

(c)(1), effective Nov. 29, 2011. For the convenience of the user, the revised text is set forth as follows:

**§572.180 Incorporated materials.**

- (a) \* \* \*
- (1) A parts/drawing list entitled, "Parts/Drawings List, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES2re), September 2009," incorporated by reference in §572.181.
- (2) A drawings and inspection package entitled "Parts List and Drawings, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES-2re, Alpha Version), September 2009," consisting of:
- (i) Drawing No. 175-0000, ES-2re Dummy Assembly, incorporated by reference, see §§572.181, 575.182, 572.184;
- (ii) Drawing No. 175-1000, Head Assembly, incorporated by reference in §§572.181 and 572.182;
- (iii) Drawing No. 175-2000, Neck Assembly Test/Cert, incorporated by reference in §§572.181 and 572.183;
- (iv) Drawing No. 175-3000, Shoulder Assembly, incorporated by reference in §§572.181 and 572.184;
- (v) Drawing No. 175-3500, Arm Assembly, Left, incorporated by reference in §§572.181 and 572.185;
- (vi) Drawing No. 175-3800, Arm Assembly, Right, incorporated by reference in §§572.181, and 572.185;
- (vii) Drawing No. 175-4000, Thorax Assembly with Rib Extensions, incorporated by reference in §§572.181 and 572.185;
- (viii) Drawing No. 175-5000, Abdominal Assembly, incorporated by reference in §§572.181 and 572.186;
- (ix) Drawing No. 175-5500, Lumbar Spine Assembly, incorporated by reference in §§572.181 and 572.187;
- (x) Drawing No. 175-6000, Pelvis Assembly, incorporated by reference in §§572.181 and 572.188;
- (xi) Drawing No. 175-7000-1, Leg Assembly—left incorporated by reference in §572.181;
- (xii) Drawing No. 175-7000-2, Leg Assembly—right incorporated by reference in §572.181;
- (xiii) Drawing No. 175-8000, Neoprene Body Suit, incorporated by reference in §§572.181 and 572.185; and,
- (xiv) Drawing No. 175-9000, Headform Assembly, incorporated by reference in §§572.181, 572.183, 572.187;

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(c) \* \* \*

- (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 para-

graph (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.

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**§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), February 2008," incorporated by reference in §572.180, which includes the technical drawings and specifications described in Drawing 175-0000, the titles of which are listed in Table A;

TABLE A

Component assembly	Drawing number
Head Assembly .....	175-1000
Neck Assembly Test/Cert .....	175-2000
Neck Bracket Including Lifting Eyebolt .....	175-2500
Shoulder Assembly .....	175-3000
Arm Assembly-Left .....	175-3500
Arm Assembly-Right .....	175-3800
Thorax Assembly with Rib Extensions .....	175-4000
Abdominal Assembly .....	175-5000
Lumbar Spine Assembly .....	175-5500
Pelvis Assembly .....	175-6000
Leg Assembly, Left .....	175-7000-1
Leg Assembly, Right .....	175-7000-2
Neoprene Body Suit .....	175-8000

- (2) "Parts/Drawings List, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES2re), February 2008," containing 8 pages, incorporated by reference in §572.180,
- (3) A listing of available transducers-crash test sensors for the ES-2re Crash Test Dummy is shown in drawing 175-0000 sheet 4 of 6, dated February 2008, incorporated by reference in §572.180,
- (4) Procedures for Assembly, Disassembly and Inspection (PADI) of the ES-2re Side Impact Crash Test Dummy, February 2008, incorporated by reference in §572.180,
- (5) Sign convention for signal outputs reference document SAE J1733 Information Report, titled "Sign Convention for Vehicle Crash Testing" dated December 1994, incorporated by reference in §572.180.

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(b) Exterior dimensions of ES-2re test dummy are shown in drawing 175-0000 sheet 3 of 6, dated February 2008.

(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.

(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.

[71 FR 75331, Dec. 14, 2006, as amended at 73 FR 33921, June 16, 2008]

EFFECTIVE DATE NOTE: At 76 FR 31866, June 2, 2011, § 572.181 was amended revising paragraphs (a), (b), and (c), effective Nov. 29, 2011. For the convenience of the user, the added and revised text is set forth as follows:

### § 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), which includes the technical drawings and specifications described in Drawing 175-0000, the titles of which are listed in Table A;

TABLE A

Component assembly	Drawing No.
Head Assembly .....	175-1000
Neck Assembly Test/Cert .....	175-2000
Neck Bracket Including Lifting Eyebolt .....	175-2500
Shoulder Assembly .....	175-3000
Arm Assembly-Left .....	175-3500
Arm Assembly-Right .....	175-3800
Thorax Assembly with Rib Extensions .....	175-4000
Abdominal Assembly .....	175-5000
Lumbar Spine Assembly .....	175-5500
Pelvis Assembly .....	175-6000
Leg Assembly, Left .....	175-7000-1
Leg Assembly, Right .....	175-7000-2
Neoprene Body Suit .....	175-8000

(2) "Parts/Drawings List, Part 572 Subpart U, Eurosid 2 with Rib Extensions (ES2re), September 2009," containing 9 pages, incorporated by reference, see § 572.180,

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(3) A listing of available transducers-crash test sensors for the ES-2re Crash Test Dummy is shown in drawing 175-0000 sheet 4 of 6, dated February 2008, incorporated by reference, see § 572.180.

(4) Procedures for Assembly, Disassembly and Inspection (PADI) of the ES-2re Side Impact Crash Test Dummy, February 2008, incorporated by reference, see § 572.180.

(5) Sign convention for signal outputs reference document SAE J1733 Information Report, titled "Sign Convention for Vehicle Crash Testing" dated December 1994, incorporated by reference, see § 572.180.

(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.

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### § 572.182 Head assembly.

(a) The head assembly consists of the head (drawing 175-1000), including the neck upper transducer structural replacement, and a set of three (3) accelerometers in conformance with specifications in § 572.189(b) and mounted as shown in drawing (175-0000 sheet 1 of 6). When tested to the test procedure specified in paragraph (b) of this section, the head assembly shall meet performance requirements specified in paragraph (c) of this section.

(b) *Test procedure.* The head shall be tested per procedure specified in 49 CFR § 572.112(a).

(c) *Performance criteria.* (1) When the head assembly is dropped in accordance with § 572.112 (a), the measured peak resultant acceleration shall be between 125 g's and 155 g's;

(2) The resultant acceleration-time curve shall be unimodal to the extent that oscillations occurring after the main acceleration pulse shall not exceed 15% (zero to peak) of the main pulse;

(3) The fore-and-aft component of the head acceleration shall not exceed 15 g's.

### § 572.183 Neck assembly.

(a) The neck assembly consists of parts shown in drawing 175-2000. For purposes of this test, the neck is