TM 9-4940-438-14&P

TECHNICAL MANUAL

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

FOR

SEPARATOR, OIL AND WATER MODEL 98-305 (ECLIPSE SYSTEMS, INC.) (NSN 4940-00-242-4100)

HEADQUARTERS, DEPARTMENT OF THE ARMY

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Technical Manual
No. 4940-438-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 9 *May 1980*

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REPORTING OF ERRORS

You can help improve this manual. If you find any mistake or 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 direct to you.

NOTE

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

Manufactured by: Eclipse Systems
Cork Hill Road
P.O. BE
Franklin, NJ 07416

Procured under Contract No: DAAA09-76-C-6438

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.

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

4- Manufacturer's Model Number -

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:
Manufacturer:

Model:
Serial:

Any other pertinent information such as frame number, type, dimensions, etc.

FILTERETTE

OPERATING INSTRUCTIONS

Air Inlet to separator is top of separator head. Mainline air pressure is Indicated on pressure gage mounted on separator head. Gage reads in pounds per square inch (PSI) Form 0-200 PSI A shut-off valve is mounted on separator heed which is filtered mainline air pressure. Valve is off with handle in 90° position to valve body and on with handle parallel to body of valve.

An otr pressure regulator is mounted to separator head for filtered regulated air supply. Automatically removes water, dirt, pipe stole and other harmful foreign matter from air lines. Incoming air is led down the center tube, then directed out against the curved baffle. The centrifugal action imported to the air efficiently separates dirt and water which drops to the bottom. The air then passes through the cleanable micronic filter element as o final safeguard. The lower flat baffle plate prevents accumulated water and dirt from reentering the air stream. All foreign motter is always kept below the filter element. The rrmovable bow:. shaulc be drained daily or whenever water accumulates in bottom of bowl.

The regulators are spring-loaded diaphragm-type regulators. The direct, on of air flow is indicated by on “In” marklng next to the required port on the regulator. Air enters the air Inlet on the right-hand side and flows past the spring-loaded valve disc which is held in the open position by the valve stem which extends up to the lower side of the diaphragm. A spring-loaded spring retainer presses against the opposite side of the diaphragm. Air flows up post the valve stem to the pressure chamber below the diaphragm. If the incoming air pressure does not exceed the pressure for which the regulator is set, the air flows through a small aperture on the outlet side of the pressure chamber to the outlet connection, If the Inlet pressure exceeds the pressure for which the regulator is set the pressure on the bottom of the diaphragm forces the diaphragm up. The valve stem is forced to follow the disphragm by the action of the spring below the valve disc. When the pressure in the pressure chamber is high enough, the valve disc seats and prevents more air from passing through the regulotor. As air is used from the outlet of the regulator, the pressure In the pressure chamber drops and the spring above the diaphragm forces the valve disc open to allow more air from the Inlet side to pass Into the pressure chamber. The regulator pressure is adlusted by Increasing or decreasing the pressure on the spring above the diaphragm with the adjusting knob through the top of the regulator. Increasing the pressure on the spring increases the regulated pressure

MAINTENANCE INSTRUCTIONS
FILTERETTE

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50-5682

The bowl of the filter should be drained daily or whenever water accumulates in bottom of bowl. To drain, open drain valve (25) on bottom of bowl. Filter should be disassembled and cleaned periodically.

Supply air inlet, is a 1/2" NPT female part in top of filter. The gage mounted on filter head is for supply line air pressure. The shut-off valve threaded directly into side of filter head is filtered supply line pressure air.

Regulated filtered air is supplied thru the regulator mounted on side of filter. The regulator is used to control the air pressure. Turn adjustment knob (14) on regulator counterclockwise to decrease pressure and clockwise to increase air pressure (maximum pressure 100 PSI). When desired pressure is maintained tighten locknut (13) on adjustment knob.

DISASSEMBLY OF FILTER FOR CLEANING AND MAINTENANCE

CAUTION - Turn off air supply before loosening or removing any parts from this unit.

FILTER DISASSEMBLY

Unscrew center stud (22) and remove bowl (21) with baffle plate (20) and bowl gasket (17). Unscrew baffle (19) to remove filter element (18) and replace if needed. Screw out inlet tube (16) from body (15) if necessary to replace or clean.

To assemble filter follow above instructions in reverse.

REGULATOR

Dirt on the valve disc (6) will cause the regulator to creep. After regulator is set, the pressure will increase. To correct, remove bottom nut (3). Unscrew plug carefully so as not to lose washer (4), valve disc (6) , spring (5) and valve stem (7). Clean valve disc or replace if necessary and assemble.

DISASSEMBLY OF REGULATOR

Unscrew and remove adjustment knob (14) together with locknut (13). Unscrew bottom nut (3) as mentioned above. Carefully unscrew bonnet nut (12) while holding regulator right side up. Then lift out spring (11), diaphragm gasket (10), diaphragm (9) from body. Clean all parts in a mild clean solvent and reassemble in the reverse order of above disassembly.

Gages, valves, mounting bracket and fittings may be removed for cleaning or replacing by unscrewing from filter head or regulator.