§ 572.112 Head assembly.

(a) Test procedure. (1) Soak the head assembly in a test environment at any temperature between 18.9 and 25.6 degrees C. (66 to 78 degrees F.) and at a relative humidity between 10 percent and 70 percent for a period of at least four (4) hours prior to its application in a test.

(2) Clean the impact surface of the head skin and impact plate surface, described in paragraph (a)(4) of this section, with 1,1,1 trichloroethane or equivalent prior to the test.

(3) Suspend the head, as shown in Figure 51, so that the midsagittal plane makes an angle of 35 ± 1 degrees with the impact surface and its anterior-posterior axis is horizontal ± 1 degree.

(4) Drop the head from a height of 200 ± 0.25 mm (7.87 ± 0.01 inches), measured from the lowest point on the head, by a means that ensures a smooth, clean release into a rigidly supported flat horizontal steel plate, which is 51 ± 2 mm (2.0 ± 0.01 in.) thick and 610 ± 10 mm (24.0 ± 0.4 in.) square. The plate shall have a dry surface and shall have a microfinish of 0.2 microns (8 microinches) to 2.0 microns (80 microinches).

(5) Allow at least two (2) hours between successive tests on the same head.

(b) Performance criteria. (1) When the head assembly is dropped in accordance with § 572.112(a), the measured peak resultant acceleration shall be between 120 and 150 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 percent (zero to peak) of the main pulse. The longitudinal acceleration vector shall not exceed 15 G’s.
§ 572.113 Neck assembly.


Figure 51

HEAD DROP TEST

Plate is 51 mm x 610 mm x 610 mm (2 x 24 x 24 in.) with SURFACE FINISH 0.2 microns (8 microinches) to 2.0 microns (80 microinches). IMPACT SURFACE to be clean and dry.