TECHNICAL MANUAL

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

COMPRESSOR-DEHYDRATOR, DENTAL , MODEL M5B (SERIAL NUMBERS 2700 AND ABOVE)

6520-00-139-1246

HEADQUARTERS, DEPARTMENT OF THE ARMY

1991

SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL.

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER.

IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE, OR SOME OTHER INSULATING MATERIAL.

SEND FOR HELP AS SOON AS POSSIBLE.

AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION.

Throughout this manual are WARNINGS, CAUTIONS, and NOTES. Please take time to read these. They are there to protect you and the equipment.

WARNING

Procedures which must be observed to avoid personal injury, and even loss of life.

CAUTION

Procedures which must be observed to avoid damage to equipment, destruction of equipment, or long-term health hazards.

NOTE

Essential information that should be remembered.

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TECHNICAL MANUAL

NO. 8-6520-003-24&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) COMPRESSOR-DEHYDRATOR, DENTAL, MODEL M5B (SERIAL NUMBERS 2700 AND ABOVE)

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You can help improve this manual. If you find any mistakes or if you know a way to improve procedures, please let us know. Mail your memorandum, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 (Recommended Changes to Equipment Technical Publications) located in the back of this manual, to: Commander, U.S. Army Medical Materiel Agency, ATTN: SGMMA-M, Frederick, MD 21702-5001. A reply will be furnished directly to you.

Approved for public release; distribution is unlimited.

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HOW TO USE THIS MANUAL

☐ This manual provides all the information needed to understand the capabilities, functions, and characteristics of this equipment. It describes how to set up, operate, test, and repair the item. You must familiarize yourself with the entire manual before operating or beginning a maintenance task.

☐ The manual is arranged by chapters, sections, and paragraphs followed by appendixes, a glossary, an index, and DA Forms 2028-2. Use the table of contents to help locate the chapter or section for the general subject area needed. The index will help locate more specific subjects.

☐ Multiple figures and tables are provided for your ease in using this manual. Words that are both capitalized and in quotation marks are names of components or words that you will actually see on the equipment.

☐ Chapter 3 provides a systematic method of inspecting and servicing the equipment. In this way, small defects can be detected early before they become a major problem causing the unit to fail to complete its mission. Make a habit of doing the checks and services in the same order each time and anything wrong will be detected quickly.

☐ Only perform maintenance functions specified in the maintenance allocation chart for your level of maintenance. Maintenance functions specified for higher levels of maintenance frequently require additional training; test, measurement, and diagnostic equipment; or tools.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. Scope.

This manual describes the compressor-dehydrator; provides unit personnel with equipment technical data and installation procedures; and provides operational and maintenance functions, services, and actions. This manual applies only to serial numbers 2700 and above. Additional information follows:

a. Type of manual. Unit, direct support (DS), and general support (GS) maintenance (including repair parts and special tools list).

b. Model number and equipment name. M5B, Compressor-Dehydrator, Dental (serial numbers 2700 and above).

c. Purpose of equipment. To provide processed, compressed air for the operation of a field dental operating and treatment unit. The compressor-dehydrator may also be used to operate patient ventilators.

1-2. Explanation of abbreviations and terms.

Special or unique abbreviations, acronyms, and terms used within this manual are explained in the glossary.

1-3. Maintenance forms, records, and reports.

TB 38-750-2 prescribes forms, records, reports, and procedures.

1-4. Destruction of Army materiel to prevent enemy use.

AR 40-61 contains instructions for destruction and disposal of Army medical materiel. Also, the SB 8-75 series publications provide periodic information and/or instructions on the disposal of medical materiel that are hazardous.

1-5. Administrative storage.

a. Place the compressor-dehydrator in administrative storage for only short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness condition within 24 hours or within the time factors determined by the directing authority. During the storage period, keep appropriate maintenance records.

b. Perform preventive maintenance checks and services (PMCS) listed in table 3-1 before placing Army equipment in administrative storage. When equipment is removed from storage, perform PMCS to ensure operational readiness.

c. Inside storage is preferred for equipment selected for administrative storage.

1-6. Preparation for storage or shipment.

Procedures to prepare the compressor-dehydrator for storage or shipment are listed in chapter 3, section IX.

1-7. Quality assurance or quality control (QA or QC).

TB 740-10/DLAM 4155.5/AFR 67-43 contains QA or QC requirements and procedures.

1-8. Nomenclature cross-reference list.

Table 1-1 identifies official versus commonly used nomenclatures.

Table 1-1. Nomenclature cross-reference list.

Common name	Official nomenclature
Case	Storage and shipping case
Compressor-dehydrator	Compressor-dehydrator, dental
Drying chamber	Dehydrator
Fan	Dryer cooling fan
Female quick-disconnect	Coupling, half, quick-disconnect, female
Male quick-disconnect	Coupling, half, quick-disconnect, male
Power switch	"ON"/"OFF" circuit breaker

1-9. Reporting and processing medical materiel complaints and/or quality improvement reports.

AR 40-61 prescribes procedures for submitting medical materiel complaints and/or quality improvement reports for the compressor-dehydrator.

1-10. Warranty information.

A warranty is not applicable.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-11. Equipment characteristics, capabilities, and features.

a. The compressor-dehydrator is a compact, portable, and self-contained unit that provides processed, compressed air free of oil, moisture, and particulate matter.

b. The unit contains an integral moisture drying assembly which automatically regenerates the drying agent.

c. The compressor-dehydrator includes a case and its lid is designed to serve as a sound suppressor and protective cover during operation.

d. The compressor-dehydrator, when used with a manifold assembly, will provide processed, compressed air to multiple patient ventilators.

1-12. Description of significant components.

a. Motor-compressor. The motor-compressor produces compressed air that requires additional processing. An intake silencer is mounted on the motor-compressor.

b. Fan. The fan provides a steady flow of air through the cooling coil. The fan operates continuously as long as the power switch is in the "ON" position.

c. Unloader valve. The unloader valve is used to vent the pressure from the compressor and to provide a circuit for air to flow from the drying chamber to the atmosphere.

d. Pressure switch. The pressure switch is mechanically operated by pressure in the air storage tank. The switch opens and closes the unloader valve and opens and closes the electrical circuit for the motor-compressor.

e. Storage tank. The storage tank holds the processed, compressed air and provides relatively stable pressure to operate attached equipment. A drain valve is located on the bottom of the tank to drain the air or water.

f. Humidity indicator. This indicator varies from pink to blue which denotes the amount of moisture in the processed air.

g. Pressure gauge. This gauge displays the pressure of the processed air.

h. Safety valve. This valve vents excessive air pressure if the primary pressure switch fails to operate properly.

i. Drying chamber. The drying chamber is used to hold desiccant that removes moisture from the compressed air.

j. Flow control valve. The flow control valve controls the flow of compressed air from the drying chamber to the storage tank during the pumping cycle and provides a metering orifice to expand processed air as it flows to the atmosphere during the purging cycle.

k. Case. The case is used to store the compressor-dehydrator when it is not in use and to serve as a shipping container. The lid of the case is designed to serve as a sound suppressor and protective cover during normal operation.

l. Power switch. The electrical power switch includes a circuit breaker as a protective device for the motor-compressor.

1-13. Tabulated data.

The tabulated data provides the specifications, physical characteristics, and other information for the compressor-dehydrator.

a. Specifications and physical characteristics. Tables 1-2 and 1-3 provide a broad range of specifications and physical characteristics.

Table 1-2. Specifications.

Electrical power	
Voltage	103.5 V to 126.5 V
Frequency	60 Hz
Current	19.5 A
Ambient temperature range	40°F (4.4°C) to 120°F (48.9°C)

Table 1-3. Physical characteristics.

Dimensions	
Length	24 3/4 in (62.87 cm)
Weight	23 in (58.42 cm)
Height	16 1/4 in (41.28 cm)
Weight	160 lbs (72.48 kg)
Normal operating load	3.8 ft^3/min
Maximum operating load	5.4 ft^3/min
Hoses (interconnecting to equipment)	2 10-ft (3.05 m) sections

b. Identification, instruction, and warning plates, decals, or markings.

(1) *Case.*

(a) Identification information as depicted on the case data plate is shown in figure 1-1.

(b) Instructions for operating the air relief valve are provided in figure 1-2.

(2) *Storage tank.*

(a) An identification data plate, which duplicates the manufacturer's information in figure 1-1, is affixed to the cylindrical tank.

(b) A decal, located on the outward side of the storage tank, providing important operational information is shown in figure 1-3.

(c) A decal, located on the end of the tank, providing precautionary information about draining the tank, is shown in figure 1-4.

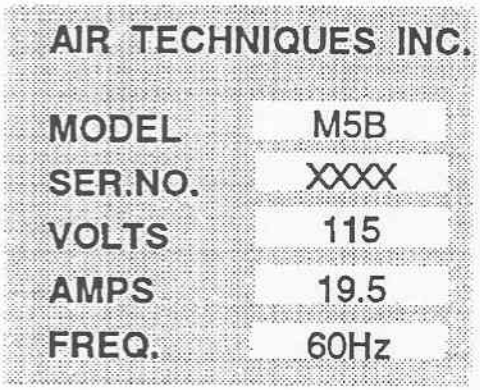

Figure 1-1. Case data plate.

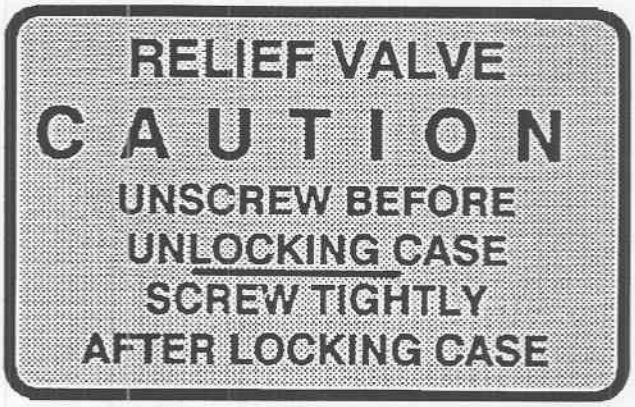

Figure 1-2. Air relief valve data plate.

ATTENTION OPERATOR

A) Use 115 VAC/60 Hertz power source only.

B) Check system operation: Compressor turns "on" (pumps-up) at 60 psig and turns "off" (purges moisture) at 80 psig.

C) To assure proper unit ventilation, check that raised transit case top rests securely on all four swivel posts.

D) Do not turn "off" compressor during the course of a normal work day. No-load operation provides for the purging of system moisture.

E) Allow compressor to operate up to 24 hours at no-load upon termination of hot and humid work day.

F) Check system moisture monitor daily. If monitor indicates "pink" (wet air), allow compressor to operate at no-load until indicator returns to "blue" (dry air).

G) If moisture monitor turns "white", discontinue use and install replacement desiccant dryer.

Figure 1-3. Storage tank decal.

DRAIN TANK DAILY

Figure 1-4. Tank drain decal.

(3) *Pressure switch.* Decals, located on the top and upper sides of the pressure switch box, providing critical operational information, are depicted at figures 1-5 and 1-6.

(4) *Electrical power cable.* A cardboard tag, affixed to the electrical power cable, providing electrical information is illustrated in figure 1-7.

PRESSURE SWITCH
FACTORY PRESET
60-80 PSI.

DO NOT CHANGE

Figure 1-5. Pressure switch decal.

ALWAYS DEPRESS RED TAB
WHILE SWITCHING
CIRCUIT BREAKER ON

Figure 1-6. Unloader valve instructional decal.

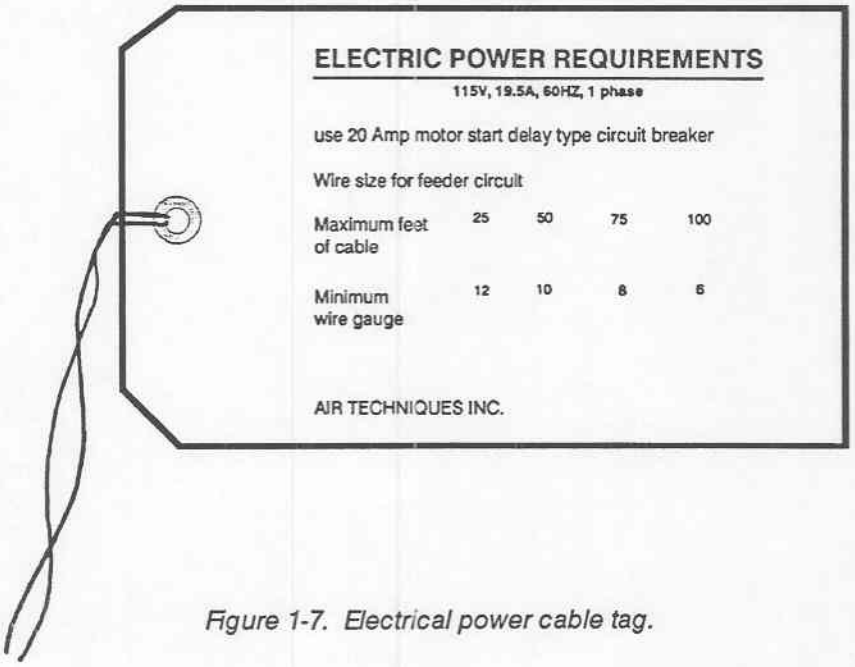

Figure 1-7. Electrical power cable tag.

1-14. Model differences.

Model differences are not applicable since this manual covers a single model and serial number grouping. However, design changes in assemblies, subassemblies, or components occur periodically. Information on such engineering changes will be published in supply bulletins and subsequent changes to this manual.

1-15. Safety, care, and handling.

a. Observe each WARNING, CAUTION, and NOTE in this manual. The use of electrical power and high pressure compressed air may be hazardous to personnel.

b. Ensure that the compressor-dehydrator is turned off when it is not used for over 24 hours.

c. Refer to paragraph 3-22 for guidance on cleaning the intake silencer element.

Section III. PRINCIPLES OF OPERATION

1-16. General.

The operation of the compressor-dehydrator consists of a pumping cycle and a purging cycle. During the pumping cycle, intake air is compressed, cooled, dried, and stored in the tank. During a purging cycle, a portion of the processed air in the storage tank is vented back through the drying chamber. These two cycles continue to automatically occur during the operation of the compressor-dehydrator. Throughout both cycles, the fan runs continuously and the processed air in the storage tank is supplied as needed.

1-17. Motor-compressor pumping cycle (fig 1-8).

Initially, with no pressure in the storage tank, the unloader valve and the pressure switch electrical contacts are closed. When the power switch is turned on, both the motor-compressor and the fan start. Compressed air from the motor-compressor is directed through the cooling coil, the drying chamber, flow control valve, and into the storage tank.

NOTE

The drying chamber contains a desiccant to remove moisture from the compressed air.

The flow control valve contains a check valve to allow the processed, compressed air to enter the storage tank. The gauge on the storage tank indicates the air pressure within the tank. The humidity indicator displays the amount of moisture in the stored air by its color (blue for dry and pink for wet). When the storage tank pressure reaches 80 psi, the pressure switch opens and stops the motor-compressor. The unloader valve is also opened to vent the compressor and drying chamber to the atmosphere. This ends the pumping cycle.

1-18. Motor-compressor purging cycle (fig 1-9).

The purging cycle begins automatically when the pumping cycle ends with the unloader valve open, the drying chamber vented to the atmosphere, and the processed air in the storage tank passing through a metering orifice in the flow control valve where it expands at a controlled rate. This large volume of dry, expanded air passes through the drying chamber and absorbs moisture from the desiccant. This moisture is then vented to the atmosphere. When the air pressure in the storage tank decreases to 60 psi, the pressure switch closes and the pumping cycle begins again.

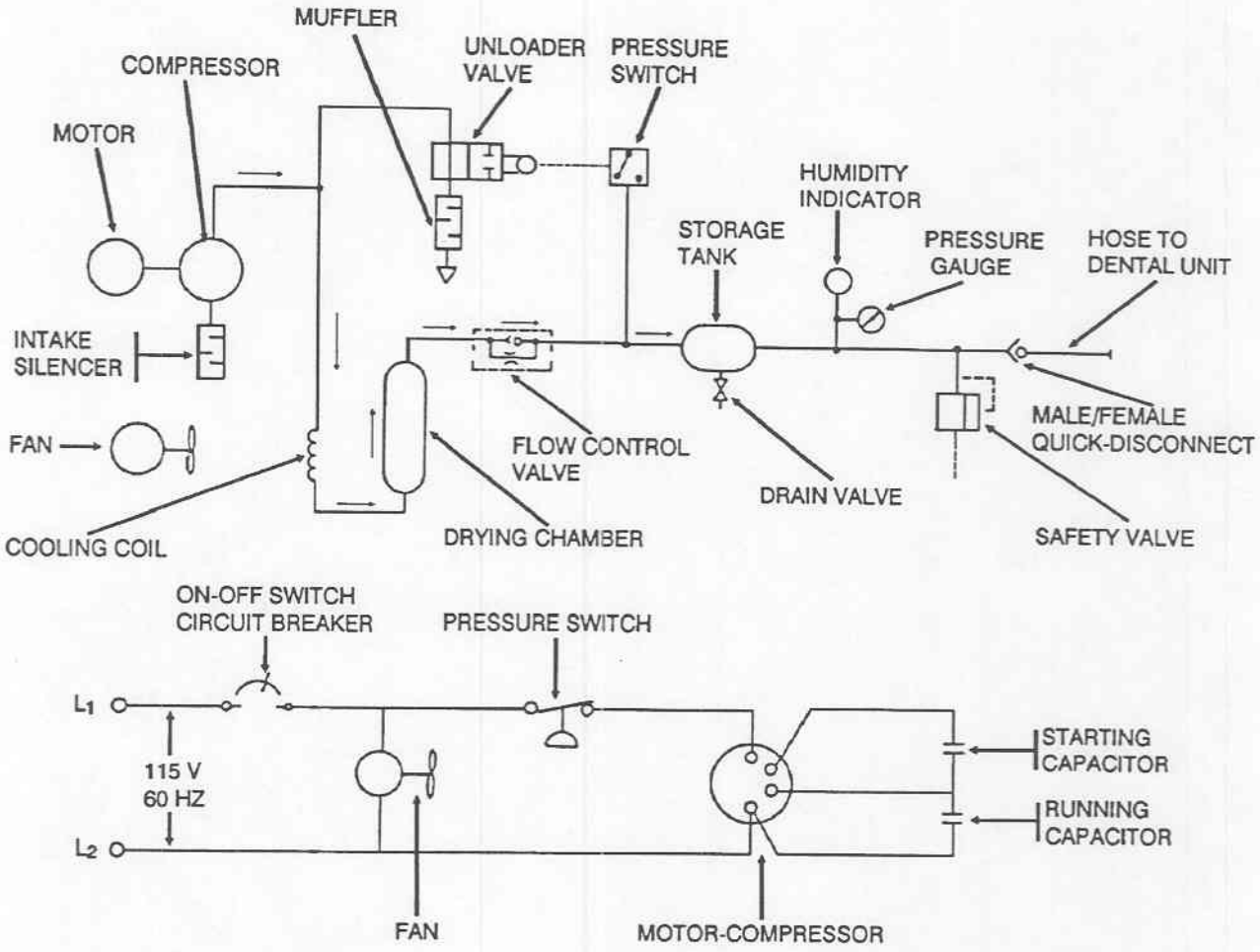

Figure 1-8. Motor-compressor pumping cycle.

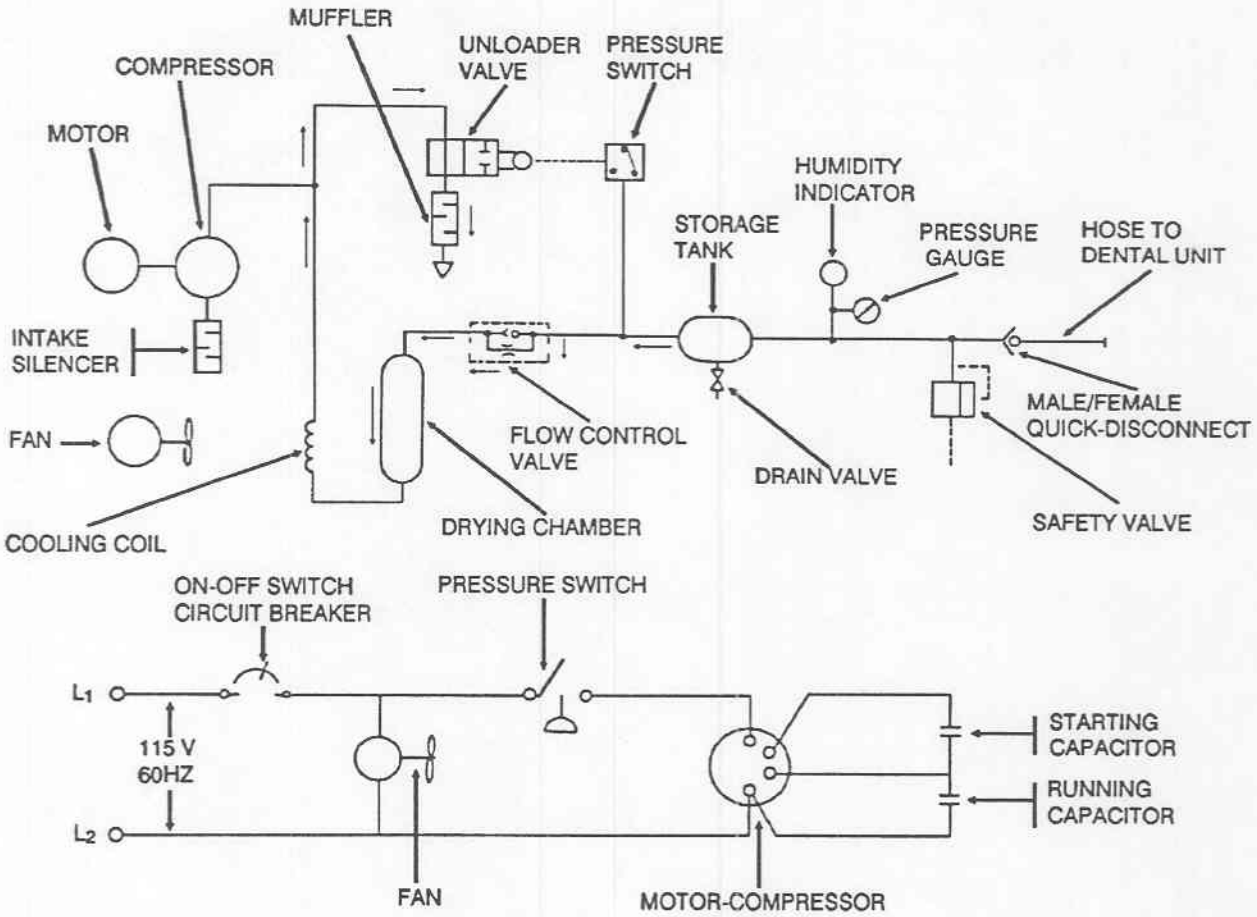

Figure 1-9. Motor-compressor purging cycle.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. OPERATING CONTROLS

2-1. Controls and indicators.

a. Operating controls consist of the power switch, the unloader valve, and the drain valve. Refer back to paragraph 1-12 for a description of these controls.

b. Operating indicators include the pressure gauge and the humidity indicator. Refer back to paragraph 1-12 for a description of these indicators. Additional operating indicators include the position of the power switch ("ON"/"OFF") and the hissing sound of air venting through the muffler during a motor-compressor purging cycle.

Section II. UNIT OPERATION

2-2. Initial start-up procedures.

The initial start-up procedures for each day of compressor-dehydrator operation are as follows:

a. Remove the lid of the case and set it aside.

b. Ensure that equipment supplied with processed air from the compressor-dehydrator is either turned off or the interconnecting hose is temporarily disconnected from the storage tank.

NOTE

Do not use any air from the storage tank during the initial start-up procedures.

c. Ensure that the pressure gauge is indicating "0."

d. Check and/or close the drain valve.

e. Set the power switch "ON" while simultaneously depressing the red tab on the unloader valve. The motor-compressor and the fan will begin to operate.

f. Observe the pressure gauge. The motor-compressor should shut off at 80 psi. The fan will continue to operate.

g. Listen for a hissing sound as air is automatically vented through the muffler. The motor-compressor should again start operation at 60 psi.

NOTE

Pumping and purging cycles will continue to alternate.

h. Check that the humidity indicator is blue. If the indicator is pink, refer to paragraph 3-20 for the regeneration procedures.

WARNING

Do not use the compressor-dehydrator when pink shows in the humidity indicator. This will damage the handpieces of the dental operating and treatment unit.

i. Connect the hose(s) if disconnected in the preceding paragraph 2-2b.

j. Replace the lid on the four case supports to suppress the noise of the motor-compressor.

CAUTION

Do not allow liquid to accumulate in the case.

2-3. Intermittent use procedures.

The compressor-dehydrator may be stopped and restarted after the initial daily start up to conserve electrical energy and minimize noise by using the following procedures.

a. Stopping procedures.

(1) Remove the lid of the case and set it aside.

(2) Push the power switch to the "OFF" position.

(3) Replace the lid on the four case supports.

b. Restarting procedures.

(1) Remove the lid of the case and set it aside.

(2) Ensure that the humidity indicator is blue.

(3) Push the power switch to the "ON" position while simultaneously depressing the red tab on the unloader valve.

(4) Replace the lid on the supports.

CAUTION

Failure to depress the red tab on the unloader valve may activate the circuit breaker and flip the power switch to the "OFF" position.

2-4. Normal operating load.

a. The maximum recommended operating load of the compressor-dehydrator under normal circumstances is 3.8 ft^3/min.

b. The load factors for various dental instruments are listed in table 2-1.

Table 2-1. Operating load factors.

Instrument	ft^3/min
Oral evacuator	2.5
Saliva ejector	1.0
Handpiece (high-speed)	1.3

NOTE

The normal recommended operating load is equivalent to the continuous operation of one high-speed handpiece and one oral evacuator at maximum capacity.

2-5. Shut-down procedures.

a. Remove the lid of the case and set it aside.

b. Push the power switch to the "OFF" position.

c. Place the loose end of the drain hose connected to the drain valve to the outside of the case.

d. Open the drain valve.

NOTE

Water drainage from the storage tank indicates that the compressor-dehydrator is being overloaded.

e. When the pressure gauge indicates "0," close the drain valve and place the drain hose back inside the case.

f. Replace the lid on the supports.

Section III. OPERATION OF AUXILIARY EQUIPMENT

2-6. Associated support items of equipment.

No associated support items of equipment are supplied with or dedicated solely for support of the compressor-dehydrator. Electrical power supplied by generators is required for numerous items of equipment.

2-7. Associated material.

The compressor-dehydrator provides processed, compressed air for the operation of a field dental operating and treatment unit. The compressor-dehydrator may also used to provide processed, compressed air for the operation of patient ventilators.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-8. High humidity conditions.

Operation of the compressor-dehydrator during periods of high humidity may result in the accumulation of moisture within the unit that cannot be eliminated by the normal pumping and purging cycles. Regeneration of the desiccant will be accomplished in accordance with the procedures in paragraph 3-20.

2-9. Operation of two dental units.

a. The compressor-dehydrator has the capability to provide sufficient air to support two dental units as a short-term expedient measure.

CAUTION

The maximum permissible operating load to support two dental units is 5.4 ft^3/min which is equivalent to the continuous operation of two saliva ejectors at maximum capacity or one oral evacuator and the intermittent operation of two high-speed handpieces.

b. If the operation in an expedient situation is required, refer to TM 8-6520-002-24&P, paragraph 1-17, for instructions to adjust the dental unit control block. This adjustment will permit higher air pressure to be delivered to the handpieces to ensure their peak efficiency when two dental units are operating simultaneously.

CAUTION

Operation of two dental units in an expedient situation may cause increased moisture to accumulate in the compressor-dehydrator and may require periodic regeneration. (Refer to para 3-20 of this manual).

CHAPTER 3

UNIT LEVEL MAINTENANCE

Section I. GENERAL INFORMATION

3-1. Overview.

Maintenance functions, both preventive and corrective, that are beyond the scope of the user are assigned to unit level medical equipment repairer personnel. These personnel will perform the majority of maintenance required for the equipment except for some tasks involving the motor-compressor, storage tank, and case. This chapter provides instructions and information to aid in performing the required tasks.

3-2. Tools and test equipment.

Common tools and test equipment required for maintenance of the equipment are listed in appendix B, section III. Refer to your unit's modified table of organization and equipment (MTOE) for authorized items.

3-3. Components of end item and basic issue items.

Components of end item and basic issue items are listed in appendix C, sections II and III.

3-4. Expendabie supplies.

Expendable and durable supplies and materials required for maintenance are listed in appendix D, section II.

3-5. Repair parts.

Repair parts required for unit level maintenance are listed in appendix E, section II.

3-6. Special tools.

Special tools required for maintenance of the compressor-dehydrator are listed in appendix E, section III.

Section II. SERVICE UPON RECEIPT OF EQUIPMENT

3-7. Unpacking and installing the compressor-dehydrator.

a. Unpacking the unit.

(1) Remove the compressor-dehydrator from the shipping carton and/or crate.

(2) Place the compressor-dehydrator no further than 20 feet from the equipment you are using.

NOTE

The compressor-dehydrator is designed for use outside patient treatment areas.

(3) Loosen the screw in the air relief valve on the lid of the case.

(4) Release the eight latches and remove the lid of the case. Set it aside.

(5) Ensure that the pressure gauge is indicating "0." If the storage tank is pressurized, release the pressure by opening the drain valve.

(6) Ensure that the drain valve is closed.

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(7) Ensure that the power switch is in the "OFF" position.

(8) Check the compressor-dehydrator for any damage from storage or shipment.

b. Installing the unit.

(1) Connect either one or two interconnecting hoses to a dental operating and treatment unit.

CAUTION

More than two interconnecting hoses (a combined length of 20 feet) may damage the compressor-dehydrator.

NOTE

Refer to TM 8-6520-002-24&P for additional information on connecting the compressor-dehydrator to a dental unit.

(2) Connect the electrical power cable to a 115-volt, 60-Hz source of power.

(3) Provide environmental protection for the compressor-dehydrator.

(4) Rotate the four case lid supports mounted on the motor-compressor so that they overlap the edges of the case at right angles.

(5) Place the lid on the supports.

Section III. LUBRICATION INSTRUCTIONS

3-8. General.

No lubrication of the unit is required.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-9. General.

a. The compressor-dehydrator must be inspected and serviced systematically to ensure that the unit is ready for operation at all times. Inspection will allow defects to be discovered and corrected before they result in serious damage or failure. Table 3-1 contains PMCS to be performed by unit level maintenance personnel.

b. Preventive maintenance is not limited to performing the checks and services listed in the PMCS table. There are things you should do any time you see they need to be done, such as checking for general cleanliness, observing for improper operational indicators, and maintaining the proper quantities of operating supplies.

c. The following is a list of the PMCS table headings with a description of the information in each column:

(1) *Item No*. This column shows the sequence in which to do the PMCS, and is used to identify the equipment area on the Equipment Inspection and Maintenance Worksheet, DA Form 2404.

(2) *Interval*. This column shows when each PMCS item is to be serviced; **B** - Before Operation, **D** - During Operation, **A** - After Operation, and **S** - Semi-annually. **B, D,** and **A** should be performed with daily use of the unit.

NOTE

When the equipment must be kept in continuous operation, check and service only those items that will not disrupt operation. Perform the complete daily checks and services when the equipment can be shut down.

(3) *Item to be Inspected and Procedure*. This column identifies the general area or specific part to be checked or serviced.

(4) *Equipment is not Ready/Available If:*. This column lists conditions that make the equipment unavailable or unusable.

Table 3-1. PMCS.

ITEM NO	INTERVAL B	D	A	S	ITEM TO BE INSPECTED AND PROCEDURE	EQUIPMENT IS NOT READY/AVAILABLE IF:
1.	X			X	**Compressor-dehydrator.**	
					a. Inspect the unit for any damaged hoses, tubes, cables, and other components.	Unit can't be operated properly.
					b. Inspect the unit for an excessive accumulation of dust or dirt. Particular attention should be given to the intake silencer and fan guard.	Unit overheats or does not operate correctly.
					c. Verify the performance of the unit by following the procedures in paragraphs 2-2, 2-3, 2-4, and 2-5.	Unit performance deviates more than 10 percent of specified parameters.
					d. Verify that the humidity indicator is blue.	The humidity indicator is blue but the desiccant can't be regenerated in accordance with the procedures in paragraph 3-20.
2.	X			X	**Air storage tank.**	
					a. Check that the tank does not leak by pushing the power switch to the "OFF" position and ensuring that the pressure holds at approximately 60 psi for several minutes.	The tank can't be properly pressurized or the tank leaks excessively.
					b. Check that the hose(s) can be properly connected.	The hose(s) can't be connected to the storage tank or the male/female quick-disconnect leaks.
					c. Ensure that the drain valve opens and closes properly.	The drain valve can't be opened or leaks when closed.
3.				X	**Case.**	
					a. Inspect the case for signs of damage or excessive wear.	The case can't be used to properly store or ship the unit.
					b. Check the air relief valve.	The air relief valve is inoperable, damaged, or missing.
					NOTE The following checks and services are not mandatory if the previous procedures indicate that the equipment is fully operational. However, you are encouraged to complete the procedures.	
4.	X	X	X	X	**Pressure gauge.** Check for dents, a cracked or broken dial cover, or gauge indications beyond the normal range.	The damaged pressure gauge precludes proper operation of the unit.
5.		X		X	**Running/starting capacitors.** Inspect for corrosion of the terminals or an indication of a chemical leak from the capacitor.	The motor-compressor fails to operate, short cycles, or the circuit breaker of the power switch is activated.

Table 3-1. PMCS - continued.

ITEM NO	INTERVAL				ITEM TO BE INSPECTED AND PROCEDURE	EQUIPMENT IS NOT READY/AVAILABLE IF:
	B	D	A	S		
6.	X			X	**Safety valve.** Test for operation.	The valve is inoperable.
7.		X		X	**Unloader valve.** Check for proper operation.	The valve is damaged or inoperable.
8.	X	X		X	**Humidity indicator.**	
					a. Inspect for dents, a cracked or broken indicator cover, or the lack of any color indication.	The humidity indicator precludes proper operation of the unit.
					b. Ensure that the indicator is blue.	The humidity indicator is other than blue.

3-10. Reporting deficiencies.

If operator personnel discover problems with the equipment during PMCS that they are unable to correct, they must report them. Refer to TB 38-750-2 and report the deficiency using the proper forms. Consult with your unit level medical equipment repairer if you need assistance.

Section V. FUNCTIONAL TESTING

3-11. General.

This section contains information for testing the compressor-dehydrator. Perform these tests following the initial receipt and installation of the unit and semiannually thereafter.

a. Preventive maintenance checks and services. Perform the PMCS listed in paragraph 3-9 before performing functional testing.

b. Functional testing. Perform functional testing using the following procedures.

(1) Observe the pressure gauge and time the pressure rise to 80 psi. The motor-compressor should shut off at 80 psi in less than 45 seconds. The fan will continue to operate.

(2) After the motor-compressor shuts off, observe the pressure gauge and time the decrease in pressure to 60 psi. Simultaneously, listen for a hissing sound as air is purged through the muffler indicating that the purging cycle is regenerating the desiccant. The motor-compressor should again start operation at 60 psi in less than 35 seconds.

(3) Time the motor-compressor pumping cycle again and the pressure should increase from 60 psi to 80 psi in less than 10 seconds.

NOTE

Pumping and purging cycles will continue to alternate.

Section VI. TROUBLESHOOTING

3-12. General.

a. Specific troubleshooting information for locating and correcting many of the operating malfunctions which may develop in the compressor-dehydrator is located in table 3-2. Symptoms are provided for common malfunctions. Each symptom is following by possible causes and corrective actions.

b. This manual cannot list all possible malfunctions. If a malfunction is not listed or is not determined by routine diagnostic procedures, notify your appropriate maintenance support unit.

Table 3-2. General troubleshooting.

SYMPTOM POSSIBLE CAUSE CORRECTIVE ACTION
1. MOTOR-COMPRESSOR WILL NOT START OR ATTEMPT TO START.
Defective electrical power receptacle.
Initiate corrective action to restore electrical power.
Defective electrical power connector or cable.
Repair or replace defective components.
Defective power switch.
Repair or replace the defective power switch.
Defective pressure switch.
Troubleshoot and repair or replace the pressure switch.
Defective starting capacitor.
Test the capacitor and replace as required.
2. MOTOR-COMPRESSOR ATTEMPTS TO START BUT WILL NOT RUN.
Motor-compressor cylinder pressurized.
Depress red unloader valve tab.
Defective unloader valve.
Repair or replace valve.
Defective running capacitor.
Replace the capacitor.
Bound motor-compressor.
Turn the power switch to "OFF." Insert a 6-mm Allen wrench into the hole in the finned aluminum housing on the end of the motor-compressor and attempt to turn it. If the fan impeller will not turn freely in both directions, refer to the maintenance instructions in paragraph 3-14.
Power switch (circuit breaker assembly) activates.
Restart the unit by depressing the red tab on the unloader valve while pushing the power switch to "ON." If the power switch continues to activate, check for low voltage or a dirty unloader valve and repair as necessary.

Table 3-2. General troubleshooting - continued.

SYMPTOM POSSIBLE CAUSE CORRECTIVE ACTION
3. MOTOR-COMPRESSOR OPERATES, BUT WITH UNUSUAL NOISE.
Loose or broken hoses or tubing.
Tighten loose connections, relocate improperly positioned components, or replace defective components.
Broken motor-compressor inlet or outlet valves.
NOTE A broken internal valve will cause the motor-compressor to vibrate.
Repair or replace the motor-compressor.
Defective bearings.
Replace the motor-compressor.
4. MOTOR-COMPRESSOR OPERATES, BUT WILL NOT BUILD UP PRESSURE TO 80 PSI.
Defective pressure gauge.
Replace gauge.
Defective pressure switch.
Repair or replace switch.
Obstructed intake silencer.
Replace the intake silencer.
CAUTION The intake silencer should be cleaned only as an expedient measure. Replace the cleaned silencer as soon as possible to preclude damage to the motor-compressor.
Drain valve leaking or open.
Close the valve or replace it.
Defective unloader valve.
Repair or replace the valve.
Defective internal motor-compressor components.
Repair or replace the motor-compressor.
5. HUMIDITY INDICATOR IS NOT BLUE.
Purging cycle not functioning properly.
Perform functional test procedures and repair as required.
Motor-compressor cycling too frequently.
Check for excessive load factors or leaks. Locate and repair problems.
Drying chamber saturated with moisture.
Regenerate the desiccant.

c. An electrical wiring diagram is provided (fig 3-1) to assist in the preceding general troubleshooting table. This illustration will also assist with additional detailed electrical and mechanical troubleshooting procedures. The dashed elliptical symbols are used to indicate sheathed electrical wiring and the dashed rectangular symbols are used to depict components or electrical assemblies. This combination of electrical and physical components or assemblies will allow the easy identification of both internal and external electrical connection points and decrease troubleshooting timeframes.

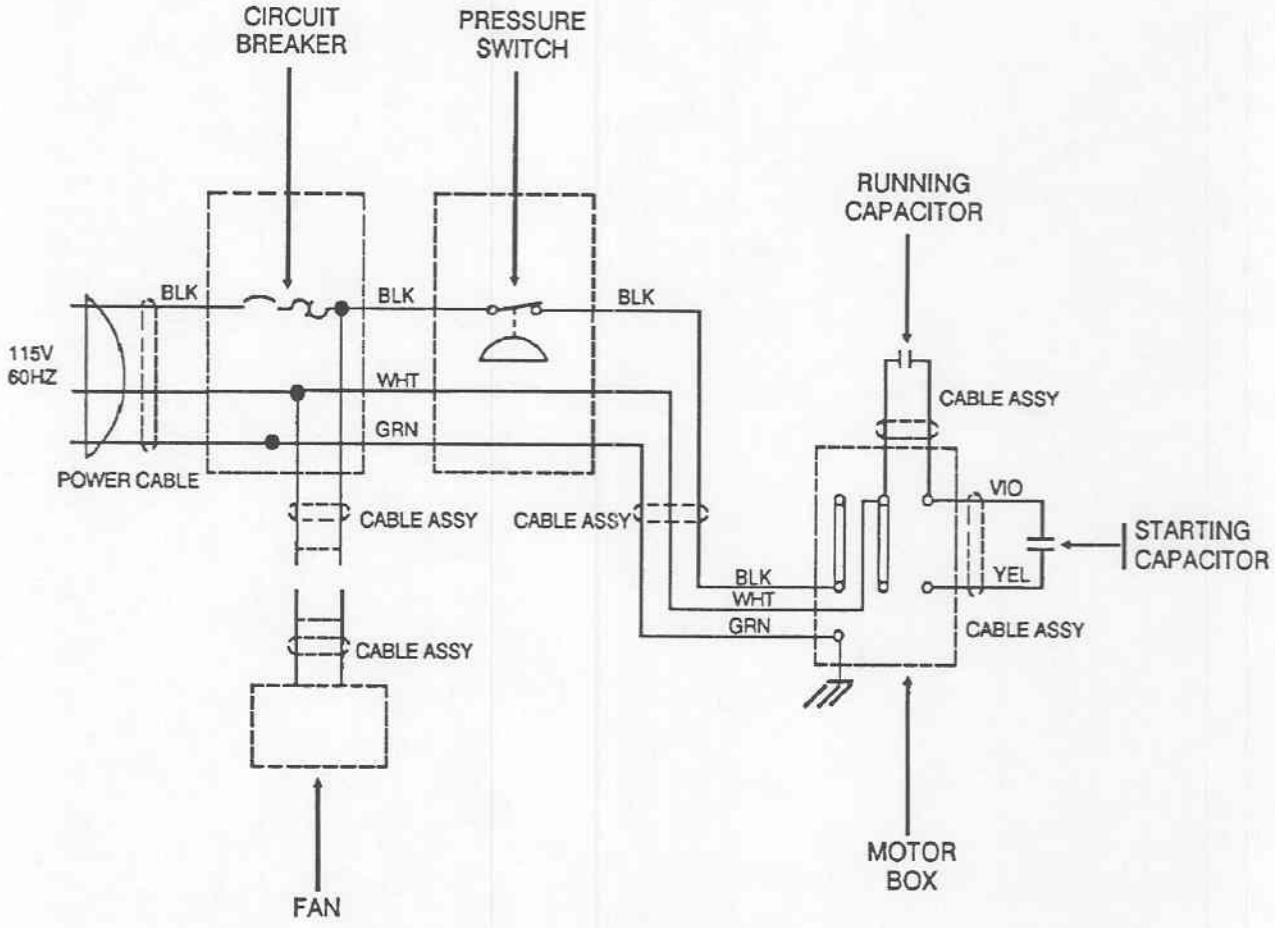


Figure 3-1. Electrical wiring diagram.

Section VII. MAINTENANCE INSTRUCTIONS

3-13. General.

a. This section of the manual contains procedures for the repair of defective assemblies or components and the subsequent repair or replacement of reparable exchange (RX) or new items.

b. Disassembled components or assemblies should be set aside and carefully arranged in the disassembly sequence to ease reassembly.

c. Procedures to remove the compressor-dehydrator from its case to allow easy access to the various assemblies and components are as follows:

(1) Disconnect the unit from the source of electrical power.

(2) Remove the four nuts, lock washers, and flat washers from the bolts securing the compressor-dehydrator base plate to the bottom of the case.

CAUTION

Ensure that the four bolts extending through the bottom of the case are not misplaced or lost. The four bolts have rubber washers under the bolt heads to ensure the waterproof integrity of the case.

(3) Lift the compressor-dehydrator out of the case.

(4) Inspect the sound suppressor foam and if it is damaged, remove it also.

d. Procedures to reinstall the compressor-dehydrator into its case are as follows:

(1) Ensure that the four bolts and their rubber washers are serviceable and in place through the bottom of the case.

(2) Install the sound suppressor foam if removed in the preceding removal sequence.

(3) Orient the compressor-dehydrator bolt holes in the base plate to the bolts in the case.

(4) Lift the compressor-dehydrator and lower it onto the four bolts.

(5) Replace the four flat washers, lock washers, and nuts. Tighten the nuts.

3-14. Motor-compressor (fig E-1 and fig E-6).

a. Valve checkout.

NOTE

The valve checkout procedure may provide an easy identification of a defective cylinder and preclude total disassembly of the motor-compressor.

(1) Disconnect the compressor-dehydrator from the source of electrical power.

(2) Disconnect the flexible air hoses connecting the compressor cylinders.

(3) Remove the intake silencer from the upper compressor cylinder.

(4) Reconnect the electrical power.

CAUTION

The compressor-dehydrator will be operating for the remainder of the valve checkout procedures.

(5) Push the power switch to the "ON" position.

(6) With the motor-compressor operating, check the suction of one cylinder at a time by placing your thumb over the open end of the cylinder elbow or tee.

NOTE

The upper cylinder will require the use of three fingers to block all tee openings.

(7) Compare the suction between cylinders which should be strong. Little or no suction will indicate either a defective inlet or outlet valve in that cylinder or cylinders.

(8) Turn off the compressor-dehydrator and disconnect it from the source of electrical power.

(9) Replace the intake silencer.

(10) Reconnect the flexible air hoses between the compressor cylinders.

b. Disassembly.

(1) Disconnect the compressor-dehydrator the source of electrical power.

(2) Disconnect both ends of the metal tube between the unloader valve and the compressor.

(3) Disconnect both ends of the flexible metal hose from between the unloader valve and the cooling coil.

(4) Disconnect both ends of the flexible metal hose from between the pressure switch and the storage tank.

(5) Loosen the hose clamps and remove the flexible air hoses connected from cylinder to cylinder of the compressor.

(6) Remove the intake silencer from the top cylinder.

(7) Disconnect the electrical cable for the fan from the terminals inside the power switch box.

(8) Remove the four nuts, lock washers, and flat washers from the bolts that fasten the motor-compressor to the base plate.

(9) Lift the motor-compressor from the base plate.

(10) Disconnect and remove the flexible metal hose from the top of the drying chamber and from the flow control valve.

(11) Remove the four bolts and lock washers from each defective cylinder.

WARNING

When more than one cylinder is disassembled at the same time, the components should be placed on a clean surface in the disassembly sequence to preclude damage or interchange of the components.

(12) Remove the cylinder head, valve assembly, seal, cylinder, and shim.

(13) Inspect the components for excessive wear or damage.

(14) Disassemble the front of the crankcase housing by removing the three bolts.

(15) Inspect the compression and expansion rings for excessive wear or damage. Carefully remove them from the piston if replacement is required.

(16) Remove the counterbalance by unscrewing one bolt and lock washer.

(17) Insert the special tool jacking bolts (identified in app E, sec III) into the two threaded holes in the crankshaft assembly. Then slowly turn the jacking bolts in equal increments to pull the piston assembly from the motor shaft.

NOTE

Remove the rear of the crankcase housing by removing the four bolts and lock washers if the motor or crankcase will be replaced.

c. Assembly.

(1) Replace the crankcase, if required, by positioning it onto the motor and replacing the four bolts and lock washers. Torque the bolts to 250 inch-pounds and apply a metal glue.

CAUTION

The front and rear halves of the crankcase are a matched assembly and must be replaced as a set.

(2) Install the original or replacement piston and counterbalance on the motor shaft with the shaft key in place. Replace the bolt and lock washer.

CAUTION

The piston and counterbalance are a matched assembly and must be replaced as a set.

(3) Replace the compression and expansion rings (if removed).

(4) Assemble the cylinder head and valve assembly.

(5) Apply a thin film of grease to the head seal.

(6) Install the cylinder and refasten with the four bolts and lock washers.

(7) Torque the bolts to 70 inch-pounds.

CAUTION

Check the cylinder clearance while rocking the piston between the top of the casting and the piston using a depth gauge. The clearance should be between 0.010 inch and 0.016 inch to avoid damage.

(8) Install an appropriate shim between the cylinder and crankcase, if required, to provide the correct clearance between the casting and the piston.

(9) Replace the motor-compressor onto the base plate and reinstall the four flat washers, lock washers, and nuts. Tighten securely.

(10) Reconnect the electrical cable to the terminals inside the power switch box.

(11) Replace the intake silencer.

(12) Reinstall the flexible air hoses from cylinder to cylinder. Tighten the hose clamps.

(13) Reconnect the flexible metal hose to the pressure switch and the storage tank.

(14) Replace the flexible metal hose to the unloader valve and the cooling coil.

(15) Replace the metal tube between the unloader valve and the compressor.

(16) Reconnect the flexible metal hose between the drying chamber and the flow control valve.

(17) Reconnect the electrical power and test the unit.

3-15. Drying chamber and cooling coil assembly (fig E-2).

a. Disassembly.

(1) Disconnect the compressor-dehydrator from the source of electrical power.

(2) Disconnect the electrical cable for the fan from the terminals inside the power switch box.

(3) Disconnect and remove the flexible metal hose from the top of the drying chamber and from the flow control valve.

(4) Disconnect the flexible metal hose from the cooling coil and the unloader valve.

(5) Remove the two nuts, lock washers, and flat washers from the two bolts fastening the drying chamber and the cooling coil assembly to the base plate.

(6) Remove components or disassemble additional subassemblies as required by both visual observation and reference to figure E-2.

b. Assembly.

(1) Reinstall subassemblies by reversing the operation of disassembly procedures.

(2) Reinstall the coiling coil assembly and the drying chamber and fasten it with two flat washers, lock washers, and nuts.

(3) Reconnect the flexible metal hose to the cooling coil and the unloader valve.

(4) Reconnect the flexible metal hose to the top of the drying chamber and the flow control valve.

(5) Replace the electrical cable for the fan to the terminals inside the power switch box.

(6) Reconnect the electrical power and test the unit.

3-16. Pressure switch and bracket assembly (fig 3-1 and fig E-3).

a. Disassembly.

(1) Disconnect the compressor-dehydrator from the source of electrical power.

(2) Remove the cover of the power switch box by removing the four screws.

(3) Disconnect the electrical cable for the fan from the terminals inside the power switch box.

(4) Remove the cover of the terminal box by removing the slotted-head screw.

(5) Remove the four screws, lock washers, and flat washers from the inside corners of the terminal box.

(6) Remove the black, green, and white wires from their connectors inside the terminal box by loosening their fastening screws.

(7) Remove the yellow, violet, blue, and brown capacitor wires from their connectors inside the terminal box by loosening their fastening screws.

NOTE

Draw a diagram denoting the position for each wire by color to ease replacement.

(8) Disconnect and remove the flexible metal hose between the pressure switch and the storage tank.

(9) Disconnect and remove the flexible metal hose between the unloader valve and the cooling coil.

(10) Lift the pressure switch and bracket assembly from above the motor-compressor and beside the terminal box.

(11) Remove components or continue disassembly as required by both visual observation and reference to figures 3-1 and E-3.

b. Assembly.

(1) Reverse the operation of the disassembly sequence for the pressure switch, capacitors, and bracket assembly or components as performed by visual observation and reference to figures 3-1 and E-3.

(2) Replace the pressure switch and bracket assembly above the motor-compressor and beside the terminal box.

(3) Replace the flexible metal hose between the unloader valve and the cooling coil.

(4) Replace the flexible metal hose between the pressure switch and the storage tank.

(5) Reconnect the yellow, violet, blue, and brown capacitor wires to their connectors inside the terminal box. Tighten the screws.

(6) Reconnect the black, green, and white wires inside the terminal box. Tighten the screws.

(7) Replace the terminal box by inserting the four flat washers, lock washers, and nuts to the bolts into the four corners of the box.

(8) Replace the cover of the terminal box and tighten the slotted head screw.

(9) Reconnect the electrical cable for the fan to the terminals inside the power switch box.

(10) Replace the cover of the power switch box and tighten the four screws.

(11) Reconnect the electrical power and test the unit.

3-17. Capacitors (fig E-1).

a. Running capacitor.

(1) *Disassembly.*

(a) Remove the rubber capacitor boot.

(b) Remove the electrical wires from the capacitor that connect to the motor-compressor.

(c) Loosen the two screws in the straps that hold the capacitor.

(d) Slide the capacitor out of the straps.

(e) Discard the capacitor in accordance with hazardous waste procedures.

(2) *Assembly.*

(a) Slide the replacement capacitor into the holding straps.

(b) Tighten the two screws in the straps.

(c) Replace the rubber capacitor boot.

(d) Reconnect the electrical wires.

b. Starting capacitor.

(1) *Disassembly.*

(a) Cut the electrical cable tie.

(b) Pry the capacitor away from the mounting bracket.

(c) Remove the plastic cap.

(d) Remove the electrical wires from the capacitor that connect to the motor-compressor.

(e) Remove and discard the capacitor.

(2) *Assembly.*

(a) Connect the electrical wires to the replacement capacitor.

(b) Replace the plastic cap.

(c) Push the capacitor into place.

(d) Replace the electrical cable tie.

3-18. Flow control valve (fig E-4).

a. Disassembly.

(1) Remove the cap nut and seal.

(2) Remove the helical compression spring, orifice seat, and orifice seal.

b. Service.

(1) Inspect all the components for wear, pock marks, dirt, or other signs of damage.

(2) Clean all components and/or replace them as required.

c. Assembly.

(1) Insert the orifice seal.

(2) Install the orifice seat and helical compression spring.

(3) Insert the cap nut seal.

(4) Replace the cap nut and tighten.

3-19. Unloader valve (fig E-5).

a. Disassembly.

(1) Remove the unloader valve from the pressure switch bracket by removing the hex nut and lock washer.

(2) Remove the inlet tee connector from the valve body.

(3) Remove the sediment strainer element from the valve body by pushing it forward through the inlet tee.

(4) Tilt the unloader valve assembly to remove the valve seat.

(5) Remove the muffler from the valve body.

b. Service.

(1) Clean the muffler.

(2) Inspect all components for wear, pock marks, dirt, or other signs of damage.

(3) Clean all components and/or replace them as required.

c. Assembly.

(1) Reinstall the muffler.

(2) Replace the valve seat.

(3) Reinstall the sediment strainer element by inserting it into the inlet tee body and pushing it forward through the body until it is flush with the edge of the tee toward the valve body.

(4) Reconnect the tee.

CAUTION

Never obstruct the muffler port in any manner to preclude damage to the motor-compressor.

(5) Reinstall the unloader valve into the pressure switch bracket and replace the lock washer and hex nut. Tighten the hex nut.

d. Adjustment.

(1) Remove the pressure switch cover by loosening the nut.

(2) Loosen the lock nut located inside the switch in the upper right-hand corner.

(3) Turn the adjusting screw counterclockwise until it is free of tension from the opposing pressure switch tab.

NOTE

Rotate the adjusting screw clockwise and counterclockwise when it is free of tension to acquire the exact location.

(4) Connect the compressor-dehydrator to electrical power.

(5) Operate the motor-compressor until it completes the pumping cycle and stops at 80 psi. The unloader valve should not allow any air to discharge.

WARNING

Disconnect the compressor-dehydrator from the source of electrical power to preclude the hazard of inadvertently contacting electrical voltage when making subsequent pressure adjustments.

(6) Turn the adjusting screw for the unloader valve inside the pressure switch box clockwise until air just begins to escape through the unloader valve.

NOTE

Use very light pressure on the adjusting screw with the screwdriver to prevent a false initial air escape setting.

(7) Observe the position of the adjusting screw slot and rotate the screw an additional 1-1/2 turns clockwise.

(8) Carefully tighten the locknut to prevent rotation of the pressure adjusting screw.

(9) Replace the pressure switch cover.

(10) Test the operation of the unloader valve by operating the motor-compressor in accordance with the procedures in paragraph 2-2.

3-20. Regeneration of desiccant.

The desiccant will be regenerated when the color is not fully blue by following the regeneration diagram in figure 3-2. The diagram sequence should be again followed after replacement of the indicator disk or replacement of the drying chamber.

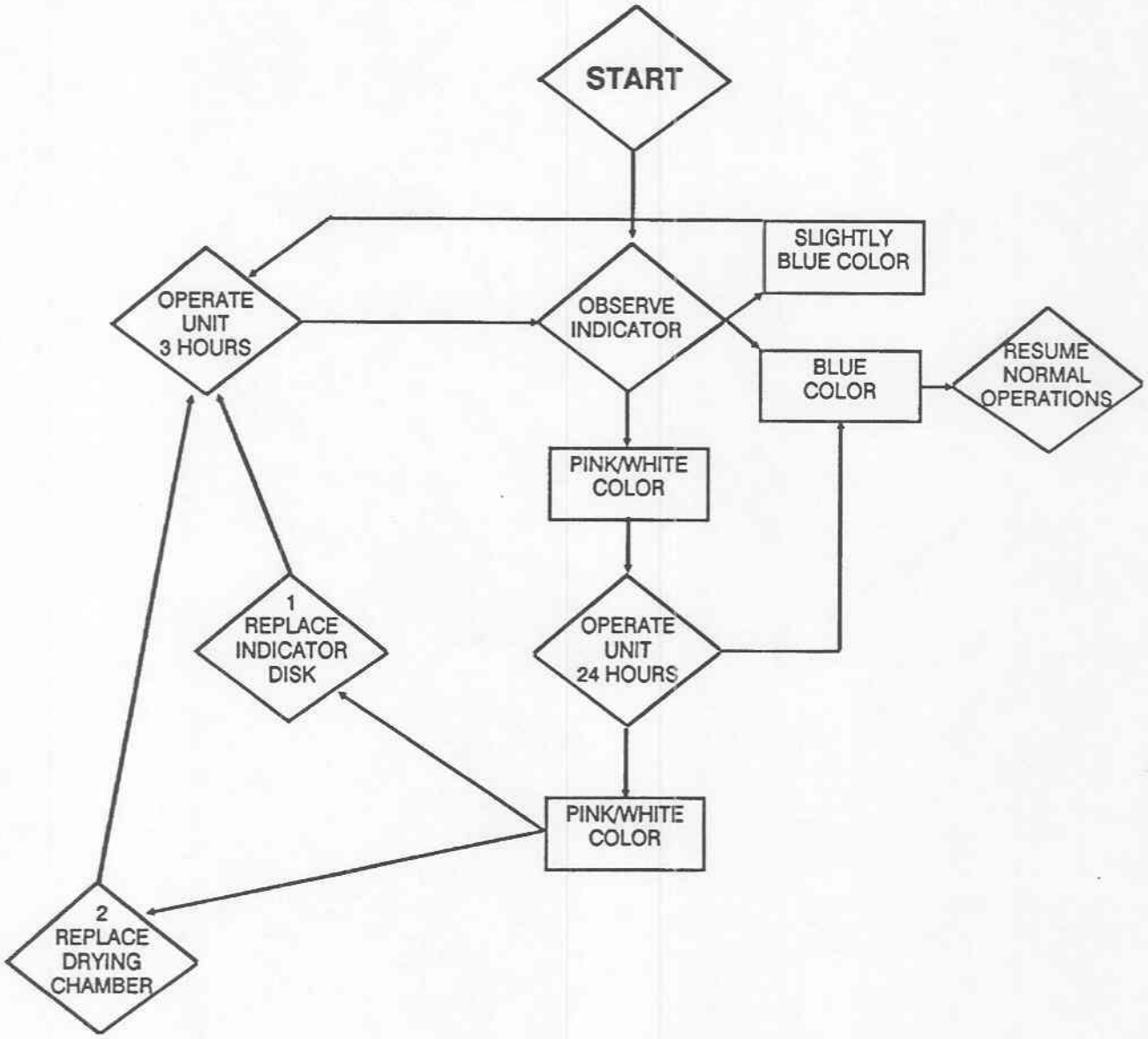


Figure 3-2. Regeneration diagram.

Section VIII. CLEANING PROCEDURES

3-21. Operator/user tasks.

a. Remove any accumulation of dust and dirt as it occurs.

b. Request your unit level medical equipment repairer personnel to remove the compressor-dehydrator from the case or when some disassembly is required for cleaning.

3-22. Medical equipment repairer tasks.

a. Remove the compressor-dehydrator from its case or provide appropriate disassembly when required for operator/user cleaning.

b. Replace the intake silencer when dirt or dust accumulates.

WARNING

Do not use any type of liquid cleanser or solvent to clean the intake silencer element. Residual matter or vapor may be passed through the compressor-dehydrator to patients and cause illness or death.

NOTE

The intake silencer element may be partially cleaned by removing it from the compressor head and blowing air through it in the reverse direction.

Section IX. STORAGE AND SHIPMENT PROCEDURES

3-23. Preparation for storage or shipment.

This section contains the procedures for preparing the compressor-dehydrator for storage or shipment within its case and crating it for commercial transportation.

a. Packing procedures.

(1) Disconnect the electrical power cable from the source of electrical power and coil it on top of the motor-compressor.

(2) Place the storage tank drain hose outside the case and drain the storage tank by opening the drain valve. Close the drain valve when the tank is empty and place the drain hose under the storage tank.

(3) Disconnect the hose(s) from the unit and the supported equipment. Coil the hoses and place them on top of the motor-compressor.

(4) Rotate the four case lid supports until they point inward.

(5) Place the lid on the case and secure the eight latches.

(6) Tighten the air relief valve on the lid of the case.

b. Shipping procedures. No special shipping procedures are required for unit movements. Crating is required for commercial transportation and/or long-term storage.

CHAPTER 4

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

Section I. GENERAL INFORMATION

4-1. Overview.

This chapter provides for maintenance that is beyond the capability, capacity, and authorization for unit level maintenance personnel.

4-2. Support maintenance services.

Specified components or assemblies identified in appendix B, section II, are only authorized for servicing by DS and GS maintenance units.

Section II. TROUBLESHOOTING

4-3. General.

There are no specific troubleshooting procedures at these levels of maintenance.

APPENDIX A
REFERENCES

A-1. Army regulations.

AR 40-61	Medical Logistics Policies and Procedures
AR 700-138	Army Logistics Readiness and Sustainability
AR 710-2	Supply Policy Below the Wholesale Level
AR 725-50	Requisitioning, Receipt, and Issue System
AR 750-1	Army Materiel Maintenance Policy and Retail Maintenance Operations
AR 750-43	Test, Measurement, and Diagnostic Equipment Program

A-2. Technical manuals.

TM 8-6500-001-10-PMCS	Operator's Preventive Maintenance Checks and Services for Reportable Medical Equipment
TM 8-6520-002-24&P	Dental Operating and Treatment Unit, Field, Portable, ADEC Model 3406 Porta-Cart
TM-DPSC-6500-RPL	Medical Materiel: Medical Repair Parts Reference List

A-3. Technical bulletins.

TB 8-6500-MPL	Mandatory Parts List for Medical Equipment
TB 38-750-2	Maintenance Management Procedures for Medical Equipment
TB 43-180	Calibration and Repair Requirements for the Maintenance of Army Materiel
TB 740-10/DLAM 4155.5/AFR 67-43	Quality Control, Depot Storage Standards, Appendix M, Medical Supplies
TB 750-8-1	Maintenance Expenditure Limits for Medical Materiel: FSC Groups (Medical Only)

A-4. Field manual.

FM 21-11	First Aid for Soldiers

A-5. Supply bulletin.

SB 700-20	Army Adopted/Other Items Selected for Authorization/List of Reportable Items

A-6. Other publications.

(This publication may be obtained from Commander, U.S. Army Medical Materiel Agency, ATTN: SGMMA-M, Frederick, MD 21702-5001.)

Technical Manual, Air Techniques, Inc.

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance levels.

c. Section III lists the tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions, explanatory notes, and/or illustrations required for a particular maintenance function.

B-2. Explanation of columns in section II.

a. Group Number, Column 1. The assembly group number (Group No.) column is a numerical group assigned to each assembly. The applicable assembly groups are listed in the maintenance allocation chart (MAC) in disassembly sequence beginning with the first assembly removed in a top down disassembly sequence.

b. Assembly Group, Column 2. This column contains a brief description of the components of each assembly group.

c. Maintenance Functions, Column 3. This column lists the various maintenance functions (A through K) and indicates the lowest maintenance level authorized to perform these functions. The symbol designations for the various maintenance levels are as follows:

C - Operator or crew

O - Unit maintenance

F - Direct support maintenance

H - General support maintenance

D - Depot maintenance

The maintenance functions are defined as follows:

A - Inspect. To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

B - Test. To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

C - Service. To clean, to preserve, to charge, and to add lubricants, cooling agents, and air. If it is desired that elements, such as painting and lubricating, be defined separately, they may be so listed.

D - Adjust. To rectify to the extent necessary to bring into proper operating range.

E - Align. To adjust specified variable elements of an item to bring it to optimum performance.

F - Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

G - Install. To set for use in an operational environment such as tents or International Standards Organization shelters.

H - Replace. To replace unserviceable items with serviceable like items.

I - Repair. Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage to a specific failure. Repair may be accomplished at each level of maintenance.

J - Overhaul. Normally the highest degree of maintenance performed by the Army in order to minimize time work in process consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by a maintenance standard in technical publications for each item of equipment. Overhaul normally does not return an item to like new condition.

K - Rebuild. The highest degree of material maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance level.

d. Tools and Equipment, Column 4. This column is provided for referencing by code, the tools and test equipment (sec III) required to perform the maintenance functions.

e. Remarks, Column 5. This column is provided for referencing by code, the remarks (sec IV) pertinent to the maintenance functions.

B-3. Explanation of columns in section III.

a. Reference Code, Column 1. This column correlates to section II, column 4.

b. Maintenance Level, Column 2. This column identifies the maintenance levels using the tools and test equipment.

c. Nomenclature, Column 3. This column identifies the tools and test equipment.

d. National Stock Number, Column 4. This column provides the national stock number (NSN) of the specific tools or test equipment.

B-4. Explanation of columns in section IV.

a. Reference Code, Column 1. This column correlates to section II, column 5.

b. Remarks, Column 2. This column provides supplemental information or explanatory notes pertinent to the maintenance function in section II.

Section II. MAINTENANCE ALLOCATION CHART FOR COMPRESSOR-DEHYDRATOR

(1) GROUP NO.	(2) ASSEMBLY GROUP	(3) MAINTENANCE FUNCTIONS A	B	C	D	E	F	G	H	I	J	K	(4) TOOLS AND EQUIPMENT	(5) REMARKS
00	Compressor-Dehydrator	O 1.0	O 0.5	O 0.3	O 0.5				O 2.2	O 3.4	F 8.0	D 12.0	01, 02, 03, 04, 05	CODE A, B, and C
01	Motor-compressor												01, 02, 03, 04, 05	CODE A, B
011	Motor		O 0.3	O 0.1					O 1.5	O 0.6		D 2.4		
012	Compressor		O 0.5						O 1.2	O 1.8		D 2.6		
013	Intake Silencer		O 0.1						O 0.1					
02	Fan												01, 02, 04, 05	CODE A
021	Motor		O 0.2						O 0.3	O 0.4				
022	Fan Blade	O 0.1				O 0.2			O 0.3					
03	Cooling Coil	O 0.2							O 0.8				01, 02	
04	Drying Chamber	O 0.5		O 0.3					O 0.8	O 1.0			01, 02	
05	Unloader Valve	O 0.7		O 0.3					O 0.4	O 0.5			01, 02	
06	Flow Control Valve	O 0.3		O 0.2					O 0.4	O 0.6			01, 02	
07	Pressure Switch		O 0.4	O 0.3					O 0.3	O 0.4			01, 02, 04, 05	

Section II. MAINTENANCE ALLOCATION CHART FOR COMPRESSOR-DEHYDRATOR

(1) GROUP NO.	(2) ASSEMBLY GROUP	(3) MAINTENANCE FUNCTIONS A	B	C	D	E	F	G	H	I	J	K	(4) TOOLS AND EQUIPMENT	(5) REMARKS
08	Storage Tank												01, 02, 03	CODE A
081	Tank	O 0.4							O 0.6					
082	Drain Valve	O 0.1							O 0.1					
09	Drying Chamber												01, 02	CODE A
091	Disk	O 0.6							O 0.3					
092	Tank	O 0.4							O 0.4					
10	Pressure Gauge		O 0.2						O 0.1	O 0.2			01, 02	
11	Safety Valve		O 0.2						O 0.3	O 0.4			01, 02, 04, 05	
12	Case	O 0.1								F 1.0	D 2.0		01, 02, 03	
121	Air Relief Valve	O 0.2							O 0.2				01, 02	
122	Latch	O 0.1							O 0.4				01, 02	

Section III. TOOLS AND TEST EQUIPMENT FOR COMPRESSOR-DEHYDRATOR

(1) REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER
01	O,F,H,D	Tool Kit, Medical Equipment Maintenance and Repair: Repairmans	5180-00-611-7923
02	O,F,H,D	Tool Kit, Medical Equipment Maintenance and Repair: Organizational	5180-00-611-7924
03	F,H	Shop Equipment, Medical Maintenance: Depot (MEDSOM) Maintenance	4940-00-594-6455
04	O,F,H,D	Multimeter, AN/USM 486	6625-01-145-2430
		or	
		Multimeter, AN/PSM 45A	6625-01-265-6000
05	O,F,H,D	Tester, Current Leakage, TS2414/P	6625-01-142-8233

Section IV. REMARKS FOR COMPRESSOR-DEHYDRATOR

(1) REFERENCE CODE	(2) REMARKS
A	Tools and test equipment are listed for each assembly group.
B	Units without the special tools identified in Appendix E will require either GS, DS, or depot level maintenance support for repair of the motor-compressor.
C	Perform an annual electrical safety inspection and test. Perform the inspection and test after repair or replacement of electrical components.

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

C-1. Scope.

This appendix lists components of end item and basic issue items for the equipment to help you inventory items required for safe and efficient operation.

C-2. General.

The Components of End Item and Basic Issue Items lists are divided into the following sections.

a. Section II. Components of End Item. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts.

b. Section III. Basic Issue Items. These are the minimum essential items required to place the equipment in operation, to operate it, and to perform emergency repairs. Basic issue items must be with the equipment during operation and whenever it is transferred between property accounts. This manual is your authority to request or requisition basic issue items, based on MTOE authorization of the end item.

C-3. Explanation of columns.

The following provides an explanation of columns found in both listings:

a. Item Number, Column 1. This column indicates the item number assigned to the item.

b. National Stock Number, Column 2. This column indicates the national stock number assigned to the item.

c. Description, Column 3. This column indicates the federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the commercial and government entity (CAGE) code in parentheses followed by the part number.

d. Unit of Measure, Column 4. This column indicates the unit of measure used in performing the actual operational or maintenance function. This measure is expressed by a two-character alphabetical abbreviation. These abbreviations are listed in the glossary.

e. Quantity, Column 5. This column indicates the quantity (QTY) of the item(s) provided with the equipment.

Section II. COMPONENTS OF END ITEM FOR COMPRESSOR-DEHYDRATOR

(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
1		Hose, Air Supply Assembly (53542) 88112	EA	2

Section III. BASIC ISSUE ITEMS FOR COMPRESSOR-DEHYDRATOR

(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
1		Technical Manual (Commercial) (53542) 88119-C	EA	2
2		Case, with Sound Suppressor Foam (53542) 88103	EA	1

APPENDIX D

EXPENDABLE AND DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. Scope.

This appendix lists expendable and durable supplies and materials that are required to maintain the equipment. This listing is authorization to requisition and retain the items if not otherwise authorized.

D-2. Explanation of columns.

a. Item Number, Column 1. The item number (Item No.) is sequentially assigned.

b. Level, Column 2. This column identifies the lowest level of maintenance that requires the listed item. An explanation of the alphabetical character is provided in appendix B, section I of this manual.

c. National Stock Number, Column 3. This column indicates the national stock number assigned to the item.

d. Description, Column 4. This column indicates the federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the CAGE code in parentheses followed by the part number.

e. Unit of Measure, Column 5. This column indicates the unit of measure used in performing the actual operational or maintenance function. This measure is expressed by a two-character alphabetical abbreviation. These abbreviations are listed in the glossary.

f. Quantity, Column 6. This column indicates the quantity (QTY) of the item(s) for support of the equipment.

Section II. EXPENDABLE AND DURABLE SUPPLIES AND MATERIALS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) UNIT OF MEASURE	(6) QTY
1	O	7920-01-004-7847	Cloth, Cleaning (97327) Rymple Cloth 301	RO	1
2	O	7920-00-543-7148	Brush, Dusting (81348) HB00190	EA	1
3	O	8030-00-889-3534	Tape, Teflon, 3/10 in (81349) MIL-T-27730	RO	1
4	O	5970-00-419-4290	Tape, Electrical (81349) MIL-I-24391	RO	1
5	O	5975-00-043-3403	Tie, Cable, Locking, Nylon (53542) 55716	PG	1
6	O	6145-00-117-8858	Cable, Power, Electrical, 3-Conductor (53542) 88083	RO	1

APPENDIX E

REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

E-1. Scope.

This manual lists spare and repair parts, special tools, special test equipment; and other special support equipment required for the performance of unit level, direct support, general support, and depot level maintenance. It authorizes the requisitioning and issue of spare and repair parts in consonance with the MAC (app B).

E-2. General.

The Repair Parts and Special Tools List is divided into the following sections:

a. Repair Parts, Section II. A list of repair parts authorized for the performance of maintenance in figure number and item number sequence.

b. Special Tools, Test, and Support Equipment, Section III. A list of special tools, test, and support equipment authorized for the performance of maintenance.

E-3. Explanation of columns in section II.

a. Illustration, Column 1.

(1) *Figure Number.* This column indicates the figure number (Fig No.) of the illustration on which the item is shown.

(2) *Item Number.* This column indicates the item number (Item No.) used to identify each item on the illustration.

b. National Stock Number, Column 2. This column indicates the national stock number assigned to the item.

c. Description, Column 3. This column indicates the federal item name of the item. The last line for each item indicates the CAGE code in parentheses followed by the part number.

d. Unit of Measure, Column 4. This column indicates the unit of measure used in performing the actual operational or maintenance function. This measure is expressed by a two-character alphabetical abbreviation.

e. Quantity, Column 5. This column indicates the quantity (QTY) of the item(s) to be used with or on the illustrated component, assembly, module, or end item. The abbreviation "AR" indicates "as required."

E-4. Explanation of columns in section III.

a. Item Number, Column 1. This number is sequentially assigned.

b. Level, Column 2. This column identifies the lowest level of maintenance that requires the listed item. An explanation of the alphabetical character is provided in appendix B, section I of this manual.

c. National Stock Number, Column 3. This column indicates the national stock number assigned to the item.

d. Description, Column 4. This column indicates the federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the CAGE code in parentheses followed by the part number.

e. Unit of Measure, Column 5. This column indicates the unit of measure used in performing the actual operational or maintenance function. This measure is expressed by a two-character alphabetical abbreviation.

f. Quantity, Column 6. This column indicates the quantity (QTY) of the item(s) to be used with or on the equipment.

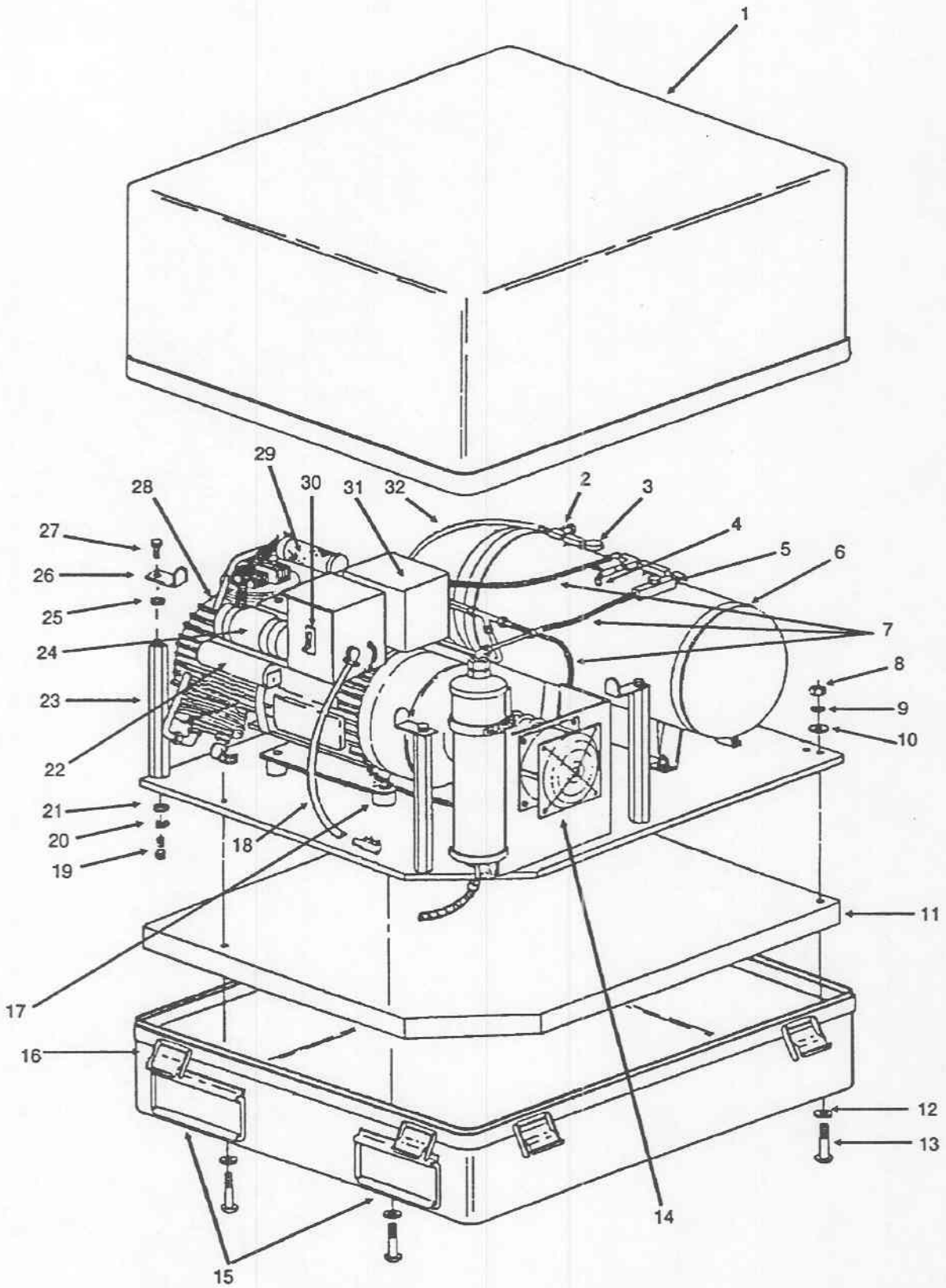


Figure E-1. Compressor-dehydrator.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-1	1		Case, Storage and Shipping w/Sound Suppressor Foam (53542) 88103	EA	1
E-1	2	6685-01-291-4376	Indicator, Humidity (53542) 60013	EA	1
E-1	3	6685-01-291-4391	Gauge, Pressure, Dial Indicating (53542) 52015	EA	1
E-1	4	4820-01-287-8847	Valve, Safety Release (53542) 60017	EA	1
E-1	5	4820-01-295-7191	Valve, Flow Control (53542) 88076	EA	1
E-1	6	6520-01-296-5056	Tank, Storage (53542) 80015	EA	1
E-1	7	4720-01-295-7198	Hose, Flexible, Metallic (53542) 88080	EA	3
E-1	8		Nut, Hex, 5/16-18 (53542) 30053	EA	4
E-1	9		Washer, Split, (Lock), 5/16 in id (53542) 30102	EA	4
E-1	10		Washer, Flat, 5/16 in id (53542) 30131	EA	4
E-1	11		Foam, Sound Suppressor (53542) 88028	EA	1
E-1	12		Washer, Rubber (53542) 88073	EA	4
E-1	13		Bolt, Step, 5/16-18 by 3 in (53542) 88074	EA	4
E-1	14		Dryer and Cooling Assembly (53542) 88008V	EA	1
E-1	15		Handle, Folding (53542) Not Available	EA	4
E-1	16	5340-01-044-6721	Latch, Case (51840) 22000750	EA	8
E-1	17		Support, Motor-Compressor (53542) 88034	EA	4

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-1	18		Cable, Power, Electrical, 3-conductor (53542) 88083	EA	1
E-1	19		Bolt, Hex Head, 5/16-18 by 1 in (53542) 30086	EA	4
E-1	20		Washer, Split (Lock), 5/16 in id (53542) 30102	EA	4
E-1	21		Washer, Flat, 5/16 in id (53542) 30131	EA	4
E-1	22	5910-01-295-7188	Capacitor, Fixed, Electrolytic (Starting) (53542) 80176	EA	1
E-1	23		Support Post (53542) 88036	EA	4
E-1	24	5910-01-297-4152	Capacitor, Fixed, Electrolytic (Running) (53542) 80177R	EA	1
E-1	25		Washer, Spring, 22.5 mm od by 11.2 mm id by 0.8 mm thick (53542) 30361	EA	4
E-1	26		Arm, Swivel (53542) 88037	EA	4
E-1	27		Bolt, Hex Head, 5/16-18 by 1/2 in (53542) 30080	EA	4
E-1	28		Compressor (53542) 88202	AY	1
E-1	29		Intake Silencer (53542) 80050	EA	1
E-1	30	5925-01-295-4789	Circuit Breaker (53542) 88042	EA	1
E-1	31		Switch, Pressure Assembly (53542) 88018V	AY	1
E-1	32	4720-01-295-7200	Hose, Air (53542) 88112	EA	2
E-1	*	4710-01-295-7233	Tube Assembly, Metallic (53542) 88195	EA	1

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-1	*	4720-01-295-7198	Hose, drain (53542) 88080	EA	1
E-1	*		Clamp, Hose, Flexible (53542) 83107	EA	4
E-1	*		Outlet Assembly, Tank (53542) 88013	EA	1
E-1	*		Inlet Assembly, Tank (53542) 88012	EA	1

* Indicates parts that are not shown in the illustration.

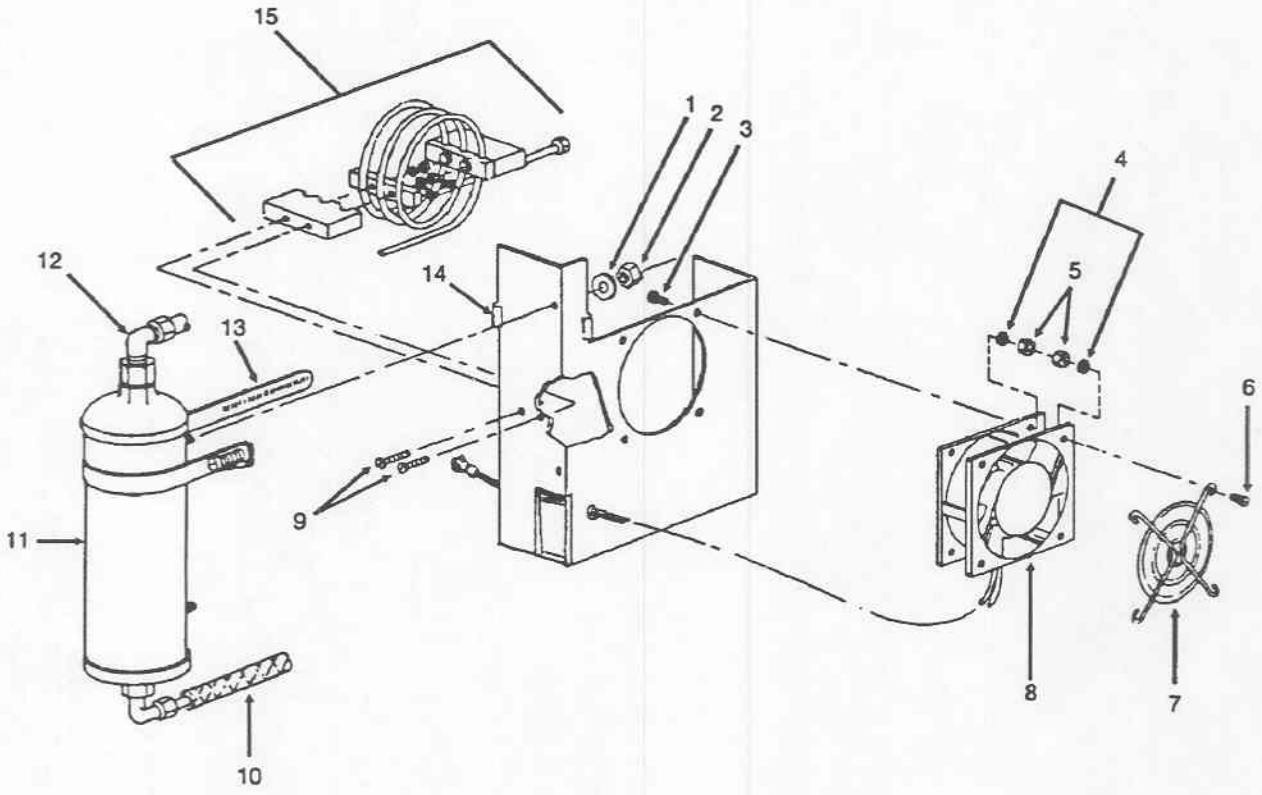


Figure E-2. Drying chamber and cooling coil assemblies.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-2	1		Washer, Split (Lock), 1/4 in id (53542) 30022	EA	1
E-2	2		Nut, Hex Head, 1/4-20 (53542) 30049	EA	2
E-2	3		Screw, Binding Head, 6-32 by 5/8 in (53542) 30133	EA	4
E-2	4		Washer, Split (Lock), No. 6 (53542) 30209	EA	8
E-2	5		Nut, Hex Head, 6-32 (53542) 30017	EA	8
E-2	6		Screw, Binding Head, 6-32 by 5/8 in (53542) 30133	EA	4
E-2	7		Guard, Fan (53542) 80517	EA	1
E-2	8	4140-01-295-7195	Fan, Circulating (53542) 80515	EA	1
E-2	9		Screw, Flat Head, 1/4-20 by 2 3/4 in (53542) 30289	EA	4
E-2	10	4720-01-295-7198	Hose, Flexible, Metallic (53542) 88080	EA	1
E-2	11	4440-01-061-6604	Dehydrator Unit (Drying Chamber Assembly) (53542) 88011	EA	1
E-2	12		Elbow, 1/4 in Pipe by 3/8 in Tubing (53542) 80017	EA	2
E-2	13		Clamp, Hose, 4-1/6 in by 5 in dia (53542) 40234	EA	1
E-2	14		Spacer, Split (53542) 88101	EA	2
E-2	15	4130-01-297-4316	Cooling Tower (Coil) (53542) 88115	EA	1

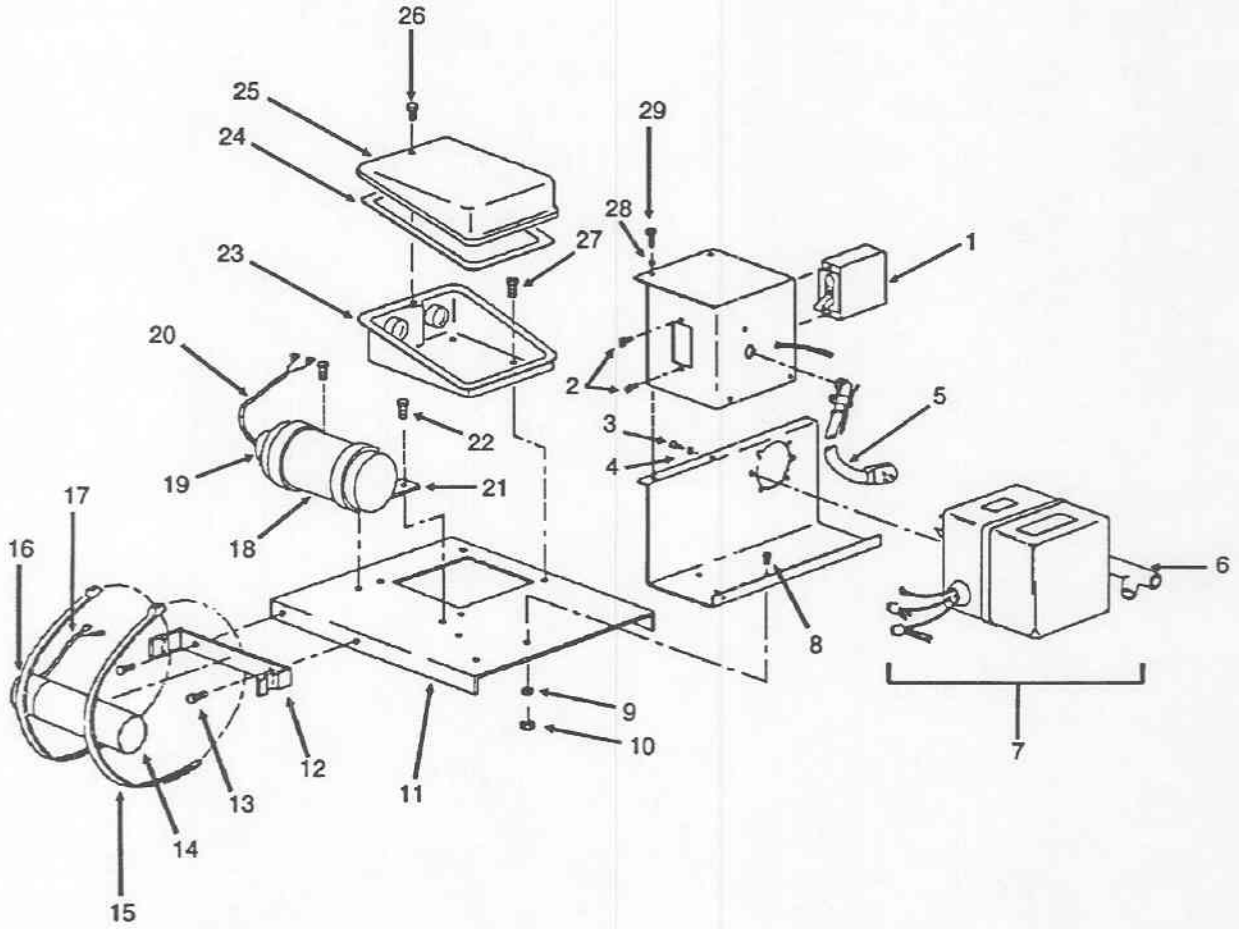


Figure E-3. Electrical assemblies.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-3	18	5910-01-297-4152	Capacitor, Fixed, Electrolytic (Running) (53542) 80177R	EA	1
E-3	19		Boot, Rubber, Running Capacitor (53542) 80091	EA	1
E-3	20		Assembly Cable, Running Capacitor to Motor (53542) 88204	EA	1
E-3	21		Clamp, Capacitor (53542) 80178-4	EA	2
E-3	22		Screw, Phillips Pan Head, Type B, Self-tapping, No. 8 by 3/8 in (53542) 88209	EA	2
E-3	23		Box, Electrical (53542) 89401R-1M	EA	1
E-3	24	5330-01-297-4161	Gasket (53542) 89285-3	EA	1
E-3	25		Cover, Box, Electrical (53542) 89285-2	EA	1
E-3	26		Screw, Type B, No. 10 by 3/8 in (53542) 30901	EA	1
E-3	27		Screw, Pan Head, Slotted, M5-16 (53542) 41170	EA	4
E-3	28		Washer, Split (Lock), No. 6, Internal Teeth (53542) 30209	EA	4
E-3	29		Screw, Pan Head, Type F, 6-5/16 in (53542) 30316	EA	4
E-3	*		Contactor, Electrical (53542) 88193	EA	1

* Indicates a part that is not shown in the illustration.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-3	1	5925-01-295-4789	Circuit Breaker (53542) 88042	EA	1
E-3	2		Screw, Binding Head, 6-32 by 1/4 in (53542) 30023	EA	2
E-3	3		Screw, Pan Head, 8-32 by 1/2 in (53542) 30207	EA	3
E-3	4		Washer, Split (Lock), No. 8 (53542) 30202	EA	3
E-3	5		Cable, Electrical Assembly (53542) 88083	EA	1
E-3	6	4820-01-299-1017	Valve, Unloader (53542) 80325	EA	1
E-3	7	6520-01-296-5055	Switch, Pressure Assembly (53542) 88018V	EA	1
E-3	8		Screw, Binding Head, 10-32 by 1/2 in (53542) 30106	EA	3
E-3	9		Washer, Split (Lock), No. 10 (53542) 30201	EA	3
E-3	10		Nut, Hex Head, 10-32 (53542) 30091	EA	3
E-3	11		Plate, Mounting (53542) 88201	EA	1
E-3	12		Bracket, Mounting, Starting Capacitor (53542) 80178-5	EA	1
E-3	13		Screw, Phillips Head, Flat, Self-tapping, No. 8 by 1/2 in (53542) 30430	EA	2
E-3	14	5910-01-295-7188	Capacitor, Fixed, Electrolytic (Starting) (53542) 80176	EA	1
E-3	15	5975-00-043-3403	Tie, Cable, Locking, Nylon (53542) 55716	PG	1
E-3	16		Boot, Starting Capacitor (53542) 80091-1	EA	1
E-3	17		Assembly, Cable, Starting Capacitor to Motor (53542) 88203	EA	1

E-9/E-10 blank

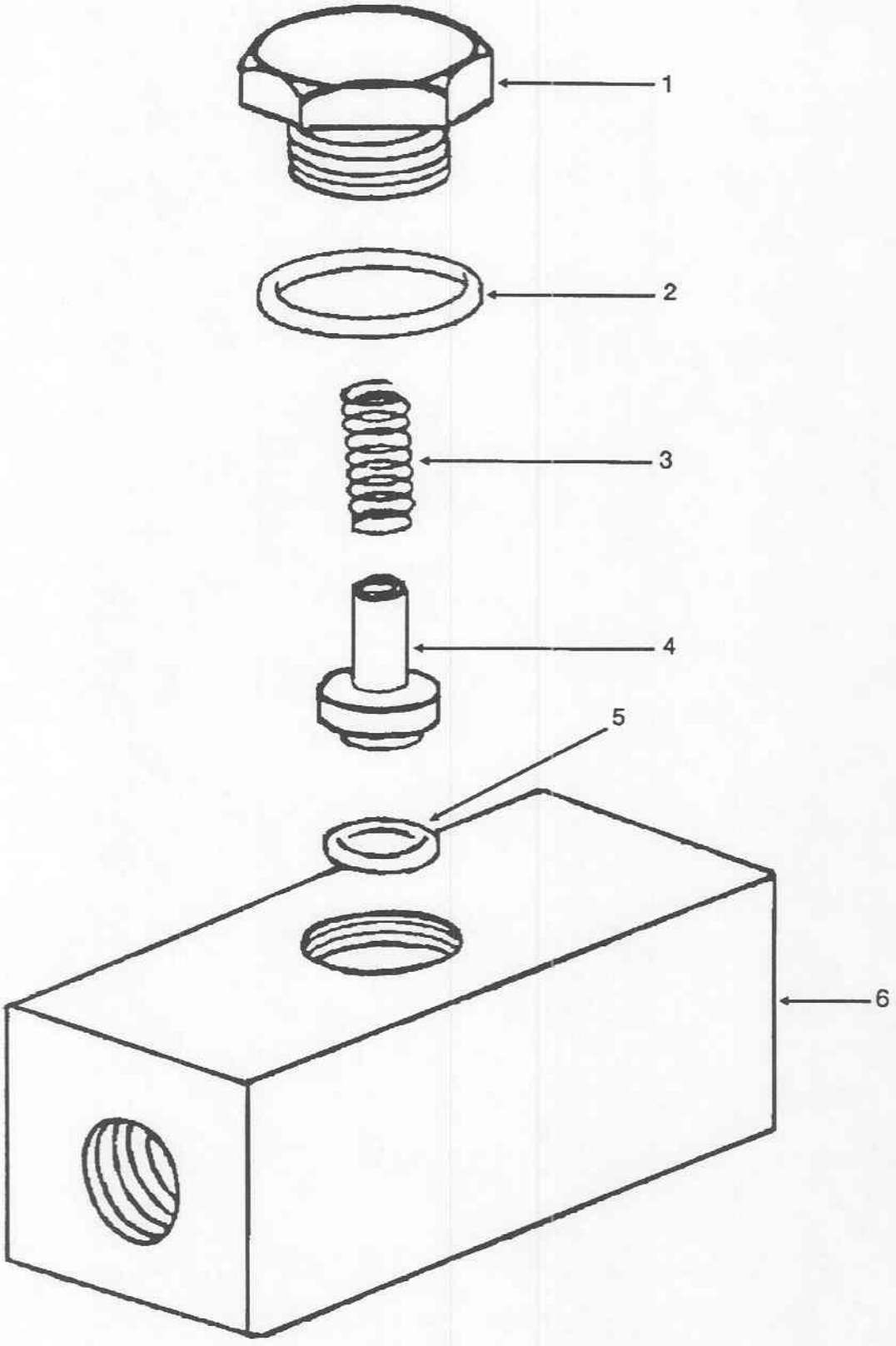


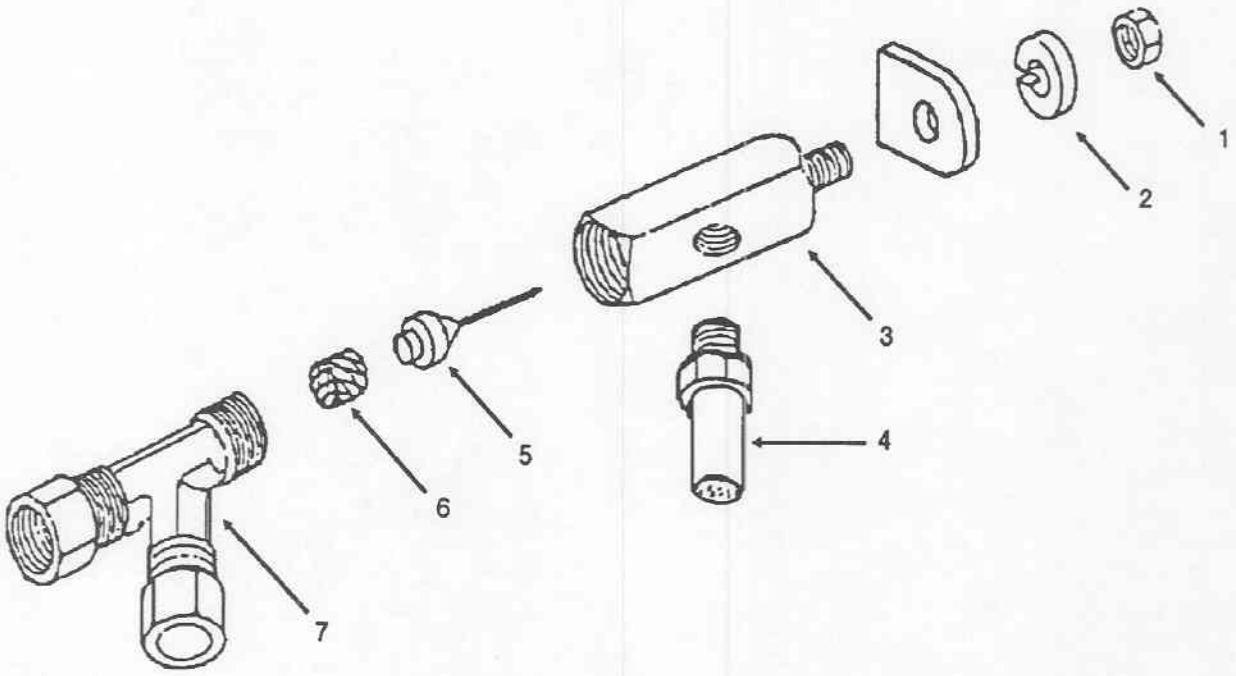
Figure E-4. Flow control valve.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-4	1		Cap, Hex Head (53542) 60603	EA	1
E-4	2	5330-00-291-9114	Seal, Plain, Encased (53542) 60605	EA	1
E-4	3	5360-01-297-4372	Spring, Helical Compression (53542) 3839	EA	1
E-4	4	5340-01-297-4375	Seat, Orifice (53542) 88071	EA	1
E-4	5	5330-01-297-4156	Seal, Plain (53542) 60604	EA	1
E-4	6		Body, Valve (53542) 88072	EA	1
E-4	*	6520-01-061-0781	Parts Kit, Control Valve (53542) 88130	KT	AR

* Includes items 2, 3, 4, and 5.

C5



NOTE: The unidentified part between the washer, split (item 2) and the body, valve assembly (item 3) is the mounting bracket for the unloader valve.

Figure E-5. Unloader valve.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-5	1		Nut, Hex Head, 5/16-24 (53542) 30370	EA	1
E-5	2		Washer, Split (Lock), 5/16 in id (53542) 30102	EA	1
E-5	3		Body, Valve Assembly (53542) 80324	EA	1
E-5	4	4310-00-481-3006	Filter, Plug (Muffler) (53542) 80330	EA	1
E-5	5	4820-01-295-7192	Valve, Lift-check (53542) 80319	EA	1
E-5	6	4730-01-295-7213	Strainer Element, Sediment (53542) 3832	EA	1
E-5	7		Tee, Inlet, Male Ends, 3/8 in and 1/4 in (53542) 88024	EA	1
E-5	*	4310-01-062-0883	Parts Kit, Unloader Valve (53542) 88145	KT	AR

* Includes items 1, 5, and 6.

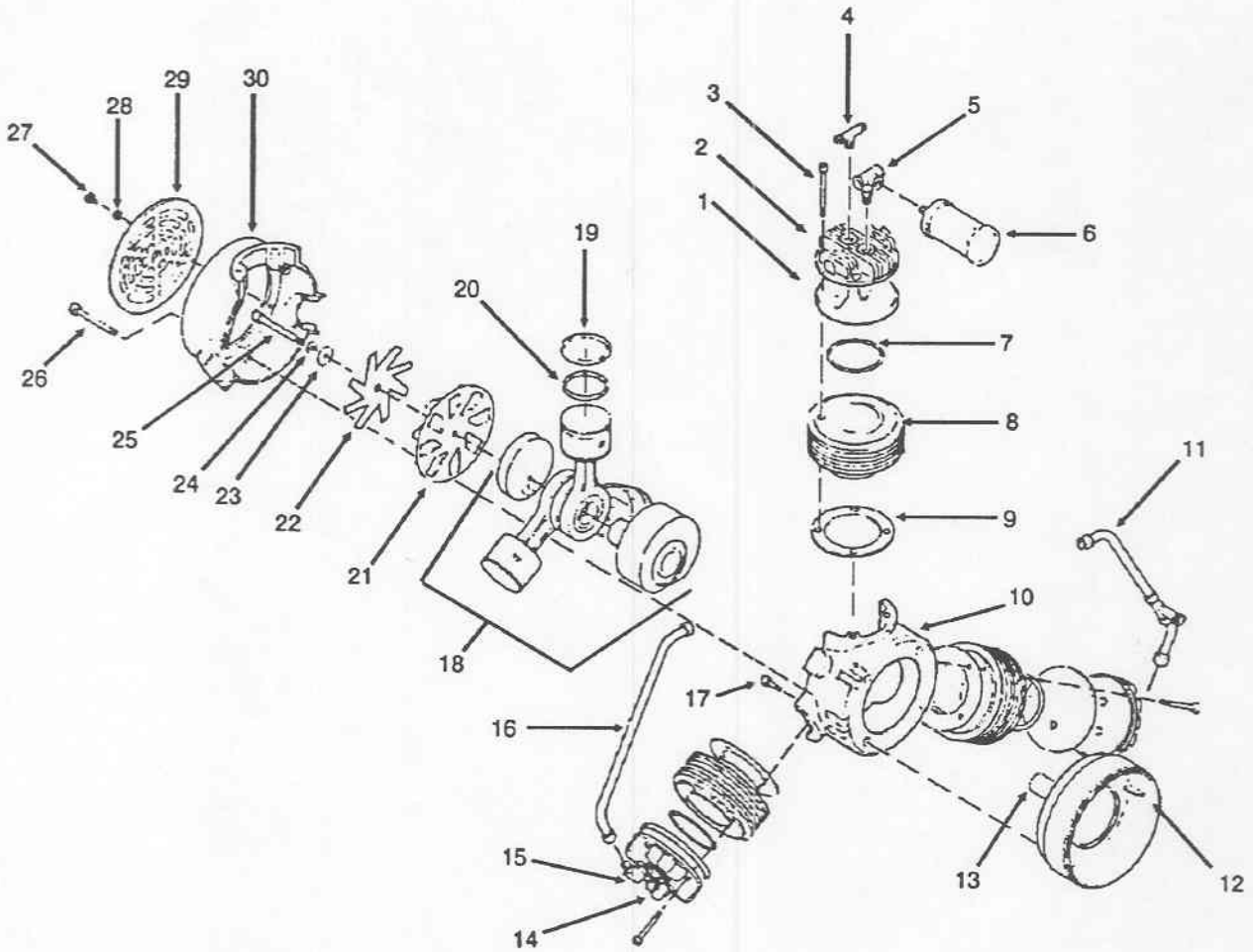


Figure E-6. Motor-compressor.

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-6	1	6520-01-147-4655	Valve Assembly (53542) 89128	EA	3
E-6	2	4310-01-297-4324	Head, Cylinder (53542) 89114	EA	3
E-6	3		Screw, Socket Head (53542) 89551	EA	15
E-6	4		Tee, Male (53542) 89500	EA	1
E-6	5		Tee (Modified) (53542) 80048	EA	1
E-6	6		Intake Silencer (53542) 80050	EA	1
E-6	7	5330-01-295-7189	Seal, Plain (53542) 89143	EA	3
E-6	8	4310-01-297-4337	Cylinder, Reciprocating, Compression (53542) 89130	EA	3
E-6	9	5365-01-297-4162	Shim (53542) 89149	EA	3
E-6	10		Crankcase Assembly (53542) 89214	EA	1
E-6	11	4710-01-295-7231	Tube Assembly, Metal, Left Side (53542) 88092	EA	1
E-6	12		Motor (53542) 89404R-1M	EA	1
E-6	13	5315-01-297-4197	Key, Shaft (53542) 89118	EA	1
E-6	14		Elbow, Intake (53542) 89510	EA	2
E-6	15		Elbow, Tube, 1/4 in id, 3/8 in od (53542) 80017	EA	1
E-6	16	4710-01-295-7232	Tube Assembly, Metal, Right Side (53542) 89317	EA	1
E-6	17		Screw, Socket Head, M8-20 (53542) 89552	EA	4
E-6	18		Crankshaft Assembly (53542) 89600	EA	1

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
E-6	19	6515-01-188-5277	Ring, Compression (53542) 89145	EA	3
E-6	20	6515-01-188-5278	Ring, Expander (53542) 89144	EA	3
E-6	21	4140-01-297-4182	Impeller, Fan, Axial (53542) 89213	EA	1
E-6	22		Washer, Crankcase Fan Support (53542) 89203	EA	1
E-6	23		Washer, 8 mm by 40 mm (53542) 89218	EA	1
E-6	24		Washer, Split (Lock), 8 mm (53542) 89554	EA	5
E-6	25		Screw, Socket Head, M8 by 90 (53542) 89225	EA	1
E-6	26		Screw, Socket Head, M6 by 70 (53542) 89551	EA	15
E-6	27		Screw, 8-32 by 1/2 in (53542) 30058	EA	3
E-6	28		Washer, Lock (53542) 30202	EA	3
E-6	29		Cover, Crankcase (53542) 89230	EA	1
E-6	30		Crankcase Assembly (53542) 89214	EA	1

Section II. REPAIR PARTS LIST FOR COMPRESSOR-DEHYDRATOR

(1) ILLUSTRATION		(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY
FIG NO.	ITEM NO.				
N/A	1		Drain Assembly (53542) 88016	EA	1
N/A	2		Cable Assembly, Fan (53542) 111140-10	EA	1
N/A	3		Cable Assembly, Pressure Switch to Motor Box (53542) 88084V	EA	1
N/A	4		Coupling, Half, Quick-disconnect Not Available	EA	1
N/A	5	6520-01-061-0780	Parts Kit, Inlet Assembly (53542) 88012	KT	AR
N/A	6	6520-01-061-0782	Parts Kit, Cylinder (53542) 881355	KT	AR
N/A	7	6520-01-061-0783	Parts Kit, Cylinder Valve (53542) 88140	KT	AR
N/A	8	6520-01-061-0784	Parts Kit, Hardware (53542) 88150	KT	AR

Section III. SPECIAL TOOLS, TEST, AND SUPPORT EQUIPMENT FOR COMPRESSOR-DEHYDRATOR

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) UNIT OF MEASURE	(6) QTY
1	O		Wrench, Allen, 5 mm Not Available	EA	1
2	O		Wrench, Allen, 6 mm Not Available	EA	1
3	O		Wrench, Torque, 0 - 250 in lbs Not Available	EA	1
4	O		Bolt, Fully Threaded, 5/16-18 by 4-1/2 in Not Available	EA	2

GLOSSARY

A	Amperes.
AFR	Air Force regulation.
AMPS	Amperes.
app	Appendix.
AR	Army regulation.
ASSY	Assembly.
AY	Assembly.
BLU	Blue (fig 3-1).
BLK	Black (fig 3-1).
BRN	Brown (fig 3-1).
C	Operator or crew.
CAGE	Commercial and government entity.
cm	Centimeter.
D	Depot maintenance.
DA	Department of the Army.
°C	Degrees Celsius.
°F	Degrees Fahrenheit.
DLAM	Defense Logistics Agency manual.
DPSC	Defense Personnel Support Center.
dia	Diameter.
DS	Direct support.
EA	Each.
F	Direct support maintenance.
fig	Figure.
FM	Field manual.
FT(ft)	Foot (feet).
GRN	Green (fig 3-1).
GS	General support.
H	General support maintenance.
Hz	Hertz (cycles per second).
id	Inner diameter.
in	Inch.
Inc.	Incorporated.
kg	Kilogram.
KT	Kit.
lbs	Pounds.

m	Meter.
MAC	Maintenance allocation chart.
MEDSOM	Medical supply, optical, and maintenance battalion.
min	Minute.
mm	Millimeter.
MPL	Mandatory parts list.
MTOE	Modified table of organization and equipment.
No.	Number.
O	Unit maintenance.
od	Outer diameter.
para	Paragraph.
PG	Package.
PMCS	Preventive maintenance checks and services.
psi	Pounds per square inch.
psig	Pounds per square inch gauge.
QA	Quality assurance.
QC	Quality control.
QTY	Quantity.
RO	Roll.
RX	Reparable exchange.
sec	Section.
SB	Supply bulletin.
Ser. No.	Serial number.
TB	Technical bulletin.
TM	Technical manual.
V	Volt.
VAC	Volts alternating current.
VIO	Violet (fig 3-1).
WHT	White (fig 3-1).
YEL	Yellow (fig 3-1).

Index

This index is organized alphabetically by topic and by subtopic. Topics and subtopics are identified by paragraph number.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON J. HAMILTON
Administrative Assistant to the
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PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO
2-8	2-13		
E-12		E-3	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Change cooling coil fan to fan.

REASON: Corrects nomenclature.

Reverse call-out numbers 7 and 9.

REASON: Correctly identifies part.

SAMPLE

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