

INCH-POUND

MIL-C-19803F  
AMENDMENT 6  
02 April 2001  
SUPERSEDING  
AMENDMENT 5  
29 September 1995

MILITARY SPECIFICATION

CONVERTER, LIQUID OXYGEN, 10 LITER, GCU-24A/A

INACTIVE FOR NEW DESIGN AFTER 23 JULY 1997

This amendment forms a part of MIL-C-19803F, dated 24 March 1982, and is approved for use by all Departments and Agencies of the Department of Defense.

By this amendment, "GCU-24/A" is changed to "GCU-24A/A" wherever it appears in this specification.

By this amendment, "Overpressure safety" is changed to "Secondary overpressure safety" wherever it appears in this specification.

PAGE 2

2.1.1 SPECIFICATIONS, MILITARY: Delete:

- "MIL-C-81302 - Cleaning Compound, Solvent, Trichlorotrifluoroethane
- MIL-T-81533 - Trichloroethane 1, 1, 1 (Methyl Chloroform) Inhibited, Vapor Degreasing"

2.1.1 STANDARDS, MILITARY: Delete "MIL-STD-781 Reliability Tests - Exponential Distribution" and substitute "MIL-HDBK-781, Reliability Test Methods, Plans, and Environments for Engineering Development, Qualification, and Production."

MIL-C-19803F  
AMENDMENT 6

PAGE 3

2.1.1 STANDARDS, MILITARY: Add “MIL-STD-1359 Cleaning Methods and Procedures for Breathing Oxygen Equipment.”

\* 3.1 Qualification: Delete.

PAGE 4

3.6 List of mayor components: Add “Mounting base” to the end of list.

PAGE 5

3.6.4, lines 6 and 7: Delete third sentence and substitute “The sensing element shall be an integral part of the container and shall be permanently installed.”

3.6.10: Delete and substitute:

“3.6.10 Secondary overpressure safety device. A secondary overpressure safety device, incorporating a frangible safety burst disc, shall be embodied in the plumbing of the converter. The location of the safety device shall be such that it will ensure rapid dumping of the head pressure from the converter in the event the pressure relief valve fails to open. The safety device shall contain a visible means of ascertaining the condition of the frangible safety burst disc without disassembly.”

PAGE 6

Add the following new paragraph:

“3.6.13 Mounting base. The mounting base shall conform to the configurations and dimensional requirements of figure 4.”

PAGE 7

3.7.10.1: Delete and substitute:

“3.7.10.1 Secondary overpressure safety (standard temperature). The secondary overpressure safety device, when tested as specified in 4.8.11.1 shall not leak at a pressure below 175 psig (1206.58 kPa) and the frangible safety burst disc (see 3.6.10) shall rupture within a pressure range of 200 psig (1378.95 kPa) minimum and 250 psig (1723.68 kPa) maximum. The

MIL-C-19803F  
AMENDMENT 6

safety device shall provide a minimum flow of 150 lpm with the safety disc in the ruptured condition.”

3.7.10.2: Delete and substitute:

“3.7.10.2 Secondary overpressure safety (low temperature). The secondary overpressure safety device, when tested as specified in 4.8.11.2, shall not leak at a pressure below 175 psig (1206.58 kPa) and the frangible safety burst disc (see 3.6.10) shall rupture within a pressure range of 200 psig (1378.95 kPa) minimum and 315 psig (2171.84 kPa) maximum. The safety device shall provide a minimum flow of 150 lpm with the safety disc in the ruptured condition.”

3.7.10.3: Delete and substitute:

“3.7.10.3 Secondary overpressure safety (high temperature). The secondary overpressure safety device, when tested as specified in 4.8.11.3, shall not leak at a pressure below 175 psig (1206.58 kPa) and the frangible safety burst disc (see 3.6.10) shall rupture within a pressure range of 175 psig (1206.58 kPa) minimum and 250 psig (1723.68 kPa) maximum. The safety device shall provide a minimum flow of 150 lpm with the safety disc in the ruptured condition.”

PAGE 9

3.11.1 Delete and substitute:

“3.11.1 Degreasing. Prior to assembling the converter, all internal surfaces the converter shall be degreased and cleaned in accordance with MIL-STD-1359. After assembly, the absence of cleaning compounds shall be verified in accordance with MIL-STD-1359.”

PAGE 10

3.13.2 Delete the following from the end of the paragraph:

“If a removable probe is employed in the container, another note shall be located in the container to designate the applicable probe number.

WARNING

USE PROBE NUMBER\_\_\_\_\_ ONLY”

\* 4.2a Qualification inspection: Delete.

MIL-C-19803F  
AMENDMENT 6

PAGE 11

- \* 4.3 Qualification inspection: Delete
- \* 4.3.1 Qualification samples: Delete
- \* 4.3.2 Retention: Delete

PAGE 14

4.6.1: Add the following to the list of tests and examinations:

“Dimensions  
Relief valve test”

PAGE 19

4.8.11. line 4: Delete "opening" and substitute “rupturing of the frangible safety burst disk”.

PAGE 22

4.8.1.7: Delete “MIL-STD-781” and substitute “MIL-HDBK-781.”

PAGE 24

- \* 6.2.1c Applicable Qualified Products List: Delete

PAGE 25

- \* 6.3 Qualification: Delete

PAGE 26

Add the following new paragraph:

“6.8 Unit Conversion. Conversion of units in this document is in accordance with ASTM E380-82 Metric Practice. The following conversion factors are applicable to this specification.

Atmosphere x 101.325 = kilopascals (kPa)  
Pounds per square inch (psi) x 6.894 = kPa

MIL-C-19803F  
AMENDMENT 6

Inches x 25.4 = millimeters (mm)  
Feet x 0.3048 = meters (m)  
Liters per minute (lpm ) x 0.001 = cubic meters per minute (cu m/min)  
Pounds x 0.4535 = kilogram (kg)  
Inches of Hg x 3.376 = kPa  
[Degrees Fahrenheit (°F) – 32] ÷ 1.8 = Degrees Celsius (°C)”

PAGE 29

Figure 3: Delete and substitute new figure 3.

PAGE 30

Figure 4: Delete and substitute new figure 4.

PAGE 32

Figure 6: Double Amplitude inch (vertical scale): Delete “0.0012” and substitute “0.0001”.

PAGE 33

- \* INDEX, Classification of Inspection: Delete Qualification inspection, 4.2a, page 10.
- \* INDEX, Qualification: Delete and all entries under.

NOTE: The margins of this amendment are marked with an asterisk to indicate where changes 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.

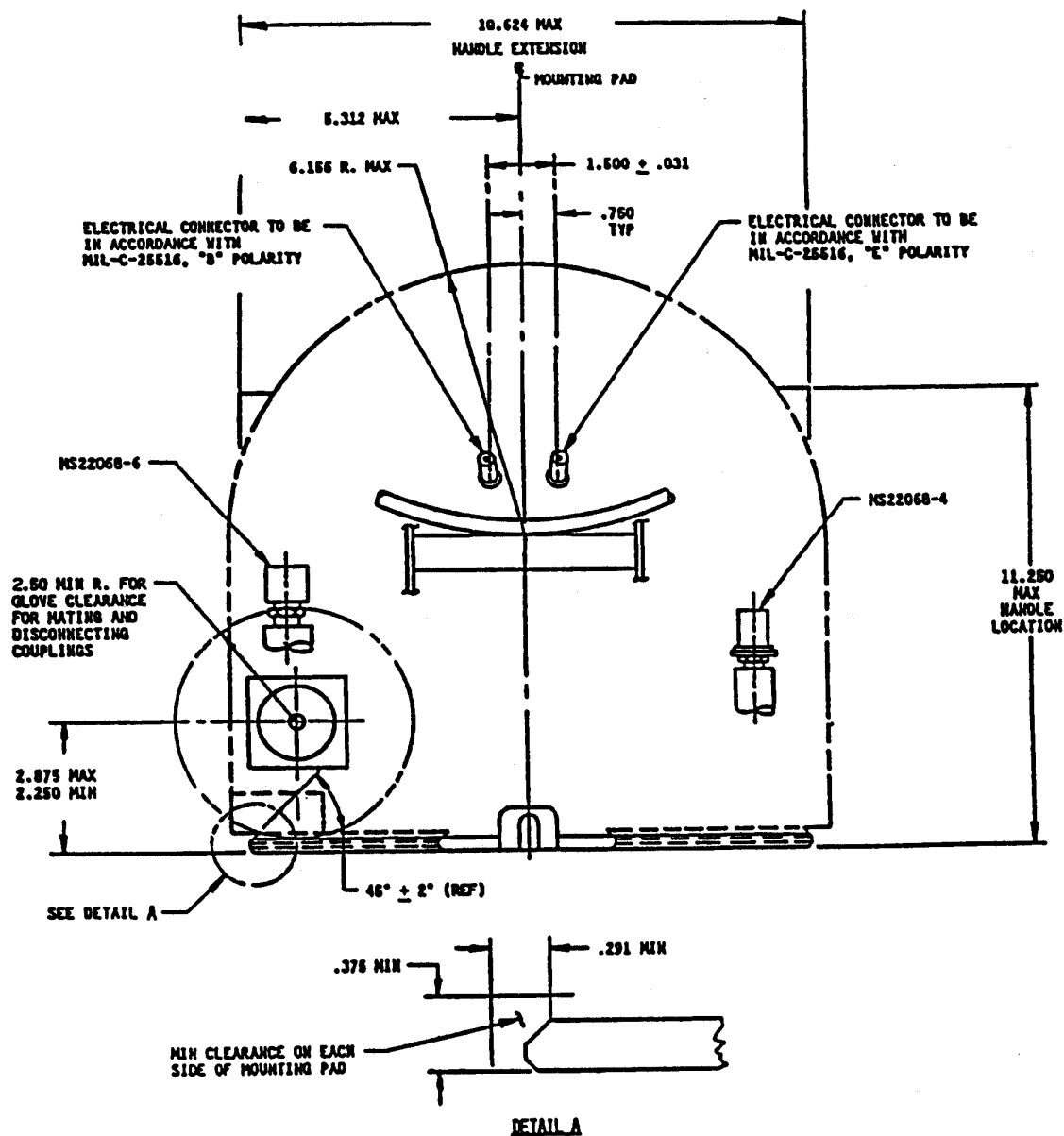
PAGE 36

Custodians:  
Army - AV  
Navy – AS  
Air Force - 99

Preparing activity:  
Navy - AS  
  
(Project 1660-0820)

Review activity:  
Air Force – 71

MIL-C-19803F  
AMENDMENT 6

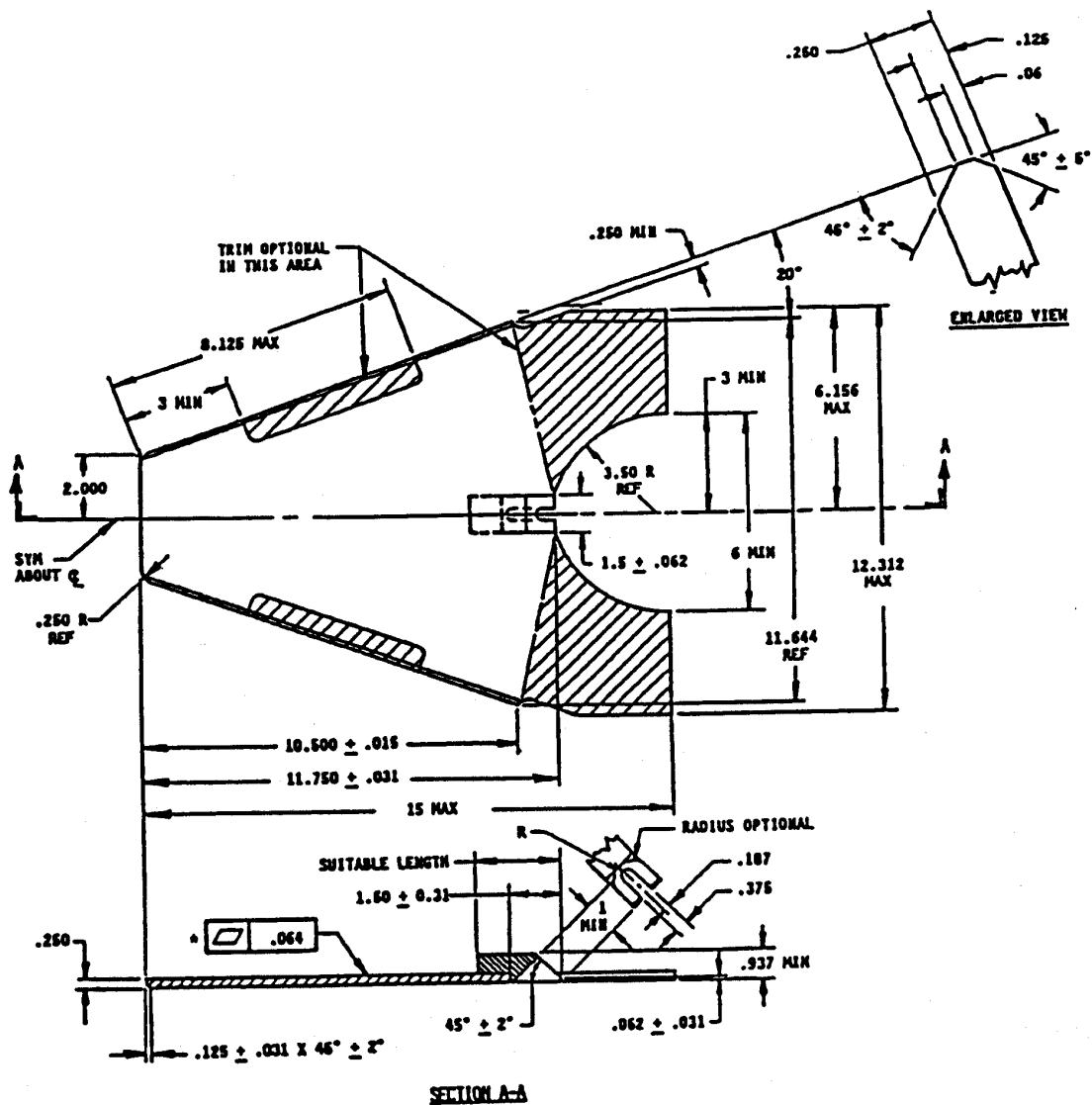


NOTES:

1. All components shall be within the specified maximum envelope.
2. Unless otherwise specified, dimensions in inches.

FIGURE 3. Front view.

MIL-C-19803F  
AMENDMENT 6



NOTES:

1. This mounting base is designed to mate with the mounting bracket shown on MS90341.
2. Unless otherwise specified, dimensions in inches. Tolerances: Decimals ± .010, Angles ± 1/2°.

FIGURE 4. Mounting base.