

MILITARY SPECIFICATION SHEET

MAINTENANCE KITS, ELECTRICAL CONNECTORS, CONTACTS,
 AND CONNECTOR AND CABLE ACCESSORIES:
 MAINTENANCE KIT, GENERAL PURPOSE, (AIR/NITROGEN HEAT GUN)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the tool kit described herein shall consist of this specification and the latest issue of MIL-M-83521.

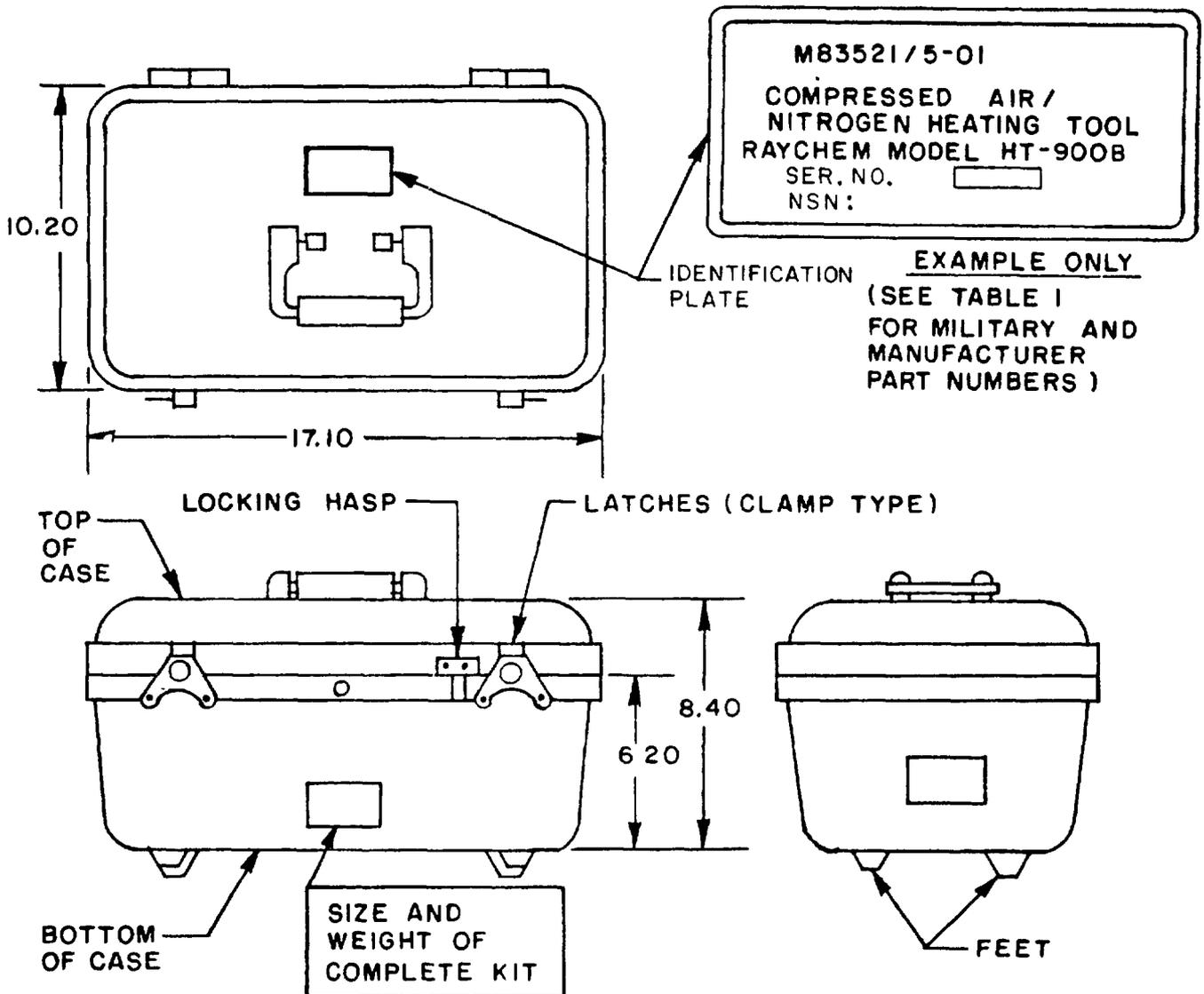


FIGURE 1. Maintenance kit, general purpose (air-nitrogen heat gun).

PARTS LIST:

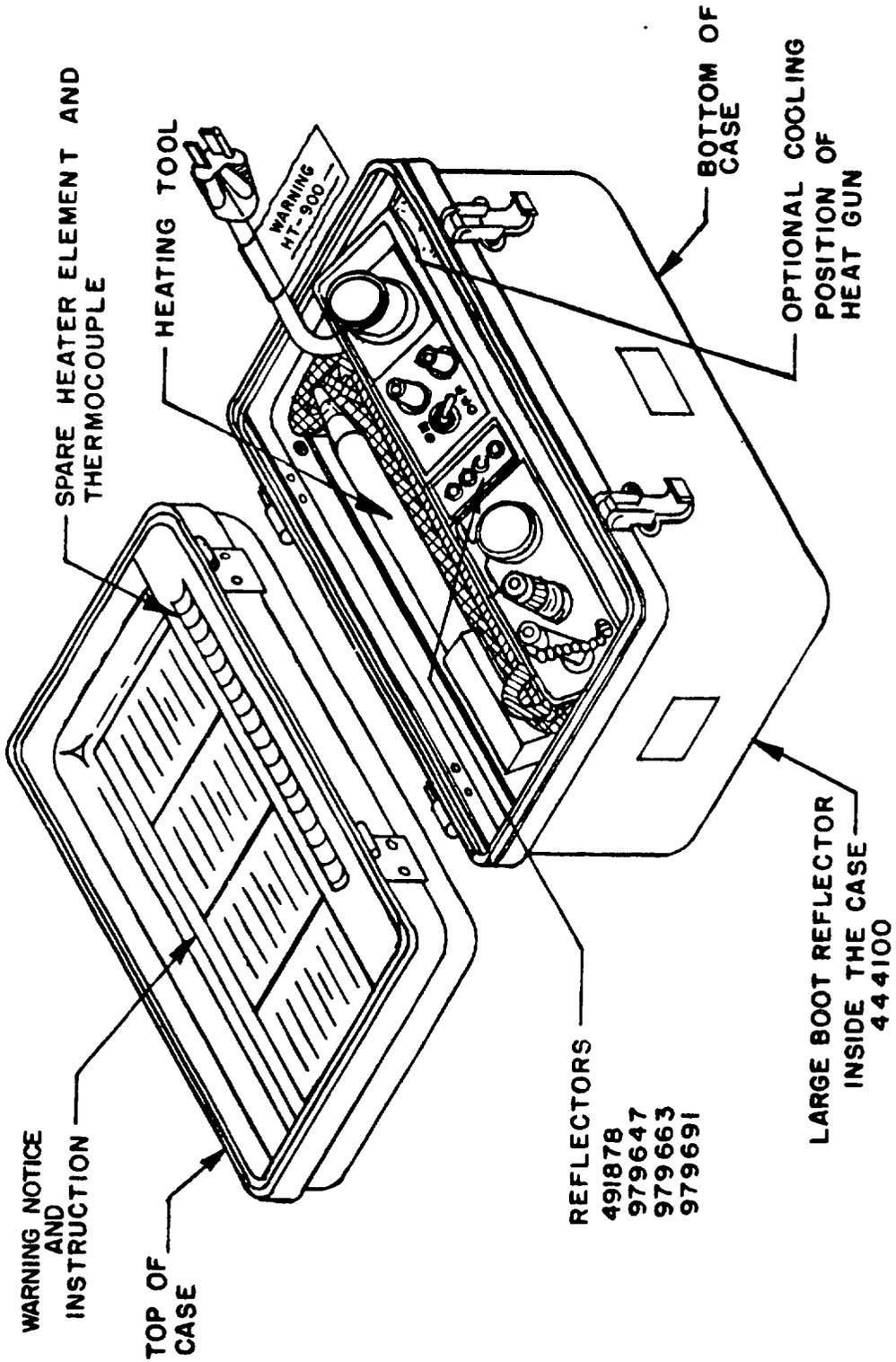
(1) M83521/5-04	Tool-case assembly (olive drab 115 V ac)
(1) M83521/5-05	Tool-case assembly (yellow 115 V ac)
(1) M83521/5-06	Tool-case assembly (olive drab 230 V ac)
(2) Raychem part number 508744	Heating element - 115 V ac (or approved equivalent)
(1) Raychem part number 011349	Heating element - 230 V ac (or approved equivalent)
(2) Raychem part number 729711	Thermocouple (or approved equivalent)
(1) Raychem part number 491878	Termination sleeve reflector (or approved equivalent)
(1) Raychem part number 979663	Miniature termination sleeve reflector (or approved equivalent)
(1) Raychem part number 979691	Boot and tubing reflector (or approved equivalent)
(1) Raychem part number 979647	Needlepoint reflector (or approved equivalent)
(1) Raychem part number 444100	Large boot and tubing reflector (or approved equivalent)
(1) Raychem part number 369118	Filter element (or approved equivalent)
(1 set) Operating instructions	(Attached to cover)
(1 set) Maintenance manual	Ref. Air Force T.O. 32A20-3-74-2
(1) Raychem part number 980123	Heat gun/handle assembly-115 V ac (or approved equivalent)
(1) Raychem part number 975825	Heat gun/handle assembly-230 V ac (or approved equivalent)
(1) Raychem part number 074594	Handle assembly (or approved equivalent)
(1) Raychem part number 636183	Air hose assembly, with hardware (or approved equivalent)

INCHES	MM
6.20	157.5
8.40	213.4
10.20	259.1
17.10	434.3

NOTES:

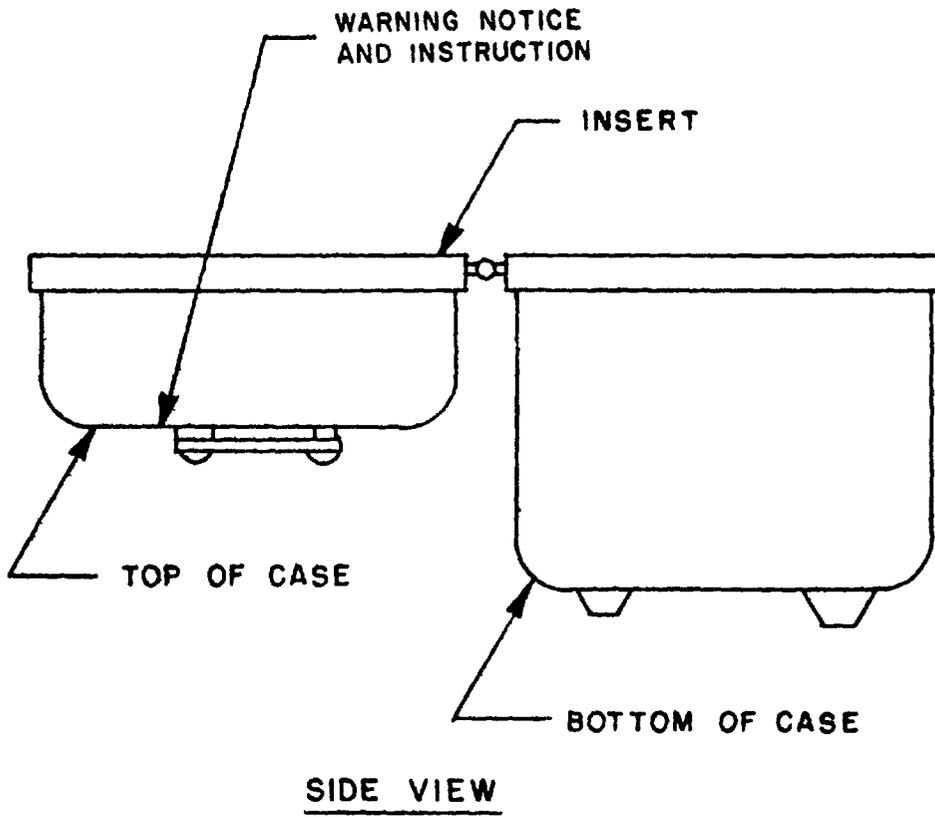
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .20$ (5.1 mm)
4. Part numbers (see table I) includes case and tools.

FIGURE 1. Maintenance kit, general purpose (air-nitrogen heat gun) - Continued.



NOTE: Six digit number is Raychem Part No. "FOR EXAMPLE ONLY".

FIGURE 1. Maintenance kit, general purpose (air-nitrogen heat gun) - Continued.



NOTES:

1. Part number M83521/5-04 for case only (tools not included), Air Force use.
2. Part number M83521/5-05 for case only (tools not included), Navy use.
3. Part number M83521/5-06 for case only (tool not included), Air Force Europe.
4. Tool instructions inside of lid.

FIGURE 2. Maintenance case assembly.

REQUIREMENTS:

The MIL-M-83521/5 compressed air/nitrogen heating tool has been designed to be operated in the presence of a potentially explosive atmosphere as defined in the MIL-STD-810 without creating an explosion. The tool must be tested and must meet the requirements of MIL-STD-810, method 511.1, procedure I.

Design and configuration: See figures 1 and 2.

Warning label: An adhesive back warning label (international orange background with black lettering), appropriate to the voltage rating for 115 V ac or 230 V ac maintenance kit shall be attached directly behind the electrical three prong plug for M83521/5-01 and -02, and shall read on both sides of the label as follows:

HT900B(115 V ac, 50-400 Hz, 1 ϕ , 7 A). The attached standard universal power plug is not approved for use in hazardous locations as defined in NFPA 70-1984, article 500. If this heating device must be used in a hazardous location as defined in NFPA 70-1984, article 500, the universal power plug must be replaced with a plug designed for use in a hazardous location.

It is the responsibility of the user to provide appropriate connection to the power source. Failure to comply with these instructions may result in fire or explosion.

For M83521/5-03, the label shall read as follows:

HT920B(230 V ac, 50-400 Hz, 1 ϕ , 3, 5 A). The attached standard universal power plug is not approved for use in hazardous locations as defined in NFPA 70-1984, article 500. If this heating device must be used in a hazardous location as defined in NFPA 70-1984, article 500, the universal power plug must be replaced with a plug designed for use in a hazardous location.

It is the responsibility of the user to provide appropriate connection to the power source. Failure to comply with these instructions may result in fire or explosion.

Materials:

Case (category 2): Fiberglass with an aluminum frame; color in accordance with FED-STD-595 (see table II).

Lining: Closed-cell neoprene in accordance with MIL-C-3133.

Insert: Polyethylene foam in accordance with PPP-C-1752.

Clasps, handles, hinges, and locking hasp: Suitably plated to resist corrosion.

Nameplate: In accordance with MIL-P-19834.

Rubber feet: On bottom of case, see figure 1.

Instruction sheets: Warning statement as appropriate (115 V ac, 230 V ac units) and operating instructions shall be printed on the inside of the top of the case. Lettering shall be legible and protected with transparent coating. Color of warning statement shall be in legible red lettering and shall precede the operating instructions.

Heating tool: Compressed air nitrogen heating tool (Raychem HT-900B, HT-920B, or approved equivalent). The heating tool shall consist of a control module and a heat gun unit connected together by a hose assembly containing air/nitrogen lines and electrical wires. It shall operate electrically as specified in table I, and with external compressed air or nitrogen at 80-200 lbf/in². It shall produce heated air/nitrogen at a temperature of 480°C (900°F \pm 20°F) at maximum setting. The heating tool control module shall be attached to the lower case half with an instant release latch hinge.

MIL-M-83521/5

Heat gun: The heat gun shall be equipped with a pneumatic control device to allow the user to switch the electric power "ON" or "OFF" at the heating tool.

Reflectors: Five heat reflectors shall be stowed conveniently on the control panel of the heating tool.

Hose assembly: The hose assembly containing the air/nitrogen lines and electrical wires shall withstand 500 cycles of flexing.

Pressure switch: IIT Neo-dyne absolute pressure switch, Model No. 500P0044 or functional equivalent.

Filter-regulator: C.A. Norgren B07-134-A1KA Filter Regulator or equivalent.

Feedback controller: Watt low part no. 1A10-11B-602 controller or equivalent.

Note: All electrical connections must be potted or have conformal coating applied.

Part numbers:

M83521/5-01 Tool Kit, General Purpose, (air/nitrogen, heat gun) Air Force use.
 M83521/5-02 Tool Kit, General Purpose, (air/nitrogen, heat gun) Navy use.
 M83521/5-03 Tool Kit, General Purpose, 230 V ac (air/nitrogen, heat gun) Air Force use.
 M83521/5-04 Tool Case Assembly, (color, olive drab) 115 V ac.
 M83521/5-05 Tool Case Assembly, (color, yellow) 115 V ac.
 M83521/5-06 Tool Case Assembly, (color, olive drab) 230 V ac.

TABLE I. Maintenance kit characteristics.

Maintenance kit military part number	Voltage	Frequency	Phase	Power (amperes)	Case color	Superseded part no.
M83521/5-01	115 V ac	50-400 Hertz	Single	6	Olive drab	M83507/14-01A
M83521/5-02	115 V ac			6	Yellow	None
M83521/5-03	230 V ac			2.75	Olive drab	None

TABLE II. Maintenance case characteristics.

Part number	Operating volts	Case color	Use	Superseded part number
M83521/5-04	115 V ac	Olive drab	Air Force	M83507/14-02A
M83521/5-05	115 V ac	Yellow	Navy	None
M83521/5-06	230 V ac	Olive drab	Air Force	None

Custodians:

Army - ER
Navy - AS
Air Force - 85

Preparing activity:

Air Force - 85

(Project 5935-3504)

Review activities:

Army - AR, AV, GL, MI
Navy - EC, OS, SH
Air Force - 11, 99
DLA - ES

User activities:

Army - AT, ME
Navy - MC, YD
Air Force - 19

Agent:

DLA - ES