TECHNICAL MANUAL

OPERATOR'S, UNIT AND
DIRECT SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
FOR

MILLIPORE OM 039 FILTER HOLDER

NSN 6640-00-893-3096

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and the content requirements normally associated with Army technical manuals. This technical manual does, however, contain all essential information required to operate and maintain the equipment.

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY
28 SEPTEMBER 1990

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SUPPLEMENTARY INTRODUCTORY MATERIAL

1-1. Maintenance Forms and Records.

Department of the Army forms and procedures used for equipment maintenance will be those described by DA Pam 738-750, The Army Maintenance Management System.

1-2. Reporting Errors and Recommending Improvements.

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 letters, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028–2 located in the back of this manual, directly to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR–MCTS, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

1–3. Destruction of Army Material to Prevent Enemy Use.

Refer to TM 750-244-3 for instructions covering the destruction of Army Material to prevent enemy use.

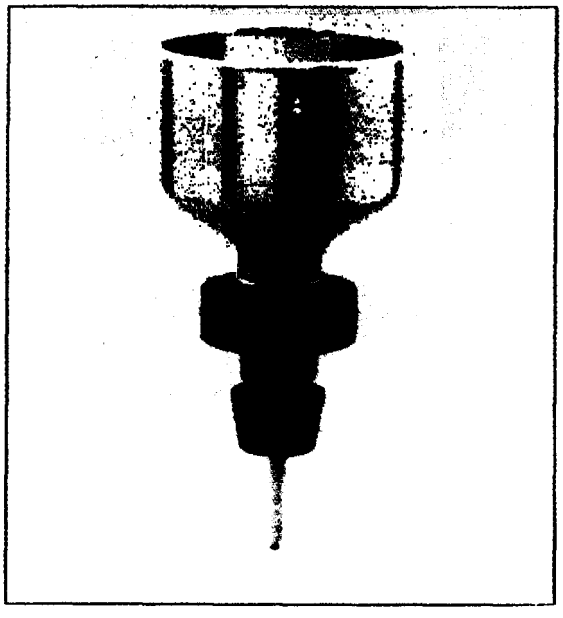
1-4. Administrative Storage of Equipment.

a. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the time factors as determined by the directing authority. During the storage period appropriate maintenance records will be kept.

b. Before placing equipment in administrative storage, current preventive maintenance checks and services should be completed. Shortcomings and deficiencies should be corrected, and ail modification work orders (MWO's) should be applied.

c. Storage site selection. inside storage is preferred for items selected for administrative storage. If inside storage is not available, trucks, vans, conex containers and other containers may be used.

Operation and
Maintenance Instructions
OM 039



Hydrosol Stainless 47mm Filter Holder
Cat. No. XX20 04720

Function

Vacuum filtering liquids for analysis of particulate or biological contamination retained on the filter surface, or to produce small quantities or ultraclean filtrate. Sterile procedures require aseptically installing a sterile filter in the separately sterilized holder.

M I L L I P O R E

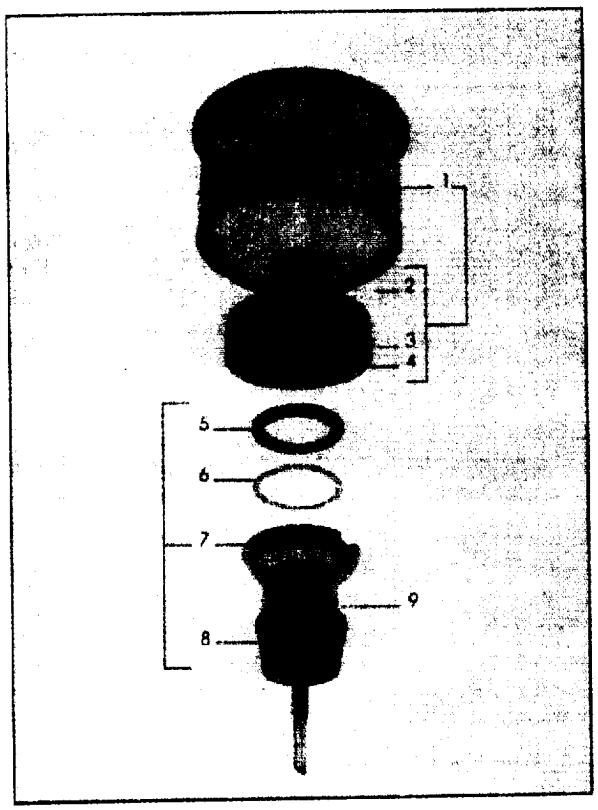


Fig. 1 Filter Holder Components

Replacement Parts	**Cat. No.**
(1) Funnel & locking ring assembly	XX20 047 04
(2) Locking ring gasket, Teflon 5/pk	XX40 047 14
(3) Locking ring	XX20 047 01
(4) Nylon lockwheels, set with wrench	XX20 047 07
(5) Filter support screen, stainless	XX20 047 08
(6) Support screen gasket, Teflon 25pk	XX20 047 03
(7) Base with screen, gasket & stopper	XX20 047 02
(8) #8 neoprene stopper, 3/8" hole 5/pk	XX20 047 18
(9) Grounding screw	_____
(10) Hydrosol grounding lead (not shown	_____

Accessories	
Funnel & locking ring assembly, 100ml	XX63 001 21
Vacuum filtering flask, I liter	XX10 047 05
Vacuum/pressure pump, 115V, 60H2	XX55 000 00
Vacuum/pressure pump, 220V, 50Hz	XX55 220 50
Vacuum/pressure pump, 100V, 50/60Hz	XX55 100 00
Filter holder Hydrosol manifold, 6-place	XX25 047 00
Filter holder Hydrosol manifold, 3-place	XX25 047 35
Filter holder PVC manifold 3–place	XX26 047 35
Vacuum hose Silicone 1 4m (4.5)	XX71 000 04
Filter forceps, stainless, smooth--tip	XX62 000 06

Operation

1 Slide the neoprene stopper over the holder outlet, if it is not already in place. Remove the funnel from the base by turning the locking ring 1/4 turn, and rest the funnel assembly on its side on a clean surface. Do not stand it upright, as this may soil the funnel rim or the sealing edge of the funnel outlet.

2 Seat the stopper and base firmly in the neck of the filtering flask. The filter support screen and its underlying gasket should be in place in the top of the base, with the screen flat and flush with the base top (see *Disassembly and Cleaning* for instructions on removing the screen and gasket).

3 With smooth-tip forceps, center a 47mm diameter Millipore filter on the screen (Fig. 2), with the gridded side up if a gridded filter is being used for later statistical counting procedures.

4 If a prefilter is required to prevent filter plugging in obtaining a desired filtrate, place a 35mm diameter Millipore depth prefilter disc exactly centered on top of the 47mm final filter. Centering must be carefully done, so that the prefilter edge will not lie under the sealing rim of the filter holder funnel.

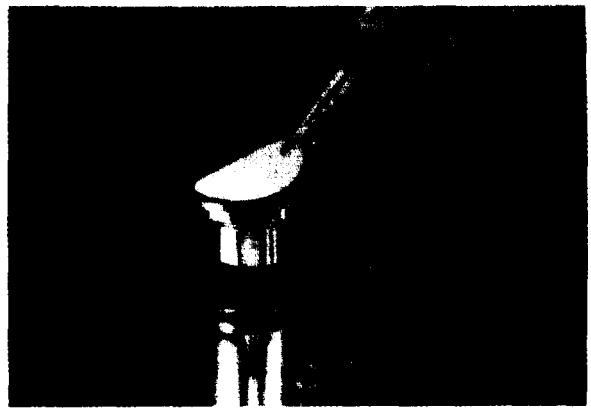


Fig. 2 Center filter accurately on support screen. Use forceps to avoid contamination or damage to filter.

5 Without touching the inside of the funnel, and without disturbing the filter (or prefilter), place the funnel on the holder base so that the nylon wheels in the locking ring are in the base slots (Fig. 3). Turn the locking ring to the right until tight, sealing the funnel to the base.

6 If a filtering manifold is used, place an assembled holder and filter in all manifold positions, or seal off unused positions with unperforated stoppers unless they can be closed by independent valves.

Fig. 3 Nylon lockwheels fit into slots in base; a quarter turn of locking ring then seals funnel to base.

7 Connect the filtering flask or manifold to the vacuum source, with silicone rubber tubing, pour the sample into the funnel and apply vacuum to filter the sample.

CAUTION

If the vacuum source is a dry–air pump, such as Millipore Cat. No. XX55 000 00, liquids should not be allowed to enter the pump intake. The simplest way to guard against this is to install a second side-arm flask between filtering flask (or manifold) and the pump as shown in Figure 4.

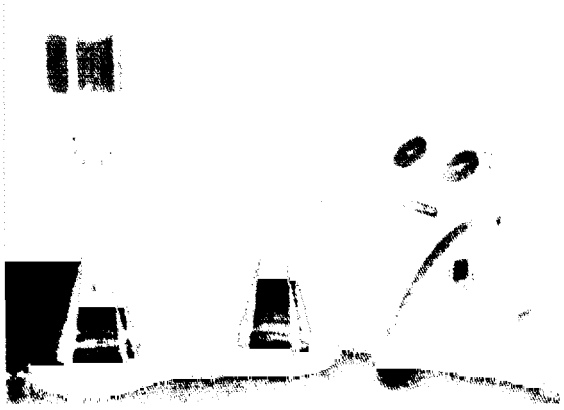


Fig. 4 Second side-arm flask connected in series keeps liquid droplets or water vapor out of pump.

8 When the sample level has lowered to the neck of the funnel, rinse down the funnel walls with about 30 ml of filtered water or appropriate solvent, not letting this liquid strike the filter surface. This flushes residue from the walls, and helps to secure a uniform contaminant distribution on the filter surface for statistical counting. In microbiological tests, the rinse fluid must be sterile and buffered. In other tests, a filtered jet from the Millipore Solvent Filtering Dispenser can be used.

9 As soon as all sample and flushing fluid has passed through the filter, shutoff the vacuum and gently rock the holder assembly to break the stopper seal and vent the flask vacuum. Rotate the locking ring to the left until it stops, releasing the funnel from the base. Lift off the funnel and transfer the filter with smooth–tip forceps to a clean petri dish for visual particle counting, or to a prepared media pad or agar

plate in a sterile petri dish for microbial contaminant culturing. Detailed analytical procedures are described in Millipore publications dealing with specific applications.

Sterile Procedures

This filter holder may not be autoclave with a filter in place. For bacteriological analyses, separately sterilize the holder with dry heat or by autoclaving the disassembled funnel and base for 15-20 minutes at 121°C (15 psig), then reassemble it aseptically with a sterile Millipore filter.

In sterilizing or autoclaving, the funnel and base should first be wrapped with lint-free Kraft paper or Tyvek, then secured with tape to close the openings and protect the filter support area. Since temperatures are known to vary from point to point in an autoclave, and may differ significantly from the autoclave setting, they should be checked occasionally with a maximum registering thermometer.

Avoid using autoclave steam containing amines, which are often added to boiler feed water to prevent scale. They may contaminate liquids that come in contact with autoclave surfaces.

Procedure for Flammable Liquids

WARNING

When flammable liquids are filtered through a membrane, high static charges may be generated. The possibility of a fire, or explosion that might ensue from this static electricity, can be prevented by grounding the filter holder in the manner explained below.

1 A Hydrosol Grounding Lead (Fig. 5) is contained with your Millipore Hydrosol Holder. It consists of a length of #20 AWG wire cable fitted at one end with a spade-lug, and an alligator clip at the other. An additional 4 ft. length of this wire cable is soldered to the alligator clip.

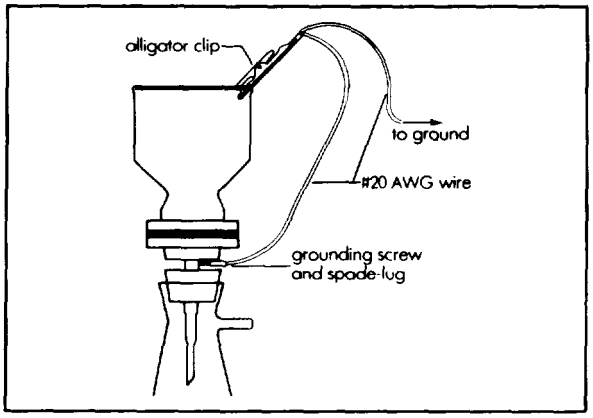


Fig. 5 Grounding Hydrosol Holder

2 To assure that the grounding lead(s) will perform as manufactured, an electrical continuity check should be made prior to connecting to the holder.

3 If the continuity check proves acceptable, connect the spade-lug to the grounding screw located on the bottom of the Hydrosol base.

4 Prepare the filter holder with a filter as described in steps 1–6 shown on page 3. and 4.

5 Fasten the alligator clip firmly to the funnel lip, and making a good electrical connection, attach the 4 ft. length of the grounding lead to a known good ground, such as a copper or similar conductive metal water-pipe.

6 Perform an electrical continuity check on the connected grounding system as set up prior to proceeding to the next step. Make sure that both base and funnel are at ground potential.

7 If the check shows acceptable conduction within the systems proceed to step 7 (page 4) and carry on with the filtration operation.

CAUTION

Filtration of flammable liquids should be carried out within a fume hood, fitted and set up with the appropriate safety measures for this type of operation. The vacuum pump, if not explosion proof, should be placed outside of and away from the fume hood opening.

Disassembly and Cleaning

Immediately after use, the filter support screen and gasket should be removed from the holder base, and all components cleaned with a sponge, hot water and a non–abrasive cleanser. Never use steel wool or abrasive materials on any part of the holder.

1 The filter support screen is held tightly in the base by friction. To remove it, hold the base upside down and slightly tilted and strike its edge sharply against a hard, clean surface. Because the screen can easily be damaged, never use a sharp or pointed instrument to pry it from the base. The small Teflon gasket can be lifted from the screen recess with forceps, and carefully set aside.

2 A stiff bristled brush is useful in removing traces of stubborn residue, but do not use a brush on the filter support screen. It can break the screen mesh and cause a ruptured filter. A pipe cleaner with dete; gent solution is helpful in cleaning the inside of the holder outlet tube.

3 After cleaning, thoroughly rinse the components with clean water and air dry. Do not wipe with paper or cloth, which will leave traces of fibers or lint. In rinsing, take special care to flush out the area under the top of the locking ring. Carefully inspect the components for signs of damage, reassemble the base with the Teflon gasket underneath the screen (which is always installed with its screen surface up), wrap the funnel and base separately with Kraft paper or Tyvek, autoclave, if desired, and store for later use. Over an extended period of use, or after filtering heavily contaminated liquids, the flat Teflon gasket under the top of the locking ring may accumulate dirt that will interfere with the holder's sealing action. To remove it for special cleaning or replacement, proceed as follows.

4 Invert the funnel and locking ring assembly (without base), and place it on a clean surface. Using the Allen wrench supplied, slightly loosen the two set screws in the locking ring.

5 Remove the nylon Iockwheels from the locking ring and set them aside, allowing the ring to rest against the bottom of the funnel. Three set screws in the sealing collar of the funnel will now be accessible.

6 With a 9164” (approximately 3.57mm) Allen wrench (not supplied), loosen these set screws until about 1/4” (6mm) of each is exposed. The sealing collar can now be lifted from the end of the funnel, allowing the locking ring and flat Teflon gasket to be removed.

7 Inspect the gasket and the inner surface of the locking ring for injury or dirt, and clean them thoroughly. Small particles of imbedded grit can be dislodged from the Teflon gasket without injuring it, but the gasket should be replaced if it is damaged or badly distorted.

8 To reassemble, place the clean gasket inside the locking ring and slip the ring, open side up, over the end of the funnel. Then replace the funnel collar and tighten its setscrews, making sure that they rest in the groove of the funnel. When properly positioned, the end of the funnel projects approximately 1/16“ (1.6mm) beyond the face of the collar.

9 Replace the Iockwheels inside the locking ring, tightening their holding screws until each wheel will not turn. The wheels should be positioned to present smooth, round bearing surfaces to the locking cams on the underside of the holder base. The set screws on the outside of the locking ring can now be tightened to keep the Iockwheel holding screws from loosening during use.

10 If a flat spot develops in either Iockwheel after a period of use, both wheels should be rotated to new positions, or replaced if necessary.

Specifications

Materials Stainless funnel, base and filter support screen, anodized aluminum locking ring, nylon locking wheels, Teflon gaskets, neoprene stopper.

Filter Size 47mm diameter

Filter Area Approximately 9.6 cm^2. The filtration area of a gridded Millipore filter in this holder contains 100 grid squares.

Depth Prefilter Size 35mm diameter

Funnel Capacity 650ml

Pressures Vacuum only

Connections #8 perforated stopper placed over outlet tube mounts in standard –liter filtering flask or Millipore filtering manifolds (available separately).

Dimensions 114mm (41/2”) diameter, 229mm (9”) high

Technical Assistance

To obtain technical assistance, call our Technical Services Department toll-free at 800-225-1380.

In Western States 800-632-2708

In Massachusetts 617-275-9200

In Canada 800-2684881

In Puerto Rico 809-739-8485

In Alaska and Hawaii 415-952-9200

Outside of U.S.A., contact the nearest Millipore office or agent listed in the Millipore Catalogue.

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MILLIPORE

APPENDIX A

REFERENCES

A–1. Scope. This appendix contains all forms, pamphlets and technical manuals referenced in both the Air mobile and Semitrailer mounted Laboratories.

A–2. Forms.

Recommended Changes to Publications . . . . . DA Form 2028
DA Form 2028–2

Quality Deficiency Report SF368
Equipment inspection and Maintenance Work Sheet . . . . . DA Form 2404
Hand Receipts . . . . . DA Form 2062

A-3. Field Manuals.

Petroleum Testing Facilities:
Laboratories and Kits FM10-72
Inspecting and Testing Petroleum Products . . . . . FM 10-70
ASTM Test Method Supplement to.... . . . . FM 10-92C1/C2

A-4. Technical Manuals.

Atlas-Copco Compressor . . . . . TM10-4310-392-13&P
Alcor Jet Fuel Thermal Oxidation Tester Operating
and Maintenance Manual . . . . . TM 10-6635-210-13&P
Bacharach Gas Alarm and Calibration Data . . . . . TM 10-6665-297-13&P
Brother Portable Typewriter . . . . . TM 10–7430–218–13&P
Chemtrix Field Ph Meter . . . . . TM10-6630-237–13&P
Elkay Manufacturing 30 GPH Cooler . . . . . TM10-4130-240-13&P
Emcee Micro-Separometer . . . . . TM 10-6640-222-13&P
Foxboro Pressure Recording Gauge . . . . . TM 10-6685-365-13&P
Gammon Aqua Glo Water Detector . . . . . TM10-6640-221–13&P
Gammon Mini Monitor Fuel Sampling Kit . . . . . TM 10-6630-230-13&P
Jelrus Burn-Out Furnace . . . . . TM 10-6640-231-13&P
Koehler Cleveland Open Tester . . . . . TM 10-6630-236-13&P
Koehler Cloud and Pour Point Chamber . . . . . TM 10-6630-238-13&P
Koehler Copper Strip Corrosion Bomb Bath . . . . . TM10-6640-220-13&P
Koehler Distillation Apparatus . . . . . TM10-6330-233-13&P
Koehler Dropping Point Apparatus . . . . . TM10-6635-211-13&P
Koehler Electric Pensky-Martins Tester . . . . . TM 10-6630-230-13&P
Koehler Foaming Characteristics Determination Apparatus . . . . . TM 10-6640-228-13&P
Koehler Kinematic Viscosity Bath . . . . . TM 10-6630-239-13&P
Koehler Tag Closed Cup Flash Tester . . . . . TM 10-6630-235-13&P
Lab-Line Explosion Proof Refrigerator . . . . . TM 10-6640-219-13&P
Lily Freezer . . . . . TM 10-6640-234-13&P
Mllipore OM 39 Filter Holder . . . . . TM10-6640-225-13&P
Millipore Vacuum Pump . . . . . TM 10-6640-217-13&P
Ohaus Harvard Trip Balance . . . . . TM 10-6670-278-13&P
Precision Gas-Oil Distillation Test Equipment . . . . . TM 10-6630-219-13&P
precision General purpose Water Bath . . . . . TM 10-6640-229-13&P

Precision High Temperature Bronze Block Gum Bath . . . . . TM 10-6630-234-13&P
Precision General Purpose Ovens . . . . . TM 10-6640–218–13&P
Precision Heater Instruction Manual and Parts List . . . . . TM 10-6640-223-13&P
Precision Oxidation Stability Bath . . . . . TM 10-6640-232-13&P
Precision Pensky-Martens Flash Testers . . . . . TM 10-6630-231-13&P
Precision Reid Vapor Pressure Bath . . . . . TM 10-6640–226-13&P
Precision Slo-Speed Stirrer . . . . . TM 10-6640–224-13&P
Precision Universal Centrifuge . . . . . TM 10-6640-230-13&P
Precision Universal Penetrometer . . . . . TM 10-6640-228-13&P
Sargent–Welch Vacuum Pump . . . . . TM 10-4310-391-13&P
Sartorious Analytical Balance . . . . . TM 10-6670-277-13&P
Scotsman Cuber . . . . . TM 10-6640-227-13&P
Soltec VOM-Multimeter . . . . . TM 10-6625-3127-13&P
Teel Self–Priming Centrifugal Pump . . . . . TM 10-6640-217-13&P
Teel Submersible Pump . . . . . TM 104320-320-13&P
Texas Instrument TI–5030II Calculator . . . . . TM 10–7420–210–13&P

A-5. Pamphlets.

The Army Maintenance Management System (TAMMS) . . . . . DA Pam 738–750

A-6. Miscellaneous Publications.

The Army Integrated Publishing and Printing Program . . . . . AR 25-30
Laboratory, Airmobile, Aviation Fuel . . . . . MIL–L–52733A(ME)
Apparatus, instruments, Chemicals, Furniture, and Supplies for industrial,
Clinical, College and Government Laboratories . . . . . Fisher Scientific Laboratories Catalog
Petroleum–Petrochemical Testing Equipment . . . . . Precision Scientific Catalog

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 categories.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section Ill lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section Il.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions. Maintenance functions will be limited to and defined as follows:

a. *Inspect.* To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. *Test.* To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. *Service.* Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. *Adjust.* To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. *Align.* To adjust specified variable elements of an item to bring about optimum or desired performance.

f. *Calibrate.* To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of knob accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. *Remove/Install.* To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. *Replace.* To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and is shown as the third position code of the SMR code.

i. *Repair.* The application of maintenance services [1]including fault location/troubleshooting,[2] removal/installation, and disassembly/assembly procedures[3] and maintenance actions[4] to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. *Overhaul.* That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e, DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. *Rebuild.* Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-3. Explanation Of Columns In The MAC, Section II.

a. *Column I. Group Number.* Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."

b. *Column 2. Component/Assembly.* Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. *Column 3. Maintenance Function.* Column 3 lists the functions to be performed on the item listed in column 2. (For a detailed explanation of these functions, see paragraph B–2.)

d. *Column 4. Maintenance Category.* Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/ assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

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[1] Services - inspect, test, service, adjust, align, calibrate, and/or replace.

[2] Fault locate/troubleshoot - the process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

[3] Disassemble/assemble - encompasses the step-by–step taking apart (or breakdown) of a spare/function group coded item to the level of its least componency identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.

[4] Actions - welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.

C . . . . . Operator/Crew
O . . . . . Unit Maintenance
F . . . . . Direct Support Maintenance
H . . . . . General Support Maintenance
D . . . . . Depot Maintenance

e. *Column 5. Tools and Equipment.* Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. *Column 6. Remarks.* This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in section IV.

B-4. Explanation Of Columns In Tool And Test Equipment Requirements, Section iii.

a. *Column I. Reference Code.* The tool and test equipment reference code correlates with a code used in the MAC, section II, column S.

b. *Column 2. Maintenance Category.* The lowest category of maintenance authorized to use the tool or test equipment.

c. *Column 3. Nomenclature.* Name or identification of the tool or test equipment.

d. *Column 4. National Stock Number.* The National stock number of the tool or test equipment.

e. *Column 5. Tool Number.* The manufacturer's part number.

B-5. Explanation Of Columns In Remarks, Section IV.

a. *Column I. Reference Code.* The code recorded in column 6, Section il.

b. *Column 2. Remarks.* This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section Il.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
	FILTER HOLDER	INSPECT REPLACE REPAIR	0.1 0.3	 0.1 					 A

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR MAINTENANCE ALLOCATION CHART

NOT APPLICABLE

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Repairs limited to replacement of parts listed in manual

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

Section I. INTRODUCTION

C-1. Scope.

This appendix lists components of end item and basic issue items for the OM 039 Filter Holder 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. This listing is for informational purposes only, and is not authority to requisition replacements. 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. Illustrations are furnished to assist you in identifying the items.

b. *Section III. Basic Issue Items.* These are the minimum essential items required to place the OM 039 Filter Holder in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the shelter during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard–to–identify items. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

C–3. Explanation of Columns.

The following provides an explanation of columns found in the tabular listings:

a. Column (1) – Illustration Number (Illus Number). This column indicates the number of the illustration in which the item is shown.

b. *Column (2) – National Stock Number.* Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

c. *Column (3) – Description.* 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 CAGEC (in parentheses) followed by the part number.

d. Column (4) – Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr).

e. Column (5) – Quantity required (QTY RQR). Indicates the quantity of the item authorized to be used with/on the equipment.

SECTION II. COMPONENTS OF END ITEM

(1) ILLUS	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION CAGEC AND PART NUMBER	USABLE ON CODE	(4) U/M	(5) QTY
	5999-00-549-0997	CLIP, ELECTRICAL: .31 IN. ALLIGATOR JAW OPENING; INSULATED 2.38 IN. LG; RED; 1 SCREW TYPE; W-C-440, TYPE TCI		EA	10
	6640-00-522-1885	FILTER ASSEMBLY FOR ASTM TEST D-2276; (08071) NO. XX60-000-01		AY	1
	6640-00-522-1883	FILTER ASSEMBLY FOR ASTM TEST D-2275; (08071) NO. XX60-000-02			
	6630-00-764-5761	FILTER UNIT, CONTAMINATION ANALYSIS (08071) MAWPO37PM		PG	1
	6640-00-522-1889	FLASK, FILTERING: BOROSILICATE GLASS RUBBER STOPPER MOUTH; SIDE TABULATION; 4000 ML; FOR ASTM TEST D-2276; (22527) NO. 10-181-5-4000			

SECTION III. BASIC ISSUE ITEMS

NOT APPLICABLE

APPENDIX D

ADDITIONAL AUTHORIZATION LIST

NOT APPLICABLE

APPENDIX E

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E–1. Scope. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V, repair parts, and heraldic items).

E–2. Explanation of Columns.

a. *Colurmn (1) – Item Number.* This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., Use cleaning compound, item 5, appendix C).

b. *Column (2) - Level.* This column identifies the lowest level of maintenance that requires the listed item.

C – Operator/Crew
O – Unit Maintenance
F – Direct Support Maintenance
H – General Support Maintenance

c. *Column (3) – National Stock Number.* This is the National stock number assigned to the item; use it to request or requisition the item.

d. *Column (4) – Description.* Indicates the Federal item name, and, if required, a description to identify the item. The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number.

e. *Column (5) – Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., EA, IN, PR). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
	C	6640-00-985-2099	DISK, FILTERING, MICROPOROUS: AEROSOL AND HYDROSOL; 25mm DIA.; 100's FOR ASTM TEST D-2276 (08071) HAWP-025-00	HD
	C	6640-00-967-0501	DISK, FILTERING, MICROPOROUS: PLAIN; AEROSOL; 47mm DIA.;100's FOR ASTM TEST D-2276; (08071) AAWP-047-00	HD
	C	6145-00-299-5186	WIRE, ELECTRICAL: COPPER; SOFT MATERIAL; SOLID CONDUCTOR; RED; No. 16 AWG; UNCOATED; 875.20 OHMS PER MILE-lb; 20°C QQ-W-343, TYPE S	LB

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

THOMAS F. SIKORA
Brigadier General, United States Army
The Adjutant General

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)
PFC JOHN DOE
COA, 3d ENGINEER BN
FT. LEONARDWOOD, MO. 63108

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 10-6640-225-13&P	28 Sept. 1990	Milipore OM 039 Filter Holder

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO
6	2-1 a		
B1		4-3	
125	line 20		

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

In line 6 of paragraph 2-1a the manual states the engine has 6 Cylenders. The engine on my set only has 4 Cylenders. Change the manual to show 4 Cylenders.

Callout 16 on figure 4-3 is pointing at a bolt. In key to figure 4-3, item 16 is called a shim - Please correct one or the other.

I ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
JOHN DOE, PFC (268) 317-7111

SIGN HERE John Doe
JOHN DOE

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN:046574-000