

MIL-STD-1489B

1 FEBRUARY 1980

SUPERSEDING

MIL-STD-1489A

1 MARCH 1974

MILITARY STANDARD

PERFORMANCE TESTING OF

COMMERCIALLY OWNED

HOUSEHOLD GOODS CONTAINERS



MIL-STD-1489B
1 February 1980

DEPARTMENT OF DEFENSE
Washington, DC 20301

Performance Testing of Commercially Owned Household Good Containers

MIL-STD-1489B

1. This Military Standard is mandatory for use by all Departments and Agencies of the Department of Defense.

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, Military Traffic Management Command Transportation Engineering Agency, ATTN: MTT-TRC, PO Box 6276, Newport News, Virginia 23606, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

CONTENTS

	<u>Page</u>
Paragraph 1.	SCOPE -----
1.1	General -----
1.2	Application -----
1.3	Metric equivalents -----
2.	REFERENCED DOCUMENTS -----
3.	DEFINITIONS -----
3.1	Household goods container -----
3.2	Household goods container tare weight -----
3.3	Household goods container tare density -----
4.	GENERAL REQUIREMENTS -----
4.1	Test facility -----
4.2	Calibration and accuracy of test apparatus -----
4.3	Test conditions -----
4.4	Sequence of testing -----
4.5	Test container -----
4.6	Deviations from specified test procedures -----
5.	TEST METHODS -----

TEST METHODS

Test Method 500.2	Drop Test -----
501.1	Stacking Test -----
502.1	Racking Test -----
503.1	Pendulum Impact Test -----
504.1	Watertightness Test -----
505.1	Pendulum Puncture Test -----
506.1	Condensation Resistance Test -----
507.2	Temperature Test -----

FIGURES

Figure 1.	Edge drop test -----
2.	Corner drop test -----
3.	Stacking test -----
4.	Racking test -----
5.	Pendulum impact test -----
6.	Pendulum puncture test -----

MIL-STD-1489B

	APPENDIX	<u>Page</u>
Paragraph	10. SCOPE -----	
	20. TEST REPORT SECTIONS -----	
	30. SECTION 1, IDENTIFICATION INFORMATION -----	
	40. SECTION 2, CONTAINER CONFIGURATION CHARACTERISTICS -----	
	50. SECTION 3, TEST RESULTS -----	
	60. SECTION 4, VERIFICATION -----	

1. SCOPE

1.1 General. This document establishes a quantitative method for measuring the performance characteristics of carrier-owned household goods containers. Structural and environmental tests, as well as an appendix dealing with test report format, are included herein.

1.2 Application. This document is for reference in determining the acceptability of carrier-owned containers for use in the transport of DOD-sponsored household goods shipments. The approving authority designated by the Commander, Military Traffic Management Command (MTMC), may, upon application, waive any of the specific tests listed herein if, in his judgment, sufficient data are available from other sources to determine that the container in question will meet the required performance characteristic(s).

1.3 Metric equivalents. Where appropriate, metric equivalents are used as the secondary standard, in parentheses, and conform to the Standard for Metric Practice of the American Society for Testing Materials (ASTM) E 380-76.

MIL-STD-1489B

2. REFERENCED DOCUMENTS

None.

3. DEFINITIONS

3.1 Household goods (HHG) container. Any one of the wide variety of containers used primarily for the long-distance shipment of household furnishings and related personal property.

3.2 HHG container tare weight. The weight of an empty HHG container.

3.3 HHG container tare density. The ratio of HHG container tare weight to its external volume.

MIL-STD-1489B

4. GENERAL REQUIREMENTS

4.1 Test facility. The HHG container owner shall have his container tested at an independent and unbiased testing laboratory having no financial interest in the test container or the container design.

4.1.1 The container owner shall coordinate the selection of a laboratory for container testing with the Director of Personal Property, Headquarters Military Traffic Management Command.

4.2 Calibration and accuracy of test apparatus. All instrumentation used in conducting the tests specified within this document shall:

4.2.1 Conform to laboratory standards whose calibrations are traceable to the prime standards of the US Bureau of Standards.

4.2.2 Meet the tolerance requirements specified within the individual test methods.

4.3 Test conditions. Unless otherwise specified, all measurements and tests shall be made at standard ambient conditions. Standard ambient conditions are as follows:

4.3.1 Temperature: $73^{\circ} \pm 18^{\circ}$ Fahrenheit ($23^{\circ} \pm 10^{\circ}$ Celsius).

4.3.2 Relative humidity: 50 ± 30 percent.

4.3.3 Atmospheric pressure: Local ambient.

4.4 Sequence of testing. Unless prior approval is obtained from the approving authority designated by the Commander, MTMC, the test methods shall be applied to the test container in the same sequence in which they appear in this standard.

4.5 Test container. Since the effects of tests 500 through 506 are intended to be cumulative, the same container shall be utilized in conducting all tests. If a container performs unsatisfactorily during the watertightness test (Method 504.1), it may be recaulked and retested. If its performance for the watertightness test cannot be corrected by recaulking, or if its performance is unsatisfactory during any of the other required tests, the complete test sequence (all test methods) shall be repeated with a new container.

4.6 Deviations from specified test procedures. Deviations from the test procedures specified within this document shall be allowed only when prior written approval has been obtained from the Directorate of Personal Property, Headquarters, Military Traffic Management Command.

5. TEST METHODS

Individual methods for performance testing follow.

MIL-STD-1489B

METHOD 500.2

DROP TEST

1. PURPOSE. The drop test is conducted to determine the HHG container's ability to withstand the concentrated dynamic loads to which it would be subjected if dropped during terminal handling.

2. TEST APPARATUS. The test apparatus shall consist of any convenient equipment with which the container may be handled, such as a forklift truck, a hoist, or a block and tackle. A surface of smooth, level, concrete or other equally rigid material upon which to perform the drop tests shall be available.

3. INTERNAL TEST LOAD. The test container shall be loaded with the interior packing and the actual contents for which it was designed. If use of the actual contents is not practical, a dummy load shall be substituted. The contents, or dummy load, shall be firmly restrained in the normal manner for shipment of household goods. The test load, including packing and cushioning, shall be not less than 8 pounds per cubic foot (128.1 kg/m^3) of the container's total interior volume. If a dummy load is used, it shall consist of several units that, with packing, will fill the cargo space. Also, it shall not be structurally integral with the container but will be firmly restrained and cushioned in a manner representative of household goods having an average density of not less than 8 pounds per cubic foot (128.1 kg/m^3). The actual magnitude of the internal test load shall be empirically determined within an accuracy of ± 30 pounds (13.6 kg), for incorporation into the test report.

4. TEST PROCEDURE. The test container shall be subjected to edge and corner drop tests as follows:

4.1 Edge Drop Test. One end of the test container shall be supported on a sill 6 inches (15.2 cm) high. The opposite end shall be raised to a height of 18 inches (45.7 cm) and then allowed to fall freely onto the supporting surface for a total of two drops (figure 1).

4.2 Corner Drop Test. One corner of the container base shall be supported on a block 6 inches (15.2 cm) high. A block 12 inches (30.5 cm) high shall be placed under the other corner of the same end. The opposite end of the container, at the lowest unsupported corner, shall be raised to a height of 18 inches (45.7 cm) and then allowed to fall freely onto the supporting surface. This test shall be applied once to each corner of the base, for a total of four drops (figure 2).

5. TEST MEASUREMENTS. None.

6. INSPECTION. Upon completion of each test, the edge drop test and the corner drop test, the exterior of the test container shall be inspected and any signs of structural damage shall be noted for incorporation into the test report.

7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container performance shall be deemed satisfactory if, subsequent to the testing, the container shows no signs of damage that would impair its structural integrity or jeopardize the protection and security of its contents. Inconsequential container damage, such as superficial wood chipping, minor dents, or paint chipping, shall not constitute unsatisfactory container performance.

8. TEST REPORT. See paragraph 50 of the appendix.

MIL-STD-1489B

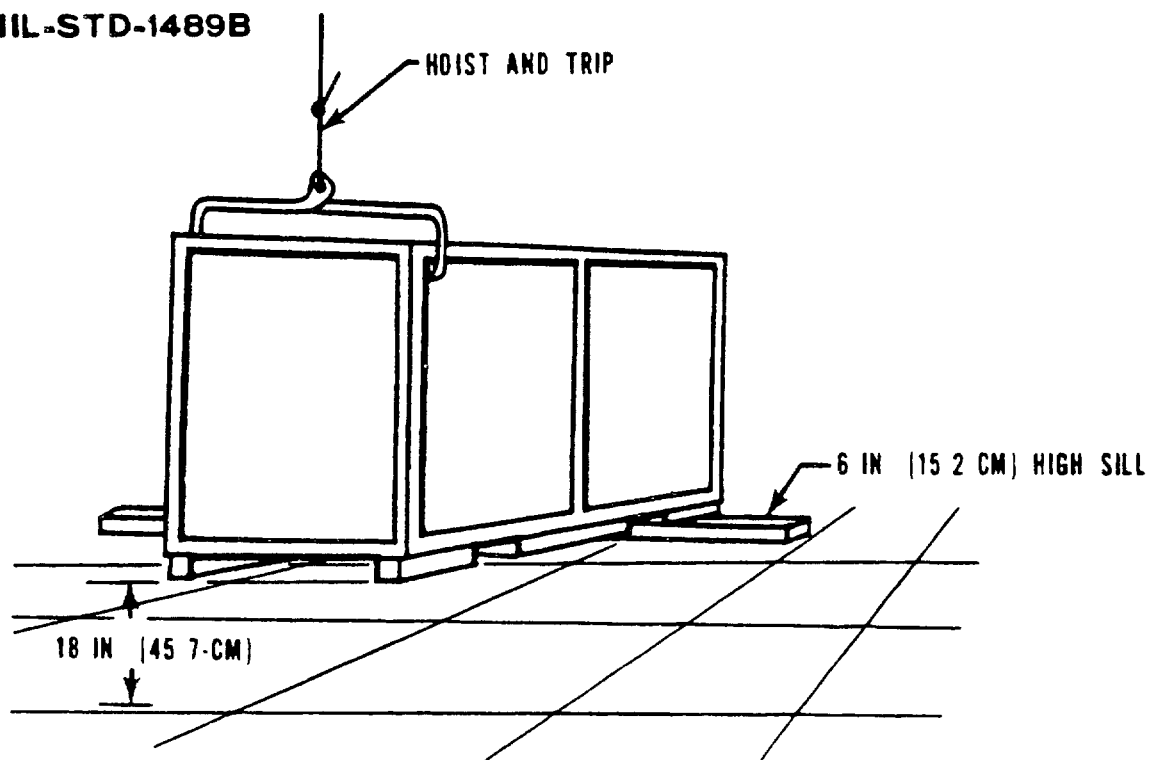


FIGURE 1 Edge drop test.

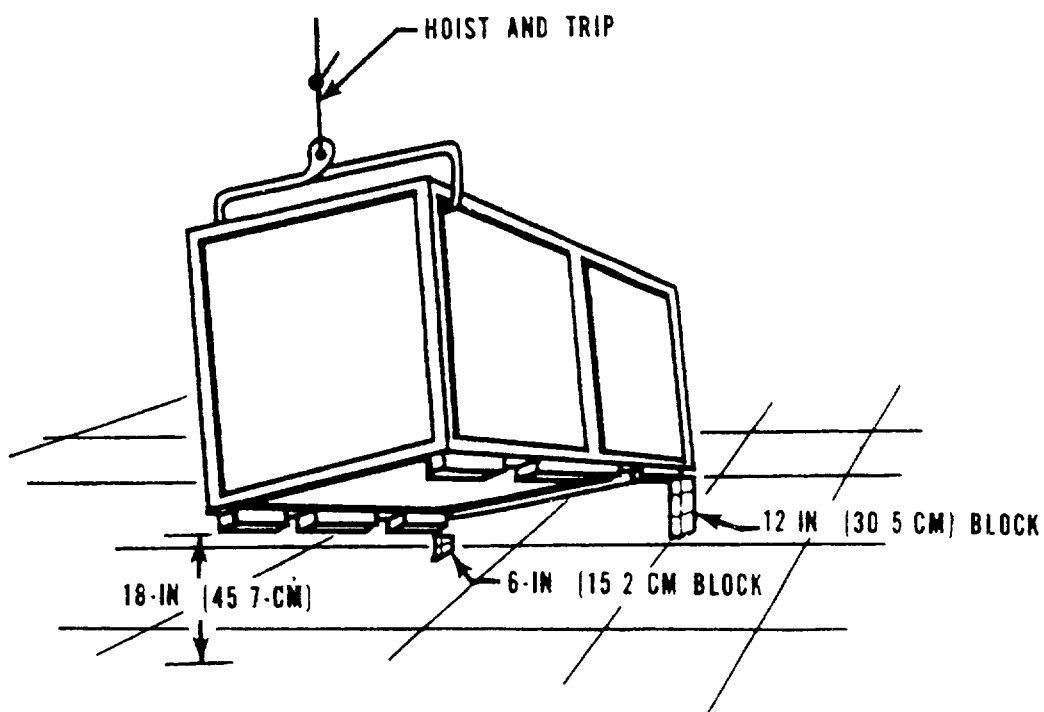


FIGURE 2 Corner drop test.

METHOD 501.1

STACKING TEST

1. PURPOSE. The stacking test is conducted to determine the HHG container's ability to withstand the compressive loads to which it would be subjected as the bottom container of a stack of similar containers.
2. TEST APPARATUS. The test apparatus shall consist of any convenient equipment with which the test load can be placed upon the container roof, such as a hoist, forklift truck, block and tackle, or testing machine. In addition, a straightedge and ruler are required.
3. INTERNAL TEST LOAD. The magnitude and volume of the internal test load shall be the same as that specified in Test Method 500.2, paragraph 3. The actual magnitude of this test load shall be empirically determined for incorporation into the test report. (This measurement shall be made within an accuracy of ± 30 pounds (± 13.6 kg).)
4. TEST PROCEDURE. The test container shall be placed upright on a level, rigid surface. An external load equal to 250 pounds times the test-container roof area in square feet ($1,221 \text{ kg/m}^2$) shall be applied to the top of the test container. This external load shall bear only on those areas of the test container roof upon which a box similar in construction to the test container would bear. A straightedge and ruler shall be used to measure the bulge of the test container at three positions on each side center panel location, as shown in figure 3. The load shall be maintained constant for at least 1 hour, after which time the superimposed load shall be gradually removed at forklift inching speed (figure 3). If a test machine is used to apply the load, it must be programed to prevent load dropoff due to material relaxation.
5. TEST MEASUREMENTS. During the stacking test, the following measurements shall be made and recorded, for incorporation into the test report:
 - 5.1 The magnitude of the superimposed load (this measurement shall be made within an accuracy of ± 100 pounds (± 45.4 kg)).
 - 5.2 The magnitude of the maximum bulging of the container side panels (this measurement shall be made within an accuracy of $\pm 1/16$ inch (± 0.159 cm)).
6. INSPECTION. Upon completion of the stacking test, the exterior of the test container shall be inspected, and the following shall be determined for incorporation into the test report:

MIL-STD-1489B

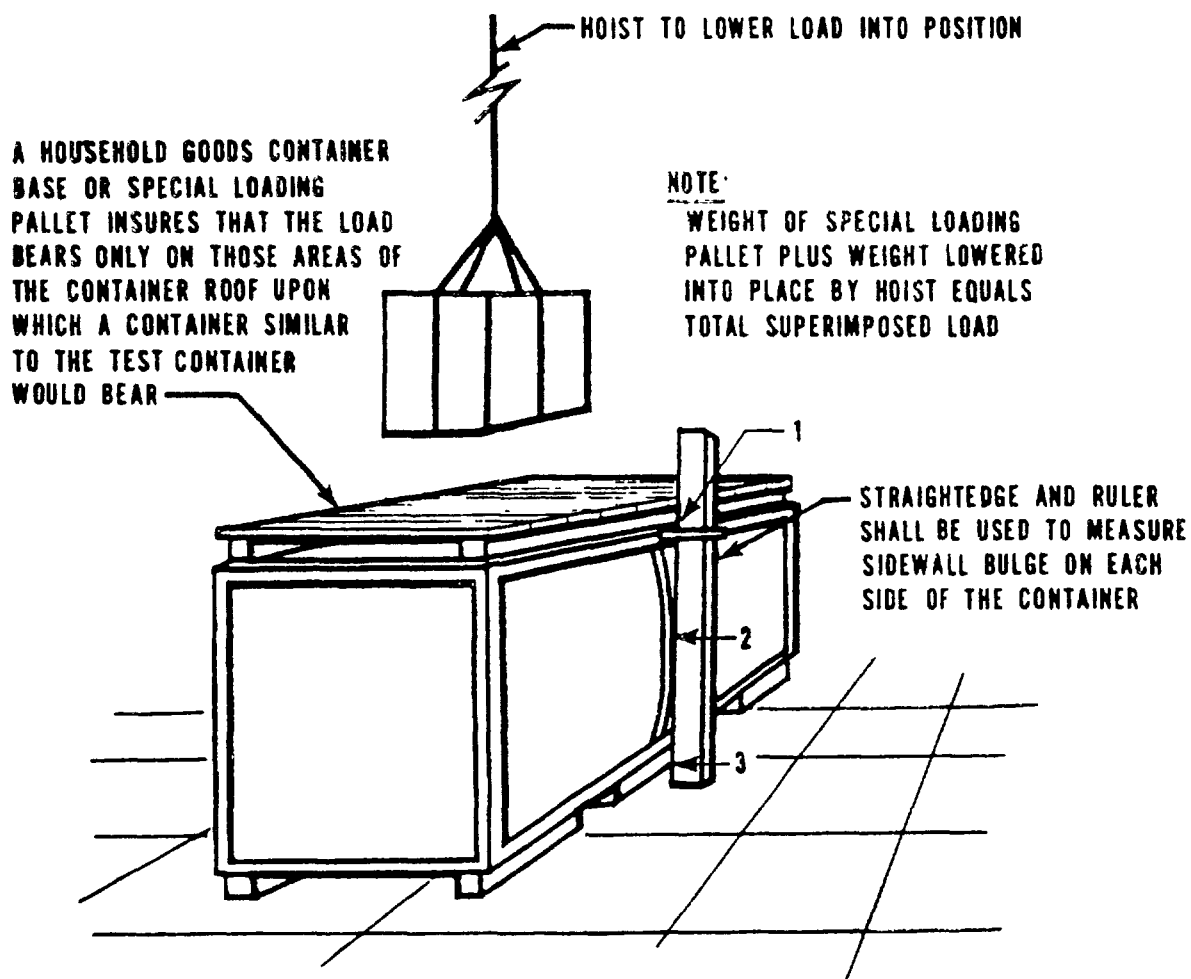
6.1 The magnitude of any permanent bulging of the container side panels (this measurement shall be made within an accuracy of $\pm 1/16$ inch (± 0.159 cm)).

6.2 Any structural damage whatsoever that resulted from the stacking test.

7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container performance shall be deemed satisfactory if, subsequent to the testing, the container shows no signs of damage that would impair its structural integrity or jeopardize the protection and security of its contents. Inconsequential container damage, such as superficial wood chipping, minor dents, or paint chipping, shall not constitute unsatisfactory performance.

8. TEST REPORT. See paragraph 50 of the appendix.

MIL-STD-14898

FIGURE 3 Stacking test.

MIL-STD-1489B

METHOD 502.1

RACKING TEST

1. PURPOSE. The racking test is conducted to determine the HHG container's ability to withstand the loads that may be imposed by lashing wires used to secure and restrain the container during transport.

2. TEST APPARATUS. The test apparatus shall consist of any convenient equipment with which to apply and measure the magnitude of two externally applied concentrated loads, as well as a ruler or other equipment to measure the diagonals of the container end walls.

3. INTERNAL TEST LOAD. The magnitude and volume of the internal test load shall be the same as that specified in Test Method 500.2, paragraph 3. The actual magnitude of this test load shall be empirically determined, for incorporation into the test report. (This measurement shall be made within an accuracy of ± 30 pounds (± 13.6 kg).)

4. TEST PROCEDURE. Chocks shall be positioned along the base of one side of the test container so as to restrain the container lateral movement. The effective height of the chocks shall not be greater than 9 inches (22.9 cm). The side of the container where the chocks are placed shall be referred to as its restrained side. Compressive forces of equal magnitude shall then be applied to the two top corners of the container unrestrained side. The line of action of each compressive force shall be parallel to the supporting surface and in the plane of the respective container end. The externally applied forces shall be gradually increased until the entire bottom edge of the container unrestrained side has been lifted just clear of the supporting surface. The forces shall then be gradually removed (figure 4).

5. TEST MEASUREMENTS. Prior to the test, measure the external diagonals of each end panel within a precision of $\pm 1/16$ inch (± 0.159 cm). During the racking test, the following measurements shall be made and recorded, for incorporation into the test report:

5.1 The magnitude of the compressive forces necessary to lift the entire bottom edge of the container unrestrained side just clear of the supporting surface (this measurement shall be made within an accuracy of ± 10 pounds (± 4.5 kg)).

5.2 The magnitude of any change in the length of the diagonals of the container end walls (this measurement shall be made within an accuracy of $\pm 1/16$ inch (± 0.159 cm)).

6. INSPECTION. Upon completion of the racking test, the exterior of the test container shall be examined and the following determined, for incorporation into the test report:

6.1 The magnitude of any permanent change in the length of the diagonal of the container end walls (this measurement shall be made within an accuracy of $\pm 1/16$ inch (± 0.159 cm)).

6.2 Any structural damage whatsoever that resulted from the racking test.

7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container's performance shall be deemed satisfactory if, subsequent to the testing, the container shows no signs of damage that would impair its structural integrity or jeopardize the protection and security of its contents. Inconsequential container damage, such as superficial wood chipping, minor dents, or paint chipping, shall not constitute unsatisfactory container performance.

8. TEST REPORT. See paragraph 50 of the appendix.

MIL-STD-1489B

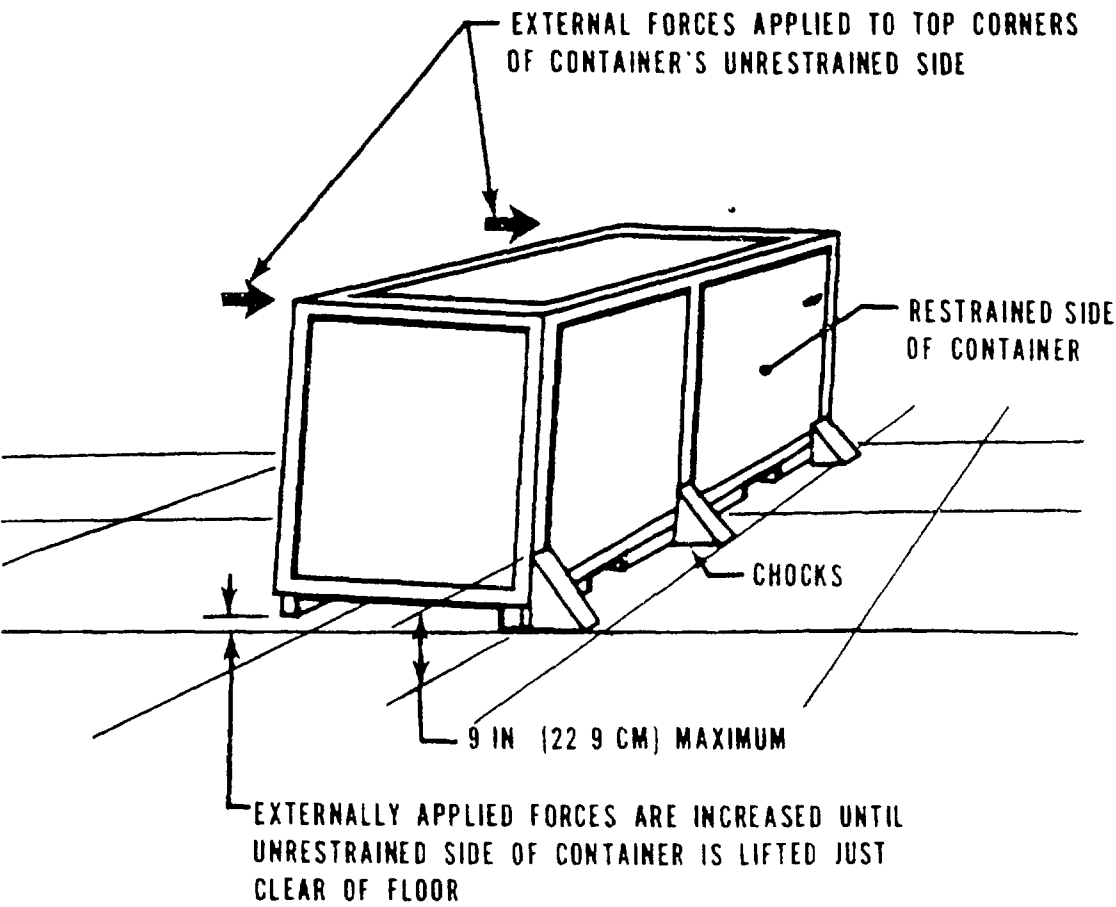


FIGURE 4 Racking test.

METHOD 503.1

PENDULUM IMPACT TEST

1. PURPOSE. The pendulum impact test is conducted to determine the container's ability to withstand the horizontal impact loads to which it may be subjected during rail humping.
2. TEST APPARATUS. The test apparatus shall consist of a 24-inch (61.0-cm) high rigid barrier and a platform, large enough to support the test container, suspended at least 16 feet (487.7 cm) above the floor by four or more parallel ropes, chains, or cables. The length of the suspension cables shall be adjusted so that the top surface of the platform, in its equilibrium position, is 9 inches (22.9 cm) above the floor. The rigid barrier shall be long enough to make full contact with the test container sidewalls. Also, it shall be oriented so that it is perpendicular to the platform's line of swing and between 3 and 9 inches (7.6 and 22.9 cm) from the platform edge when the platform is in its equilibrium position (figure 5).
3. INTERNAL TEST LOAD. The magnitude and volume of the internal test load shall be the same as that specified in Test Method 500.2, paragraph 3. The actual magnitude of this test load shall be empirically determined for incorporation into the test report. (This measurement shall be made within an accuracy of ± 30 pounds (± 13.6 kg).)
4. TEST PROCEDURE. The test container shall be placed upright on the suspended platform so that the container surface that is to be impacted projects beyond the end of the platform and contacts the rigid barrier. The platform shall then be pulled straight back until its top surface is 15 inches (38.1 cm) above the floor and then be allowed to swing freely forward so as to impact the test container against the rigid barrier. The test shall be applied once to each side and end of the test container, for a total of four impacts.
5. TEST MEASUREMENTS. None.
6. INSPECTION. The exterior of the container shall be inspected upon completion of the pendulum impact test, and any signs of structural damage shall be noted, for incorporation into the test report.

MIL-STD-1489B

7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container's performance shall be deemed satisfactory if, subsequent to the testing, the container shows no signs of damage that would impair its structural integrity or jeopardize the protection and security of its contents. Inconsequential container damage, such as superficial wood chipping, minor dents, or paint chipping, shall not constitute unsatisfactory container performance.

8. TEST REPORT. See paragraph 50 of the appendix.

MIL-STD-1480B

PLATFORM SUSPENDED FROM
MINIMUM 16 FT (487.7 CM)

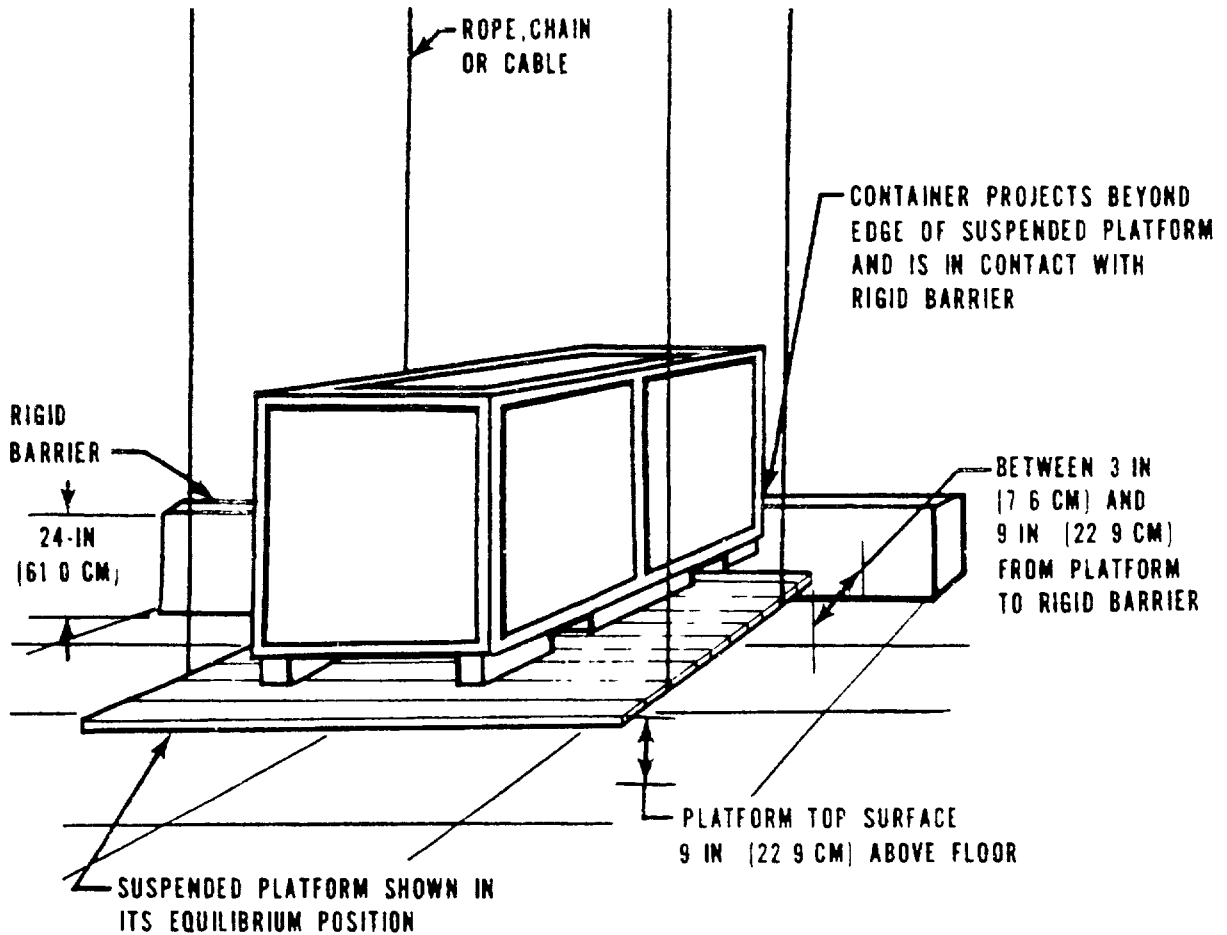


FIGURE 5 Pendulum impact test.

MIL-STD-1489B

METHOD 504.1

WATERTIGHTNESS TEST

1. PURPOSE. The watertightness test is conducted to determine the HHG container's ability to protect its contents from rain-induced damage.
2. TEST APPARATUS. The test apparatus shall consist of a 1/2-inch (1.27-cm) inside-diameter hose connected to a water source that shall produce a pressure head of 15 to 20 inches (38.1 to 50.8 cm) of water at the discharge end of the hose (without nozzle). For purposes of this test, the line valve (spigot) is adjusted to obtain a vertical stream height of 15 to 20 inches (38.1 to 50.8 cm), which is substantially a 15- to 20-inch (38.1- to 50-cm) pressure head.
3. INTERNAL TEST LOAD. None.
4. TEST PROCEDURE. The test container shall be sealed as if for transport. A water stream from the 1/2-inch (1.27-cm) inside-diameter hose (without nozzle), with a head of 15 to 20 inches (38.1 to 50.8 cm), shall be applied to the test container. The hose shall be held approximately 18 inches (45.7 cm) from the test container, and the impact point of the water stream shall move across all joints and seams of the exterior of the container at a rate of 3 to 4 inches (7.62 to 10.16 cm) per second. The duration of the test shall be the time to cover all exterior joints and seams twice.
5. TEST MEASUREMENTS. None.
6. INSPECTION. Immediately following exposure to the water stream, the exterior of the container door shall be wiped to prevent inadvertent drainage of water from the door while opening the container for inspection. Immediately after wiping, the door shall be opened and the interior of the container shall be inspected for any signs of water infiltration. The results shall be noted for incorporation into the test report.
7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container's performance shall be deemed satisfactory if, after being subjected to the watertightness test, the container interior shows no signs whatsoever of water infiltration.
8. TEST REPORT. See paragraph 50 of the appendix.

METHOD 505.1

PENDULUM PUNCTURE TEST

1. PURPOSE. The pendulum puncture test is conducted to determine the HHG container's ability to withstand the concentrated impact loads that may be accidentally induced by mechanical handling equipment.
2. TEST APPARATUS. The test apparatus shall consist of a forklift tine extension or simulation thereof, weighing at least 70 pounds (31.8 kg), suspended at least 14 feet (426.7 cm) above the floor of the test container by two or more ropes, chains, or cables (figure 6). The cross-sectional area of the impact and of the tine extension shall not exceed 3.5 square inches (22.6 cm). The length of the suspension cables shall be adjusted so that, when the impact tine is in its equilibrium position and the container is in test position, the center of the impact end will contact the container endwall at a point 8 to 10 inches (20.3 to 25.4 cm) above the container floor. The equilibrium attitude of the tine must be such that its center of gravity is in line with the direction of impact.
3. INTERNAL TEST LOAD. None.
4. TEST PROCEDURE. The test container shall be placed upright and oriented so that the container surface, against which the tine is to be impacted, is in contact with the tine and is horizontally centered with respect to and perpendicular to the line of swing of the tine. The tine shall then be gradually pulled straight back until it is 20 inches (50.8 cm) above its equilibrium height. It shall then be allowed to swing freely forward so as to impact with the unrestrained test container. The test shall be applied once to each side and end of the test container, for a total of four impacts.
5. TEST MEASUREMENTS. None.
6. INSPECTION. Both the exterior and interior of the HHG container shall be inspected upon completion of the pendulum puncture test, and any signs of structural damage, such as splitting, puncturing, or denting of the container wall panels, shall be noted, for incorporation into the test report.
7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container's performance shall be deemed satisfactory if, subsequent to the testing, the container shows no signs of damage that would impair its structural integrity or jeopardize the protection and security of its contents. Inconsequential container damage, such as superficial wood chipping, minor dents, or paint chipping, shall not constitute unsatisfactory container performance.
8. TEST REPORT. See paragraph 50 of the appendix.

MIL-STD-1489B

TINE SUSPENDED FROM MINIMUM HEIGHT
OF 14 FT (426.7 CM) ABOVE FLOOR

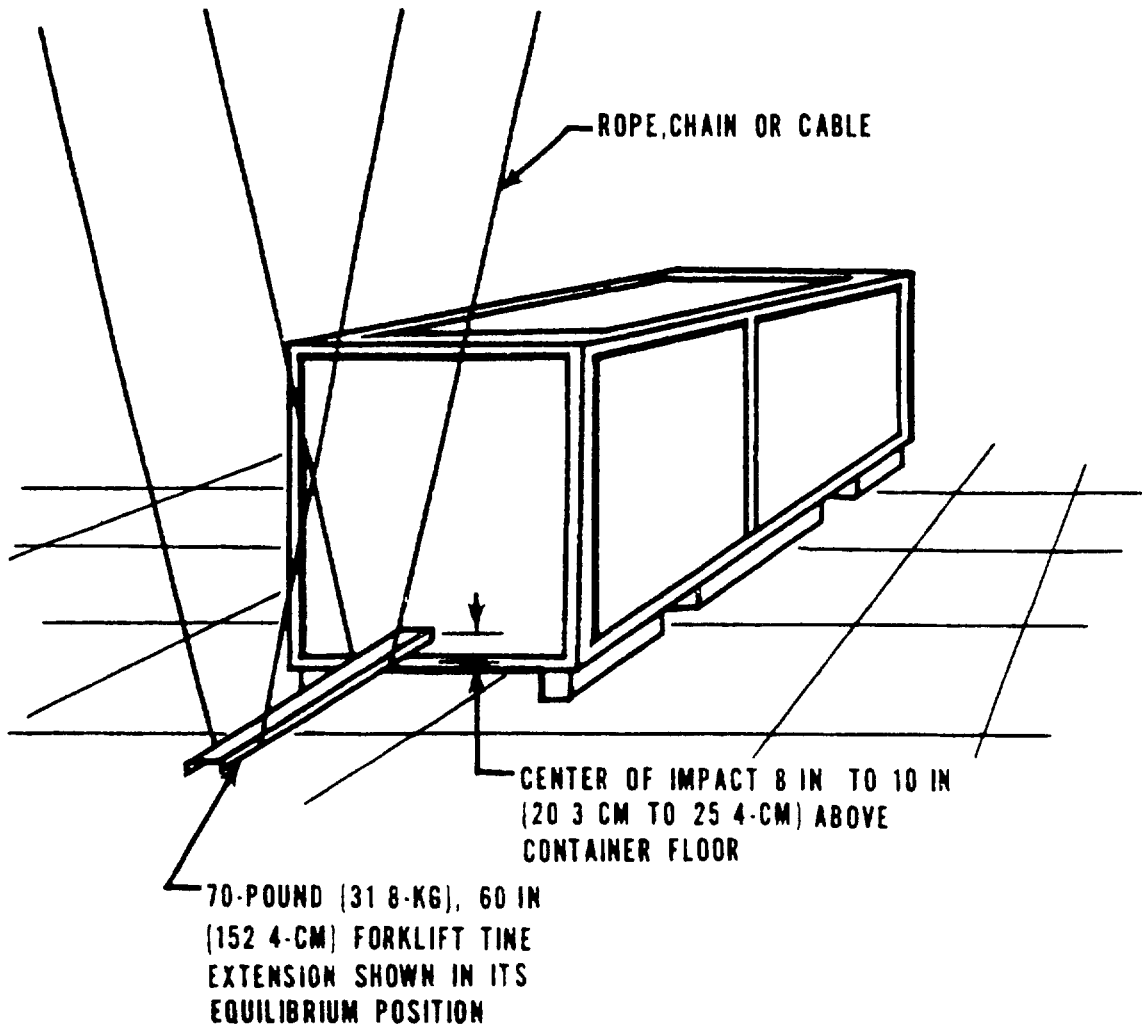


FIGURE 6. Pendulum puncture test.

METHOD 506.1

CONDENSATION RESISTANCE TEST

1. PURPOSE. This test is conducted to determine the HHG container's effectiveness in protecting its contents from condensation-induced water damage.

2. TEST APPARATUS. The test apparatus shall consist of the following:

2.1 A compartment, chamber, or room in which temperature control can be maintained between extremes of 65° Fahrenheit (18.3°C) and 86° Fahrenheit (30°C).

2.2 A shallow pan that, when filled with water to a depth of 1 inch (2.54 cm), has a water surface area of at least 363 square inches (2,342 cm²).

3. INTERNAL TEST LOAD. None.

4. TEST PROCEDURE. Before placing the HHG container within the test chamber, the test chamber's temperature and relative humidity shall be brought to levels of 86°±2° Fahrenheit (30°±1.1°C) and 42±2 percent. The open HHG container shall then be placed within the test chamber and allowed to stabilize at the ambient conditions. The shallow pan described above shall then be filled to a depth of 1 inch (2.54 cm) with water at a temperature of 78° Fahrenheit (25.6°C) and placed on the floor of the test container. The container shall then be sealed as if for transport and subjected to the following 10-1/2-hour test cycle.

4.1 The test chamber temperature shall be lowered to 84°±1° Fahrenheit (28.9°±0.6°C) over a 3-hour period.

4.2 The test chamber temperature shall be lowered to 80°±1° Fahrenheit (26.7°±0.6°C) over a 1-1/2-hour period.

4.3 The test chamber temperature shall be lowered to 67°±1° Fahrenheit (19.4°±0.6°C) over a 3-1/2-hour period.

4.4 The test chamber temperature shall be lowered to 65°±1° Fahrenheit (18.3°±0.6°C) over a 2-1/2-hour period.

5. TEST MEASUREMENTS. None.

6. INSPECTION. The test container shall be opened immediately upon completion of the 10-1/2-hour test cycle, and its interior thoroughly inspected for any signs of condensation.

MIL-STD-1489B

7. SATISFACTORY CONTAINER PERFORMANCE. The HHG container's performance shall be deemed satisfactory if no signs whatsoever of condensation are observed during the post test inspection.

8. TEST REPORT. See paragraph 50 of the appendix.

METHOD 507.2

TEMPERATURE TEST

1. PURPOSE. The temperature test is conducted to determine the ability of the HHG container paneling and framing materials to maintain their integrity when subjected to adverse temperatures.
2. TEST APPARATUS. The test apparatus shall consist of a high-temperature test chamber and a low-temperature test chamber. The high-temperature test chamber shall be capable of maintaining temperature control between extremes of $+90^{\circ}$ Fahrenheit (32.2°C) and $+125^{\circ}$ Fahrenheit (51.7°C). The low-temperature test chamber shall be capable of maintaining temperature control between extremes of $+55^{\circ}$ Fahrenheit (12.8°C) and -40° Fahrenheit (-40°C).
3. INTERNAL TEST LOAD. Not applicable.
4. TEST PROCEDURE. A sample of each type and each thickness of paneling material, laminated framing material, and molded plastic framing material used in the container shall be tested. The paneling sample(s) shall be no smaller than 6 by 8 inches (15.2 by 20.3 cm). Framing material sample(s) shall be full width and full thickness and at least 18 inches (45.7 cm) long. The sample(s) shall be stabilized at standard ambient conditions and then placed in the high-temperature test chamber and subjected to the following test cycle:
 - 4.1 The test chamber temperature shall be raised to $105^{\circ}+2^{\circ}$ Fahrenheit ($40.6^{\circ}+1.1^{\circ}\text{C}$) within a 1-hour period and maintained at that level for 4 hours.
 - 4.2 The test chamber temperature shall be raised to a level in excess of 125° Fahrenheit (51.7°C) within a 1-hour period and maintained at that level for 4 hours.
 - 4.3 The test chamber temperature shall be lowered to $105^{\circ}+2^{\circ}$ Fahrenheit ($40.6^{\circ}+1.1^{\circ}\text{C}$) within a 1-hour period and maintained at that level for 1 hour.
 - 4.4 Steps 4.2 and 4.3 shall be repeated.
 - 4.5 The test sample(s) shall be returned to standard ambient conditions and placed in the low-temperature test chamber.

MIL-STD-1489B

4.6 The test chamber temperature shall be lowered to -40° Fahrenheit (-40°C) within a 2-hour period and maintained at that level for 6 hours.

4.7 The test sample(s) shall be returned to standard ambient conditions.

5. TEST MEASUREMENTS. None.

6. INSPECTION. Upon completion of the temperature test, each test sample shall be inspected, and any signs of deterioration, such as warping, splitting, softening, loss of rigidity, delamination, or any other observable change affecting the structural qualities or appearance of the material, shall be noted, for incorporation into the test report.

7. SATISFACTORY SAMPLE PERFORMANCE. The test sample's performance shall be deemed satisfactory if, subsequent to the testing, the sample shows no signs of deterioration, such as warping, splitting, or delamination, that could in any way impair the container's ability to protect household goods contents.

8. TEST REPORT. See paragraph 50 of the appendix.

APPENDIX

TEST REPORT REQUIREMENTS

10. SCOPE. This appendix is a mandatory part of this document. The provisions contained herein establish the standard according to which the test report shall be drafted. Requirements dealing with both the content and format of the test report are included.

20. TEST REPORT SECTIONS. The test report shall consist of four sections headed as follows: Section 1, Identification Information; Section 2, Container Configuration Characteristics; Section 3, Test Results; Section 4, Verification.

30. SECTION 1, IDENTIFICATION INFORMATION. Section 1 shall contain the following information:

30.1 Test report date of issuance.

30.2 Name and business address of container manufacturer.

30.3 Name of commercial carrier who sponsored testing.

30.4 Name and business address of carrier representative.

30.5 Name and location of the independent test laboratory.

30.6 Name of Government representative who witnessed testing, if applicable.

30.7 A bill of materials, specifications, and drawings suitable for identifying the container and evaluating the test report. Drawings should include, as a minimum, front and side elevation views and top and bottom views.

40. SECTION 2, CONTAINER CONFIGURATION CHARACTERISTICS. The following container characteristics shall be listed in section 2:

40.1 Exterior dimensions, in inches (cm).

40.2 Exterior volume, in cubic feet (m^3).

40.3 Interior dimensions, in inches (cm).

40.4 Interior volume, in cubic feet (m^3).

40.5 Ratio of interior volume to exterior volume.

MIL-STD-1489B

40.6 Tare weight, in pounds (kg).

40.7 Tare density, in pounds per cubic feet (kg/m³).

50. SECTION 3, TEST RESULTS. Section 3 shall consist of eight parts, one part for each of the performance tests specified within this document. Each part shall contain the following:

50.1 Test designation.

50.2 Date test was conducted.

50.3 A statement that the test was conducted in accordance with the stated test procedures or, if applicable, a statement describing any deviations from those procedures.

50.4 A description of the HHG container's performance during testing to include a presentation of any test measurements made.

50.5 A discussion of post-test inspection findings to include a presentation of any measurements made.

50.6 A statement, based on paragraph 7 of the applicable test method, as to whether the container's test performance was satisfactory or unsatisfactory.

60. SECTION 4, VERIFICATION. Section 4 shall consist of a statement, signed by an appropriate official of the independent testing laboratory, verifying that the laboratory has no financial interest in either the design or manufacture of the container; that the test equipment, test procedures, test conditions, and sequences of testing employed conformed to all applicable provisions of the document; and that the test report accurately depicts the test findings.

Custodians:

Army - MT
Navy - SA
Air Force - 69

Preparing Activity:

Military Traffic Management Command
Transportation Engineering Agency

Review Activities:

Army - GL, ME
Navy - SA
Air Force - 99

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS This form is provided to solicit beneficial comments which may improve this document and enhance its use. DoD contractors, government activities, manufacturers, vendors, or other prospective users of the document are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity. A response will be provided to the submitter, when name and address is provided, within 30 days indicating that the 1426 was received and when any appropriate action on it will be completed.

NOTE This form shall not be used to submit requests for waivers, deviations or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

DOCUMENT IDENTIFIER (Number) AND TITLE MIL-STD-1489B, Military Standard, Performance Testing of Commercially Owned Household Goods Containers

NAME OF ORGANIZATION AND ADDRESS OF SUBMITTER

☐ VENDOR ☐ USER ☐ MANUFACTURER

1 ☐ HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? ☐ IS ANY PART OF IT TOO RIGID, RESTRICTIVE, LOOSE OR AMBIGUOUS? PLEASE EXPLAIN BELOW

A. GIVE PARAGRAPH NUMBER AND WORDING

B. RECOMMENDED WORDING CHANGE

C. REASON FOR RECOMMENDED CHANGE(S)

2 REMARKS

SUBMITTED BY (Printed or typed name and address — Optional)

TELEPHONE NO

DATE

DD FORM 1426
1 OCT 76

EDITION OF 1 JAN 72 WILL BE USED UNTIL EXHAUSTED

C

FOLD

POSTAGE AND FEES PAID



C

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

Director
Military Traffic Management Command
Transportation Engineering Agency
P. O. Box 6276
Newport News, VA 23606

FOLD

1

2