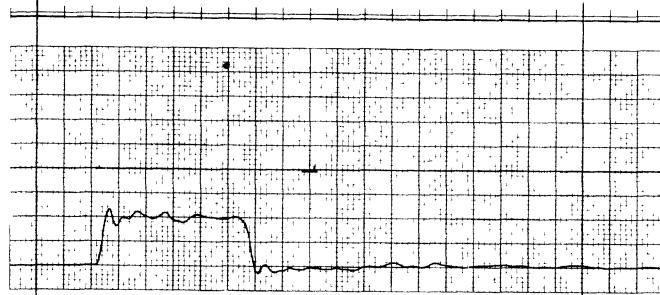


SUMMARY DATA HEAD ACCELERATIONS

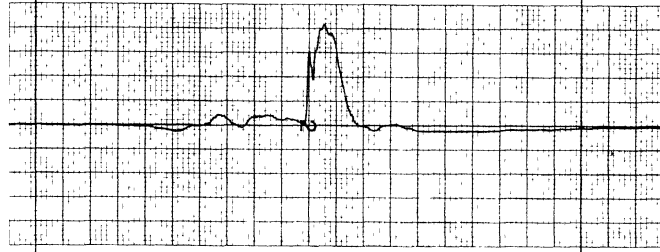
Test Number A-685
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.0 miles/hr

Test Type Steering Wheel
Impact

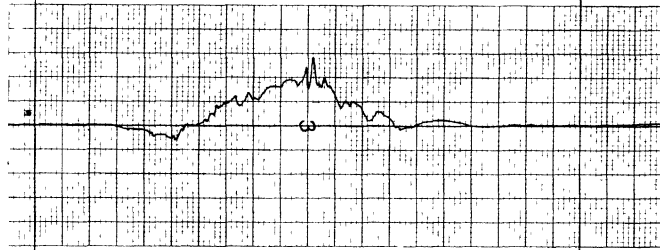
Sled Pulse
10 g's/division
Filtered
Class 60



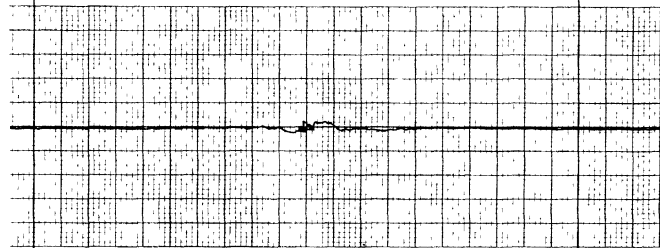
Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000



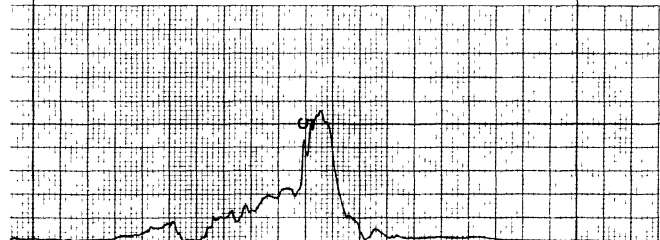
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



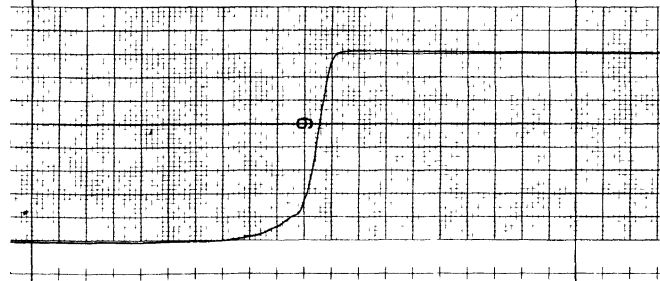
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5}sec/divi-
sion



SUMMARY DATA HEAD ACCELERATIONS

Test Number A-687

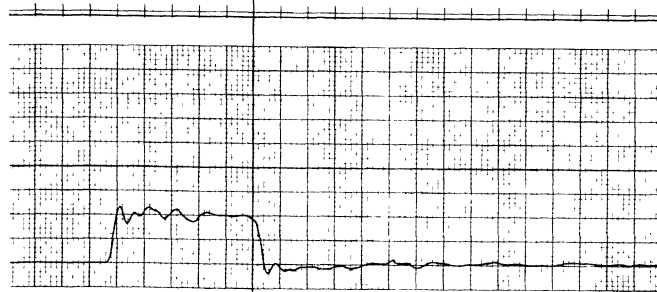
Test Type Steering Wheel

Dummy HSRI Repeatable Pete (1)

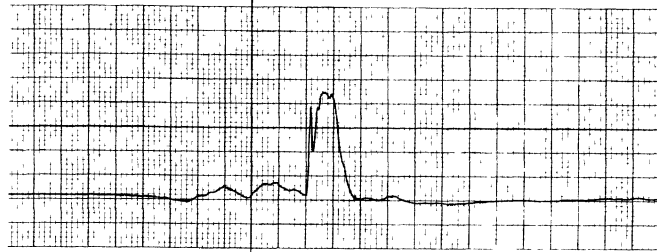
Impact

Sled Velocity 30.1 miles/hr

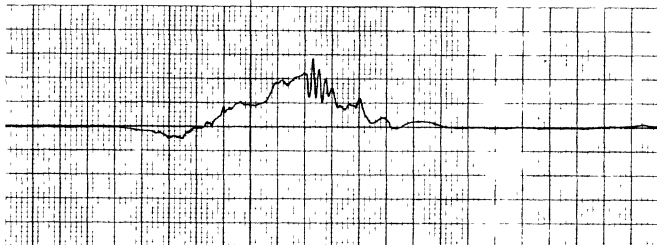
Sled Pulse
10 g's/division
Filtered
Class 60



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



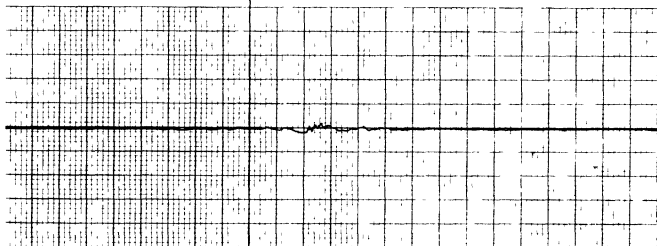
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



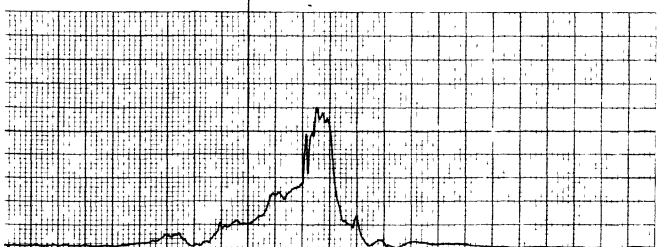
BRUSH INSTRUMENTS DIVISION, GO

CLEVELAND, OHIO PRINTED IN U

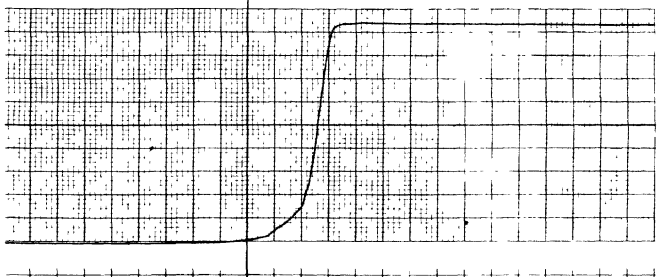
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5} sec/divi-
sion

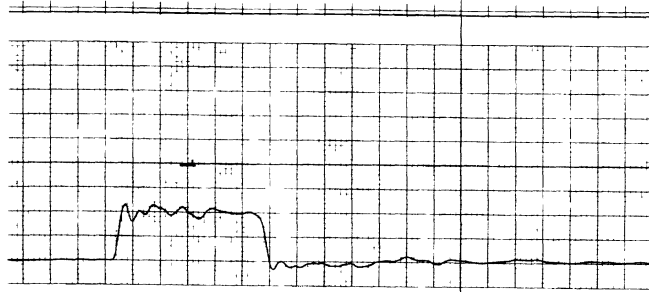


SUMMARY DATA HEAD ACCELERATIONS

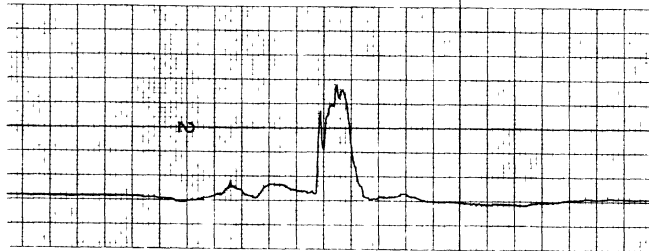
Test Number A-688
Dummy HSRI Repeatabe Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Steering Wheel
Impact

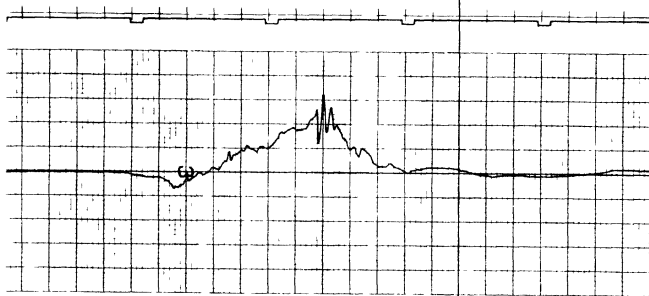
Sled Pulse
10 g's/division
Filtered
Class 60



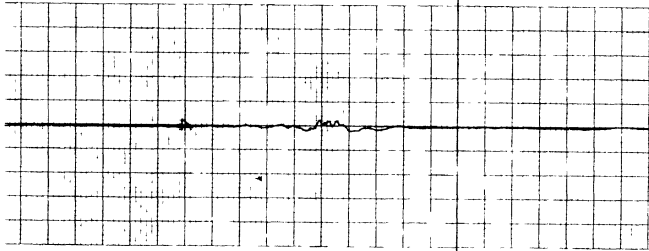
Anterior-Posterior
Head Acceleration
25 g's/division
Filtered
Class 1000



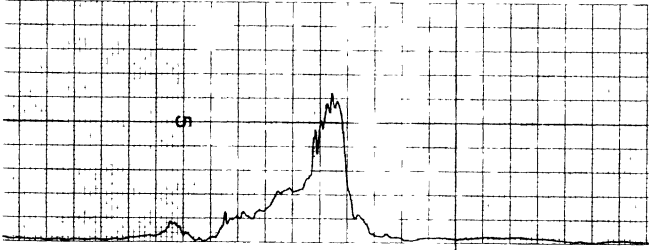
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



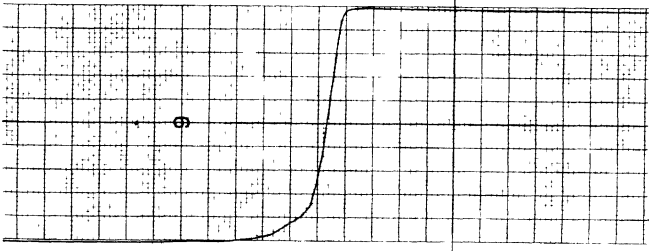
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5}sec/divi-
sion

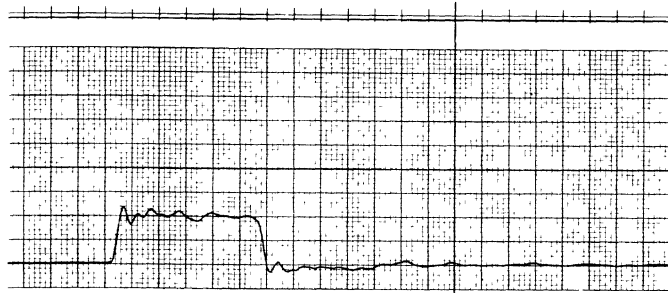


SUMMARY DATA HEAD ACCELERATIONS

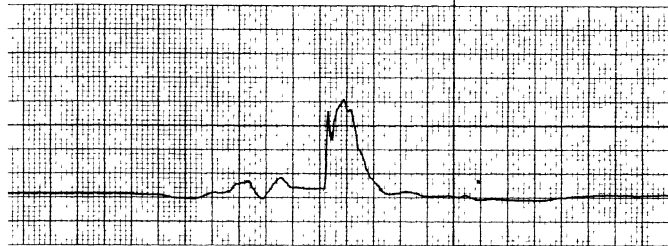
Test Number A-689
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Steering Wheel
Impact

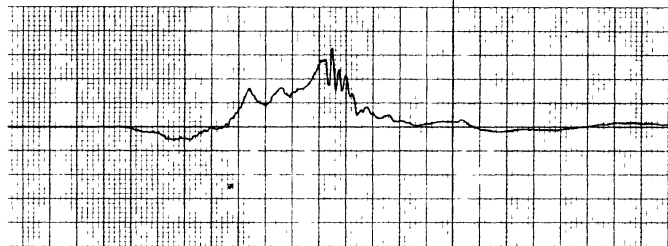
Sled Pulse
10 g's/division
Filtered
Class 60



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



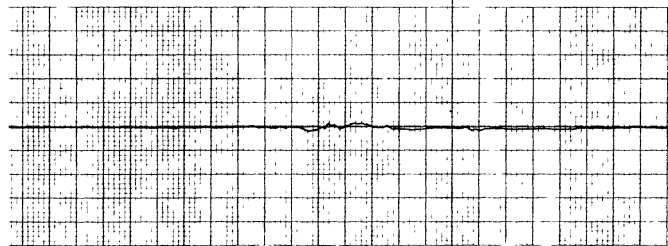
Superior-Inferior
Head Acceleration
25 g's/division
Filtered
Class 1000



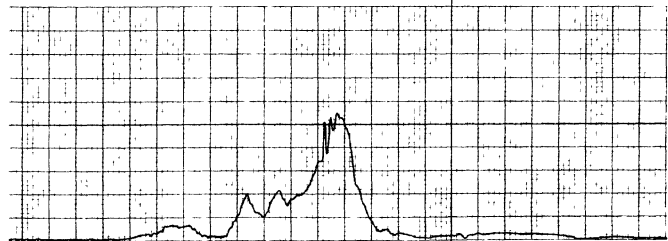
USH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U.S.A.

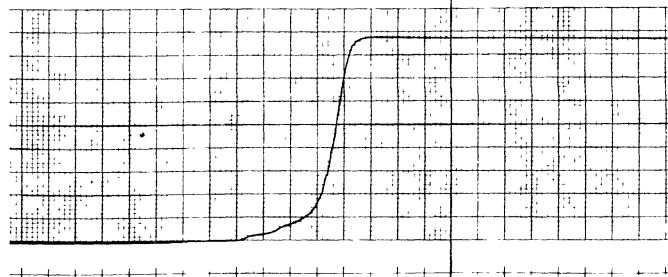
Left-Right
Head Acceleration
25 g's/division
Filtered
Class 1000



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



Severity Index
200 g^{2.5} sec/divi-
sion

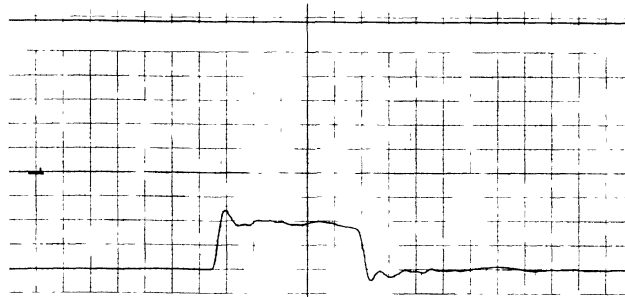


SUMMARY DATA CHEST ACCELERATIONS

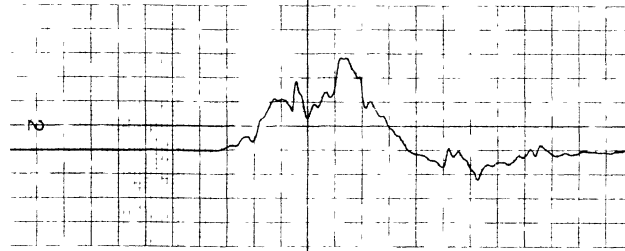
Test Number A-641
Dummy HSRI-Repeatable Pete (1)
Sled Velocity 29.7 miles/hr

Test Type Lap and Torso
Belts

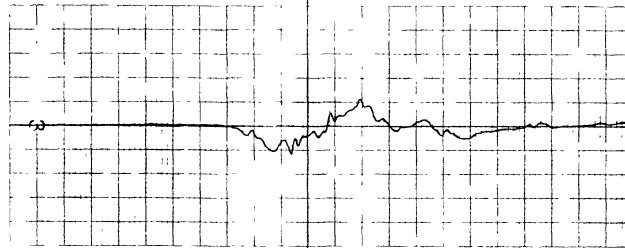
Sled Pulse
10 g's/division
Filtered
Class 60



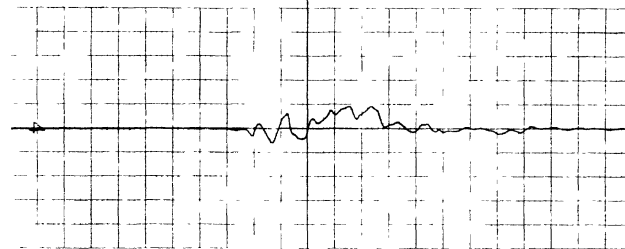
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



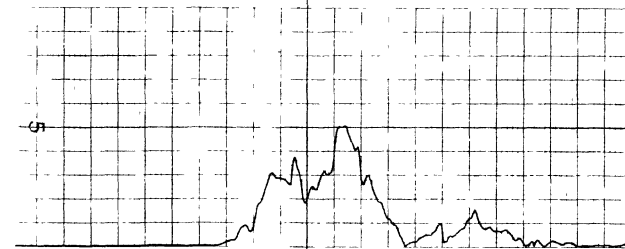
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



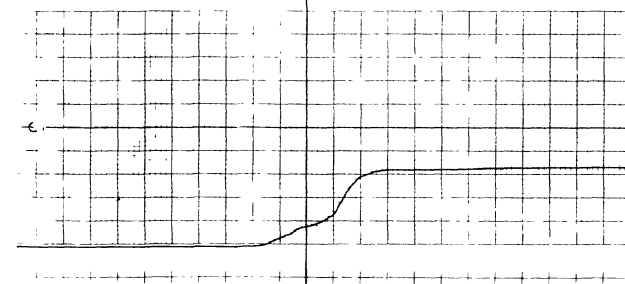
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

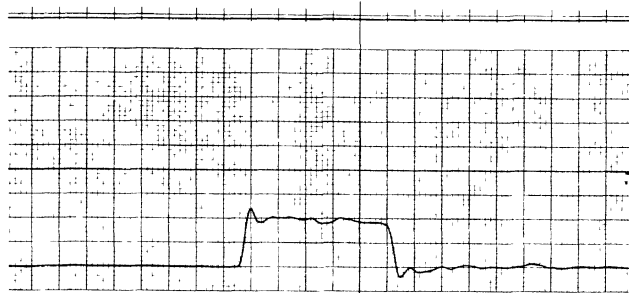


SUMMARY DATA CHEST ACCELERATIONS

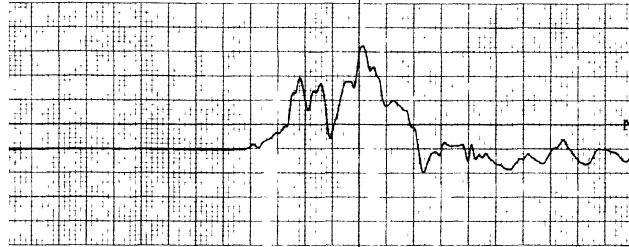
Test Number A-642
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Lap and Torso
Belts

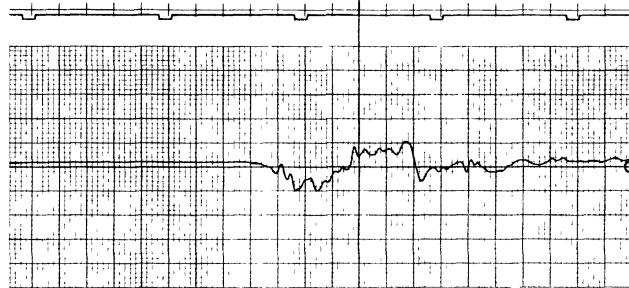
Sled Pulse
10 g's/division
Filtered
Class 60



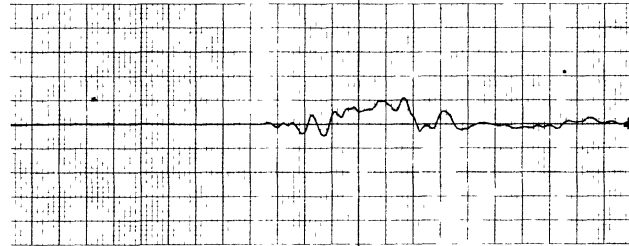
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



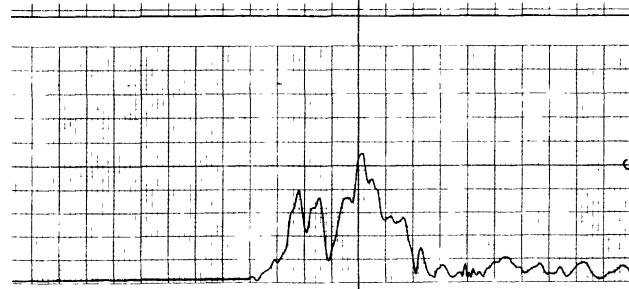
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



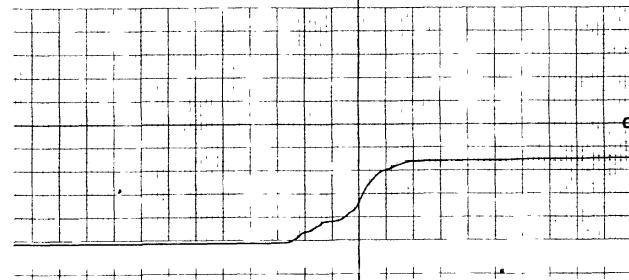
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5} sec/divi-
sion

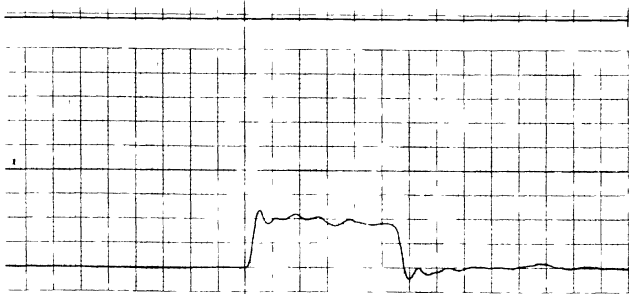


SUMMARY DATA CHEST ACCELERATIONS

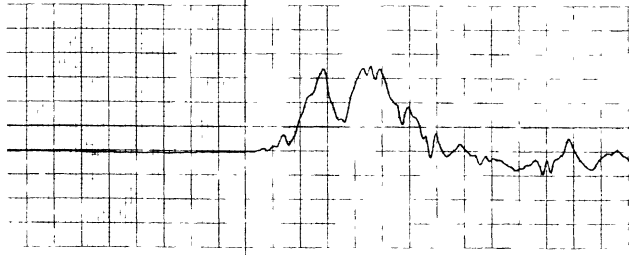
Test Number A-643
Dummy HSRI Repeatable Pete (1)
Sled Velocity 29.7 miles/hr

Test Type Lap and Torso
Belts

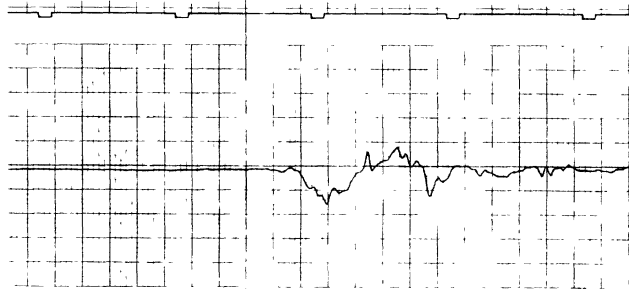
Sled Pulse
10 g's/division
Filtered
Class 60



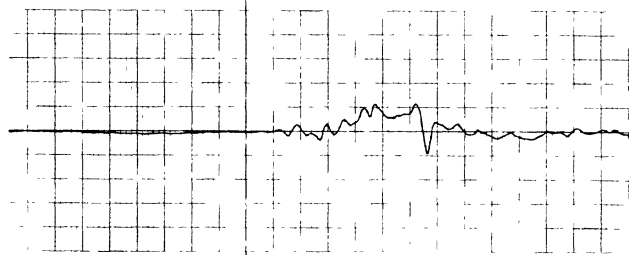
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



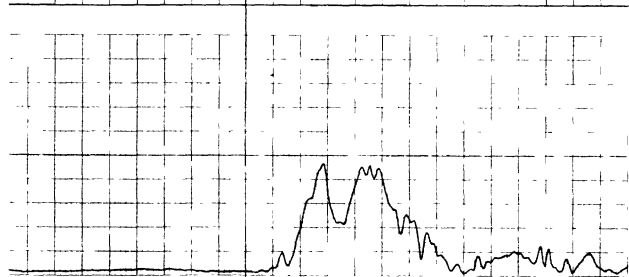
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



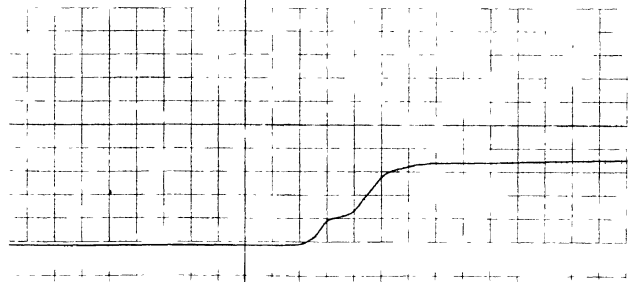
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

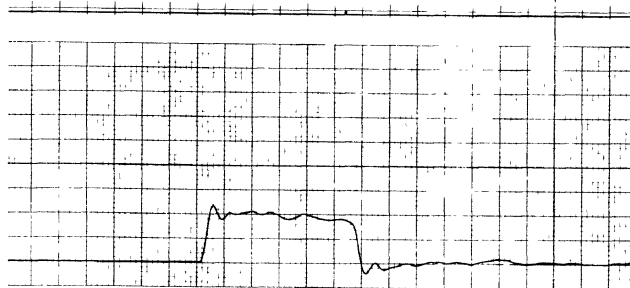


SUMMARY DATA CHEST ACCELERATIONS

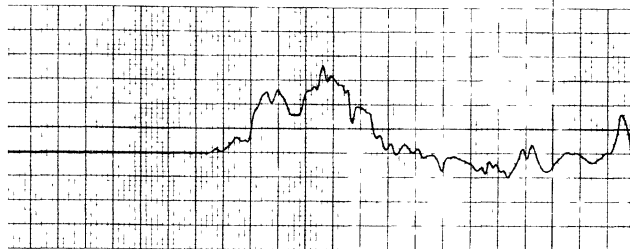
Test Number A-644
 Dummy HSRI Repeatabile Pete (1)
 Sled Velocity 30.4 miles/hr

Test Type Lap and Torso
Belts

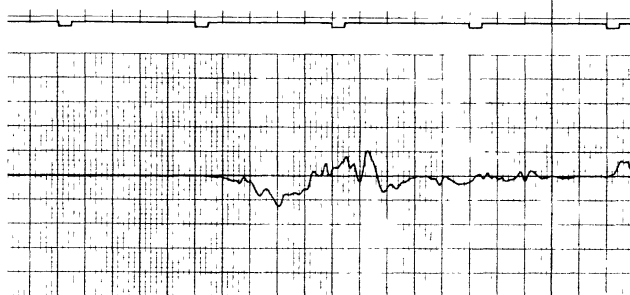
Sled Pulse
 10 g's/division
 Filtered
 Class 60



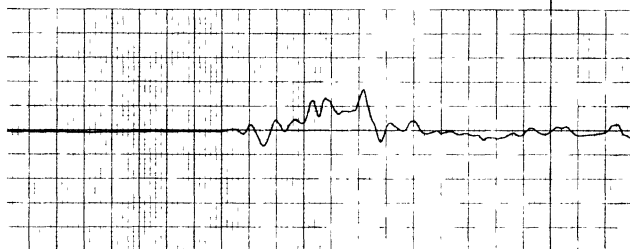
Anterior-Posterior
 Chest Acceleration
 12.5 g's/division
 Filtered
 Class 600



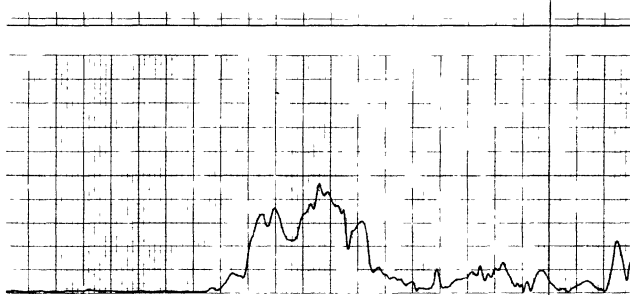
Superior-Inferior
 Chest Acceleration
 12.5 g's/division
 Filtered
 Class 600



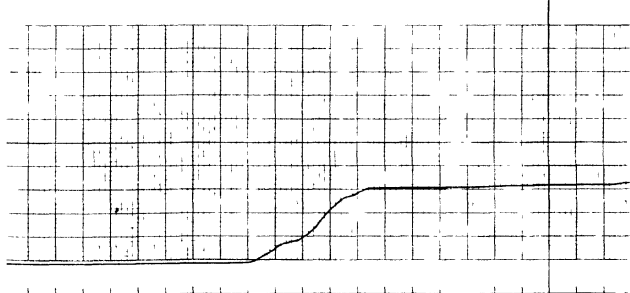
Left-Right
 Chest Acceleration
 12.5 g's/division
 Filtered
 Class 600



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



Severity Index
 100 g^{2.5}sec/divi-
 sion

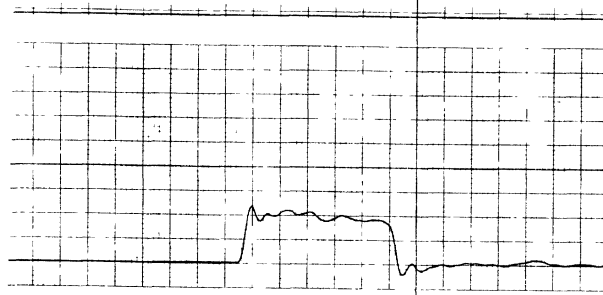


SUMMARY DATA CHEST ACCELERATIONS

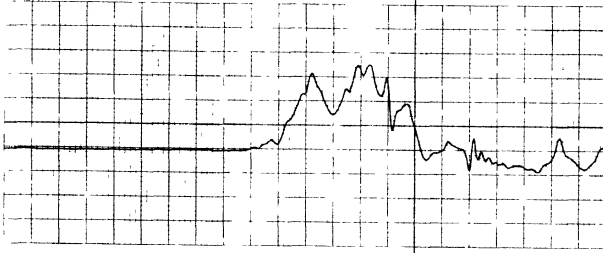
Test Number A-645
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Lap and Torso
Belts

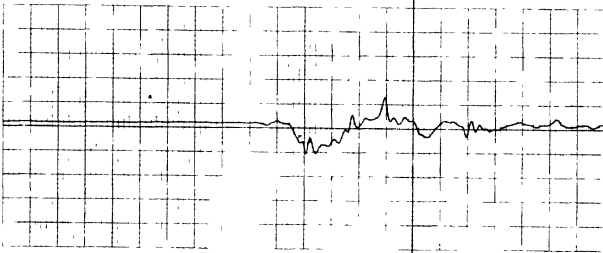
Sled Pulse
10 g's/division
Filtered
Class 60



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



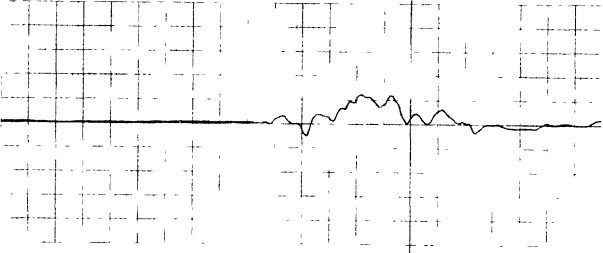
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



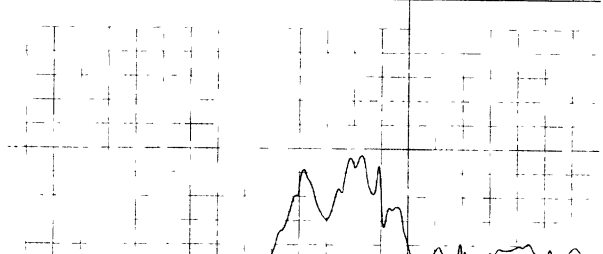
INSTRUMENTS DIVISION, GOULD INC

EVELAND, OHIO PRINTED IN U.S.A.

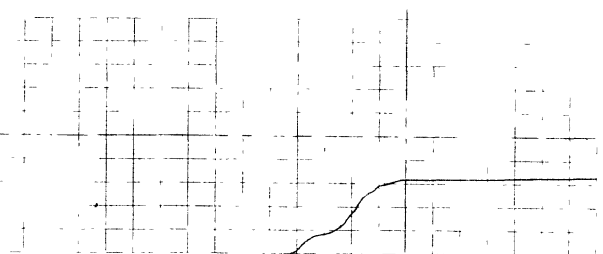
Left-Rigt.
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

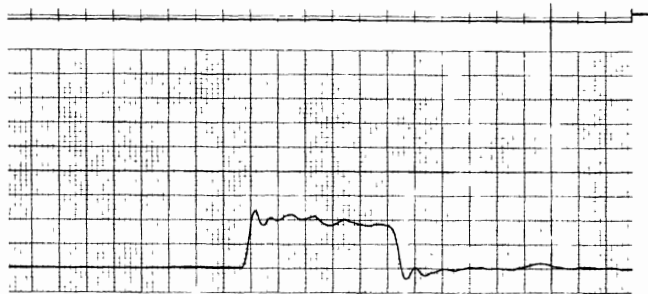


SUMMARY DATA CHEST ACCELERATIONS

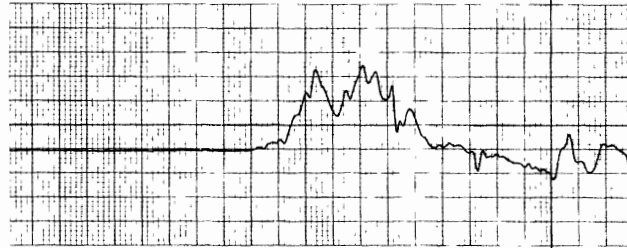
Test Number A-646
Dummy HSRI Repeatabile Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Lap and Torso Belts

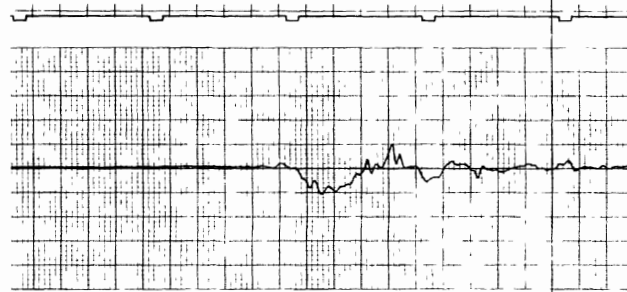
Sled Pulse
10 g's/division
Filtered
Class 60



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



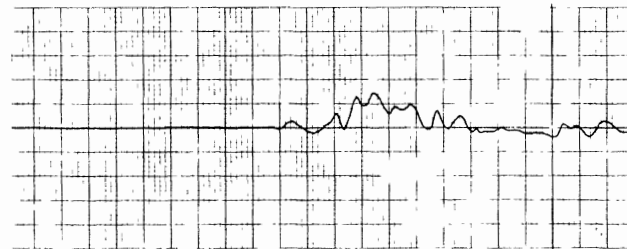
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



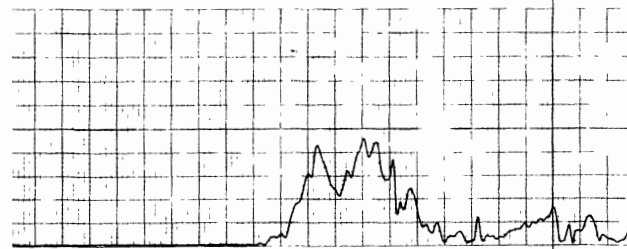
BRUSH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U.S.A.

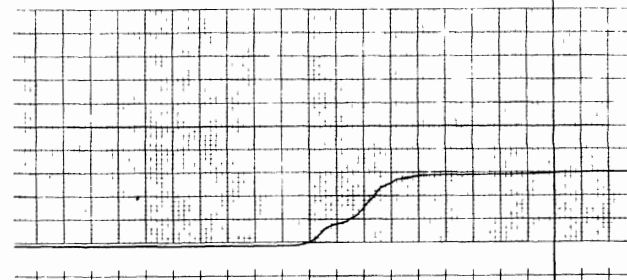
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

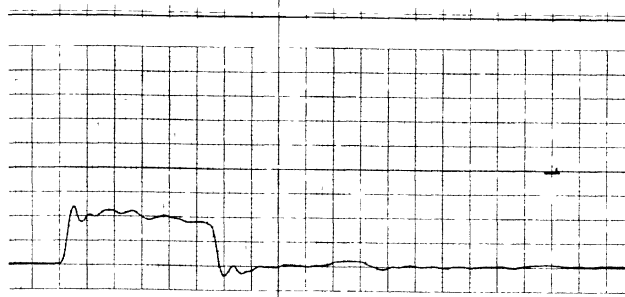


SUMMARY DATA CHEST ACCELERATIONS

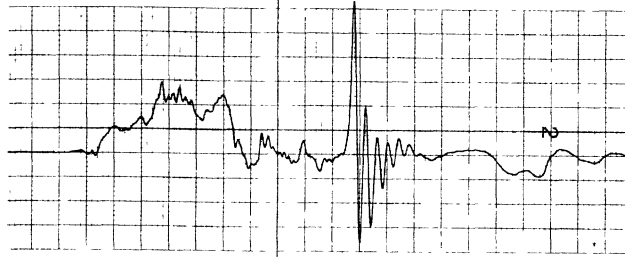
Test Number A-647
Dummy OGLE/MTRA 50% M
Sled Velocity 30.2 miles/hr

Test Type Lap and Torso
Belts

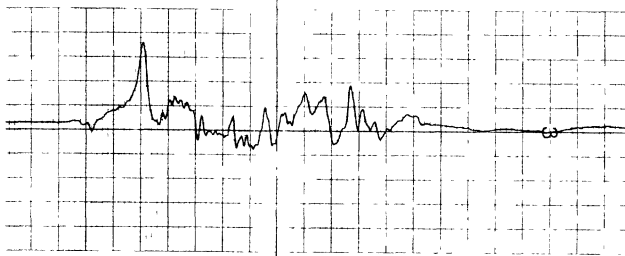
Sled Pulse
10 g's/division
Filtered
Class 60



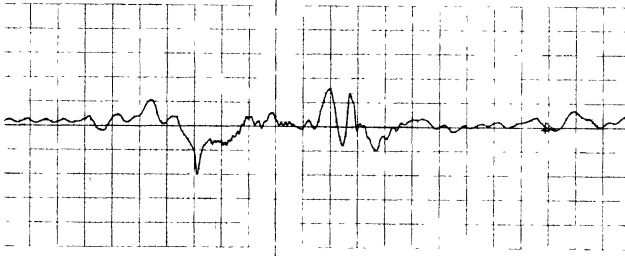
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



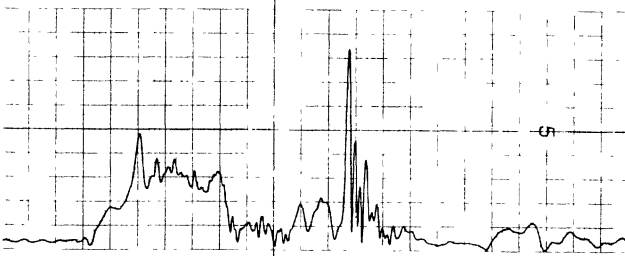
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



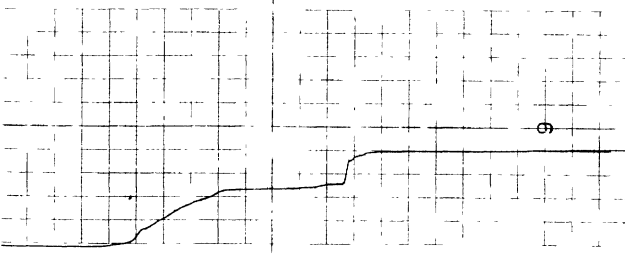
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

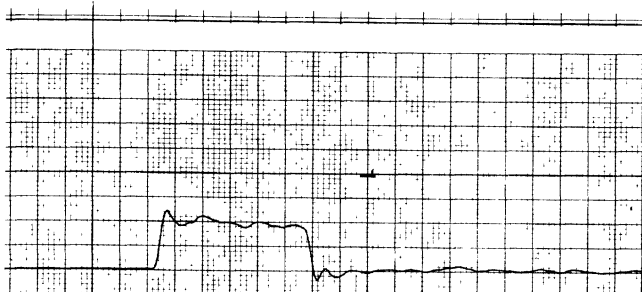


SUMMARY DATA CHEST ACCELERATIONS

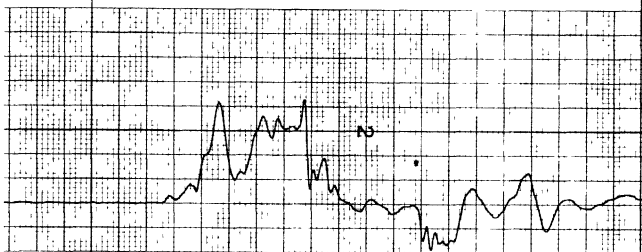
Test Number A-672
Dummy HSRI Repeatable Pete(2)
Sled Velocity 30.6 miles/hr

Test Type Lap and Torso
Belts

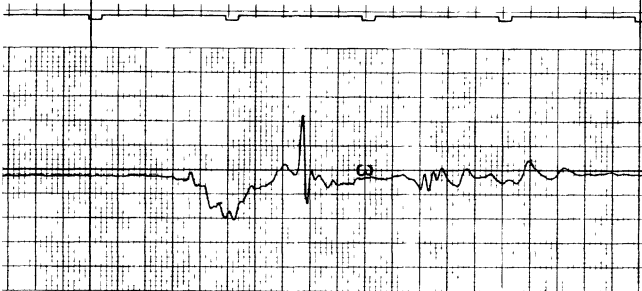
Sled Pulse
10 g's/division
Filtered
Class 60



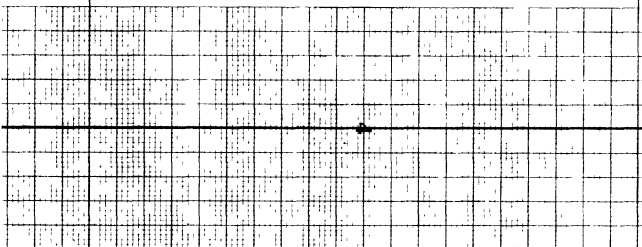
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



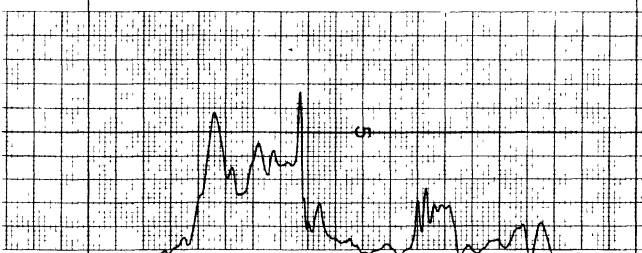
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



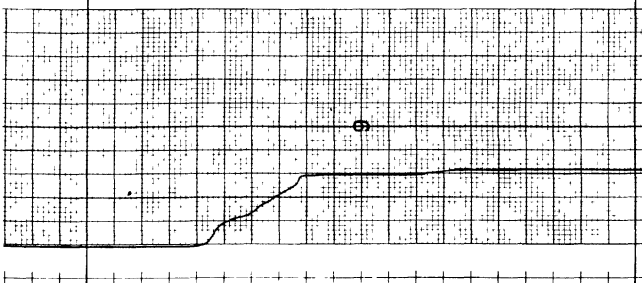
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division

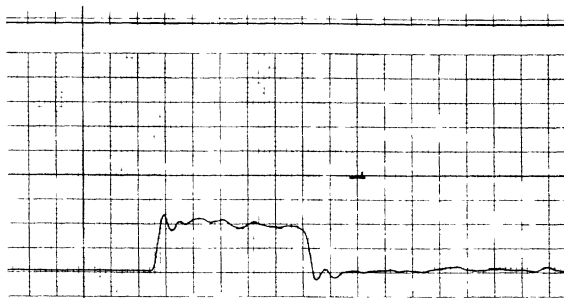


SUMMARY DATA CHEST ACCELERATIONS

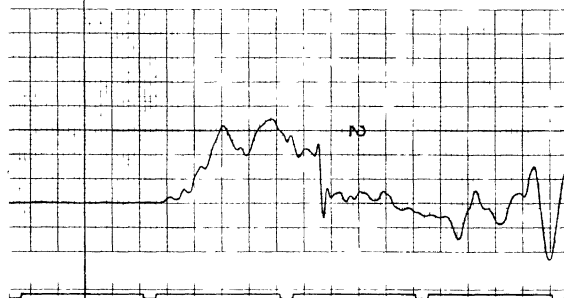
Test Number A-673
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Lap and Torso Belts

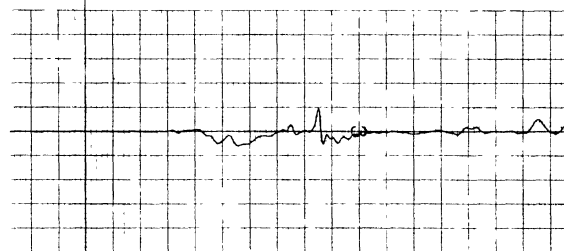
Sled Pulse
10 g's/division
Filtered
Class 60



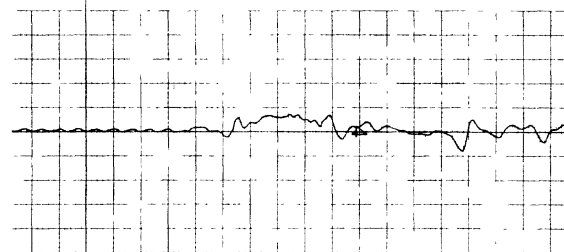
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



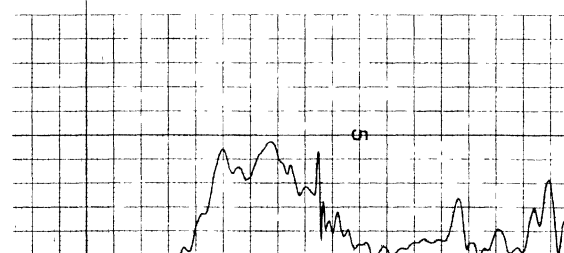
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



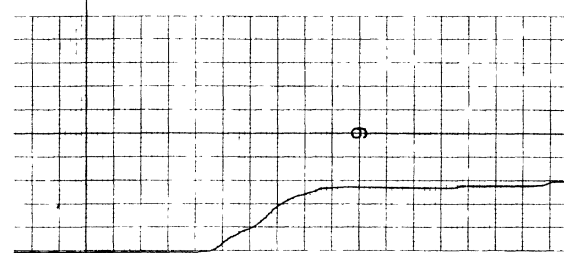
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

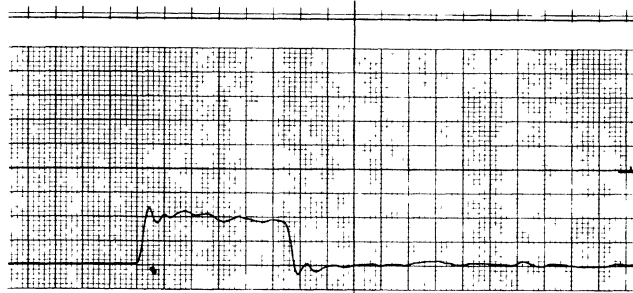


SUMMARY DATA CHEST ACCELERATIONS

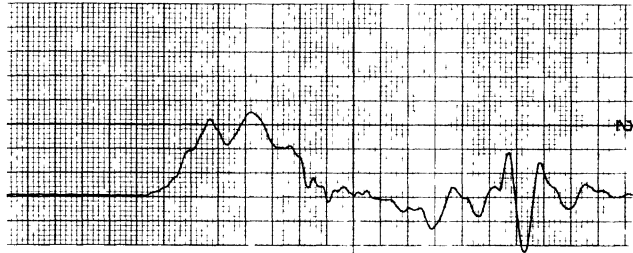
Test Number A-676
Dummy HSRI-Repeatable Pote (1)
Sled Velocity 29.9 miles/hr

Test Type Lap and Torso
Belts

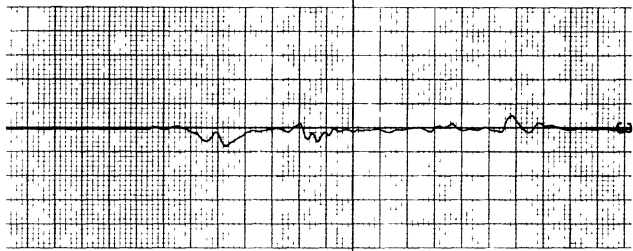
Sled Pulse
10 g's/division
Filtered
Class 60



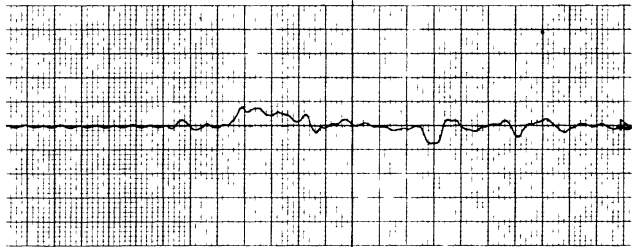
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



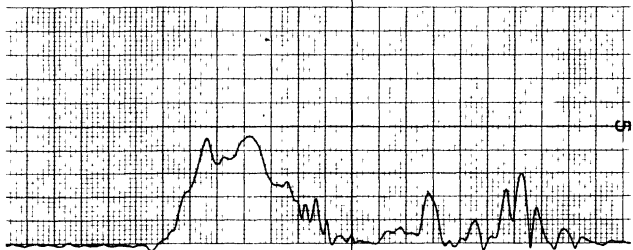
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



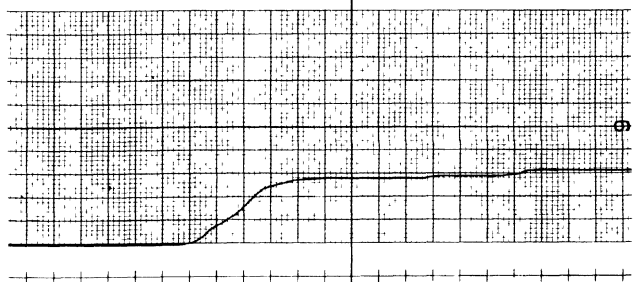
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

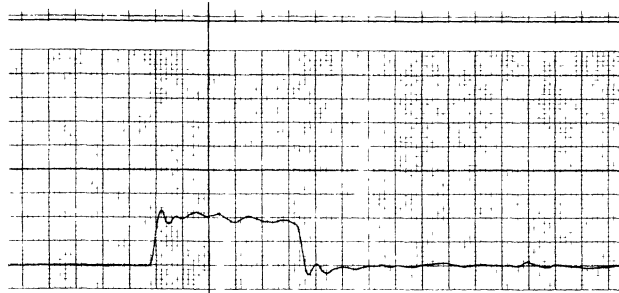


SUMMARY DATA CHEST ACCELERATIONS

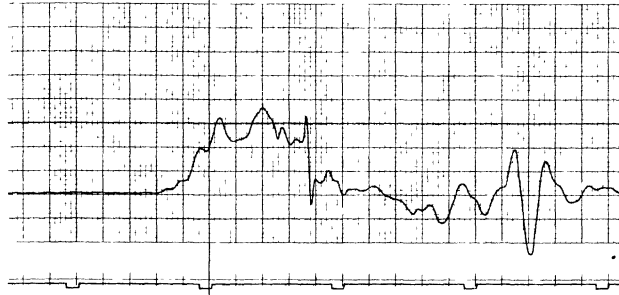
Test Number A-675
Dummy HSRI Repeatable Pete (2)
Sled Velocity 29.9 miles/hr

Test Type Lap and Torso
Belts

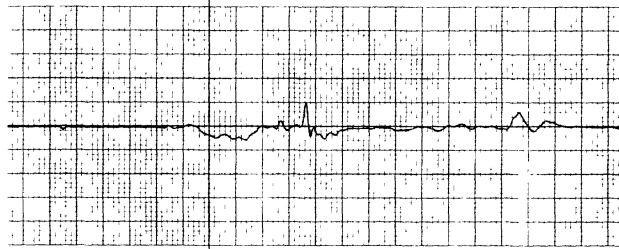
Sled Pulse
10 g's/division
Filtered
Class 60



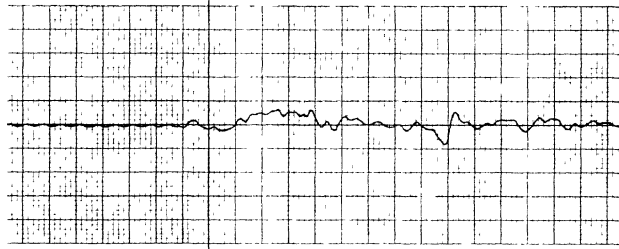
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



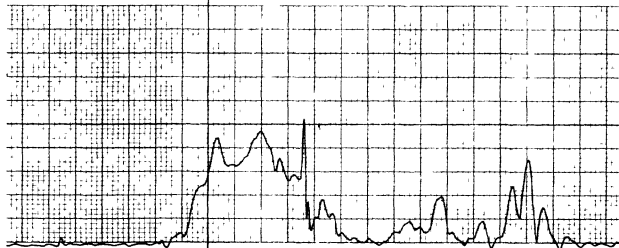
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



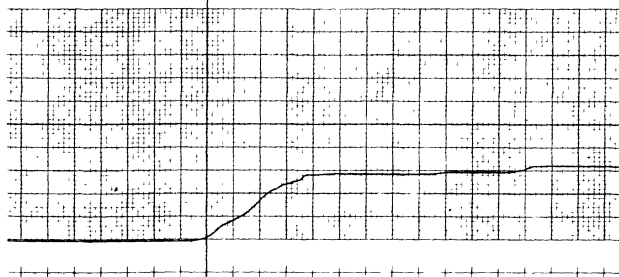
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

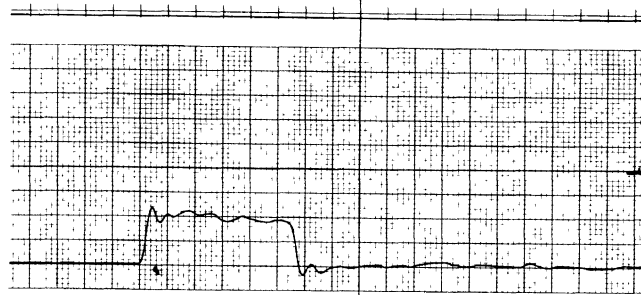


SUMMARY DATA CHEST ACCELERATIONS

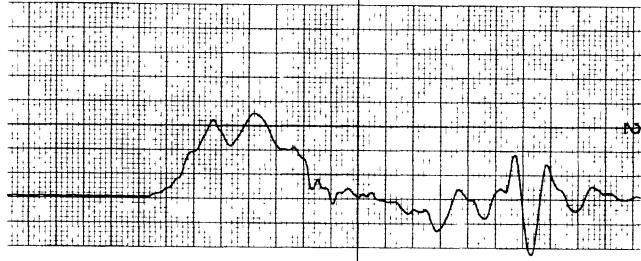
Test Number A-676
Dummy HSRI-Repeatable Pete (2)
Sled Velocity 29.9 miles/hr

Test Type Lap and Torso
Belts

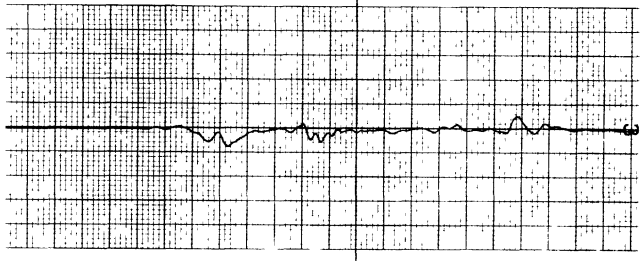
Sled Pulse
10 g's/division
Filtered
Class 60



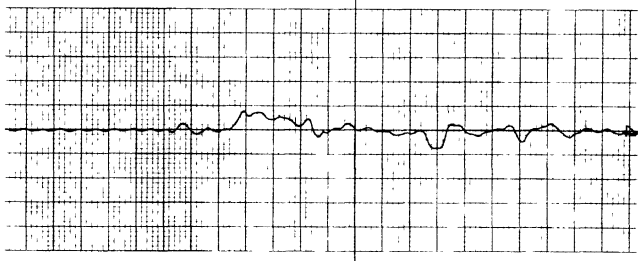
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



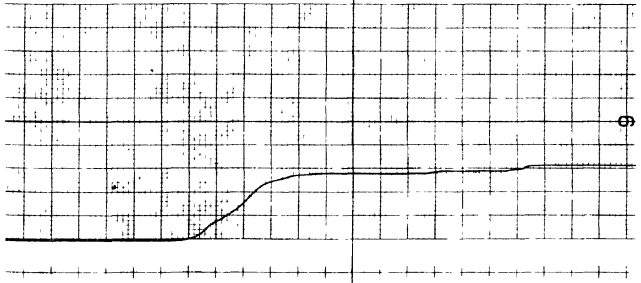
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

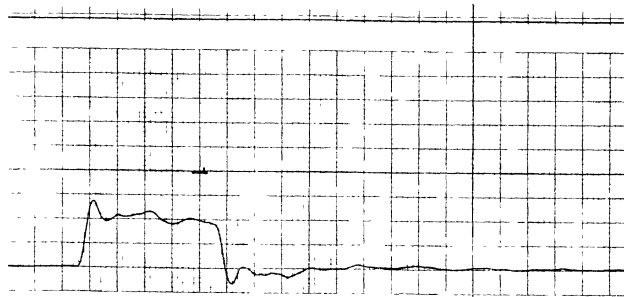


SUMMARY DATA CHEST ACCELERATIONS

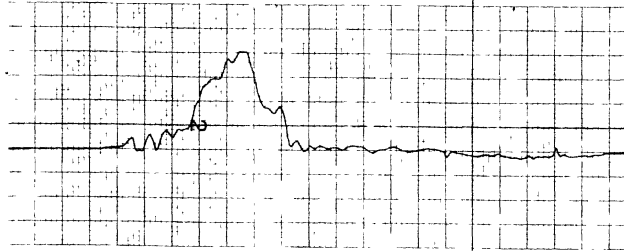
Test Number A-648
Dummy HSRI Repeatable Pete (1)
Sled Velocity 26.5 miles/hr

Test Type Preinflated Airbag

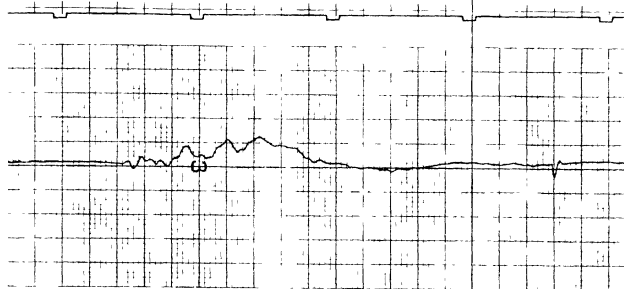
Sled Pulse
10 g's/division
Filtered
Class 60



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



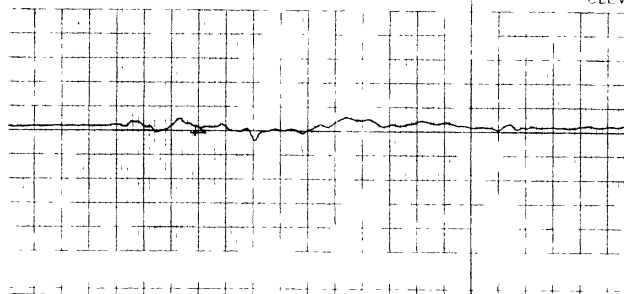
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



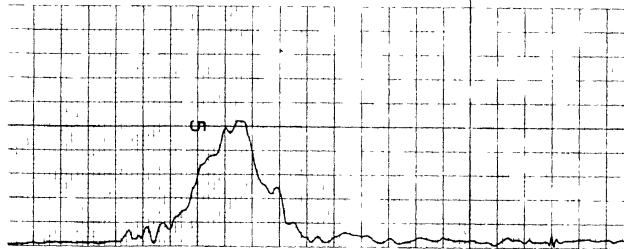
BRUSH IN

CLEV

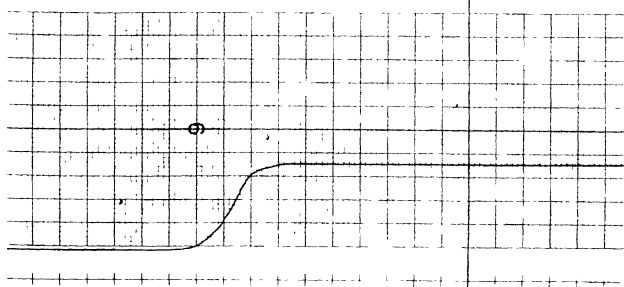
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

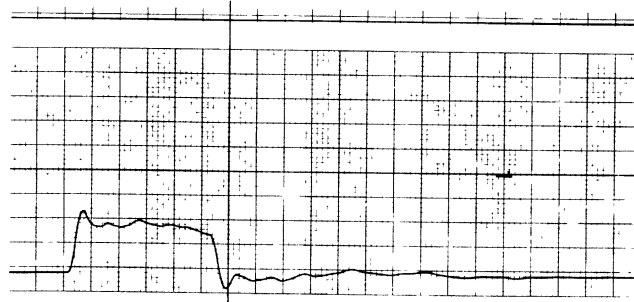


SUMMARY DATA CHEST ACCELERATIONS

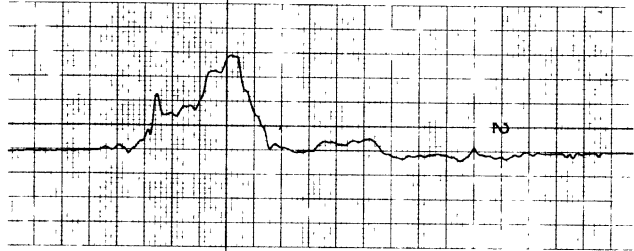
Test Number A-649
Dummy HSRI Repeatable Pete (1)
Sled Velocity 26.2 miles/hr

Test Type Preinflated Airbag

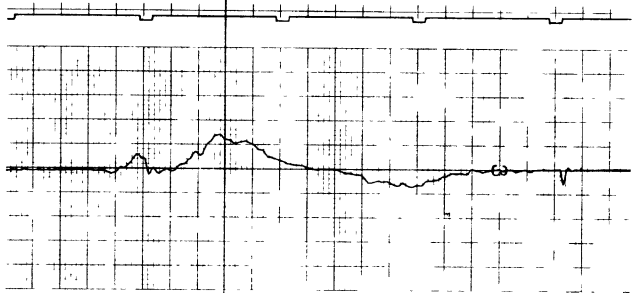
Sled Pulse
10 g's/division
Filtered
Class 60



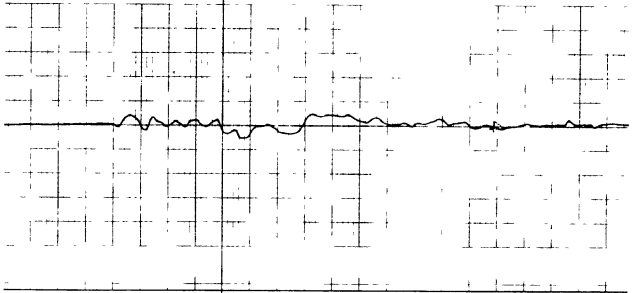
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



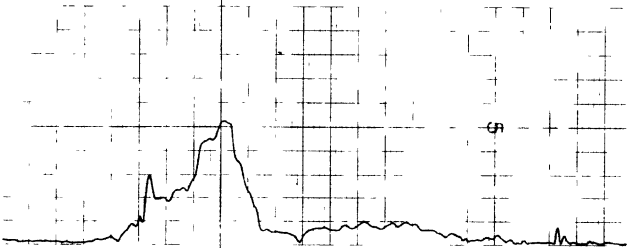
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



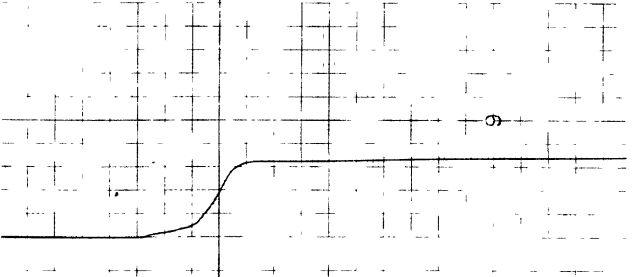
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division

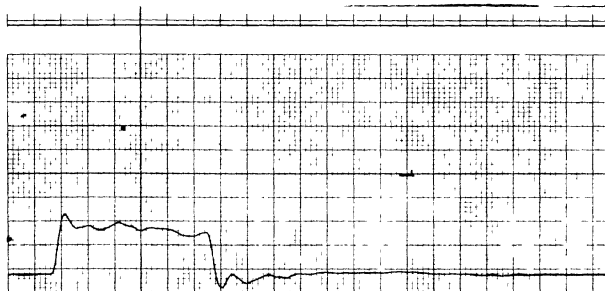


SUMMARY DATA CHEST ACCELERATIONS

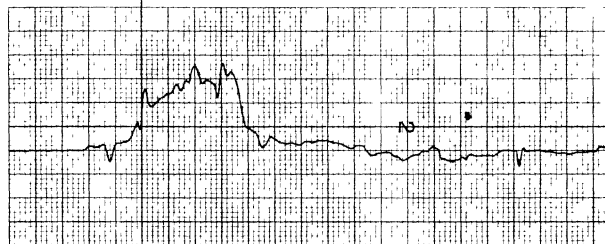
Test Number A-650
Dummy HSRI Repeatable Pete (1)
Sled Velocity 29.5 miles/hr

Test Type Preinflated Airbag

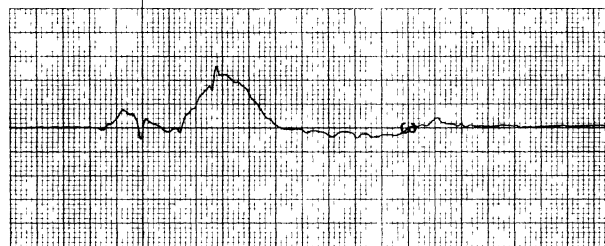
Sled Pulse
10 g's/division
Filtered
Class 60



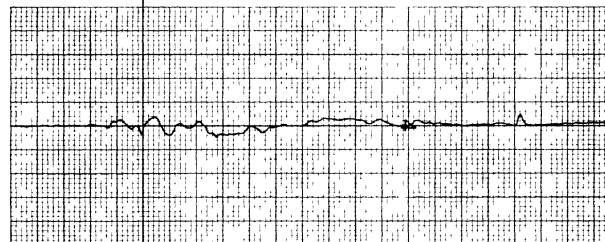
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



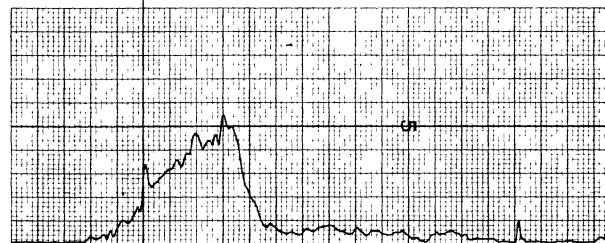
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



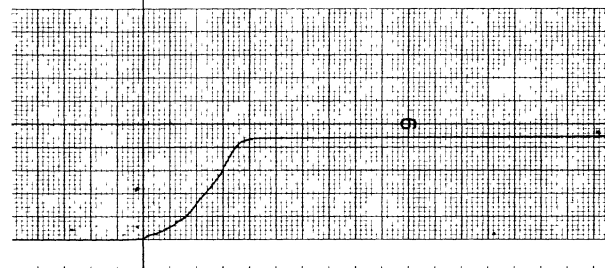
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

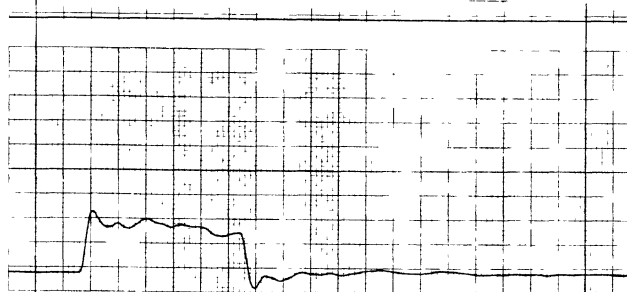


SUMMARY DATA CHEST ACCELERATIONS

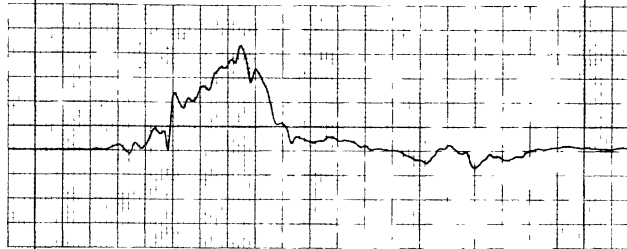
Test Number A-651
Dummy HSRI Repeatable Peto (1)
Sled Velocity 27.9 miles/hr

Test Type Preinflated Airbag

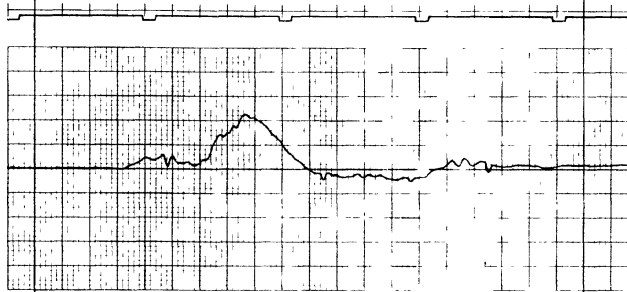
Sled Pulse
10 g's/division
Filtered
Class 60



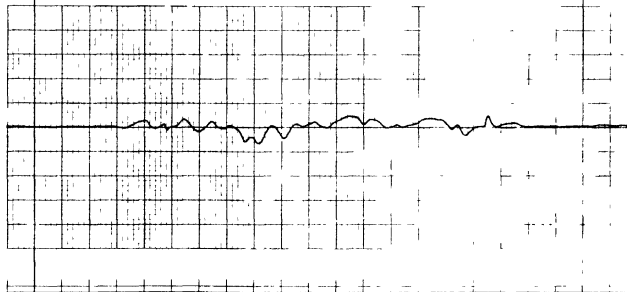
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



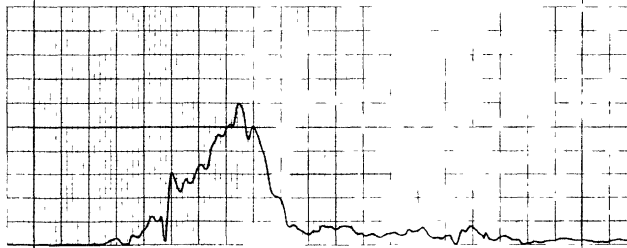
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



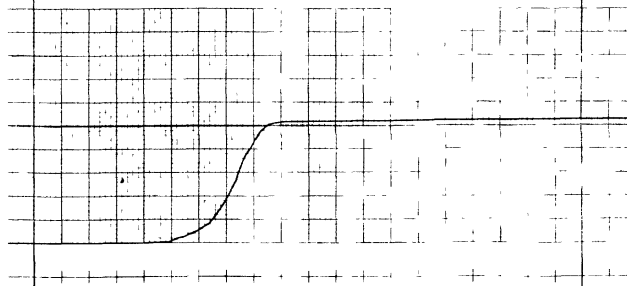
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

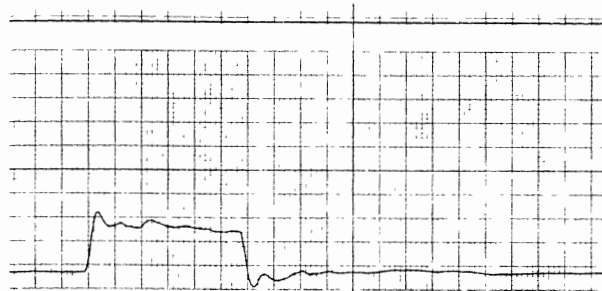


SUMMARY OF CHEST ACCELERATIONS

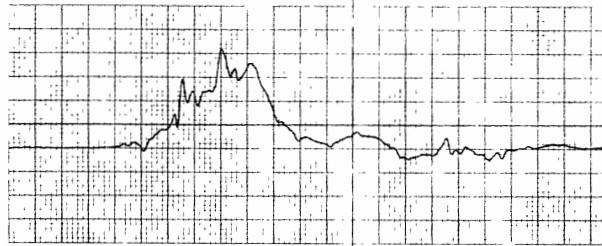
Test Number A-652
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Preinflated Airbag

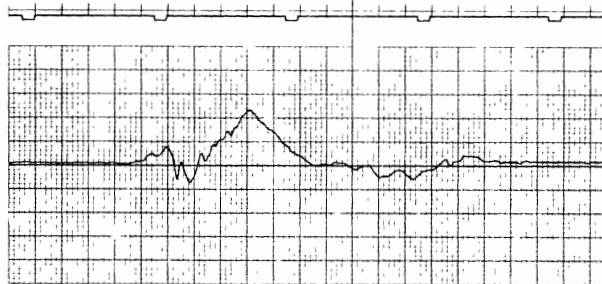
Sled Pulse
10 g's/division
Filtered
Class 60



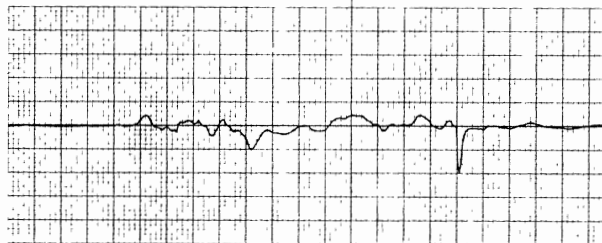
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



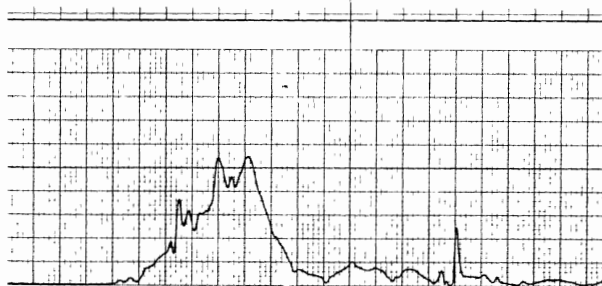
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



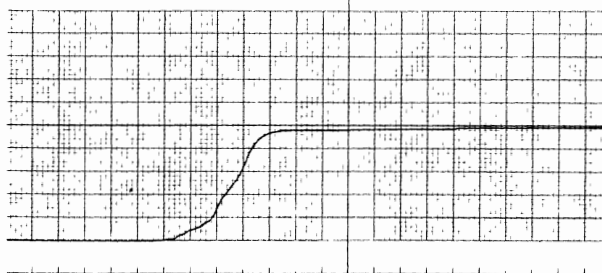
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division

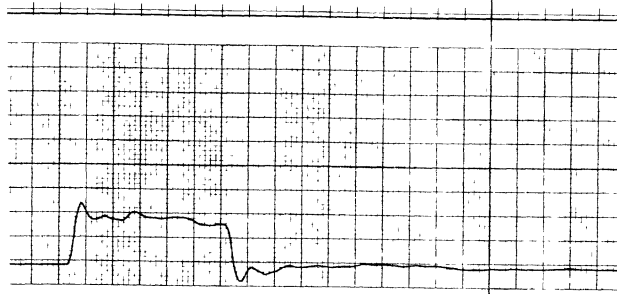


SUMMARY DATA CHEST ACCELERATIONS

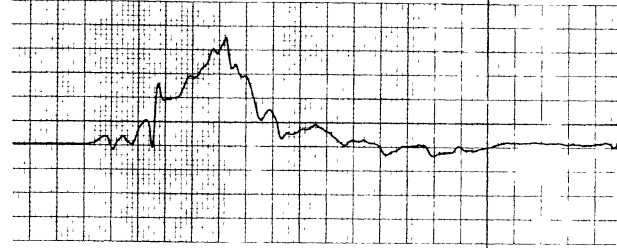
Test Number A-653
Dummy HSRI Repeatabile Pete (1)
Sled Velocity 29.7 miles/hr

Test Type Preinflated Airbag

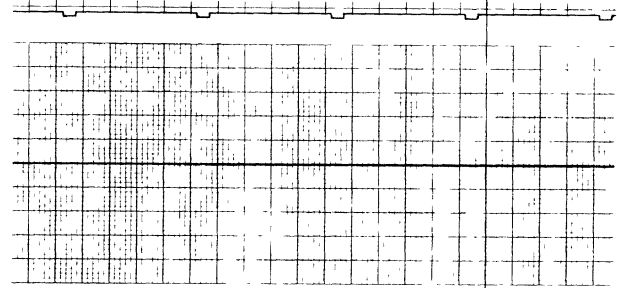
Sled Pulse
10 g's/division
Filtered
Class 60



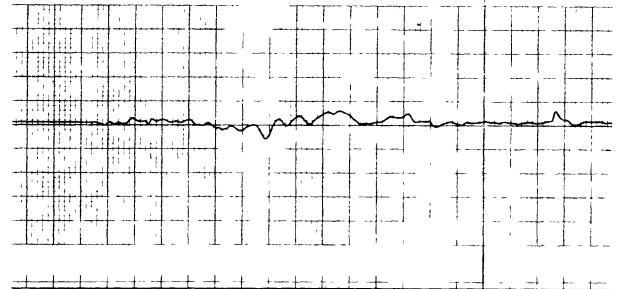
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



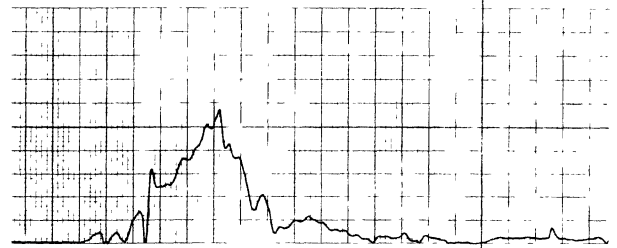
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



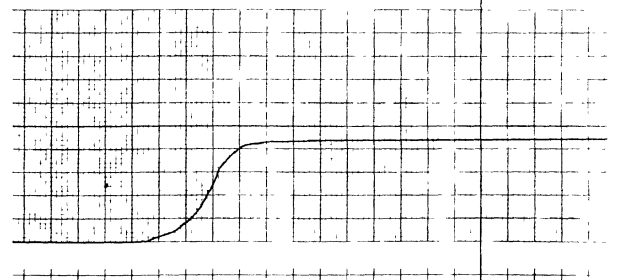
Left-Right:
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division

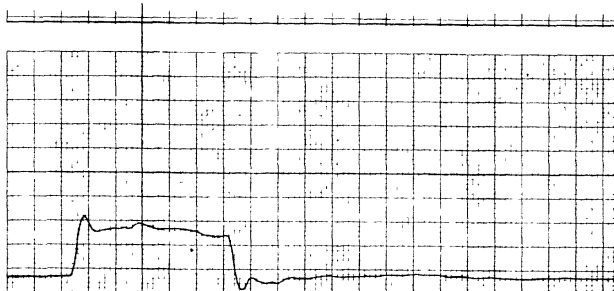


SUMMARY DATA CHEST ACCELERATIONS

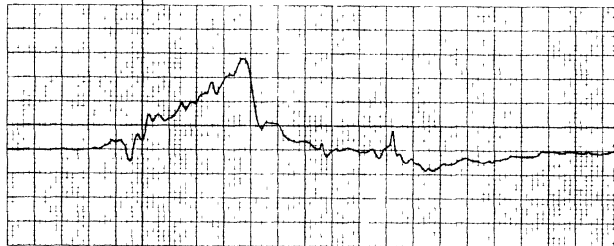
Test Number A-654
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Preinflated Airbag

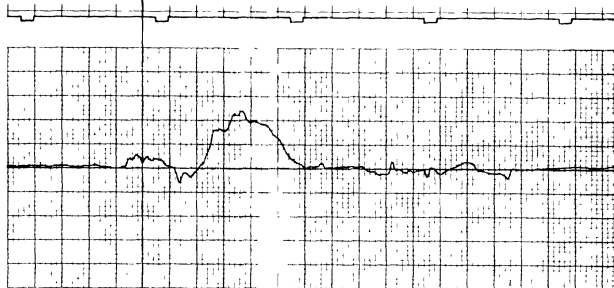
Sled Pulse
10 g's/division
Filtered
Class 60



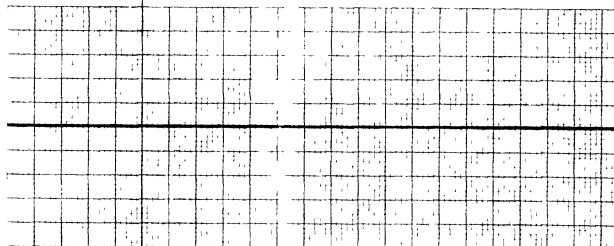
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



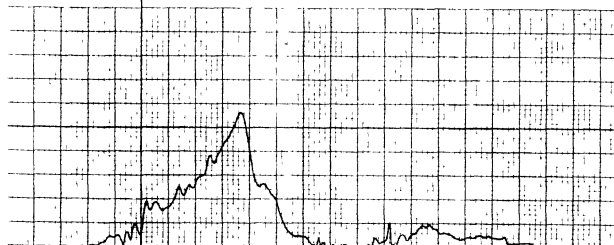
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



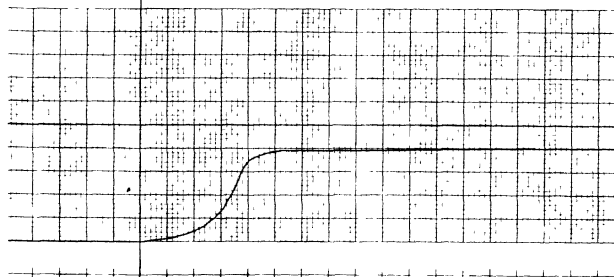
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division

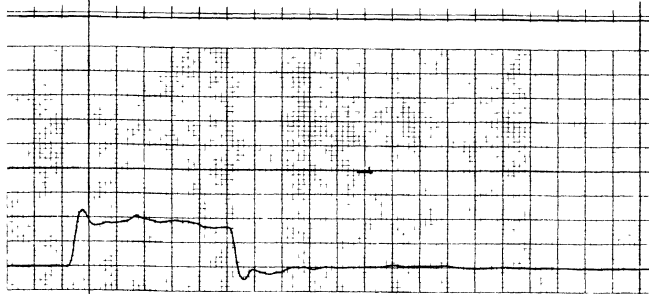


SUMMARY DATA CHEST ACCELERATIONS

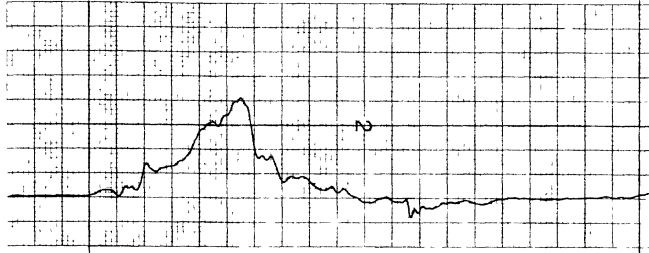
Test Number A-655
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Preinflated Airbag

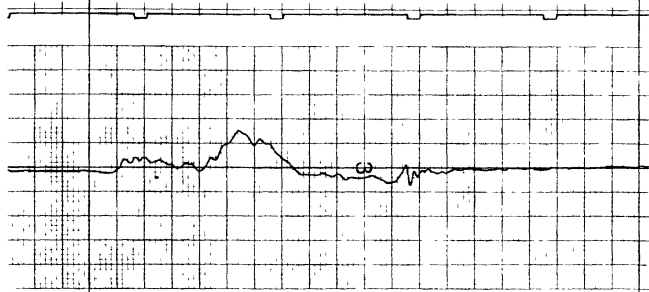
Sled Pulse
10 g's/division
Filtered
Class 60



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

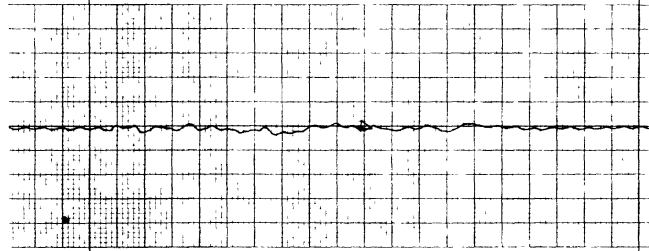


Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

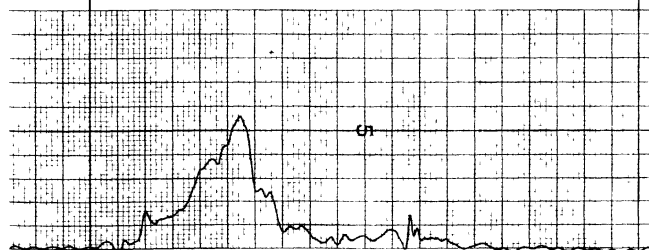


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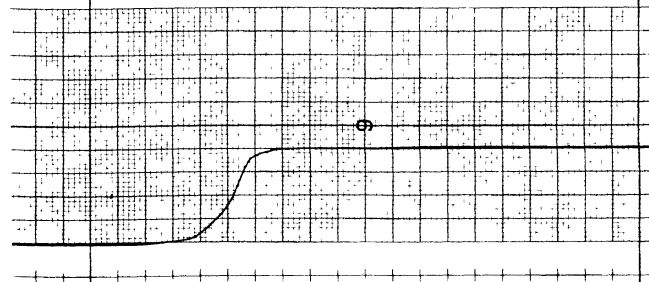
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

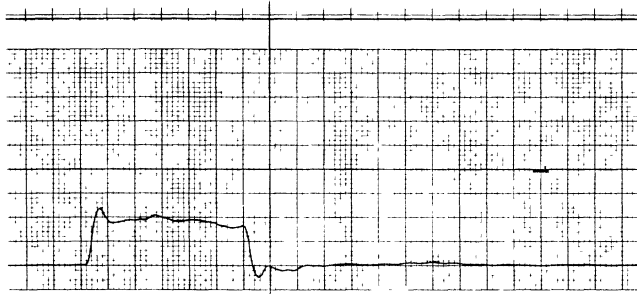


SUMMARY DATA CHEST ACCELERATIONS

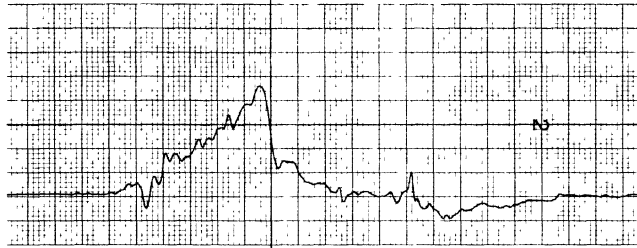
Test Number A-656
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Preinflated Airbag

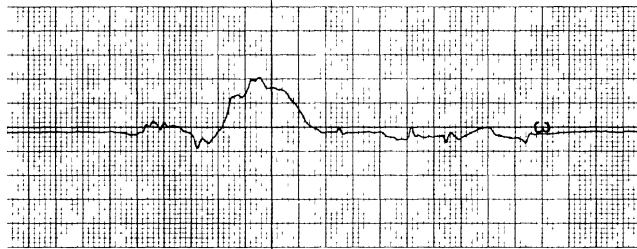
Sled Pulse
10 g's/division
Filtered
Class 60



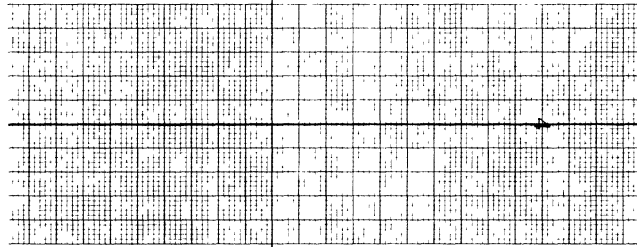
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



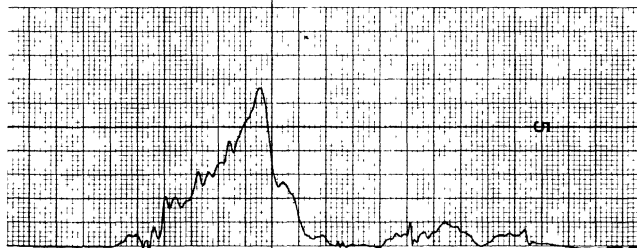
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



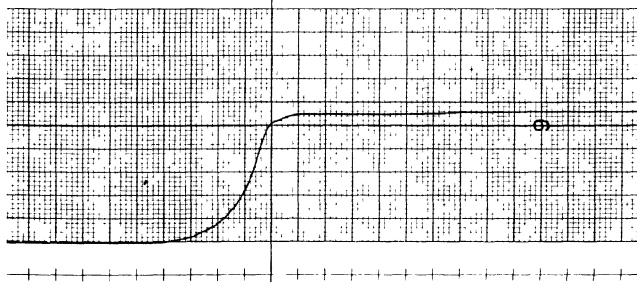
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5} sec/divi-
sion

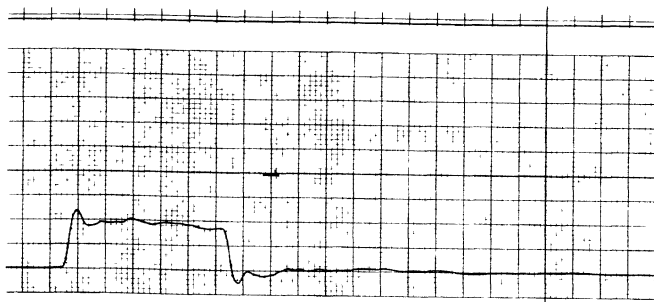


SUMMARY DATA CHEST ACCELERATIONS

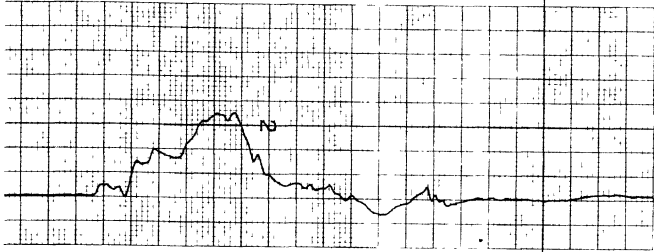
Test Number A-657
Dummy HSRI Repeatabile Pete (2)
Sled Velocity 30.7 miles/hr

Test Type Preinflated Airbag

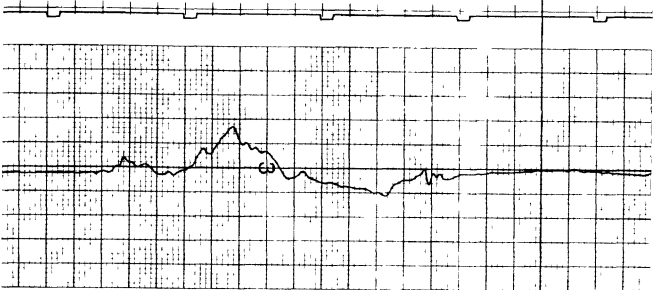
Sled Pulse
10 g's/division
Filtered
Class 60



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

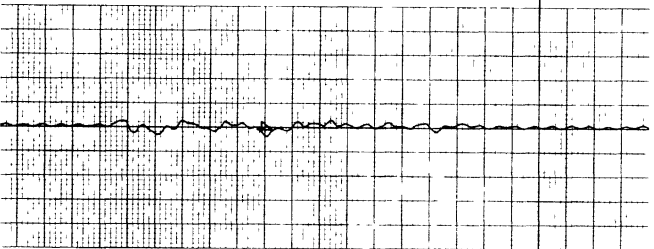


Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600

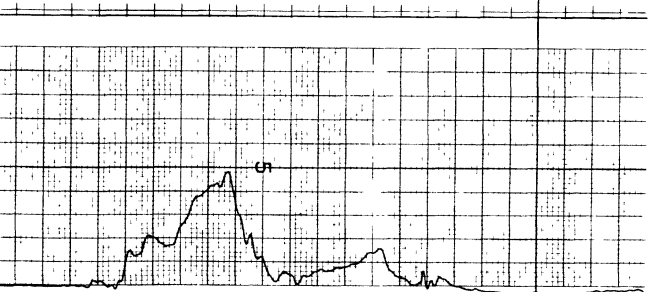


BRU

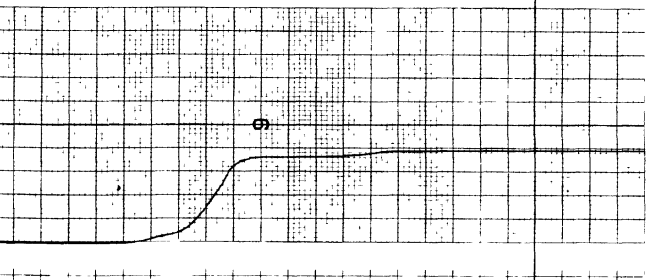
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

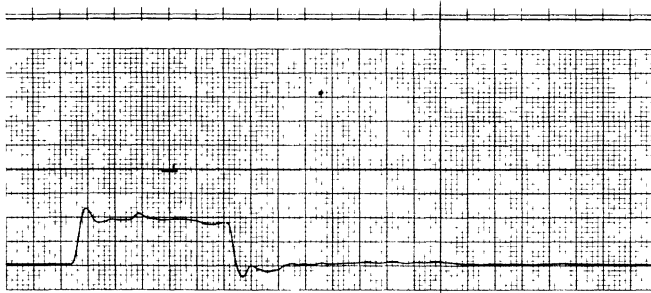


SUMMARY DATA CHEST ACCELERATIONS

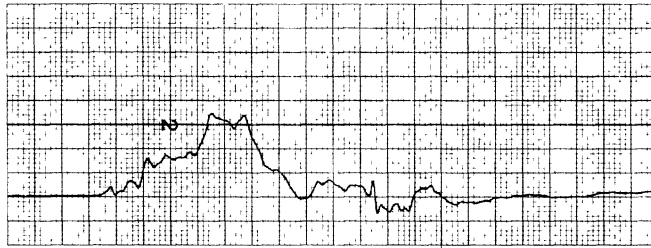
Test Number A-658
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.6 miles/hr

Test Type Preinflated Airbag

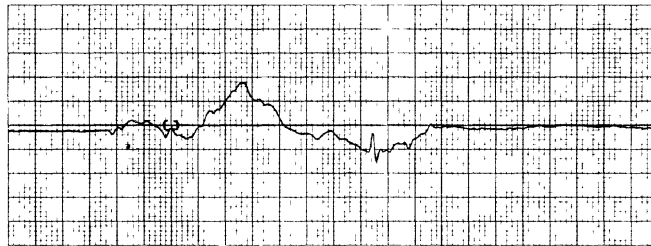
Sled Pulse
10 g's/division
Filtered
Class 60



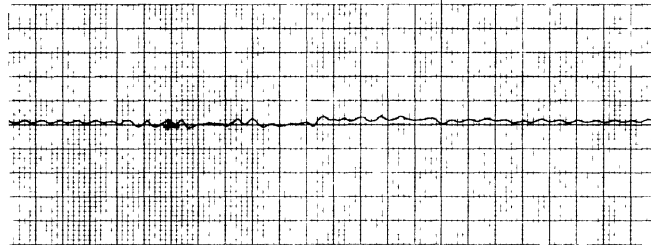
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



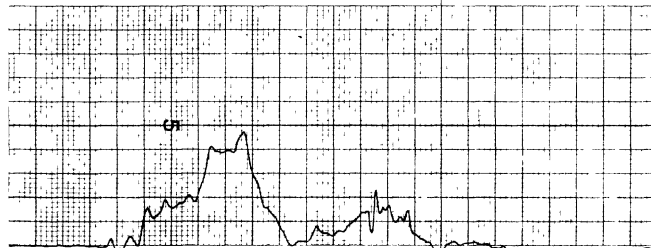
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



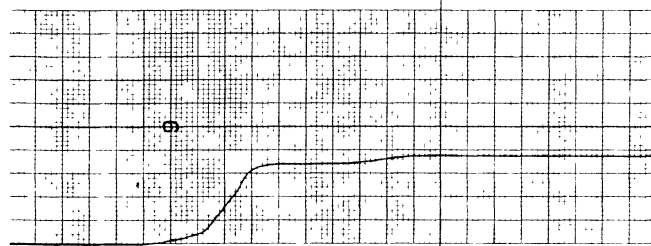
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/division



SUMMARY DATA CHEST ACCELERATIONS

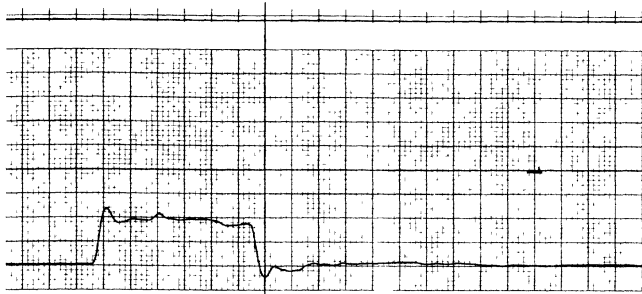
Test Number A-659

Test Type Preinflated Airbag

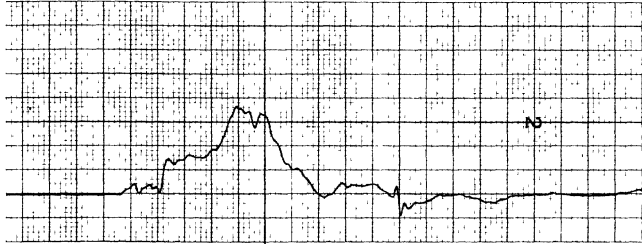
Dummy HSRI Repeatable Pete (2)

Sled Velocity 30.2 miles/hr

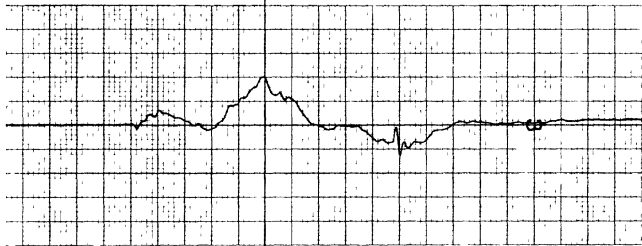
Sled Pulse
10 g's/division
Filtered
Class 60



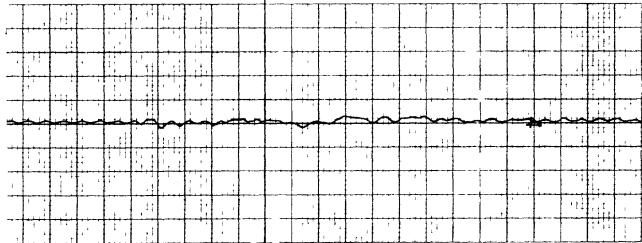
Anterior-Posterior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



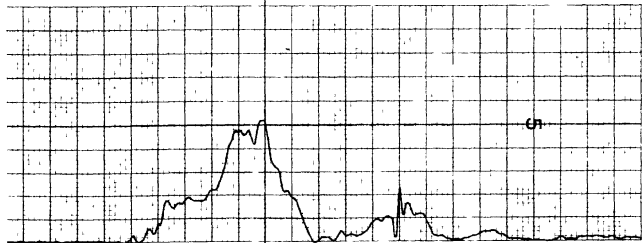
Superior-Inferior
Chest Acceleration
12.5 g's/division
Filtered
Class 600



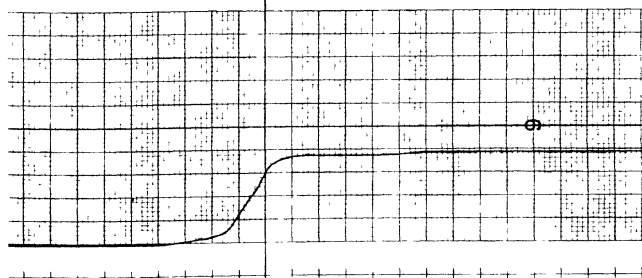
Left-Right
Chest Acceleration
12.5 g's/division
Filtered
Class 600



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



Severity Index
100 g^{2.5}sec/divi-
sion

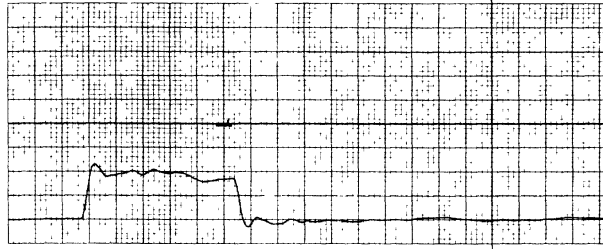


SUMMARY DATA CHEST ACCELERATIONS

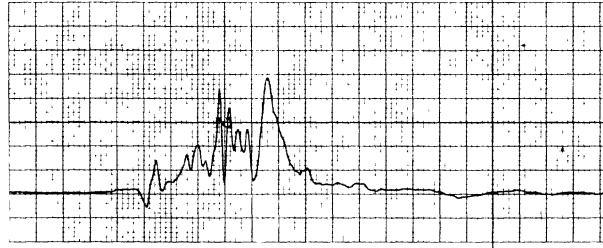
Test Number A-661
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

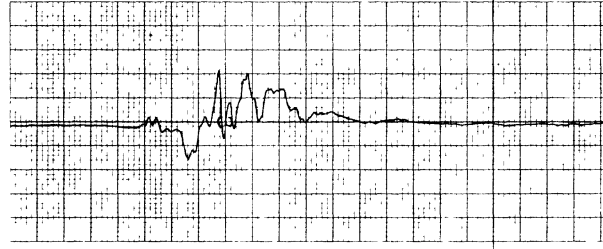
Sled Pulse
10 g's/division
Filtered
Class 60



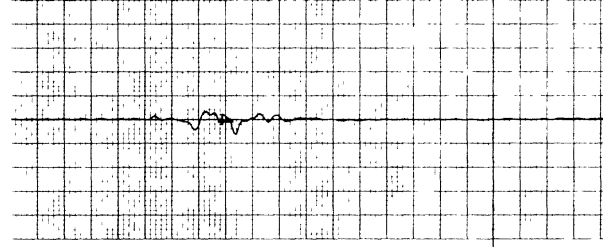
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



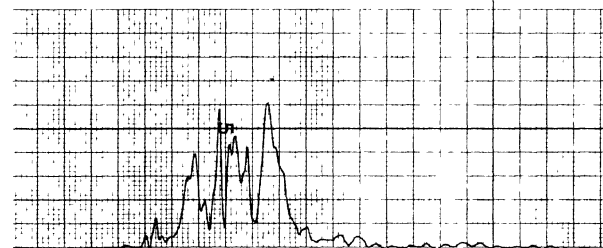
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



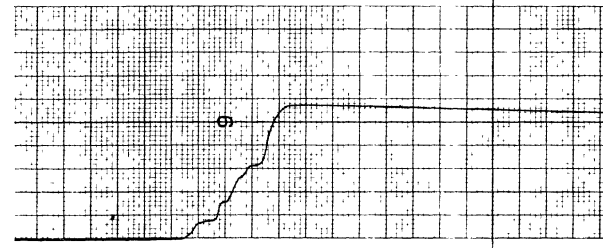
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

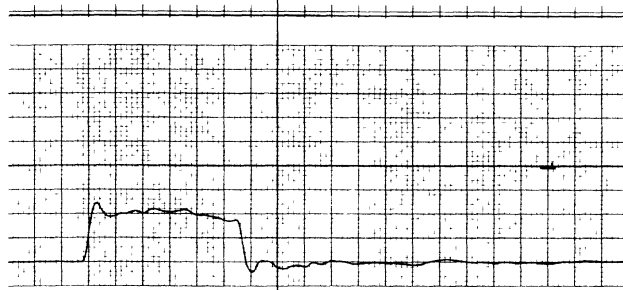


SUMMARY DATA: CHEST ACCELERATIONS

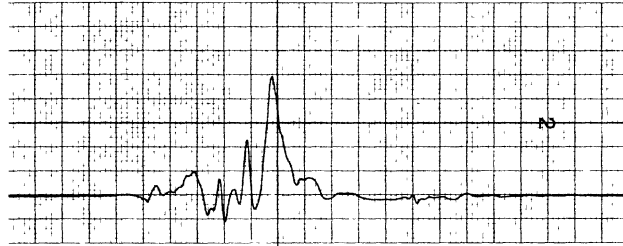
Test Number A-662
Dummy HSRT-Repeatable Pete (2)
Sled Velocity 30.8 miles/hr

Test Type Dash/Windshield
Impact

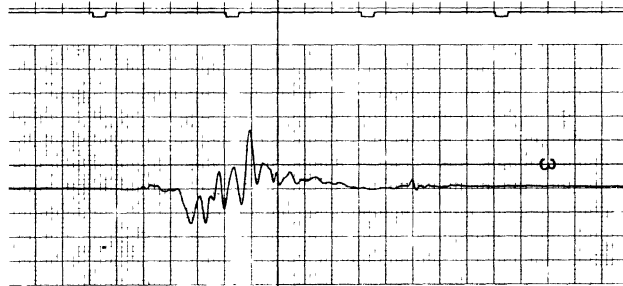
Sled Pulse
10 g's/division
Filtered
Class 60



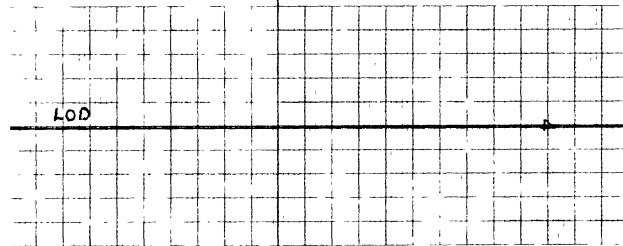
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



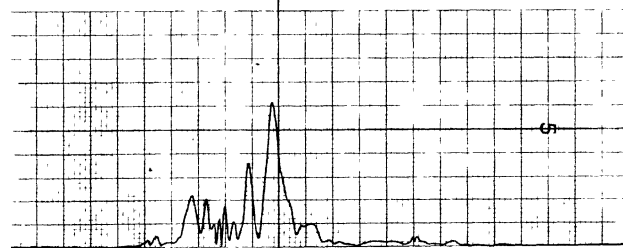
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



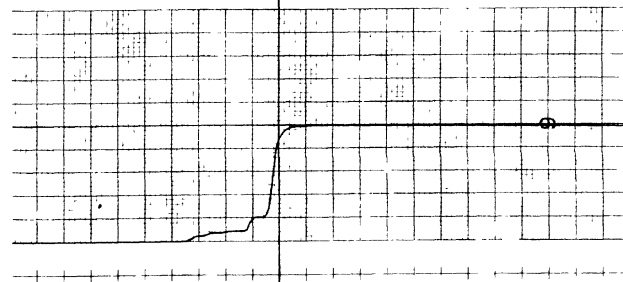
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/division

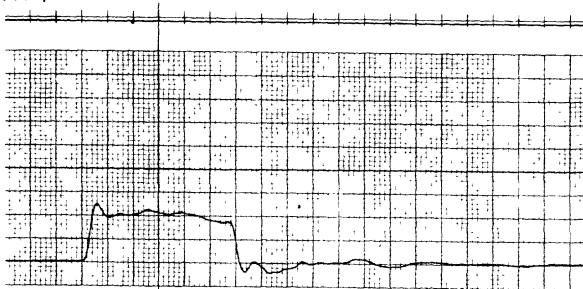


SUMMARY DATA CHEST ACCELERATIONS

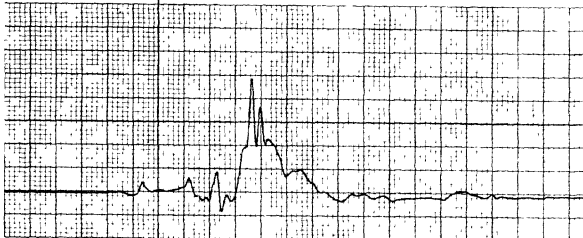
Test Number A-663
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

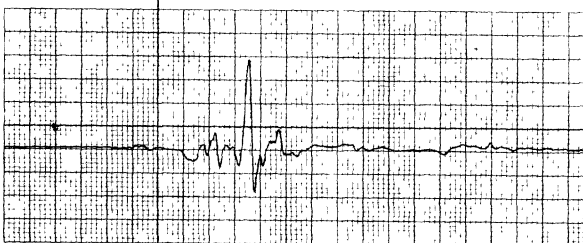
Sled Pulse
10 g's/division
Filtered
Class 60



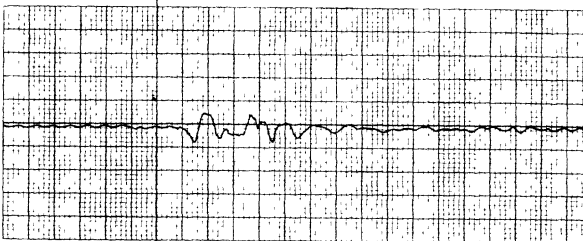
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



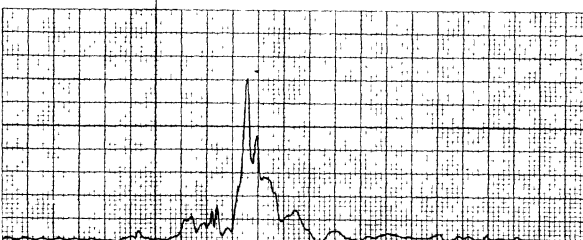
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



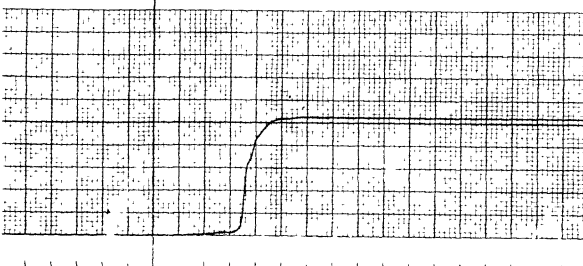
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

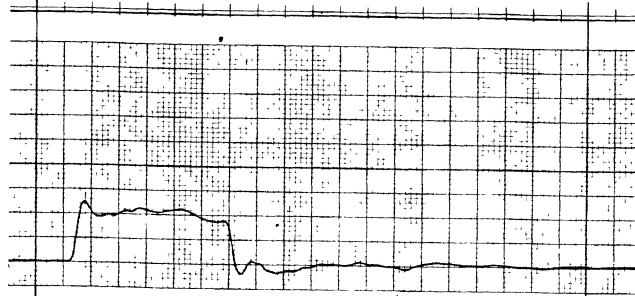


SUMMARY DATA: CHEST ACCELERATIONS

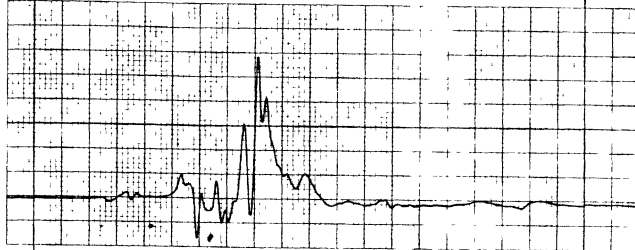
Test Number A-664
Dummy HSRI Repeatable Pete (2)
Sled Velocity 28.4 miles/hr

Test Type Dash/Windshield
Impact

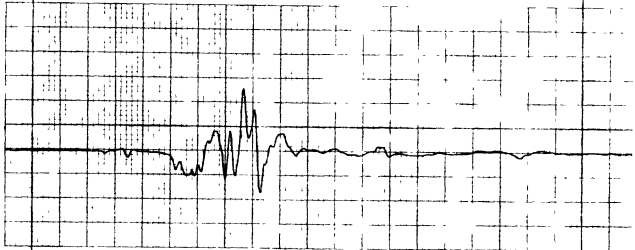
Sled Pulse
10 g's/division
Filtered
Class 60



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



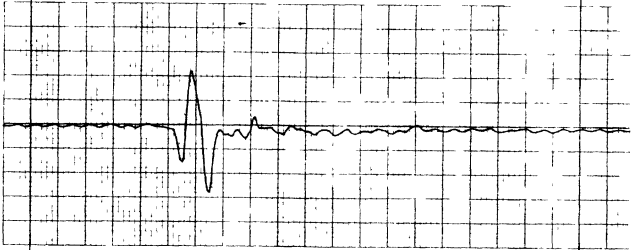
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



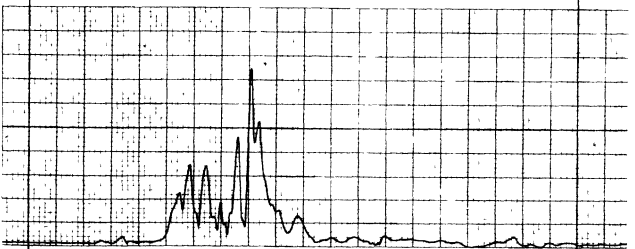
BRUSH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U.S.A.

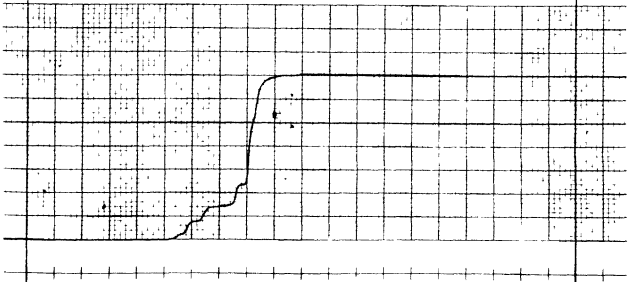
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

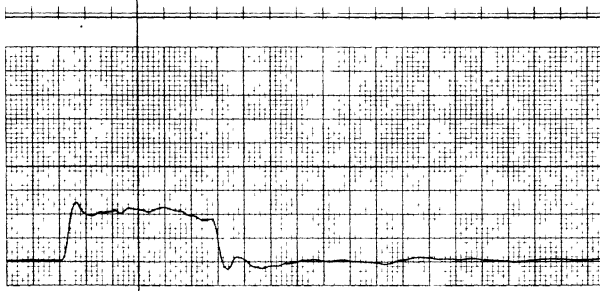


SUMMARY DATA: CHEST ACCELERATIONS

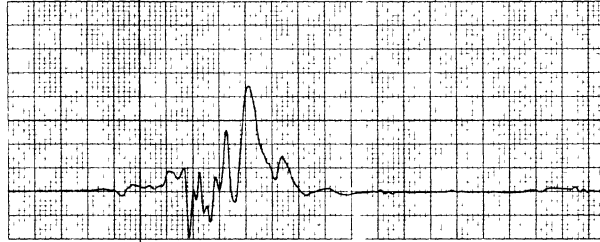
Test Number A-665
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield
Impact

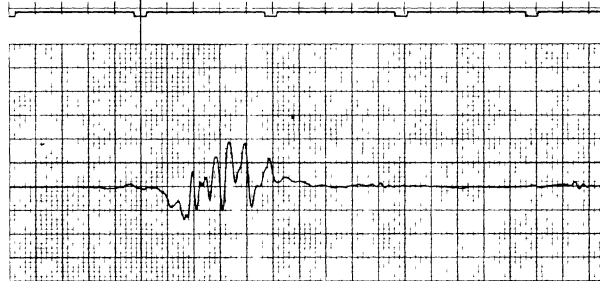
Sled Pulse
10 g's/division
Filtered
Class 60



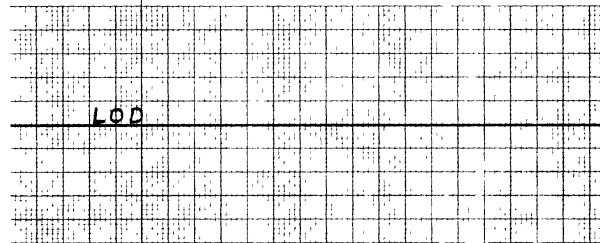
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



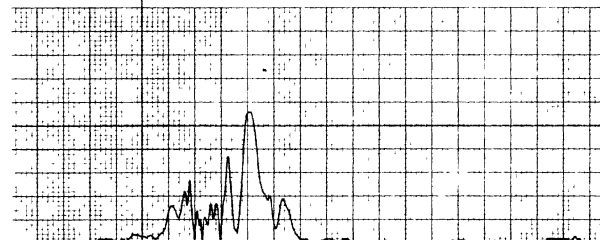
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



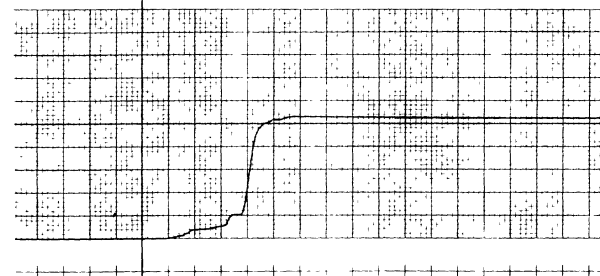
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

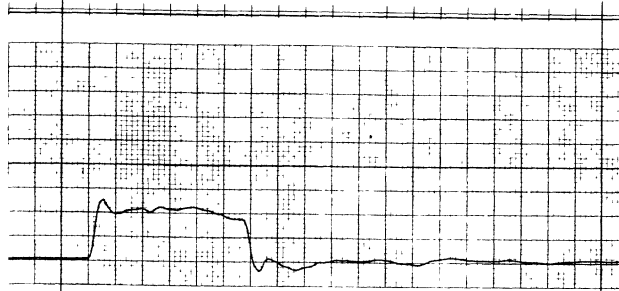


SUMMARY DATA CHEST ACCELERATIONS

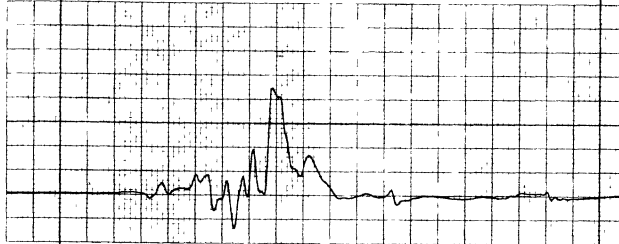
Test Number A-666
Dummy HSRI-Repeatable Pete (2)
Sled Velocity 30.5 miles/hr

Test Type Dash/Windshield
Impact

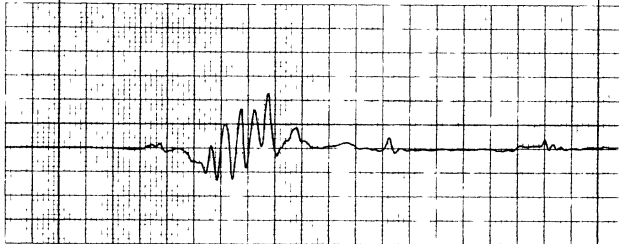
Sled Pulse
10 g's/division
Filtered
Class 60



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



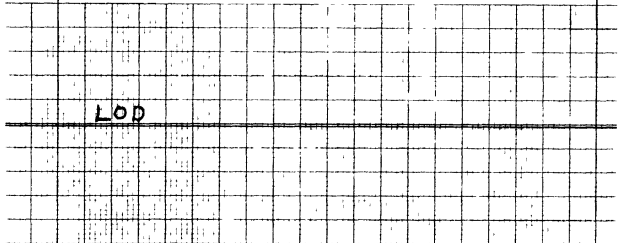
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



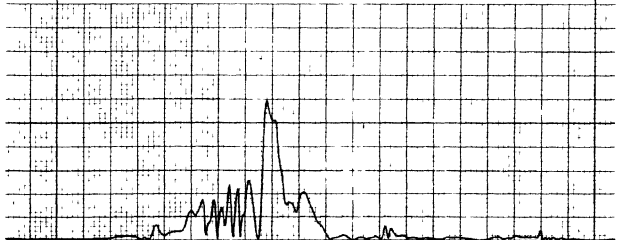
BRUSH INSTRUMENTS DIVISION, GOULD INC

CLEVELAND, OHIO PRINTED IN U.S.A

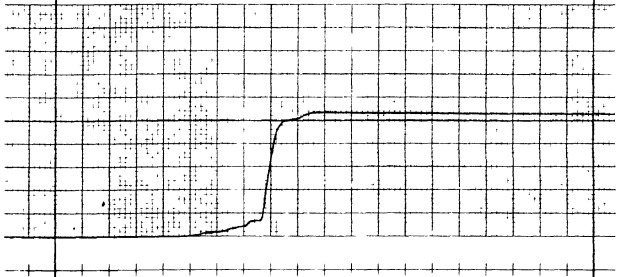
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

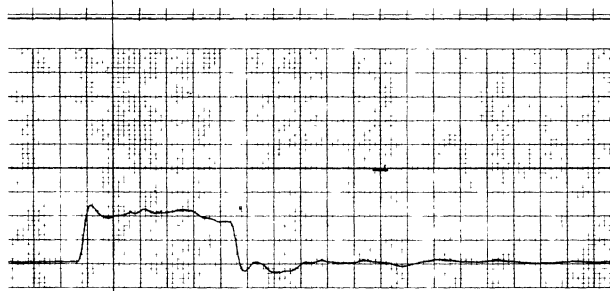


SUMMARY DATA: CHEST ACCELERATIONS

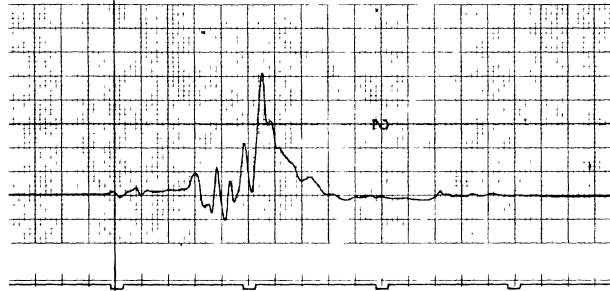
Test Number A-667
Dummy HSRI-Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type DASH/Windshield
Impact

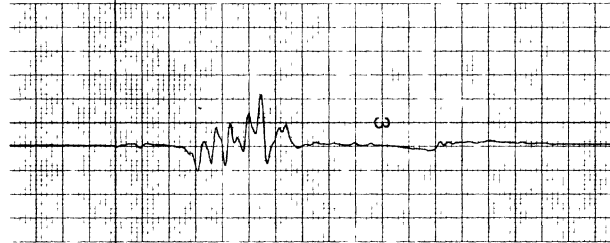
Sled Pulse
10 g's/division
Filtered
Class 60



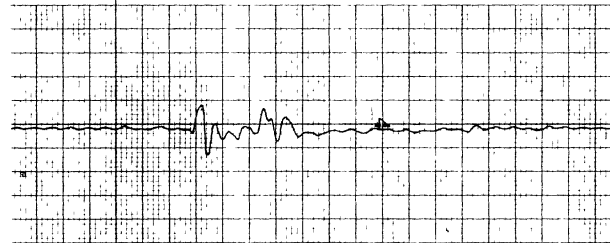
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



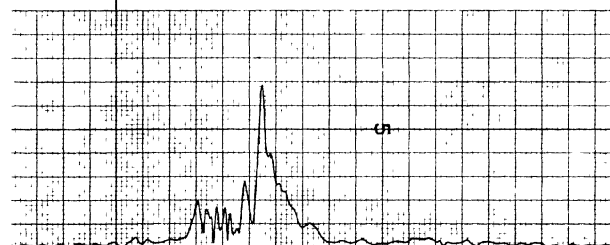
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



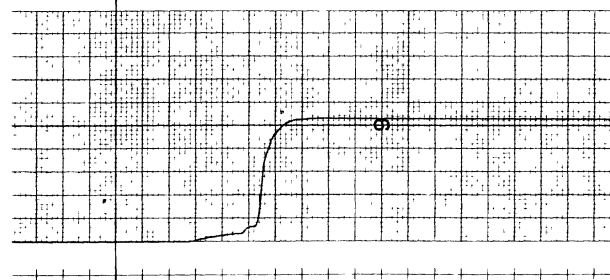
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

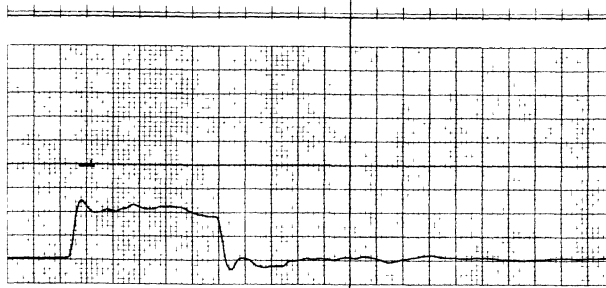


SUMMARY DATA CHEST ACCELERATIONS

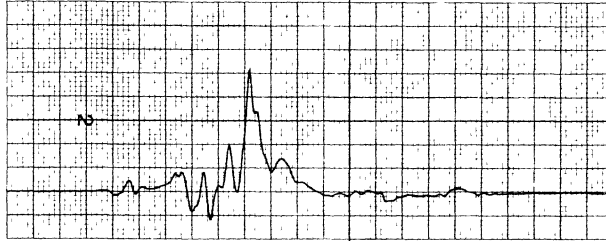
Test Number A-668
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Dash/Windshield
Impact

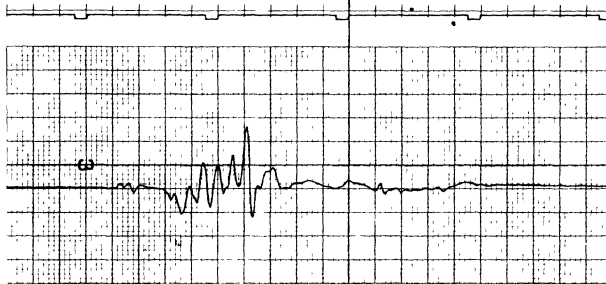
Sled Pulse
10 g's/division
Filtered
Class 60



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



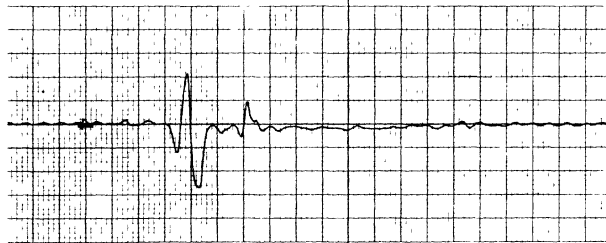
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



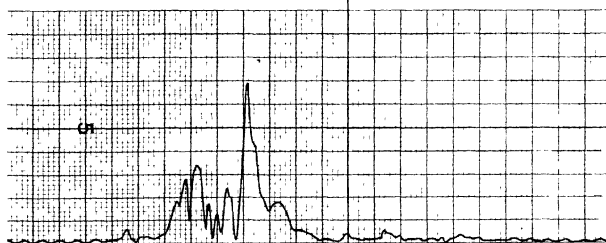
BRUSH INSTRUMENTS

CLEVELAND, OHIO

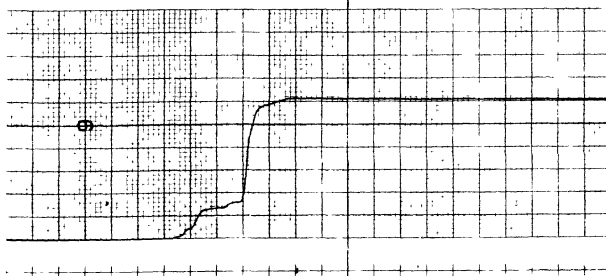
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

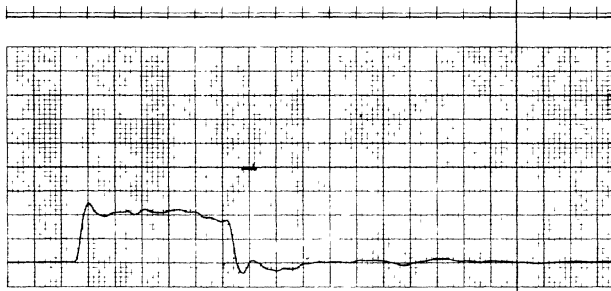


SUMMARY DATA: CHEST ACCELERATIONS

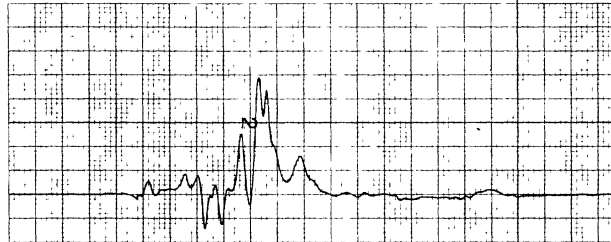
Test Number A-669
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Dash/Windshield
Impact

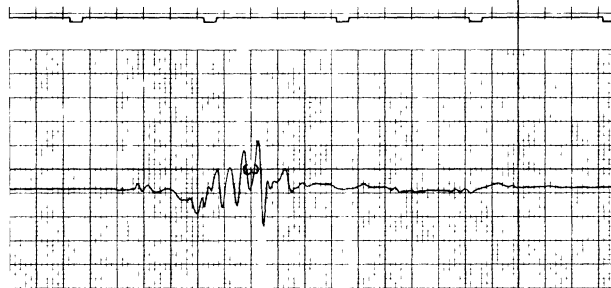
Sled Pulse
10 g's/division
Filtered
Class 60



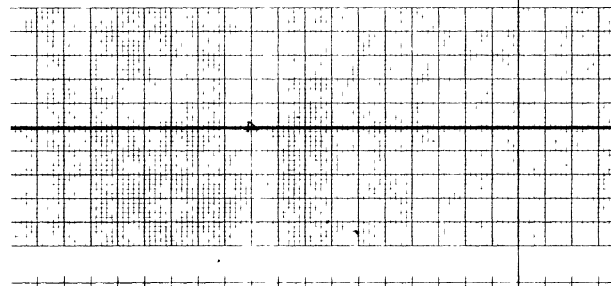
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



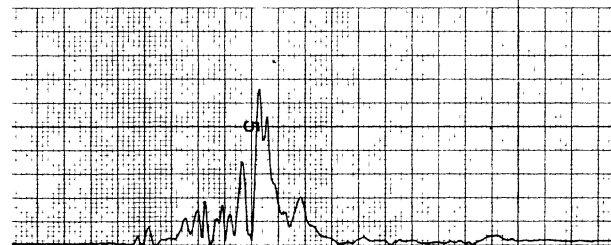
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



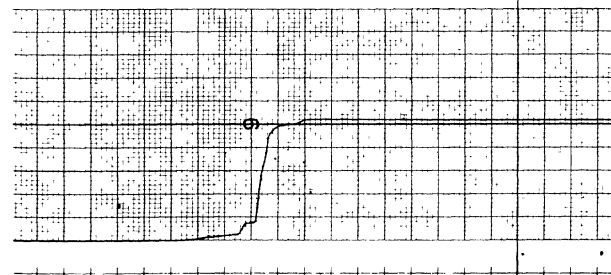
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5} sec/divi-
sion

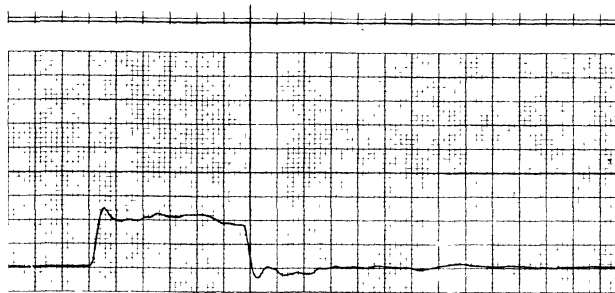


SUMMARY DATA CHEST ACCELERATIONS

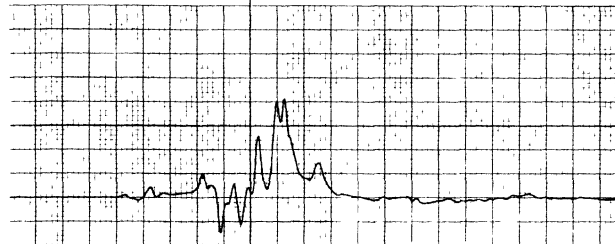
Test Number A-670
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield
Impact

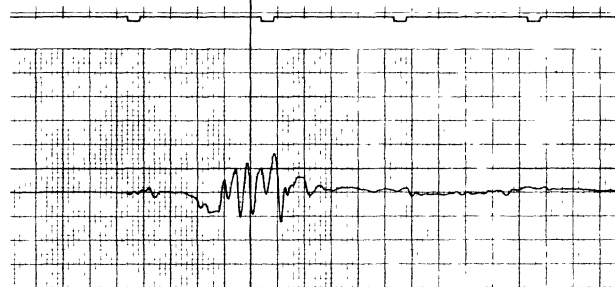
Sled Pulse
10 g's/division
Filtered
Class 60



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



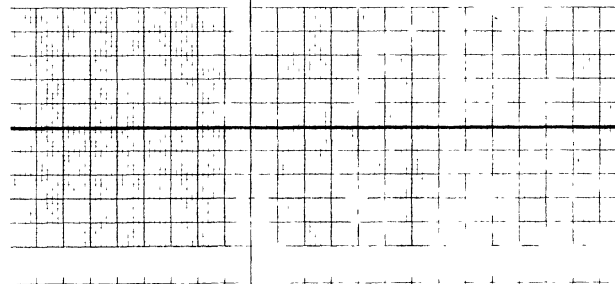
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



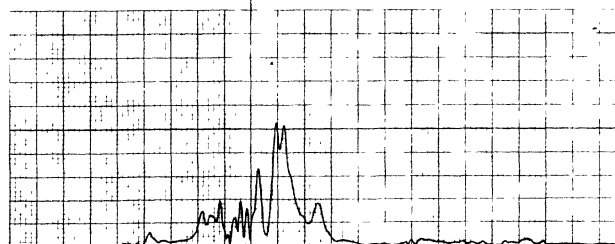
BRUSH INSTRUMENTS DIVISION, C

CLEVELAND OHIO PRINTED I

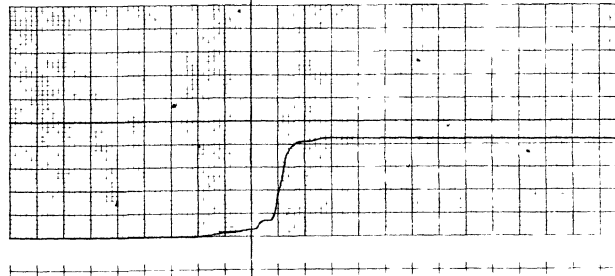
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

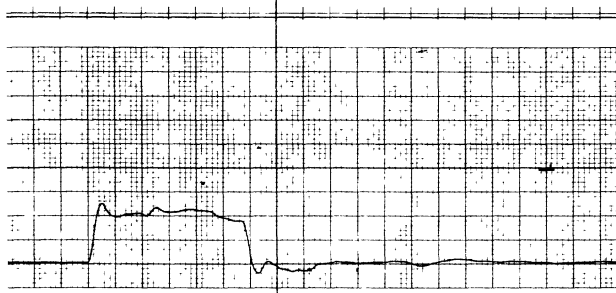


SUMMARY DATA: CHEST ACCELERATIONS

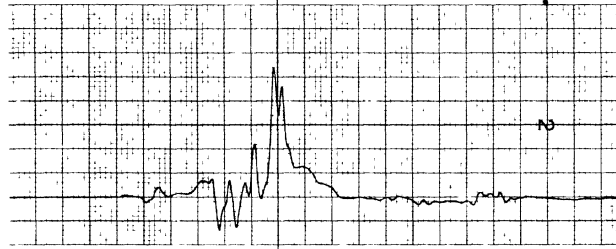
Test Number A-671
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.2 miles/hr

Test Type Dash/Windshield
Impact

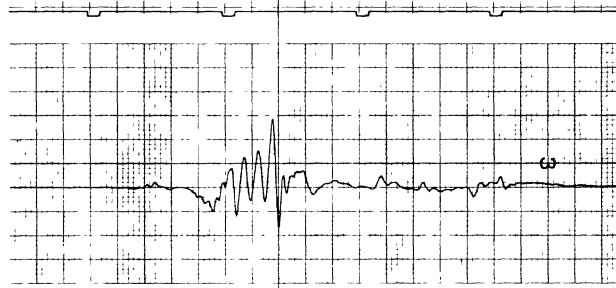
Sled Pulse
10 g's/division
Filtered
Class 60



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



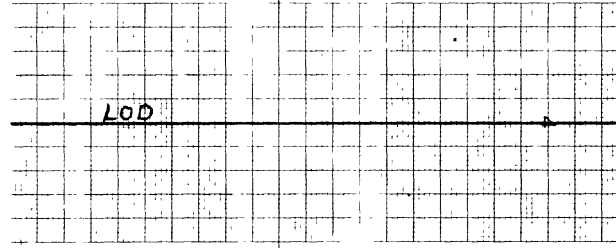
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



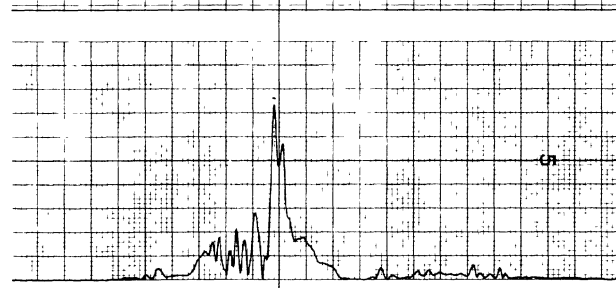
DIVISION, GOULD INC

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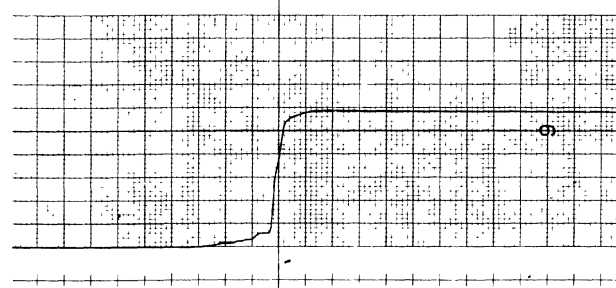
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

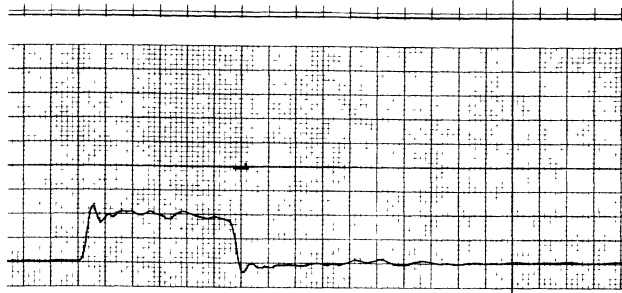


SUMMARY DATA CHEST ACCELERATIONS

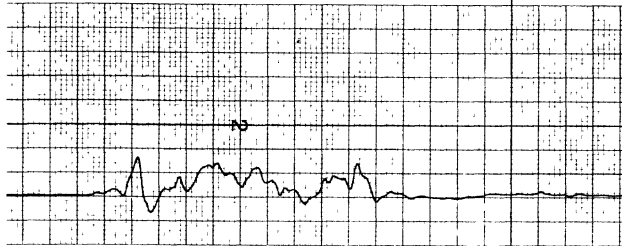
Test Number A-678
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.0 miles/hr

Test Type Steering Wheel
Impacts

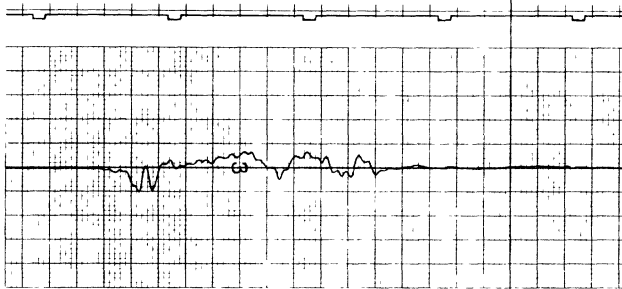
Sled Pulse
10 g's/division
Filtered
Class 60



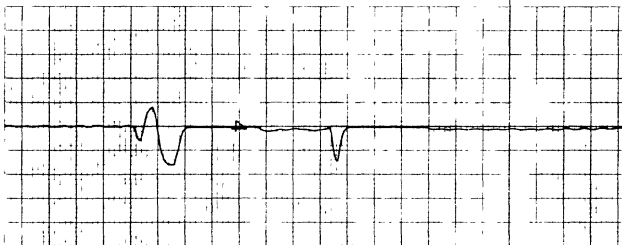
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



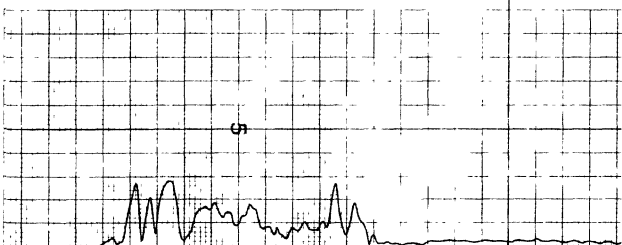
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



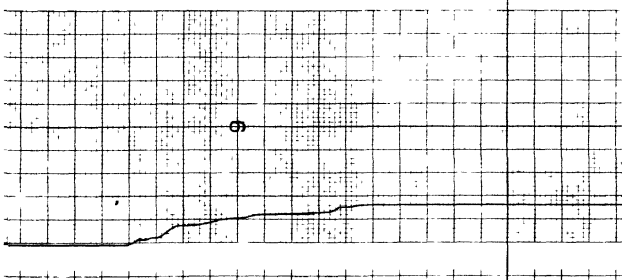
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

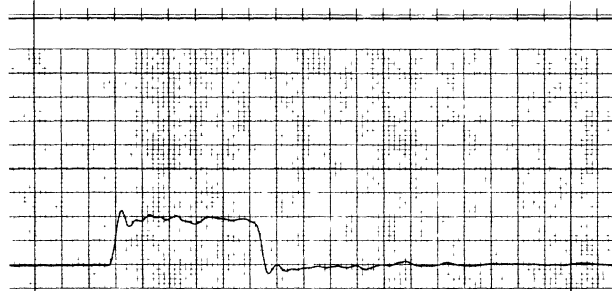


SUMMARY DATA CHEST ACCELERATIONS

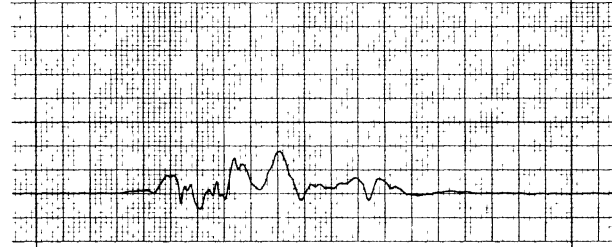
Test Number A-680
Dummy HSRI Repeatable Pete (2)
Sled Velocity 29.9 miles/hr

Test Type Steering Wheel
Impact

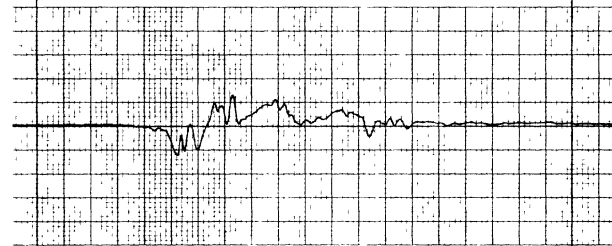
Sled Pulse
10 g's/division
Filtered
Class 60



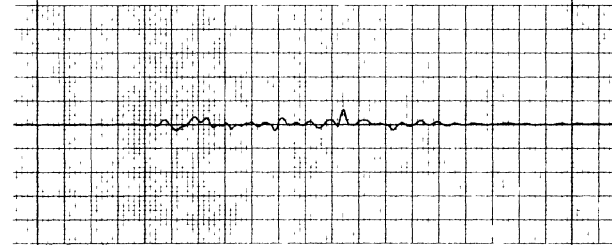
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



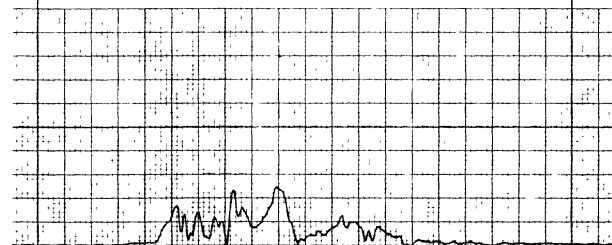
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



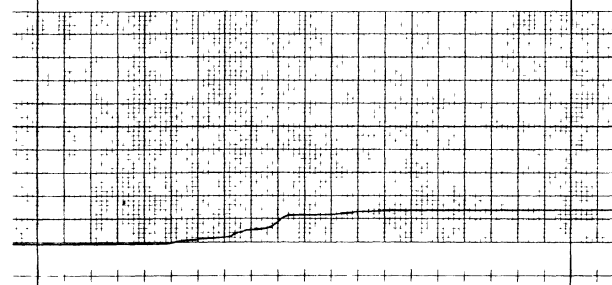
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

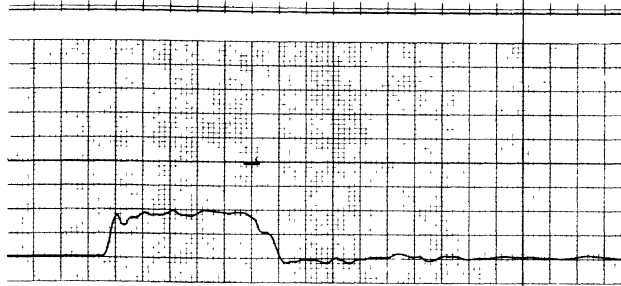


SUMMARY DATA CHEST ACCELERATIONS

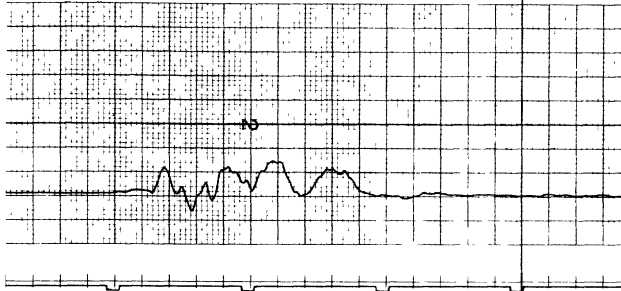
Test Number A-681
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

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



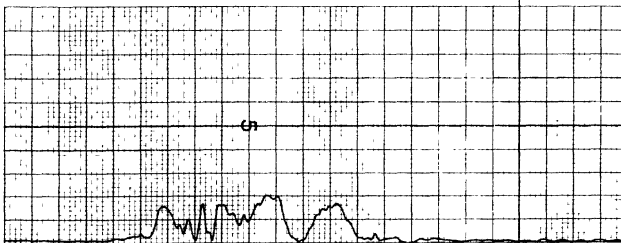
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



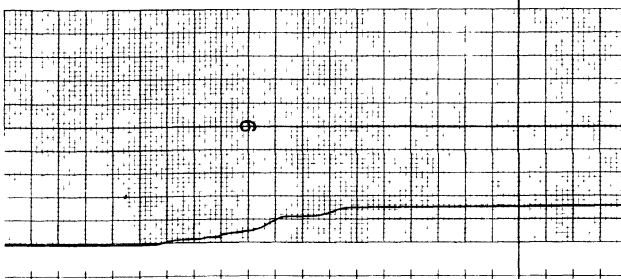
Left-Right:
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 $g^{2.5}$ sec/divi-
sion

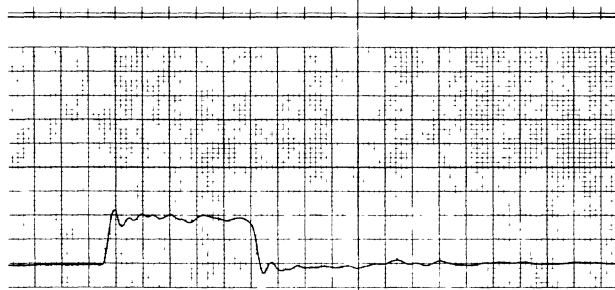


SUMMARY DATA CHEST ACCELERATIONS

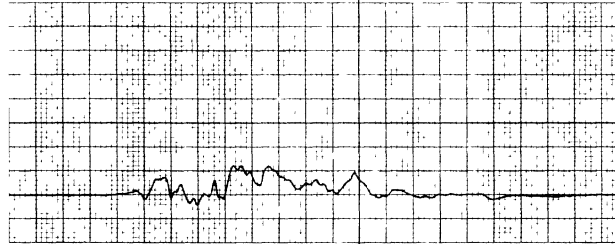
Test Number A-682
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Steering Wheel
Impact

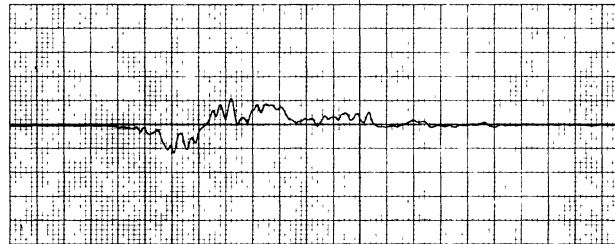
Sled Pulse
10 g's/division
Filtered
Class 60



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



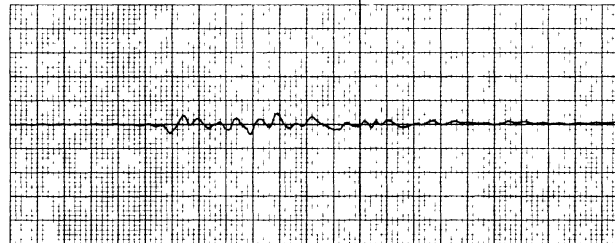
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



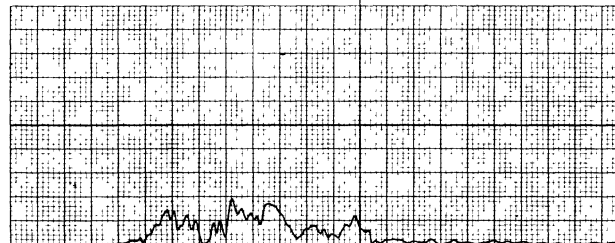
INSTRUMENTS DIVISION, GOULD INC

OHIO, OHIO PRINTED IN U.S.A.

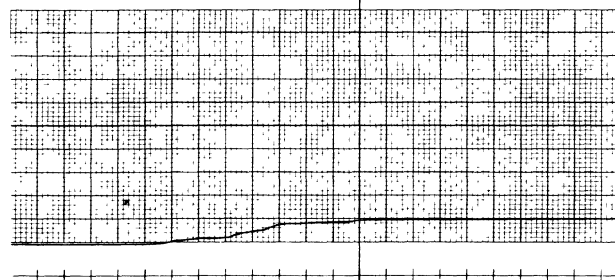
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

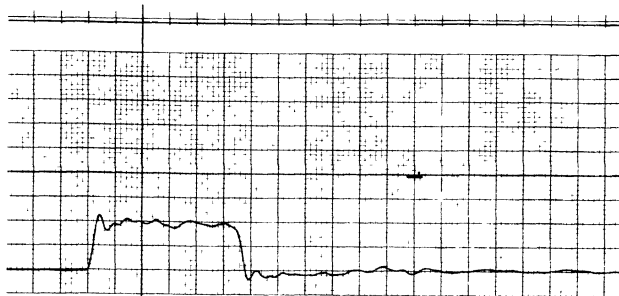


SUMMARY DATA CHEST ACCELERATIONS

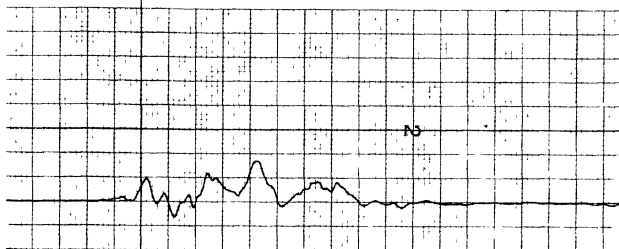
Test Number A-683
Dummy HSRI Repeatable Pete (2)
Sled Velocity 30.2 miles/hr

Test Type Steering Wheel
Impact

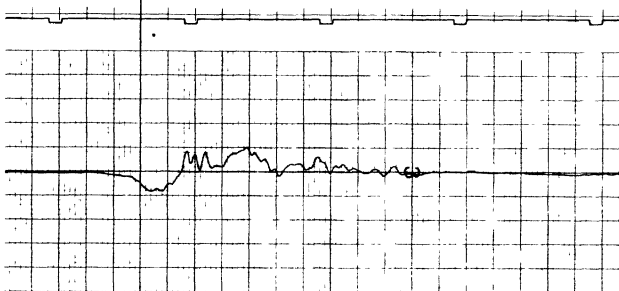
Sled Pulse
10 g's/division
Filtered
Class 60



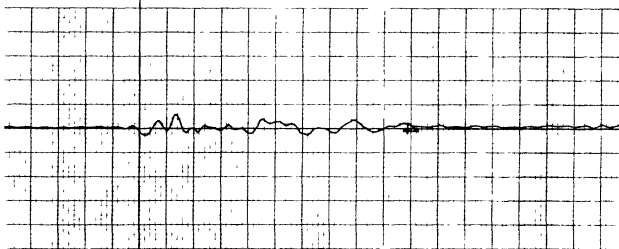
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



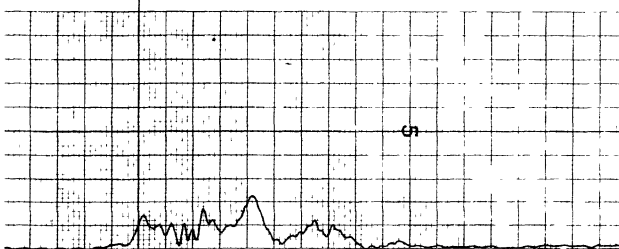
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



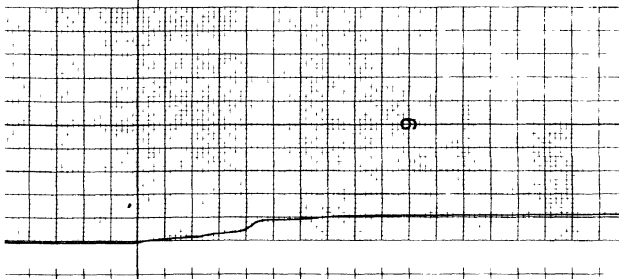
Left-Right:
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

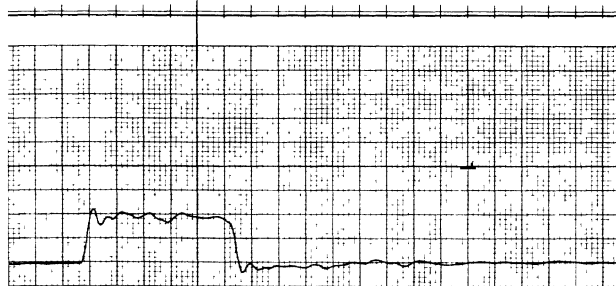


SUMMARY DATA CHEST ACCELERATIONS

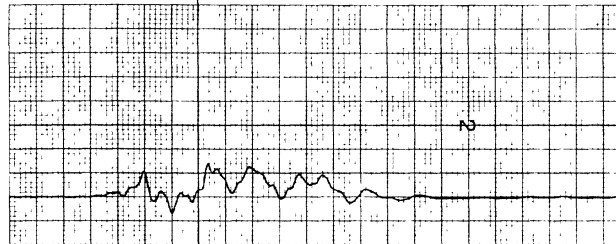
Test Number A-684
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.3 miles/hr

Test Type Steering Wheel
Impact

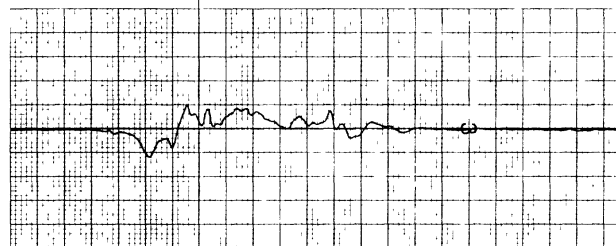
Sled Pulse
10 g's/division
Filtered
Class 60



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



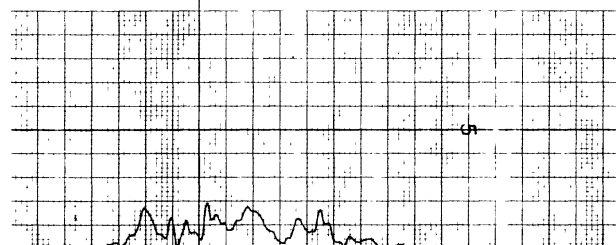
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



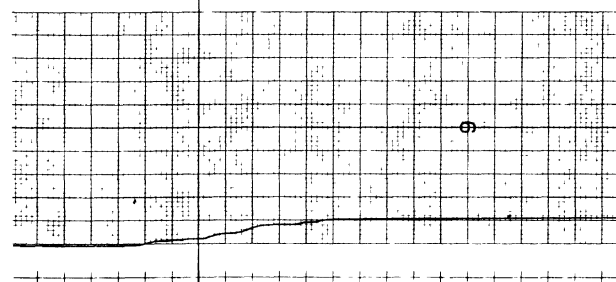
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion



SUMMARY DATA CHEST ACCELERATIONS

Test Number A-685

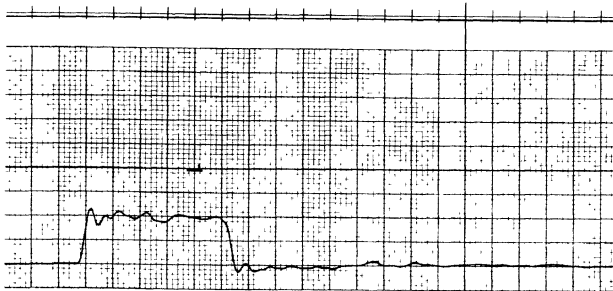
Test type Steering Wheel

Dummy HSRI Repeatable Pote (1)

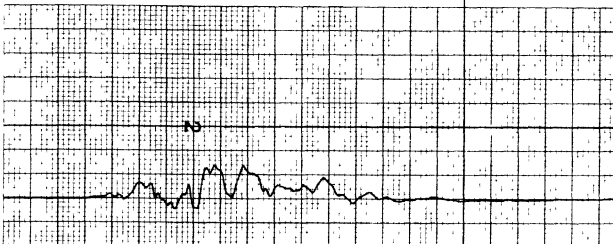
Impact

Sled Velocity 30.0 miles/hr

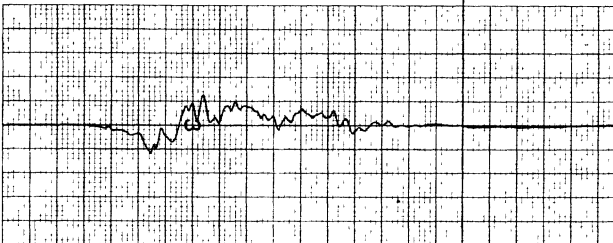
Sled Pulse
10 g's/division
Filtered
Class 60



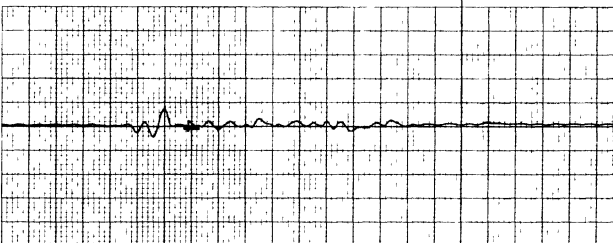
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



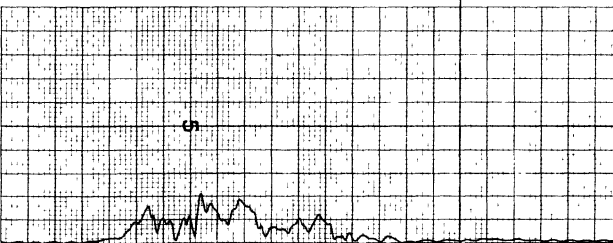
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



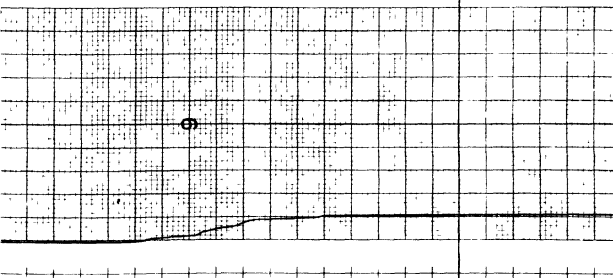
Left-Right:
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion



BRUSH IN

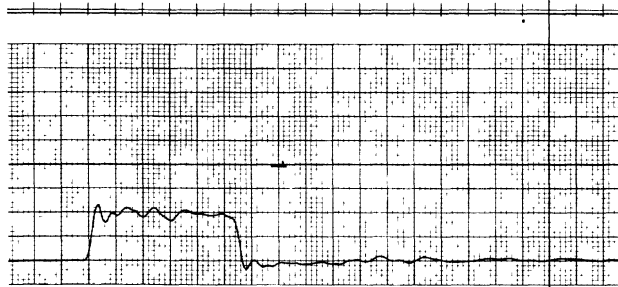
CLEVI

SUMMARY DATA CHEST ACCELERATIONS

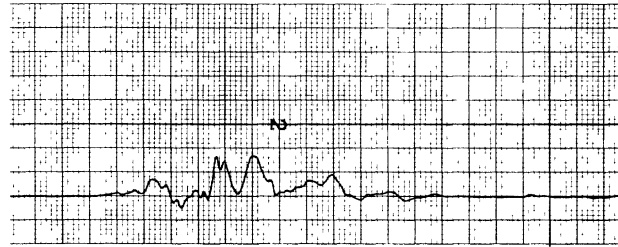
Test Number A-686
Dummy HSRI Repeatable Pote (1)
Sled Velocity 30.0 miles/hr

Test Type Steering Wheel
Impact

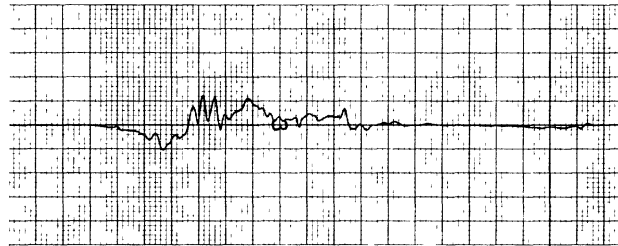
Sled Pulse
10 g's/division
Filtered
Class 60



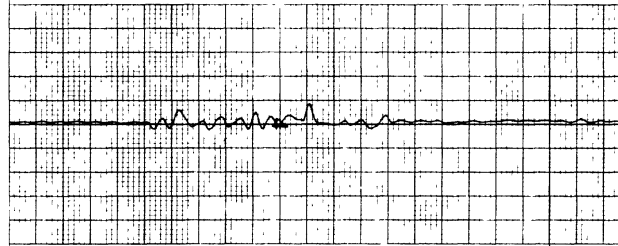
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



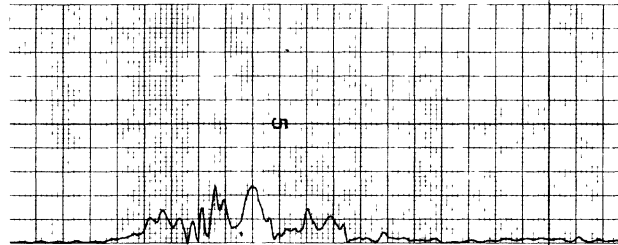
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



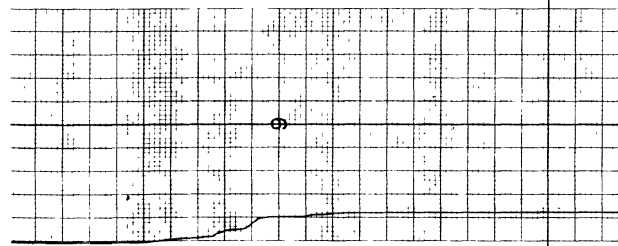
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

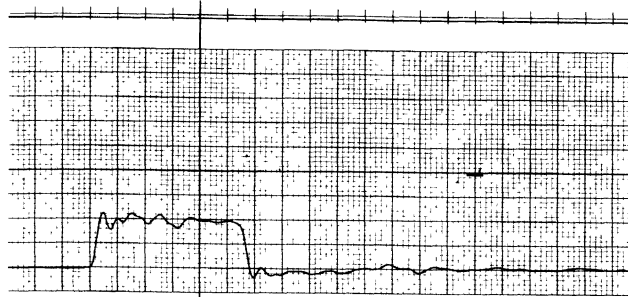


SUMMARY DATA CHEST ACCELERATIONS

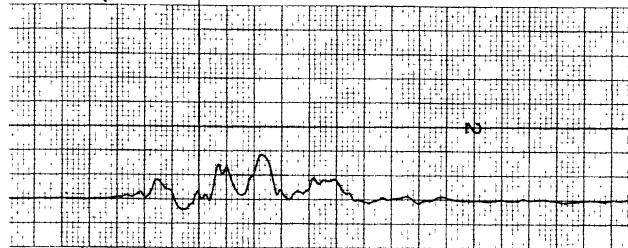
Test Number A-687
Dummy HSRI Repeatable Pete (1)
Sled Velocity 30.1 miles/hr

Test Type Steering Wheel
Impact

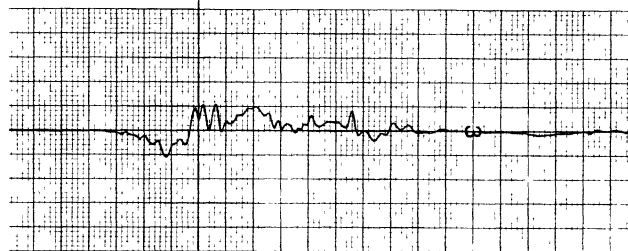
Sled Pulse
10 g's/division
Filtered
Class 60



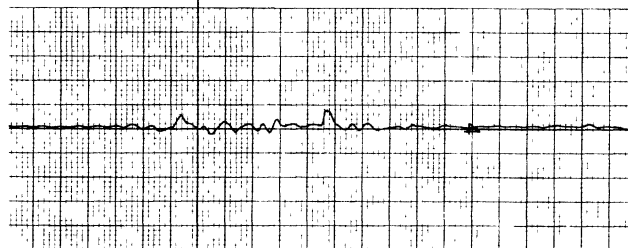
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



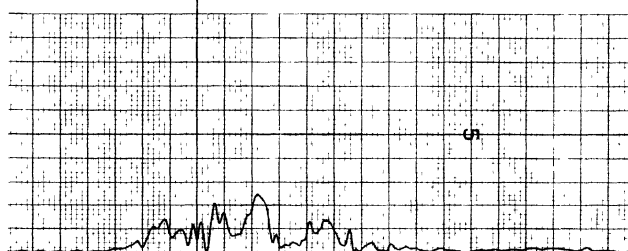
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



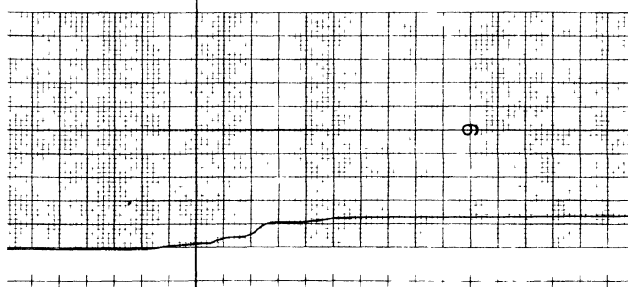
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

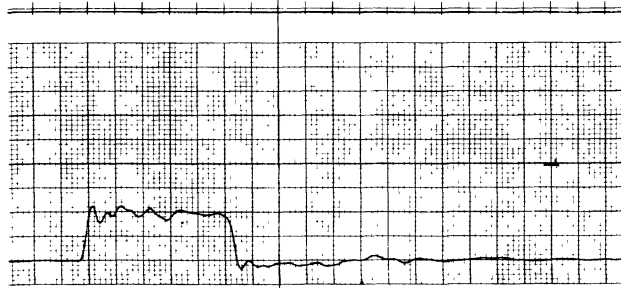


SUMMARY DATA CHEST ACCELERATIONS

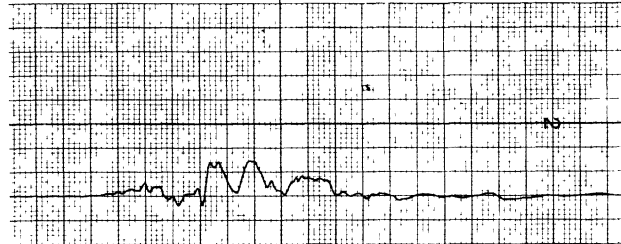
Test Number A-688
Dummy HSRI Repeatable Pote (1)
Sled Velocity 30.1 miles/hr

Test Type Steering Wheel
Impact

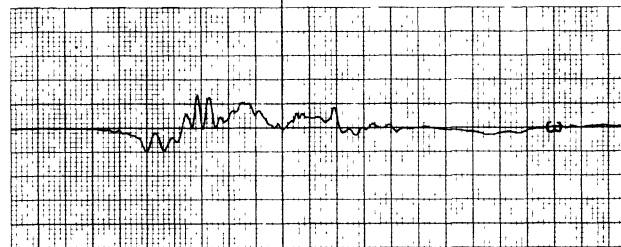
Sled Pulse
10 g's/division
Filtered
Class 60



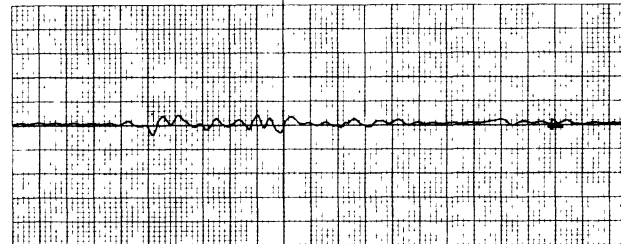
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



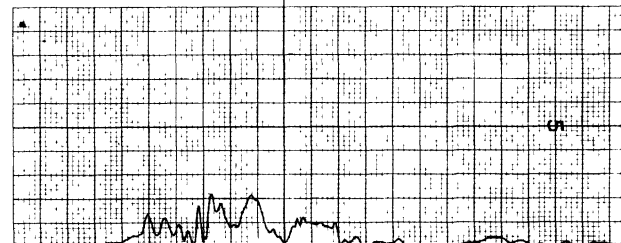
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



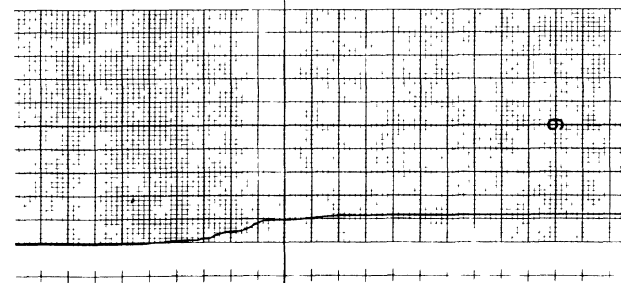
Left-Right
Chest Acceleration
25 g's/division
Filtered
Class 600



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



Severity Index
200 g^{2.5}sec/divi-
sion

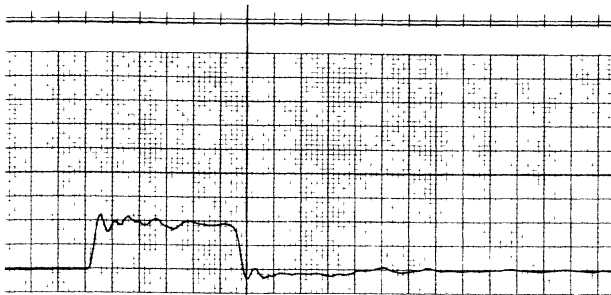


SUMMARY DATA CHEST ACCELERATIONS

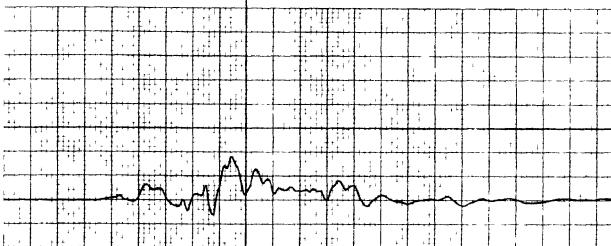
Test Number A-689
Dummy HSRI-Repeatable Peta (1)
Sled Velocity 30.3 miles/hr

Test Type Steering Wheel
Impact

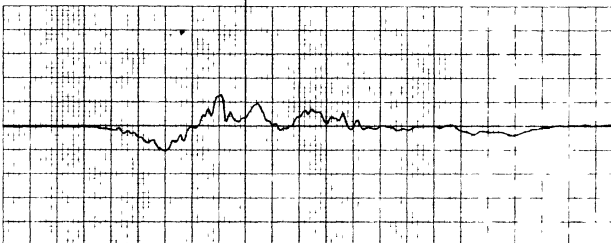
Sled Pulse
10 g's/division
Filtered
Class 60



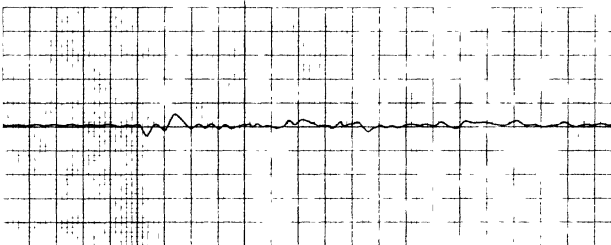
Anterior-Posterior
Chest Acceleration
25 g's/division
Filtered
Class 600



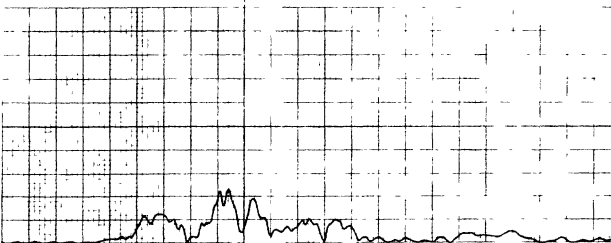
Superior-Inferior
Chest Acceleration
25 g's/division
Filtered
Class 600



Left-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

