

MIL-STD-810H  
METHOD 516.8

#### 4.6.7 Bench Handling (Procedure VI).

The intent of this test is to determine the ability of materiel to withstand the usual level of shock associated with typical bench maintenance or repair. Use this test for any materiel that may experience bench or bench-type maintenance. This test considers both the structural and functional integrity of the materiel.

##### 4.6.7.1 Test Controls - Bench Handling (Procedure VI).

Ensure the test item is a fully functional representative of the materiel. Raise the test item at one edge 100 mm (4 in.) above a solid wooden bench top, or until the chassis forms an angle of 45° with the bench top or until point of balance is reached, whichever is less. (The bench top must be at least 4.25 cm (1.675 inches) thick.) Perform a series of drops in accordance with specifications. The heights used during this test are defined by examining the typical drops that are commonly made by bench technicians and assembly line personnel.

##### 4.6.7.2 Test Tolerances - Bench Handling (Procedure VI).

Ensure the test height of drop is within 2.5 percent of the height of drop as specified in paragraph 4.6.7.1.

##### 4.6.7.3 Test Procedure - Bench Handling (Procedure VI).

- Step 1 Following an operational and physical checkout, configure the item as it would be for servicing, e.g., with the chassis and front panel assembly removed from its enclosure. If the test item operates satisfactorily, proceed to Step 2. If not, resolve the problems and repeat this Step. Position the test item as it would be for servicing. Generally, the test item will be non-operational during the test.
- Step 2 Using one edge as a pivot, lift the opposite edge of the chassis until one of the following conditions occurs (whichever occurs first).
  - a. The lifted edge of the chassis has been raised 100 mm (4 in.) above the horizontal bench top.
  - b. The chassis forms an angle of 45° with the horizontal bench top.
  - c. The lifted edge of the chassis is just below the point of perfect balance.

Let the chassis drop back freely to the horizontal bench top. Repeat using other practical edges of the same horizontal face as pivot points, for a total of four drops.
- Step 3 Repeat Step 2 with the test item resting on other faces until it has been dropped for a total of four times on each face on which the test item could be placed practically during servicing.
- Step 4 Visually inspect the test item.
- Step 5 Document the results.
- Step 6 Operate the test item in accordance with the approved test plan. See paragraph 5 for analysis of results.
- Step 7 Document the results for comparison with data obtained in Step 1, above.

#### 4.6.8 Pendulum Impact (Procedure VII).

The test item (large shipping container) may consist of a box, case, crate or other container constructed of wood, metal, or other material, or any combination of these for which ordinary box tests are not considered practical or adequate. Unless otherwise specified, large containers are those that measure more than 152cm (60 in.) on any edge or diameter, or those when loaded have gross weights in excess of 70kg (154 lbs).

##### 4.6.8.1 Test Controls - Pendulum Impact (Procedure VII).

- a. The pendulum impact tester consists of a platform suspended from a height at least 5m (16.4 ft) above the floor by four or more ropes, chains, or cables; and a bumper comprised of a flat, rigid concrete or masonry wall, or other equally unyielding flat barrier. The bumper is at least 46cm (18.1 in) high; wide enough to make full contact with the container end, and has sufficient mass to resist the impacts without displacement. The impact surface is oriented perpendicular to the line of swing of the platform. The platform is large enough to support the container or pack, and when hanging free, has its top surface approximately 23cm (9.1 in) above the floor, and its leading edge at least 8cm (3.1 in) from the surface of the bumper. The suspension