



HIP JOINT TEST FIXTURE AND TORSO ASSEMBLY (REF)
FRONT VIEW

Fig 27

[51 FR 26701, July 25, 1986, as amended at 53 FR 8765, Mar. 17, 1988; 61 FR 67955, Dec. 26, 1997; 63 FR 5748, Feb. 4, 1998]

§ 572.36 Test conditions and instrumentation.

(a) The test probe used for thoracic impact tests is a 6 inch diameter cylinder that weighs 51.5 pounds including instrumentation. Its impacting end has a flat right angle face that is rigid and has an edge radius of 0.5 inches. The test probe has an accelerometer mounted on the end opposite from impact with its sensitive axis colinear to

the longitudinal centerline of the cylinder.

(b) Test probe used for the knee impact tests is a 3 inch diameter cylinder that weighs 11 pounds including instrumentation. Its impacting end has a flat right angle face that is rigid and has an edge radius of 0.02 inches. The test probe has an accelerometer mounted on the end opposite from impact with its sensitive axis colinear to

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the longitudinal centerline of the cylinder.

(c) Head accelerometers shall have dimensions and response characteristics specified in drawing 78051-136, revision A, or its equivalent, and the location of their seismic mass as mounted in the skull are shown in drawing C-1709, revision D.

(d) The six axis neck transducer shall have the dimensions, response characteristics, and sensitive axis locations specified in drawing C-1709, revision D and be mounted for testing as shown in Figures 20 and 21 of § 572.33, and in the assembly drawing 78051-218, revision T.

(e) The chest accelerometers shall have the dimensions, response characteristics, and sensitive mass locations specified in drawing 78051-136, revision A or its equivalent and be mounted as shown with adaptor assembly 78051-116, revision D for assembly into 78051-218, revision T.

(f) The chest deflection transducer shall have the dimensions and response characteristics specified in drawing 78051-342, revision A or its equivalent and be mounted in the chest deflection transducer assembly 78051-317, revision A for assembly into 78051-218, revision T.

(g) The thorax and knee impactor accelerometers shall have the dimensions and characteristics of Endevco Model 7231c or equivalent. Each accelerometer shall be mounted with its sensitive axis colinear with the pendulum's longitudinal centerline.

(h) The femur load cell shall have the dimensions, response characteristics, and sensitive axis locations specified in drawing 78051-265 or its equivalent and be mounted in assemblies 78051-46 and -47 for assembly into 78051-218, revision T.

(i) The outputs of acceleration and force-sensing devices installed in the dummy and in the test apparatus specified by this part are recorded in individual data channels that conform to requirements of Society of Automotive Engineers (SAE) Recommended Practice J211 Mar95, Instrumentation for Impact Tests, Parts 1 and 2. SAE J211 Mar95 sets forth the following channel classes:

- (1) Head acceleration—Class 1000
- (2) Neck forces—Class 1000

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(3) Neck moments—Class 600

(4) Neck pendulum acceleration—Class 60

(5) Thorax and thorax pendulum acceleration—Class 180

(6) Thorax deflection—Class 180

(7) Knee pendulum acceleration—Class 600

(8) Femur force—Class 600

(j) Coordinate signs for instrumentation polarity conform to the sign convention shown in the document incorporated by § 572.31(a)(5).

(k) The mountings for sensing devices shall have no resonance frequency within range of 3 times the frequency range of the applicable channel class.

(l) Limb joints are set at 1g, barely restraining the weight of the limb when it is extended horizontally. The force required to move a limb segment shall not exceed 2g throughout the range of limb motion.

(m) Performance tests of the same component, segment, assembly, or fully assembled dummy are separated in time by period of not less than 30 minutes unless otherwise noted.

(n) Surfaces of dummy components are not painted except as specified in this part or in drawings subtended by this part.

[51 FR 26701, July 25, 1986, as amended at 53 FR 8765, Mar. 17, 1988; 62 FR 27518, May 20, 1997; 63 FR 45965, Aug. 28, 1998]

Subpart F—Side Impact Dummy 50th Percentile Male

SOURCE: 55 FR 45766, Oct. 30, 1990, unless otherwise noted.

§ 572.40 Incorporated materials.

(a) The drawings, specifications, manual, and computer program referred to in this regulation that are not set forth in full are hereby incorporated in this part by reference. These materials are thereby made part of this regulation. The Director of the Federal Register has approved the materials incorporated by reference. For materials subject to change, only the specific version approved by the Director of the Federal Register and specified in the regulation are incorporated. A notice of any change will be published in the FEDERAL REGISTER. As a convenience