§ 572.160 Incorporation by reference.

(a) The following materials are hereby incorporated into this subpart S by reference:

(1) A drawings and specifications package entitled, “Parts List and Drawings, Part 572 Subpart S, Hybrid III 6-Year-Old Child Weighted Crash Test Dummy (H–III6CW),” dated June 2009, incorporated by reference in §572.161 and consisting of:

(i) Drawing No. 167–0000, Complete Assembly, incorporated by reference in §572.161;

(ii) Drawing No. 167–2000, Upper Torso Assembly, incorporated by reference in §§572.161, 572.164, and 572.165 as part of a complete dummy assembly;

(iii) Drawing No. 167–2020, Revision A, Spine Box Weight, incorporated by reference in §§572.161, 572.164, and 572.165 as part of a complete dummy assembly;

(iv) Drawing No. 167–3000, Lower Torso Assembly, incorporated by reference in §§572.161, and 572.165 as part of a complete dummy assembly;

(v) Drawing No. 167–3010, Revision A, Lumbar Weight Base, incorporated by reference in §§572.161 and 572.165 as part of a complete dummy assembly; and


(b) The incorporated materials are available as follows:

(1) The Drawings and Specifications for the Hybrid III Six-Year-Old Weighted Child Test Dummy referred to in paragraph (a)(1) of this section are available in electronic format through the NHTSA docket center and in paper format from Leet-Melbrook, Division of New RT, 18810 Woodfield Road, Gaitersburg, MD 20879, (301) 670–0090.

(2) [Reserved]

§ 572.161 General description.

(a) The Hybrid III Six-Year-Old Weighted Child Test Dummy is defined by drawings and specifications containing the following materials:

(1) “Parts List and Drawings, Part 572 Subpart S, Hybrid III 6-Year-Old Child Weighted Crash Test Dummy (H–III6CW),” dated June 2009 (incorporated by reference, see §572.160);

(2) Head, neck, arm, and leg assemblies specified in 49 CFR 572 subpart N; and


(b) Adjacent segments are joined in a manner such that except for contacts

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TABLE A

<table>
<thead>
<tr>
<th>Component assembly</th>
<th>Drawing No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete assembly</td>
<td>167–0000</td>
</tr>
<tr>
<td>Upper torso assembly</td>
<td>167–0000</td>
</tr>
<tr>
<td>Spine box weight</td>
<td>167–2020 Rev. A</td>
</tr>
<tr>
<td>Lower torso assembly</td>
<td>167–3000</td>
</tr>
<tr>
<td>Lumbar weight base</td>
<td>167–3010 Rev. A</td>
</tr>
</tbody>
</table>

1 Head, neck, arm, and leg assemblies are as specified in 49 CFR 572 subpart N.
existing under static conditions, there is no contact between metallic elements throughout the range of motion or under simulated crash impact conditions.

(c) The structural properties of the dummy are such that the dummy must conform to Subpart S in every respect and Subpart N as applicable, before use in any test similar to those specified in Standard 208, “Occupant Crash Protection” (49 CFR 571.208), and Standard 213, “Child Restraint Systems” (49 CFR 571.213).

§ 572.163 Neck assembly and test procedure.

The neck assembly is assembled and tested as specified in 49 CFR 572.123 (Subpart N).

§ 572.164 Thorax assembly and test procedure.

(a) Thorax (upper torso) assembly. The thorax consists of the part of the torso assembly shown in drawing 167–2000 (incorporated by reference, see § 572.160).

(b) When the anterior surface of the thorax of a completely assembled dummy (drawing 167–2000) that is seated as shown in Figure S1 is impacted by a test probe conforming to 49 CFR 572.127(a) at 6.71 ±0.12 m/s (22.0 ±0.4 ft/s) according to the test procedure specified in 49 CFR 572.125(c):

(1) The maximum sternum displacement relative to the spine, measured with chest deflection transducer (specified in 49 CFR 572.124(b)(1)), must be not less than 38.0 mm (1.50 in) and not more than 46.0 mm (1.80 in). Within this specified compression corridor, the peak force, measured by the probe in accordance with 49 CFR 572.127, must be not less than 1205 N (270.9 lbf) and not more than 1435 N (322.6 lbf). The peak force after 12.5 mm (0.5 in) of sternum displacement, but before reaching the minimum required 38.0 mm (1.46 in) sternum displacement limit, must not exceed an upper limit of 1500 N.

(2) The internal hysteresis of the ribcage in each impact as determined by the plot of force vs. deflection in paragraph (b)(1) of this section must be not less than 65 percent but not more than 85 percent.

(c) Test procedure. The thorax assembly is tested as specified in 49 CFR 572.124(c).

§ 572.165 Upper and lower torso assemblies and torso flexion test procedure.


(b)(1) When the upper torso assembly of a seated dummy is subjected to a force continuously applied at the head to neck pivot pin level through a rigidly attached adaptor bracket as shown in Figure S2 according to the test procedure set out in 49 CFR 572.125(c), the lumbar spine-abdomen assembly must flex by an amount that permits the upper torso assembly to translate in angular motion until the machined surface of the instrument cavity at the back of the thoracic spine box is at 45 ±0.5 degrees relative to the transverse plane, at which time the force applied as shown in Figure S2 must be within 88.6 N ±25 N (20.0 lbf ±5.6 lbf), and

(2) Upon removal of the force, the torso assembly must return to within 9 degrees of its initial position.

(c) Test procedure. The upper and lower torso assemblies are tested as specified in 49 CFR 572.125(c), except that in paragraph (c)(5) of that section,