

MIL-A-83039B(USAF)  
AMENDMENT 3

14 Jun 84

SUPERSEDING  
AMENDMENT 2  
3 April 1975

MILITARY SPECIFICATION  
AIR CONDITIONER A/M32C-10A AIR CYCLE FOR  
AIRCRAFT GROUND SUPPORT

This amendment forms a part of Military Specification MIL-S-83039B(USAF), dated 16 April 1971, and is approved for use by the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Add to bottom of page:

"Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: the Engineering Division, San Antonio ALC/MMEDO, Kelly AFB, Texas 78241 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter."

\*1.1, delete in its entirety and substitute:

"1.1 Scope. This specification covers one type of air conditioner designated A/M32C-10A."

2.1, delete in its entirety and substitute the following 2.1 and add new paragraph 2.1.1:

"2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified (see 6.2), the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this specification to the extent specified herein."

\*Under SPECIFICATIONS, FEDERAL, ZZ-H-451, delete title and substitute the following: "Hose, Fire, Woven-Jacketed, Rubber, Latex or Rubber Coated Fabric Lined, with Couplings."

\*Under SPECIFICATIONS, MILITARY, MIL-G-38195, delete title and substitute: "Generator Set, Gas Turbine Engine, 60 kw 400 Hertz, General purpose."

PAGE 2

\*2.1, under STANDARDS, delete "MIL-STD-100" and substitute "DOD-STD-100" same title.

\*2.1, add the following: "MIL-STD-794 Parts and Equipment, Procedures for Packaging of."

FSC 4120

MIL-A-83039B(USAF)  
AMENDMENT 3

\*2.1, under STANDARDS, delete title for MIL-STD-808 and substitute:

"Finish Materials and Processes for Corrosion Prevention and Control in Support Equipment."

Under STANDARDS, MILITARY, delete "MS33656 - Fitting End, Standard Dimensions for Flared Tube Connection and Gasket Seal."

\*Delete parenthetical source paragraph and substitute the following new paragraph:

"(Copies of specifications and standards required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)"

2.2, delete and substitute the following:

\* "2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable."

Add the following Industry document and source paragraph:

\* "AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3951-82 Standard Practice for Commercial Packaging.

(Application for copies of ASTM publications should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.)"

Add the following new paragraph:

\* "2.1.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence."

PAGE 3

3.1, delete and substitute:

\* "3.1 First article. This specification makes provisions for first article testing."

PAGE 6

3.5.4, line 2, delete: "design, construction, modification, and retesting" and substitute "design and construction."

PAGE 9

3.6.2.1, delete second sentence.

3.6.3, line 3, delete: "110°F" and add "200°F". After last sentence, add "This delivery shall be achieved simultaneously with the deliveries specified in 3.6.2 and 3.6.5."

MIL-A-83039B(USAF)  
AMENDMENT 3

PAGE 10

3.7.2.2, delete in its entirety and substitute:

"3.7.2.2 Rupture protection. The low pressure side of the system shall be protected from damage to components due to abnormal buildup of pressure. An automatic reset pressure relief means shall be provided which has a pressure setting above normal operating pressures but below the pressure tolerance of the components."

PAGE 11

3.7.6.2, lines 2 and 3: Delete "from the operator's position without removal of panels or covers."

PAGE 12

3.7.7.1, item d: Delete in its entirety:

3.7.7.1.1, delete in its entirety.

3.7.8.2, line 2: Delete "47°" and substitute "50°."

PAGE 13

3.7.8.10, lines 2 and 3: Delete "70° to 110°F" and substitute "55° to 200°F."

PAGE 14

3.7.10 and 3.7.10.1: At the beginning of the first sentence, add "When specified (see 6.2),".

PAGE 17

\*4.1, line 2 and 4: Delete "supplier" and substitute "contractor."

\*4.2 a: Delete "Preproduction" and substitute "First article."

PAGE 18

4.4, delete "Preproduction" and substitute "First article."

\*4.4.1, line 1 and line 2: Delete "preproduction" and substitute "first article."

\*4.4.2, delete in its entirety and substitute:

"4.4.2 Test report. Upon completion of the first article tests, a first article test report in accordance with MIL-STD-831 shall be prepared and three complete copies of the report furnished to the procuring activity."

PAGE 19

\*4.4.3, line 1, line 2 and line 3: Delete "Preproduction" and substitute "First article."

MIL-A-83039B(USAF)  
AMENDMENT 3

PAGE 22

\*4.6.4, line 3: Delete "taxiing" and substitute "taxiing."

PAGE 23

4.6.5.1.6, line 3: After "of" add "3.6.3 and."

PAGE 25

Delete paragraph 4.6.9, Table II and notes 1, 2 and 3 and substitute the following:

"4.6.9 Environmental tests. The following environmental tests shall be conducted on the air conditioner in accordance with the specified methods of MIL-STD-810.

4.6.9.1 High temperature test. The air conditioner shall be subjected to high temperature in accordance with test method 501, procedure I. The maximum operating temperature shall be 125°F. At the conclusion of the test, the air conditioner shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3, and 3.6.4.

4.6.9.2 Low temperature test. The air conditioner shall be subjected to low temperature in accordance with test method 502, procedure I. The storage temperature shall be -80°F, and the lowest operating temperature shall be -65°F. At the conclusion of the test, the air conditioner shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3 and 3.6.4.

4.6.9.3 Sunshine test. The air conditioner or representative material and paint samples thereof shall be subjected to a sunshine test in accordance with test method 505, procedure I. Any evidence of degradation or deterioration shall be cause for rejection.

4.6.9.4 Rain test. The air conditioner shall be subjected to a rain test in accordance with test method 506, procedure I. The air conditioner shall be operated during the last 10 minutes of each 30 minute rain cycle.

4.6.9.5 Humidity test. The air conditioner shall be subjected to humidity in accordance with test method 507, procedure I. At the conclusion of the test, the air conditioner shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3 and 3.6.4.

4.6.9.6 Fungus test. The air conditioner or representative material samples thereof shall be subjected to fungus in accordance with test method 508, procedure I.

4.6.9.7 Salt-fog test. The air conditioner shall be subjected to salt-fog in accordance with test method 509, procedure I. Access doors and covers that would normally be open during operation of the air conditioner shall be left open throughout the test. At the conclusion of the test, the air conditioner

MIL-A-83039B(USAF)  
AMENDMENT 3

shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3, and 3.6.4.

4.6.9.8 Dust test. The air conditioner shall be subjected to sand and dust in accordance with test method 510, procedure I. The air conditioner shall be nonoperative during this test. The second 6 hour test (at 145°F) may be performed immediately after reaching stabilization in step 2. At the conclusion of the test, the air conditioner shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3, and 3.6.4.

4.6.9.9 Vibration test. The turbine assembly shall be subjected to vibration in accordance with test method 514.1, procedure VIII. The testing shall be conducted in accordance with category (f), curve Y. The test setup shall simulate the installation in the air conditioner and shall be approved by the procuring activity. At the conclusion of the test, the turbine assembly shall be reinstalled in the air conditioner and operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3, and 3.6.4.

4.6.9.10 Shock test. The air conditioner shall be subjected to shock in accordance with test method 516, procedure II. At the conclusion of the test, the air conditioner shall be operated at condition 2 as specified in table I for 1 hour. It shall be demonstrated that the air conditioner meets the requirements of 3.6.2, 3.6.3, and 3.6.4."

PAGE 26

\*5, delete in its entirety and substitute the following Section 5:

"5. PACKAGING.

5.1 Preservation. Preservation shall be Level A, C or Commercial as specified (see 6.2).

5.1.1 Level A. The air conditioner unit shall be preserved in accordance with MIL-R-3593.

5.1.2 Level C. The Level C preservation for the air conditioner unit shall conform to the MIL-STD-794 requirements for this level.

5.1.3 Commercial. The commercial preservation of air conditioner units shall be in accordance with the requirements of ASTM D 3951-82.

5.2 Packing. Packing shall be Level A, B, C or commercial, as specified (see 6.2).

5.2.1 Levels A and B. The trailer-mounted air conditioner unit, component parts, and repair parts shall be packed in accordance with MIL-STD-281.

5.2.2 Level C. The Level C packing for trailer-mounted air conditioner units, component parts, and repair parts shall conform to the MIL-STD-794 requirements for this level.

MIL-A-83039B(USAF)  
AMENDMENT 3

5.2.3 Commercial. The preserved air conditioner units shall be packed in accordance with the requirements of ASTM D 3951-82.

5.3 Marking.

5.3.1 Levels A, B and C. In addition to any special or other identification marking required by the contract (see 6.2), each unit pack, shipping containers, and unboxed (mobile) units shall be marked in accordance with MIL-STD-129. The shipment marking nomenclature shall be:

Air Conditioner A/M32C-10A  
Air Cycle for Aircraft Ground Support

5.3.2 Commercial. Commercial marking shall be in accordance with the requirements of ASTM D 3951-82.

PAGE 27

\*6.2, line 1, delete "Procurement documents should specify the following" and substitute the following:

"6.2.1 Acquisition requirements. Acquisition documents should specify the following:"

6.2, add: "f. When the high-pressure air hose and rack are required (see 3.7.10 and 3.7.10.1)."

The margins of this amendment are marked with an asterisk or vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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