(xiii) Drawing No. 175–8000, Neoprene Body Suit, incorporated by reference in §§ 572.181 and 572.185; and,


(3) A procedures manual entitled “Procedures for Assembly, Disassembly and Inspection (PADI) of the EuroSID–2re 50th Percentile Adult Male Side Impact Crash Test Dummy, February 2008,” incorporated by reference in §§ 572.180(a)(2), and 572.181(a);

(4) Society of Automotive Engineers (SAE) Recommended Practice J211, Rev. Mar 95 “Instrumentation for Impact Tests—Part 1—Electronic Instrumentation”; and,


(b) 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 the Department of Transportation, Docket Operations, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, telephone (202) 366–9826, and at the National Archives and Records Administration (NARA), and in electronic format through Regulations.gov. For information on the availability and inspection of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/ibr/locations.html. For information on the availability and inspection of this material at Regulations.gov, call 1–877–377–5457, or go to: http://www.regulations.gov.

(c) The incorporated materials are available as follows:

(1) The Parts/Drawings List, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES2re) referred to in paragraphs (a)(4) and (a)(5) of this section, are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096, telephone 1–877–606–7323.

§ 572.181 General description.

(a) The ES–2re Side Impact Crash Test Dummy, 50th Percentile Adult Male, is defined by:

(1) The drawings and specifications contained in the “Parts List and Drawings, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES–2re, Alpha Version), September 2009,” (incorporated by reference, see § 572.180),

(2) The SAE materials referred to in paragraphs (a)(4) and (a)(5) of this section are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096, telephone 1–877–606–7323.

(b) 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 the Department of Transportation, Docket Operations, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, telephone (202) 366–9826, and at the National Archives and Records Administration (NARA), and in electronic format through Regulations.gov. For information on the availability and inspection of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/ibr/locations.html. For information on the availability and inspection of this material at Regulations.gov, call 1–877–377–5457, or go to: http://www.regulations.gov.

(c) The incorporated materials are available as follows:

(1) The Parts/Drawings List, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES2re) referred to in paragraph (a)(1) of this section, the Parts List and Drawings, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES–2re, Alpha Version) referred to in paragraph (a)(2) of this section, and the PADI document referred to in paragraph (a)(3) of this section, are available in electronic format through Regulations.gov and in paper format from Leet-Melbrook, Division of New RT, 18810 Woodfield Road, Gaithersburg, MD 20879, telephone (301) 670–0090.

(2) The SAE materials referred to in paragraphs (a)(4) and (a)(5) of this section are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096, telephone 1–877–606–7323.

§ 572.182 Sign convention for signal outputs.


(b) Exterior dimensions of ES-2re test dummy are shown in drawing 175–0000 sheet 3 of 6, dated February 2008, incorporated by reference, see §572.180.

(c) Weights of body segments (head, neck, upper and lower torso, arms and upper and lower segments) and the center of gravity location of the head are shown in drawing 175–0000 sheet 2 of 6, dated February 2008, incorporated by reference, see §572.180.

(d) Adjacent segments are joined in a manner such that, except for contacts existing under static conditions, there is no additional contact between metallic elements of adjacent body segments throughout the range of motion.

(e) The structural properties of the dummy are such that the dummy conforms to this Subpart in every respect before use in any test similar to those in Standard No. 214, Side Impact Protection and Standard No. 201, Occupant Protection in Interior Impact.

§ 572.183 Neck assembly.

(a) The neck assembly consists of parts shown in drawing 175–2000. For purposes of this test, the neck is mounted within the headform assembly 175–9000 as shown in Figure U1 in appendix A to this subpart. When subjected to tests procedures specified in paragraph (b) of this section, the neck-headform assembly shall meet performance requirements specified in paragraph (c) of this section.

(b) Test procedure.

(1) Soak the neck-headform assembly in a test environment as specified in §572.189(n);

(2) Attach the neck-headform assembly to the part 572 subpart E pendulum test fixture as shown in Figure U2–A in appendix A to this subpart, so that the midsagittal plane of the neck-headform assembly is vertical and perpendicular to the plane of motion of the pendulum longitudinal centerline shown in Figure U2–A. Torque the half-spherical screws (175–2004) located at either end of the neck assembly to 88 ± 5 in-lbs using the neck compression tool (175–9500) or equivalent;

(3) Release the pendulum from a height sufficient to allow it to fall freely to achieve an impact velocity of 3.4±0.1 m/s measured at the center of the pendulum accelerometer (Figure 22 as set forth in 49 CFR 572.33) at the time the pendulum makes contact with the decelerating mechanism. The velocity-time history of the pendulum falls inside the corridor determined by the upper and lower boundaries specified in Table 1 to paragraph (a) of this section.

(4) Allow the neck to flex without the neck-headform assembly making contact with any object;

(5) Time zero is defined in §572.189(j).

<table>
<thead>
<tr>
<th>Upper boundary</th>
<th>Lower boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (ms)</td>
<td>Velocity (m/s)</td>
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