

PIA TS 135

- (b) If the reserve is to be static line actuated by releasing the main canopy, the reserve static line, if used, must not fail under a straight tension test load of 300-lbf (1334.5 N) applied for not less than 3 seconds.
- (c) If the reserve ripcord is to be static lined from an aircraft the reserve ripcord/static line, must not fail under a straight tension test load of 600-lbf (2668.9 N) applied for not less than 3 seconds.
- (d) Rigid pins, if used, shall not yield under a load of 8-lbf (35.6 N) applied to the cable (or equivalent) perpendicular to the axis of the pin, for not less than 3 seconds. The pin shall be supported for 0.5 in (12.7-mm) maximum at the end farthest from the cable attachment. All 4.3.3 human factors tests shall be performed using a primary actuation device/ripcord that has passed this test.

4.3.3 HUMAN FACTORS AND ACTUATION FORCE TESTS:

An anthropometrically diverse group of individuals (consisting of a representative group of no less than 3 males and 3 females) from the intended user group shall be employed for all human factors tests in 4.3.3. All individuals shall be able to operate the subject device without any undue difficulty. Table 2 lists the required test conditions and number of tests for each particular component. Additional information for the component tests is listed below.

TESTS: Under normal design operating conditions, all devices tested under this paragraph shall result in a positive and quick operation of the device within the following load range applied to the handle:

- (a) a load applied at the handle of not less than 5 lbf (22.2 N), applied in the direction giving the lowest pull force,
- (b) a load applied at the handle of not more than 22 lbf (97.9 N), applied in the direction of normal design operation,
- (c) for chest type parachute assemblies, the maximum pull force shall be 15 lbf (66.7 N),
- (d) the primary actuation device shall be tested in accordance with Table 2,
- (e) the emergency/reserve drogue release (if used) shall be tested in accordance with Table 2.

NOTE: For these tests, the primary actuation device (ripcord or equivalent) shall be equipped with a tamper-indicating device (i.e. seal thread or equivalent) of the same type that will be required for production articles in service.

4.3.4 HUMAN FACTORS TESTS, HARNESS:

Harnesses shall demonstrate that they will perform the basic function of retaining the body at the end of the parachute suspension system in an inherently secure manner. This requirement shall be demonstrated by passing all live drop tests in Table 3.

4.3.5 ENVIRONMENTAL TESTS:

Three drops shall be made at 60 KEAS except that prior to the test the parachute assembly shall be subjected to the following preconditioning: (These tests may be combined with other tests.)

4.3.5.1 Precondition for 16 hours at not less than +200 °F (93.3 °C), stabilize to ambient and test drop.

4.3.5.2 Precondition for 16 h at not greater than -40 °F (-40 °C), stabilize to ambient and test drop.