§ 572.200

dorsiflexion and as close together as possible.

- (4) Orient the arm downward to the lowest detent such that the longitudinal centerline of the arm is parallel to the inferior-superior orientation of the spine box.
- (5) The midsagittal plane of the dummy is vertical, and superior surface of the lower half neck assembly load cell replacement (180–3815) in the lateral direction is within ±1 degree relative to the horizontal as shown in Figure V9–A.
- (6) While maintaining the dummy's position as specified in paragraphs (b)(3), (4) and (5) of this section, the top of the shoulder rib mount (180–3352) orientation in the fore-and-aft direction is within ± 1.0 degree relative to horizontal as shown in Figure V9–B in Appendix A to this subpart.
- (7) The pelvis impactor is specified in 49 CFR 572.200(c).
- (8) The dummy is positioned with respect to the impactor such that the longitudinal centerline of the impact probe is in line with the longitudinal centerline of the iliac load cell access hole, and the 88.9 mm dimension of the probe's impact surface is aligned horizontally.
- (9) The impactor is guided, if needed, so that at contact with the pelvis, the longitudinal axis of the impactor is within ±1 degree of a horizontal plane and perpendicular to the midsagittal plane of the dummy.
- (10) The dummy's pelvis is impacted at the iliac location at 4.3 ± 0.1 m/s.
- (11) Allow a period of at least 120 minutes between successive tests of the same pelvis assembly.
- (c) *Performance criteria*. While the impactor is in contact with the pelvis:
- (1) Peak acceleration of the impactor is not less than 36 g and not more than 45 σ .
- (2) Peak acceleration of the pelvis is not less than 28 g and not more than 39 g;
- (3) Peak iliac force is not less than $4.10~\rm{kN}$ and not more than $5.10~\rm{kN}$.

[71 FR 75370, Dec. 14, 2006, as amended at 74 FR 29896, June 23, 2009]

§ 572.200 Instrumentation and test conditions.

- (a) The test probe for shoulder, lateral thorax, and pelvis-acetabulum impact tests is the same as that specified in 49 CFR 572.137(a) except that its impact face diameter is 120.70 ± 0.25 mm and it has a minimum mass moment of inertia of 3646 kg-cm².
- (b) The test probe for the lateral abdomen impact test is the same as that specified in 572.137(a) except that its impact face diameter is 76.20 ± 0.25 mm and it has a minimum mass moment of inertia of 3646 kg-cm².
- (c) The test probe for the pelvis-iliac impact tests is the same as that specified in 49 CFR 572.137(a) except that it has a rectangular flat impact surface 50.8×88.9 mm for a depth of at least 76 mm and a minimum mass moment of inertia of 5000 kg-cm^2 .
- (d) Accelerometers for the head, the thoracic spine, and the pelvis conform to specifications of SA572–S4.
- (e) Rotary potentiometers for the neck-headform assembly conform to SA572–S51.
- (f) Instrumentation and sensors conform to the Recommended Practice SAE J-211 (March 1995), Instrumentation for Impact Test, unless noted otherwise
- (g) All instrumented response signal measurements shall be treated to the following specifications:
- (1) Head acceleration—digitally filtered CFC 1000:
- (2) Neck-headform assembly translation-rotation—digitally filtered CFC 60:
- (3) Neck pendulum, T1 and T12 thoracic spine and pelvis accelerations—digitally filtered CFC 180;
- (4) Neck forces (for the purpose of occipital condyle calculation) and moments—digitally filtered at CFC 600;
- (5) Pelvis, shoulder, thorax and abdomen impactor accelerations—digitally filtered CFC 180;
- (6) Acetabulum and iliac wings forces—digitally filtered at CFC 600;
- (7) Shoulder, thorax, and abdomen deflection—digitally filtered CFC 600.
- (h) Mountings for the head, thoracic spine and pelvis accelerometers shall have no resonant frequency within a range of 3 times the frequency range of the applicable channel class;

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- (i) Leg joints of the test dummy are set at the force between 1 to 2 g, which just support the limb's weight when the limbs are extended horizontally forward. The force required to move a limb segment does not exceed 2 g throughout the range of the limb motion.
- (j) Performance tests are conducted, unless specified otherwise, at any temperature from 20.6 to 22.2 degrees C. (69 to 72 degrees F.) and at any relative
- humidity from 10% to 70% after exposure of the dummy to those conditions for a period of 4 hours.
- (k) Coordinate signs for instrumentation polarity shall conform to the Sign Convention For Vehicle Crash Testing, Surface Vehicle Information Report, SAE J1733, 1994–12 (refer to §572.191(a)(5)).
- [71 FR 75370, Dec. 14, 2006, as amended at 74 FR 29896, June 23, 2009]

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APPENDIX A TO SUBPART V OF PART 572—FIGURES

FIGURE V1 NECK ATTACHED TO HEADFORM ASSEMBLY

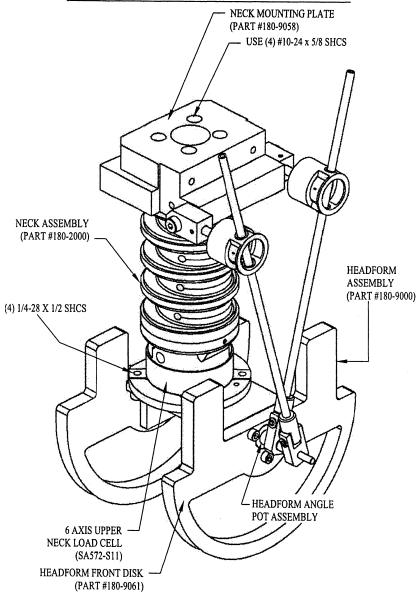


FIGURE V2-A NECK/HEADFORM ATTACHED TO PENDULUM FOR LEFT-SIDE IMPACT

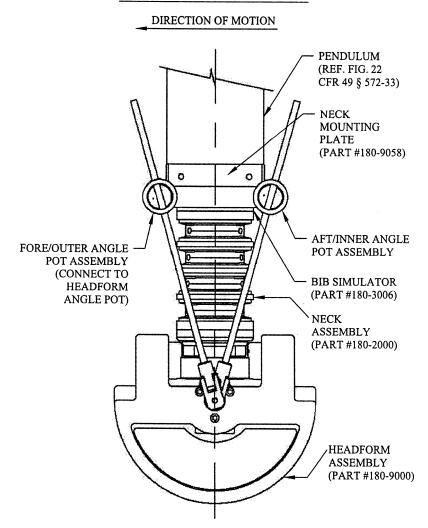


FIGURE V2-B NECK/HEADFORM ATTACHED TO PENDULUM FOR RIGHT-SIDE IMPACT

DIRECTION OF MOTION

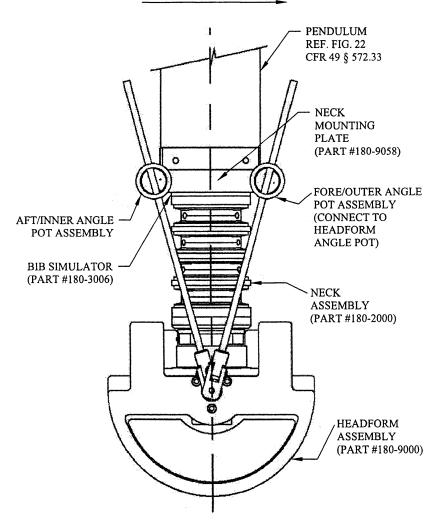
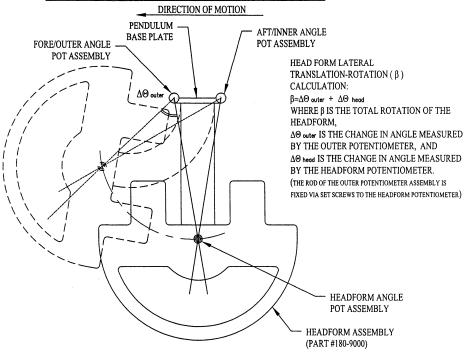


FIGURE V2-C ANGLE MEASUREMENT WITH HEADFORM SET-UP



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FIGURE V3 CERTIFICATION BENCH

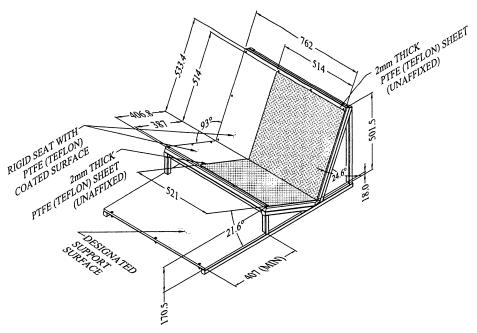
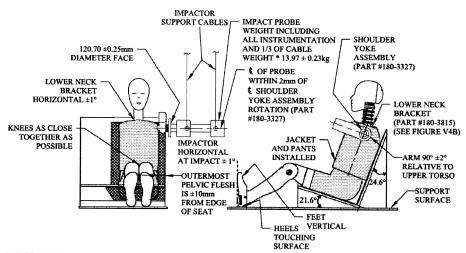


FIGURE V4-A SHOULDER IMPACT



* 1/3 OF CABLE WEIGHT NOT TO EXCEED 5% OF THE TOTAL IMPACTOR PROBE WEIGHT

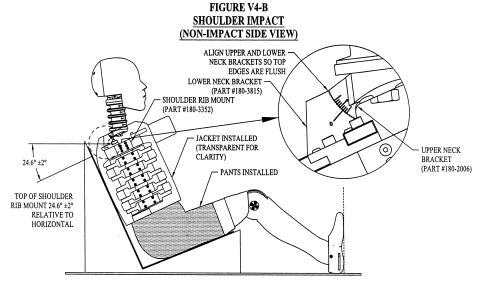
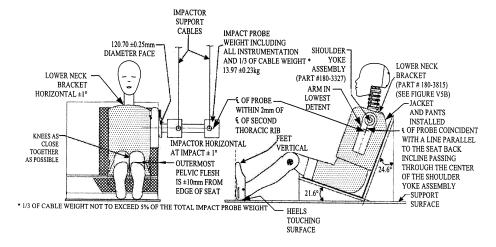
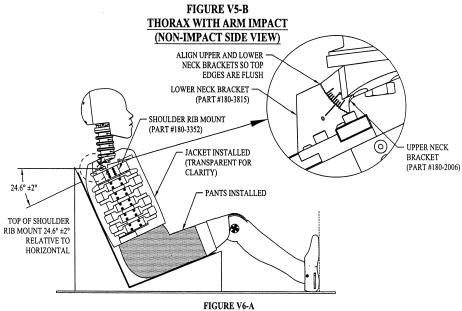


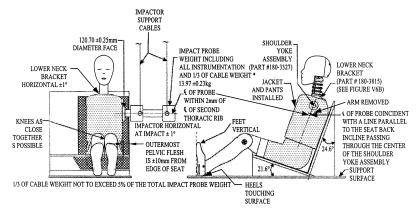
FIGURE V5-A THORAX WITH ARM IMPACT

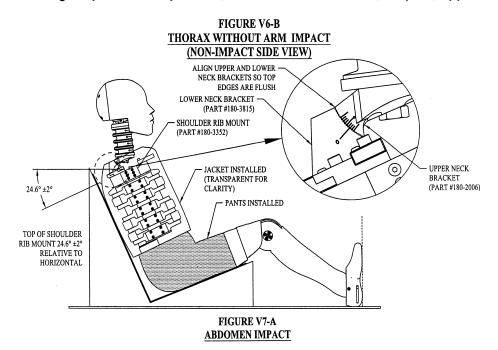


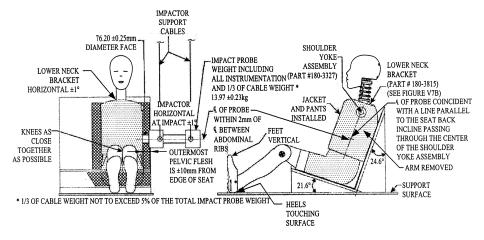
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THORAX WITHOUT ARM IMPACT







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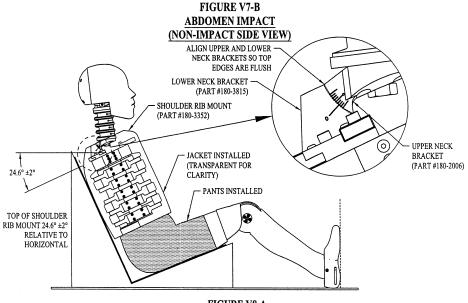
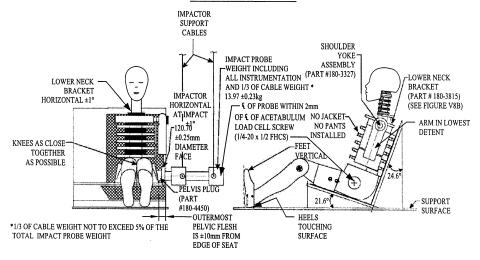
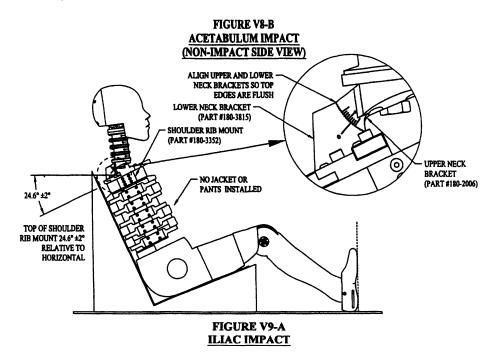
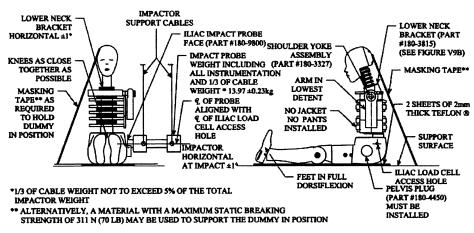
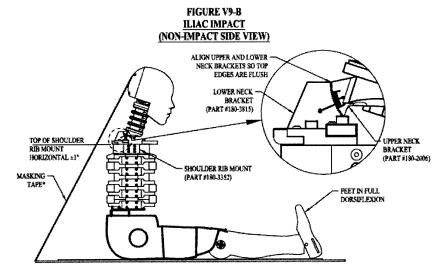


FIGURE V8-A ACETABULUM IMPACT









* ALTERNATIVELY, A MATERIAL WITH A MAXIMUM STATIC BREAKING STRENGTH OF 311 N (70 LB) MAY BE USED TO SUPPORT THE DUMMY IN POSITION

[71 FR 75370, Dec. 14, 2006, as amended at 74 FR 29896, June 23, 2009]

PART 573—DEFECT AND NON-COMPLIANCE RESPONSIBILITY AND REPORTS

Sec.

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573.4 Definitions.

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573.6 Defect and noncompliance information report.

573.7 Quarterly reports.

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573.12 Prohibition on sale or lease of new and used defective and noncompliant motor vehicle equipment.

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573.14 Accelerated remedy program.

AUTHORITY: 49 U.S.C. 30102, 30103, 30116–30121, 30166; delegation of authority at 49 CFR 1.50 and 49 CFR 501.8.

Source: 43 FR 60169, Dec. 26, 1978, unless otherwise noted.

§ 573.1 Scope.

This part:

- (a) Sets forth the responsibilities under 49 U.S.C. 30116–30121 of manufacturers of motor vehicles and motor vehicle equipment with respect to safety-related defects and noncompliances with Federal motor vehicle safety standards in motor vehicles and items of motor vehicle equipment; and
 - (b) Specifies requirements for-
- (1) Manufacturers to maintain lists of owners, purchasers, dealers, and distributors notified of defective and noncomplying motor vehicles and motor vehicle original and replacement equipment.
- (2) Reporting to the National Highway Traffic Safety Administration (NHTSA) defects in motor vehicles and motor vehicle equipment and noncompliances with motor vehicle safety standards prescribed under part 571 of this chapter, and