TM 9-4940-427-14&P

# DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S , ORGANIZATIONAL, DIRECT SUPPORT

AND GENERAL SUPPORT MAINTENANCE

MANUAL INCLUDING REPAIR PARTS LIST

FOR

**SEPARATOR, OIL AND WATER**

**MODEL 303C**

**(SHARPE MFG. CO.) (4940-00-242-4101)**


## HEADQUARTERS, DEPARTMENT OF THE ARMY

31 OCTOBER 1980

Technical Manual
No. 9-4940-427-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 31 October 1980

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST FOR**

# SEPARATOR, OIL AND WATER MODEL 303C (SHARPE MFG. CO.) (NSN 4940-00-242-4101)

**REPORTING OF ERRORS**

**You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.**

**NOTE**

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this separator is issued.

Manufactured by: Sharpe Manufacturing Co.
1224 Wall Street
Los Angeles, CA 90015

Procured under Contract No. DAAA09-76-D-6002

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

# INSTRUCTIONS FOR REQUISITIONING PARTS

## NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock NUMBER, it is mandatory that the following information be furnished the supply officer.

1 - Manufacturer's Federal Supply Code Number -

2 - Manufacturer's Part Number exactly as listed Herein. Pages 2 and 3 )

3 - Nomenclature exactly as listed herein, including dimensions, if necessary.

4 - Manufacturer's Model Number - 303C

5 - Manufacturer's Serial Number (End Item)

6 - Any other information such as type, Frame Number, and Electrical Characteristics, if applicable.

7 - If DD Form 1348 is used, fill IN all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

(a) In blocks 4,5,6, list manufacturer's Federal Supply Code Number - followed by a colon and manufacturer's Part Number for the repair part.

(b) Complete Remarks field as follows:

Noun: ( nomenclature of repair part)
For: NSN: 4940-00-242-4101
Manufacturer: Sharpe Mfg. CO.

Model: 303C
Serial: (of end item)

Any other pertinent information such as Frame Number, Type. Dimensions, etc.

MANUAL FOR MODEL 303C OIL & WATER SEPARATOR
MIL-S-12928E CLASS II

The Model 303C is made up of the 303 Air Filter and two 18C-3R Air Regulators as shown on Part Sheet (attached), which provides an exploded view of both.

The 303 air filter section of the 303C is where the compressed air is cleaned of contamination (dirt,rust,etc.) and moisture,which is generally a mixture of oil and water. In operation, the unit should be drained daily. This is accomplished at the drain cock (1-HC-320).

To insure maximum efficiency, the reusable filter element (1-303-19) should be inspected at least every three months. This is accomplished as follows:

1. Relieve the unit of air pressure.
2. Loosen the cap nuts (1-303-07), using 3/4" wrenches.
3. Remove the lower cap nut (1-303-07), bottom casting (1-303-02), and filter housing (1-303-03).

The filter element (1-303-19) is an edge type filter and all the contamination collects on the outside of the element. If it is excessive, remove the element and clean. This is accomplished as follows:

1. Unscrew the upper cap nut (1--303--07) from the center rod (1-303-04). This removes the main baffle and filter assembly.
2. Clean the filter element in solvent.
3. Install the main baffle and filter assembly by inserting the center rod (1-303-04) thru the upper casting (1-303-01) and screwing on the upper cap nut (1-303-07) hand-snug.
4. Install the filter housing (1-303-03), bottom casting (1-303-02), and lower cap nut (1-303-07).
5. Tighten upper and lower cap nuts (1-303-07) with wrench.
6. The unit is now ready for service.

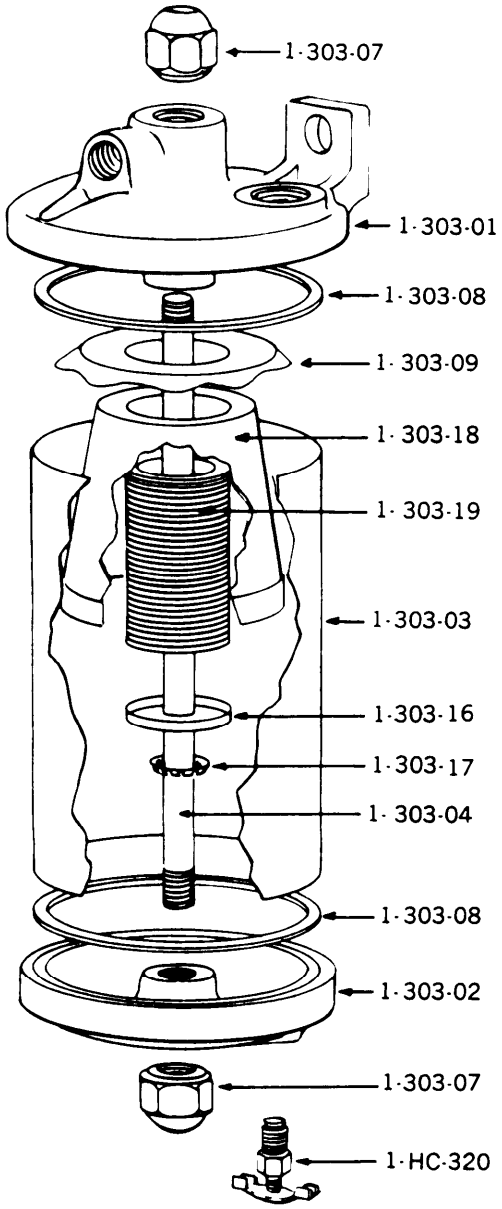
The 18C-3R is the air regulator section of the 303C, and it is here the regulation of air pressure is accomplished through the operation of the thumb screw (1-18-20). When the thumb screw is turned clockwise, the indicated pressure on the gage (GA-160) will increase. To decrease the pressure, simply turn the the thumb screw counterclockwise.

To increase the life of the diaphragm (1-18-10), the thumb screw should be turned counterclockwise until the gage reads zero when the unit is not in operation for extended periods of time. It is good practice, for instance, if the unit is not being used at night, to have the day crew leave the unit set at zero.

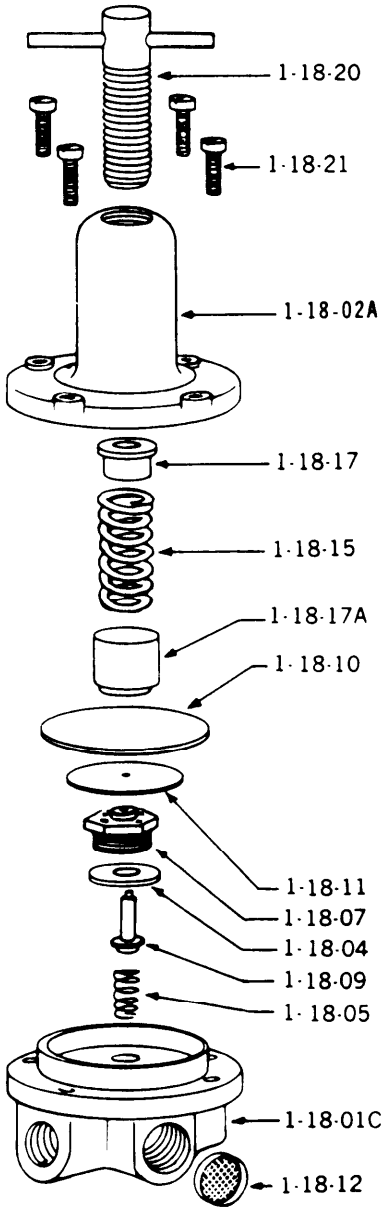
Troubleshooting of the 18C-3R is generally confined to two areas--the diaphragm (1-18-10) and the valve stem (1-18-09). If the gage (GA-160) is acting erratically, and air is coming out of the relief hole in the bonnet (1-18-02A), then the diaphragm is faulty. If the same condition exists and air is not coming out of the above-mentioned relief hole, then the trouble is in the valve stem. Generally, something is keeping it stuck open.

To check either part, the following procedure should be followed:

1. Remove all pressure from the unit.
2. Unscrew the machine screws (1-18-21), and the unit will disassemble as shown on Parts List




**303 AIR FILTER**




**18-C3R**