

spine box. Apply the force at any torso deflection rate between 0.5 and 1.5 degrees per second up to 40 degrees of flexion but no further; maintain 40 degrees of flexion for 10 seconds, and record the highest applied force during that time. Release all force as rapidly as possible and measure the return angle three minutes after release.

**§ 572.86 Test conditions and dummy adjustment.**

(a) With the complete torso on its back lying on a horizontal surface and the neck assembly mounted and shoulders on the edge of the surface, adjust the neck such that the head bolt is lowered  $0.40 \pm 0.05$  inches ( $10 \pm 1$  mm) after a vertically applied load of 11.25 pounds (50 N) applied to the head bolt is released.

(b) With the complete torso on its back with the adjusted neck assembly as specified in § 572.66(a), and lying on a horizontal surface with the shoulders on the edge of the surface, mount the head and tighten the head bolt and nut firmly, with the head in horizontal position. Adjust the head joint at the force between 1–2g, which just supports the head's weight.

(c) Using the procedures described below, limb joints are set at the force between 1–2g, which just supports the limbs' weight when the limbs are extended horizontally forward:

(1) With the complete torso lying with its front down on a horizontal surface, with the hip joint just over the edge of the surface, mount the upper leg and tighten hip joint nut firmly. Adjust the hip joint by releasing the hip joint nut until the upper leg just starts moving.

(2) With the complete torso and upper leg lying with its front up on a horizontal surface, with the knee joint just over the edge of the surface, mount the lower leg and tighten knee joint nut firmly. Adjust the knee joint by releasing the knee joint nut until the lower leg just starts moving.

(3) With the torso in an upright position, mount the upper arm and tighten firmly the adjustment bolts for the shoulder joint with the upper arm placed in a horizontal position. Adjust the shoulder joint by releasing the

shoulder joint nut until the upper arm just starts moving.

(4) With the complete torso in an upright position and upper arm in a vertical position, mount the forearm in a horizontal position and tighten the elbow hinge bolt and nut firmly. Adjust the elbow joint nut until the forearm just starts moving.

(d) With the torso assembled in an upright position, the adjustment nut for the lumbar vertebrae is tightened until the spring is compressed to  $\frac{2}{3}$  of its unloaded length.

(e) Performance tests are conducted at any temperature from 66 to 78 degrees F and at any relative humidity from 10 percent to 70 percent after exposure of the dummy to these conditions for a period of not less than four hours.

(f) Performance tests of the same component, segment, assembly or fully assembled dummy are separated in time by a period of not less than 20 minutes unless otherwise specified.

(g) Surfaces of the dummy components are not painted except as specified in the part or in drawings incorporated by this part.

**Subpart K—Newborn Infant**

SOURCE: 58 FR 3232, Jan. 8, 1993, unless otherwise noted.

**§ 572.90 Incorporation by reference.**

(a) The drawings and specifications referred to in § 572.91(a) are hereby incorporated in subpart K by reference. These materials are thereby made part of this regulation. The Director of the Federal Register approved that materials incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the materials may be inspected at NHTSA's Docket Section, 400 Seventh Street, SW., room 5109, Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(b) The incorporated material is available as follows:

(1) Drawing numbers 126-0000 through 126-0015 (sheets 1 through 3), 126-0017 through 126-0027, and a parts list entitled "Parts List for CAMI Newborn Dummy," are available from Reprographic Technologies, 1111 14th

## § 572.91

Street, NW., Washington, DC 20005. (202) 628-6667.

(2) A construction manual entitled, "Construction of the Newborn Infant Dummy" (July 1992) is available from Reprographic Technologies at the address in paragraph (b)(1) of this section.

### § 572.91 General description.

(a) The representative newborn infant dummy consists of a drawings and specifications package that contains the following materials:

(1) Drawing numbers 126-0000 through 126-0015 (sheets 1 through 3), 126-0017 through 126-0027, and a parts list entitled "Parts List for CAMI Newborn Dummy"; and,

(2) A construction manual entitled, "Construction of the Newborn Infant Dummy" (July 1992).

(b) The structural properties of the dummy are such that the dummy conforms to this part in every respect both before and after being used in dynamic tests specified in Standard No. 213 of this chapter (§ 571.213).

## Subpart L—Free Motion Headform

SOURCE: 60 FR 43058, Aug. 18, 1995, unless otherwise noted.

### § 572.100 Incorporation by Reference.

(a) The drawings and specifications referred to in § 572.101 are hereby incorporated in subpart L by reference. These materials are thereby made part of this regulation. The Director of the Federal Register approved the materials incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the materials may be inspected at NHTSA's Docket Section, 400 Seventh Street, S.W., room 5109, Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, N.W., Washington, DC.

(b) The incorporated material is available as follows:

(1) Drawing number 92041-001, "Head Form Assembly," (November 30, 1992); drawing number 92041-002, "Skull Assembly," (November 30, 1992); drawing number 92041-003, "Skull Cap Plate Assembly," (November 30, 1992); drawing number 92041-004, "Skull Cap Plate," (November 30, 1992); drawing number 92041-005, "Threaded Pin," (November

## 49 CFR Ch. V (10-1-02 Edition)

30, 1992); drawing number 92041-006, "Hex Nut," (November 30, 1992); drawing number 92041-008, "Head Skin without Nose," (November 30, 1992, as amended March 6, 1995); drawing number 92041-009, "Six-Axis Load Cell Simulator Assembly," (November 30, 1992); drawing number 92041-011, "Head Ballast Weight," (November 30, 1992); drawing number 92041-018, "Head Form Bill of Materials," (November 30, 1992); drawing number 78051-148, "Skull-Head (cast) Hybrid III," (May 20, 1978, as amended August 17, 1978); drawing number 78051-228/78051-229, "Skin-Hybrid III," (May 20, 1978, as amended through September 24, 1979); drawing number 78051-339, "Pivot Pin-Neck Transducer," (May 20, 1978, as amended May 14, 1986); drawing number 78051-372, "Vinyl Skin Formulation Hybrid III," (May 20, 1978); and drawing number C-1797, "Neck Blank, (August 1, 1989); drawing number SA572-S4, "Accelerometer Specification," (November 30, 1992), are available from Reprographic Technologies, 1111 14th Street, N.W., Washington, DC 20005.

(2) A user's manual entitled "Free-Motion Headform User's Manual," version 2, March 1995, is available from NHTSA's Docket Section at the address in paragraph (a) of this section.

(3) SAE Recommended Practice J211, OCT 1988, "Instrumentation for Impact Tests," Class 1000, is available from The Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.

### § 572.101 General description.

(a) The free motion headform consists of the component assembly which is shown in drawings 92041-001 (incorporated by reference; see § 572.100), 92041-002 (incorporated by reference; see § 572.100), 92041-003 (incorporated by reference; see § 572.100), 92041-004 (incorporated by reference; see § 572.100), 92041-005 (incorporated by reference; see § 572.100), 92041-006 (incorporated by reference; see § 572.100), 92041-008 (incorporated by reference; see § 572.100), 92041-009 (incorporated by reference; see § 572.100), 92041-011 (incorporated by reference; see § 572.100), 78051-148 (incorporated by reference; see § 572.100), 78051-228/78051-229