



A Unit of AMERON GLOBAL, INC.

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**PORTABLE WATER-SOLUTION**

**FIRE EXTINGUISHER**

**P/N M892480-1**

**COMPONENT MAINTENANCE MANUAL**

**WITH TECHNICAL PROPERTIES AND**

**ILLUSTRATED PARTS LIST**

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**26-20-03**

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OCT 15/02**



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## **INTRODUCTION**

### **SCOPE**

This Component Maintenance Manual covers the maintenance and overhaul procedures for the portable water-solution fire extinguisher. The portable water-solution fire extinguisher is used to extinguish fires in the cabin compartment.

### **MANUFACTURING ENTITY & PRODUCT SUPPORT**

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In addition to our factory Product Support, Overhaul and Recharge stations are available worldwide.

### **USE MANUAL FOR SPECIFIC FUNCTIONS**

This manual covers the following topics: Description and Operation, Technical Properties, Testing and Fault Isolation, Disassembly, Cleaning, Check, Repair, Assembly and Storage, Special Tools, Fixtures, and Equipment, and Illustrated Parts List.

Recommended tools, equipment, and materials are listed in each section and in the Special Tools, Fixtures, and Equipment section. Equivalent items may be used.

### **REVISION SERVICE**

Revised pages will be issued when necessary throughout the service life of the portable water-solution fire extinguisher. The revised part of the page will be identified with a change bar or capital **R** in the left margin.

### **VERIFICATION**

Testing and Fault Isolation	<u>July 2, 2001</u>
Disassembly	<u>July 2, 2001</u>
Assembly	<u>July 2, 2001</u>





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**ABBREVIATIONS AND UNIT SYMBOLS**

Abbreviations and unit symbols used in this manual are defined below.

Assy.	Assembly	kPag	Kilo Pascal-gauge (1 kPag = 0.15-psi)
ATA	Air Transport Association	Max	Maximum
CAA	Civil Aviation Authority	Min	Minimum
CAGE	Commercial and Government Entity	Mm	Millimeter (1 mm = 0.0394-inch)
Cfh	Cubic feet per hour	N·m	Newton-meter (1 N·m = 8.3 inch-pound)
CFR	Code of Federal Regulations	No.	Number
Cm	Centimeter (1 cm = 0.394-inch)	OD	Outside Diameter
DOT	Department of Transportation	Psig	Pounds per square inch-gauge
FAA	Federal Aviation Administration	Rev.	Revision
GN <sub>2</sub>	Nitrogen Gas	SB	Service Bulletin
ID	Inside Diameter	Scm/hour	Standard cubic centimeters per hour
IPL	Illustrated Parts List	Temp	Temperature
JAA	Joint Aviation Authorities	%	Percent
Kg	Kilogram (1 kg = 2.205-pounds)		



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**SECTION 1: DESCRIPTION AND OPERATION**

**1. Description**

- A. The Aircraft Portable Fire Extinguisher consists of a stainless steel cylinder containing one and 3/8 quarts to one and 7/16 quarts (44 to 46 ounces) (1,30 to 1,36 liters) of antifreeze extinguishing agent, a valve body, cartridge handle, and discharge lever assembly. The valve body, cartridge handle, and discharge lever assembly are located on the top end of the cylinder assembly as shown in Figure 1. A locking shoulder on the cartridge handle prevents the fire extinguisher from being accidentally discharged.
- B. The cylinder assembly is filled with antifreeze extinguishing agent. The valve body, cartridge handle, and discharge lever assembly are attached to the outlet port on the cylinder assembly.
- C. When completely assembled and fully charged with one and 3/8 quarts to one and 7/16 quarts (44 to 46 ounces) (1,30 to 1,36 liters) of antifreeze extinguishing agent the fire extinguisher weight is less than 7 pounds (3,17 kg).
- D. The fire extinguisher is provided without mounting brackets. Mounting brackets are available as separate items, and can be used to attach the fire extinguisher to the aircraft, next to a hazardous area.

**2. Operation**

- A. Carbon dioxide charge from the pressure cartridge within the cartridge handle provides the discharge force necessary to expel the antifreeze extinguishing agent through the valve assembly to the fire source. Twisting the cartridge handle in the direction indicated by the arrows on the cartridge handle causes the carbon dioxide pressure cartridge to be punctured, releasing the carbon dioxide charge to pressurize the cylinder assembly.
- B. The antifreeze extinguishing agent is contained in the cylinder assembly until the discharge lever is manually squeezed, allowing the pressure within the cylinder assembly to force the antifreeze extinguishing agent out through the valve assembly. The time of discharge is between 30 and 45 seconds at 70°F (21,1°C) temperature; the minimum discharge range is 12 feet (3,7 m).



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**3. Technical Properties**

A. Technical properties are provided in Table 1.

**Table 1. Technical Properties**

<b>PROPERTY</b>	<b>SPECIFICATION</b>
Leak test pressure	175 psig (1207 kPag) minimum
Hydrostatic (proof) pressure	300 psig (2069 kPag) minimum
Burst pressure	500 psig (3448 kPag) minimum
Ambient temperature range	-40°F to +140°F (-40°C to +60°C)
Weight of antifreeze extinguishing agent	One and 3/8 to one and 7/16 quarts (44 to 46 ounces) (1,30 to 1,36 liters)
Weight of charged assembly	6.5-pounds (2,95 kg) minimum 7.0-pounds (3,17 kg) maximum
Container material	Stainless Steel (Nitronic 40)
Container capacity	102 cubic inches (1,67 liter) maximum
Discharge time at 70°F (21,1°C)	30 seconds minimum 45 seconds maximum
Discharge distance (horizontal stream)	12 feet (3,7 m) minimum for at least 75 % of the total agent
Force to turn cartridge handle	15 inch-pounds (1,7 N·m) maximum
Force to depress discharge lever	3 pounds (1,36 kg maximum)



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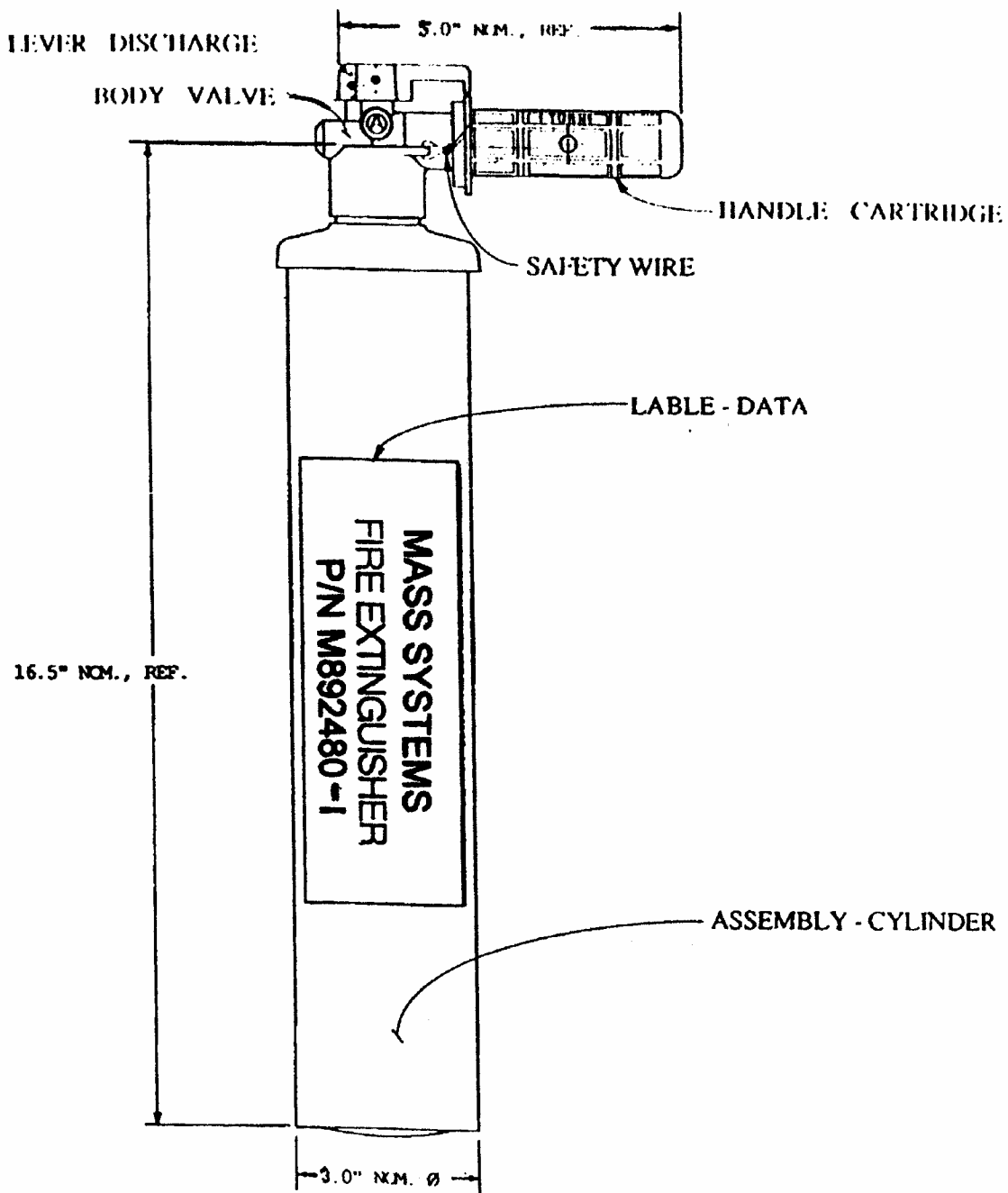


Figure 1. Fire Extinguisher Primary Components



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**SECTION 101: TESTING AND FAULT ISOLATION**

**1. General**

- A. MASS Systems recommends the following functional test period and a mandatory hydrostatic (proof) pressure test period.
- (1) Recommendation for scheduled functional test shall be within 30 months after original or last test date for cylinder assemblies in continuous service or storage. Cylinder assemblies for which 30 months have elapsed from the original or last test date and which have not been retested should be functionally tested.
  - (2) Mandatory hydrostatic (proof) pressure test shall be performed 5 years after original or last hydrostatic (proof) pressure test date.
- B. This section contains the procedures and safeguards required for testing and troubleshooting the cylinder assembly. Prior to performing hydrostatic (proof) pressure tests, visual check and leak test must be performed and necessary repairs must be accomplished.

**2. Testing**

A. Functional Test

- (1) Fill the cylinder assembly (120) with 44 ounces (1,30 liter) of clean water.
- (2) Assemble the valve assembly to the cylinder assembly (120).
- (3) Operate the fire extinguisher.
- (4) Measure force to turn cartridge handle (10), must be 15 inch-pounds (1,70 N·m) maximum.
- (5) Measure force to depress discharge lever (80), must be 3 pounds (1,4 kg) maximum.
- (4) The discharge time is between 30 and 45 seconds at 70° F (21,1°C) temperature and shall cover a minimum range of 12 feet (3,7 m).
- (5) No visible leakage is permissible at the valve body (100) and cylinder assembly (120) connection.



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B. Proof Pressure Tests

**WARNING:** PERFORM THIS HYDROSTATIC (PROOF) PRESSURE TESTING IN A SUITABLE SAFETY CHAMBER AND IN AN AREA FREE OF UN-AUTHORIZED PERSONNEL.

- (1) Remove the overflow tube (115) from the cylinder assembly (120) and fill the cylinder assembly with water.
- (2) Apply 175 psig (1207 kPag) pressure to the cylinder assembly (120) and check for leaks along the seams.

**NOTE:** Check all seams with a soap solution. Visually inspect for air bubbles that indicate leaks.

- (3) Hydrostatic (proof) pressure test the cylinder assembly (120) at 300 psig (2069 kPag) for one minute and visually check for leaks or deformation. **RELEASE PRESSURE AND DRAIN CYLINDER.** Metal stamp the date (month and year) of the test on the cylinder assembly (120) dome immediately under the previous test date after performing the hydrostatic (proof) pressure test.

**Table 101. Fault Isolation and Corrective Action**

<b>FAULT</b>	<b>PROBABLE CAUSE</b>	<b>CORRECTIVE ACTION</b>
Cylinder assembly (120) is nicked, dented, or damaged	Improper handling.	Refer to inspection, rejection criteria. Perform hydrostatic (proof) pressure test on cylinder assembly (120).
Cylinder assembly (120) leakage	Loose or defective valve assembly.	Tighten or repair valve assembly.
	Defective o-ring (60) neck seal.	Replace o-ring (60) neck seal.
	Damaged or defective seat stem (85).	Repair or replace seat stem (85).
Deformation of cylinder assembly (120)	Over-pressurization.	Replace fire extinguisher.
	Cylinder assembly (120) walls deteriorated or deformed.	Replace fire extinguisher.



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**SECTION 301: DISASSEMBLY**

1. **General**

- A. Disassemble the fire extinguisher only to extent necessary to effect repairs.
- B. Refer to the IPL Figure 1 in Illustrated Parts List for parts locations, and disassemble in order given.

2. Procedure

**WARNING: DO NOT DISASSEMBLE THE FIRE EXTINGUISHER FURTHER UNTIL THE EXTINGUISHING AGENT HAS BEEN DISCHARGED OR SEVERE INJURY TO PERSONNEL CAN OCCUR.**

- A. Discharge the fire extinguisher.
- B. Disassemble the cylinder assembly (120) from the valve assembly.

- (1) Remove the broken seal and copper seal wire (-5).

**WARNING: MAKE CERTAIN THAT THE FIRE EXTINGUISHER IS COMPLETELY DISCHARGED BEFORE ATTEMPTING FURTHER DISASSEMBLY.**

- (2) Unscrew the cylinder assembly (120) from the valve body (100). The maintenance data label (110), manufacturing data label (105), and handle position labels (15) need not be removed unless damaged. Removal of the overflow tube (115) is performed only if the overflow tube (115) is loose, wobbly, or defective; or if hydrostatic (proof) pressure testing is to be performed.
- (3) Unscrew the cartridge handle (10) from the valve body (100).
- (4) Remove the used pressure cartridge (25) and the cartridge spring (20) from inside the cartridge handle (10). Discard the used pressure cartridge (25).

C. Disassemble Valve Assembly

- (1) Remove the retainer ring (30) from the valve body (100), then remove the piercing pin assembly (35) from the valve body (100). Remove and discard the o-rings (40 and 45) from the grooves of the piercing pin assembly (35).



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- (2) Remove the check (50) from the valve body (100).
- (3) Remove the siphon hose (55). Remove the o-ring (60) from the valve body (100). Hold the discharge lever (80) stationary, and using a screwdriver unscrew the check valve assembly (65).
- (4) Drive out the groove pin (70) and remove the discharge lever (80) and the seat stem (85) from the valve body (100). Remove and discard the o-ring (95). Remove the stem spring (90).
- (5) Drive out the groove pin (75) to separate the discharge lever (80) from the seat stem (85).





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**SECTION 401: CLEANING**

**1. General**

- A. This section describes cleaning requirements and specifies cleaning materials to be used. Equivalent materials may be used.
- B. Cleaning of the components is limited to removal of foreign materials.

**2. Materials**

- A. Cleaning materials are listed in Table 401. Equivalent items may be used. Substitute materials, if used, must not leave a residue on cleaned surfaces.

**Table 401. Cleaning Materials**

<b>NOMENCLATURE</b>	<b>SPECIFICATION NUMBER</b>	<b>SOURCE (CAGE)*</b>
Alcohol, Isopropyl	Federal Specification TT-I-735	Commercially available

**3. Procedure**

**WARNING:** ISOPROPYL ALCOHOL IS COMBUSTIBLE AND HARMFUL, OR FATAL IF SWALLOWED. KEEP FROM HEAT OR OPEN FLAME. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID BREATHING SOLVENT MIST OR VAPOR. USE IN VENTILATED AREAS.

- A. Clean the metal parts using cleaning solvent or equivalent and a soft bristle brush only.

**WARNING:** ALWAYS DIRECT COMPRESSED AIR AWAY FROM PERSONNEL. WEAR EYE PROTECTION.

- B. Dry the metal parts with clean, dry compressed air using a maximum pressure of 20 psig (138 kPag), or dry with clean, lint-free cloth.
- C. Wipe the nonmetallic components clean with a dry, clean, lint-free cloth.



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**SECTION 501: CHECK**

**1. General**

- A. This section describes inspections and checks required to determine the condition of the fire extinguisher prior to and following repairs, recharging, and assembly.

**2. Inspection**

- A. Visually inspect the fire extinguisher for deformation, dents, weld cracks, loose or missing components, and service life. Repair or replace damaged or loose components. Perform hydrostatic (proof) pressure testing if the cylinder assembly (120) service life has reached five-years since last test.

**WARNING:** DAMAGED CYLINDER ASSEMBLIES (120) CAN CAUSE INJURY OR DEATH. IF EXPERIENCED INSPECTION PERSONNEL ARE NOT AVAILABLE TO CONDUCT TESTS, RETURN THE CYLINDER ASSEMBLIES (120) TO A DOT CERTIFIED TEST FACILITY FOR HYDROSTATIC (PROOF) TEST INSPECTION.

- B. Visually inspect the cylinder assembly (120) for evidence of over-pressurization or other damage.

**NOTE:** If doubt exists about the cylinder assembly (120) service condition, perform hydrostatic (proof) pressure test following visual examination.

- (1) Inspect the cylinder assembly (120) exterior for bulging, dents, distortion, weld cracks, or other damage or deformation. If doubt exists about the cylinder assembly (120) condition, condemn and replace the cylinder assembly (120).
- (2) Use a mirror and light to inspect interior of the cylinder assembly (120) for debris, oil, and other foreign matter.

**WARNING:** DEBRIS REMOVED BY COMPRESSED AIR CAN CAUSE BLINDNESS OR OTHER SERIOUS INJURY. WEAR SAFETY FACE SHIELD AND DIRECT AIR FLOW AWAY FROM PERSONNEL WHEN PURGING THE CYLINDER ASSEMBLY (120).

- (3) Purge the cylinder assembly (120) interior with clean, dry, oil-free air at a maximum pressure of 20 psig (138 kPag).



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- (4) Visually check the cylinder assembly (120) interior for defects. Replace the cylinder assembly with any of the following:

NOTE: A decrease of 0.005-inch (1,27 mm) from original wall thickness is cause for rejection.

- (a) Cracks
  - (b) Elongated pits of any length
  - (c) Extensive localized pitting
  - (d) Bulging or dents
  - (e) Corrosion
  - (f) Fire damage or evidence of prolonged exposure to heat.
- (5) Inspect all mating and seating surfaces for nicks, dents, and radial scratches.
- (6) Refer to TESTING AND TROUBLESHOOTING for the functional test procedure and hydrostatic (proof) pressure test procedure when any inspection or check requirement has not been met.

C. Visually inspect components as follows:

- (1) Check all the springs for deformation. Check the cartridge spring (20) for 1.480- to 1.500-inch (37,59 to 38,10 mm) free height. Check the stem spring (90) for for 0.730- to 0.750-inch (18,54 to 19,05 mm) free height.
- (2) Inspect the piercing pin assembly (35) for damage and tightness.
- (3) Check condition of the overflow tube (115).

WARNING: DEBRIS REMOVED BY COMPRESSED AIR CAN CAUSE BLINDNESS OR OTHER SERIOUS INJURY. WEAR SAFETY FACE SHIELD AND DIRECT AIR FLOW AWAY FROM PERSONNEL WHEN CHECKING THE PORTING OF THE VALVE BODY (100).

- (4) Inspect that valve body (100) is clear of obstructions. Blow compressed air (20 psig – 138 kPag approximately) through the porting to insure it is clear.



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**SECTION 601: REPAIR**

**1. General**

- A. This section describes acceptable repair procedures that can be performed on the cylinder assembly (120) and specifies items that must be replaced in lieu of attempting repairs.

**2. Definitions**

**REPAIRABLE:** An item that can be restored to useful condition by grinding, crimping, threading or replacement of one or more components.

**REPLACEABLE:** An item that can be repaired by removal and replacement with a new component.

**NONREPAIRABLE** An item that cannot be restored to useful service by replacement of components or by any other standard repair method.

**DAMAGED:** An item that has incurred damage through mishandling or misuse or has been deformed or broken when struck by a foreign object.

**DEFECTIVE:** An item that fails due to structural, electrical, or mechanical malfunction during normal operation.

**EXPENDED:** An item that has been used and cannot be used again without recharging or replacing contents or components.

**3. Procedures**

- A. Repair damaged threads as follows:

- (1) Select tap or die of correct thread size. Lubricate thread cutting area with cutting oil.
- (2) Screw selected tap or die into or onto threads to be repaired. Repair damaged threads and remove tap or die.
- (3) Thoroughly clean oil and cuttings from the repaired threads.
- (4) Using an appropriate thread gauge, check threads for proper major, minor, and pitch diameters as specified in MIL-S-8879. Reject the repaired part if threads are uneven, chipped, or have incorrect diameters.



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**4. Replacement**

- A. Refer to the ASSEMBLY Section for reassembly procedures.
- B. Repair to the detail components of the Aircraft Fire Extinguishers is not practical and is not recommended.
- C. Replace all damaged, defective, expended, and non-repairable items. Replace all preformed o-rings (items 40, 45, 60, and 95) and check (50).
- D. Replace broken or cracked discharge lever (80).
- E. Replace the pressure cartridge (25) if the weight is less than the weight stamped on the pressure cartridge (25). Replace the pressure cartridge (25) if corroded or damaged, or if the pressure cartridge (25) is expended. Discharge defective cartridges and discard.
- F. Replace the labels (15, 105, 110, -125, and -125A) if deteriorated.

**5. Retest**

- A. When repairs are complete, recharge, and retest.



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**SECTION 701: ASSEMBLY (INCLUDING STORAGE)**

**1. General**

A. This section describes the assembly procedures, defines the order of assembly, and lists materials required to assemble components. Always assemble components in specified order. Disregard the assembly instructions for components that have not been disassembled or removed. Refer to the Illustrated Parts List (IPL) section for the parts required and location.

B. Functional Test

A functional test is recommended prior to the following assembly to assure proper operation. Refer to the Testing and Fault Isolation section.

**2. Materials**

A. Materials required for assembly are listed in Table 701. Equivalent items may be used.

**Table 701. Assembly Materials**

<b>NOMENCLATURE</b>	<b>SPECIFICATION NUMBER</b>	<b>SOURCE (CAGE)*</b>
Extinguishing Agent	M3923	MASS Systems 0FRR4
Extinguishing Agent	213923	Kidde Aerospace 61423
Lubricant	3451	Dow Corning 71984
Lubricant	3452	Dow Corning 71984

**3. Assembly Procedure**

**WARNING:** DIRECT COMPRESSED AIR FLOW AWAY FROM PERSONNEL. DEBRIS MOVED BY AIR FLOW CAN CAUSE BLINDNESS OR SERIOUS INJURY. WEAR EYE PROTECTION.

A. **Preparation**

Clean interior of the cylinder assembly (120) using clean, dry, oil-free air, compressed pressure (20 psig - 138 kPag approximately).



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WARNING: TO AVOID POSSIBLE INJURY CAUSED BY BURSTING THE CYLINDER ASSEMBLIES (120), PERFORM HYDROSTATIC (PROOF) TESTING BEFORE ASSEMBLY.

**B. Assembly**

- (1) Lubricate all o-rings (40, 45, 60, and 95), the rubber check (50), the check valve assembly (65), and the neck of the pressure cartridge (25) with lubricant 3451.
- (2) Install the o-ring (40) into the internal groove in the piercing pin assembly (35). Install the o-ring (45) into the external groove of the piercing pin assembly (35). Install the check (50) onto the piercing pin assembly (35) and insert the piercing pin assembly (35) into the valve body (100).
- (3) Insert the o-ring (60) into the valve body (100).
- (4) Install the o-ring (95) onto the seat stem (85). Slip the stem spring (90) over the seat stem (85) and insert the seat stem (85) into the discharge lever (80). Press groove pin (75) into the discharge lever (80) and seat stem (85).
- (5) Insert the seat stem (85) with the discharge lever attached into the valve body (100). Press the groove pin (70) into the discharge lever (80) and the valve body (100).
- (6) Install the check valve assembly (65) onto the threads of the seat stem (85). Using a screwdriver, tighten the check valve assembly (65) until the bottom of the discharge lever (80) is parallel with the horizontal centerline of the valve body (100).
- (7) Temporarily install cartridge handle (10) onto valve body (100). Using a screwdriver, tighten the check valve assembly (65) until the bottom of the discharge lever (80) **lightly** touches the ring on the cartridge handle (10). See Figure 701 for the gap dimension of 0.001- to 0.006-inch (0,03 to 0,15 mm). Remove the cartridge handle (10).

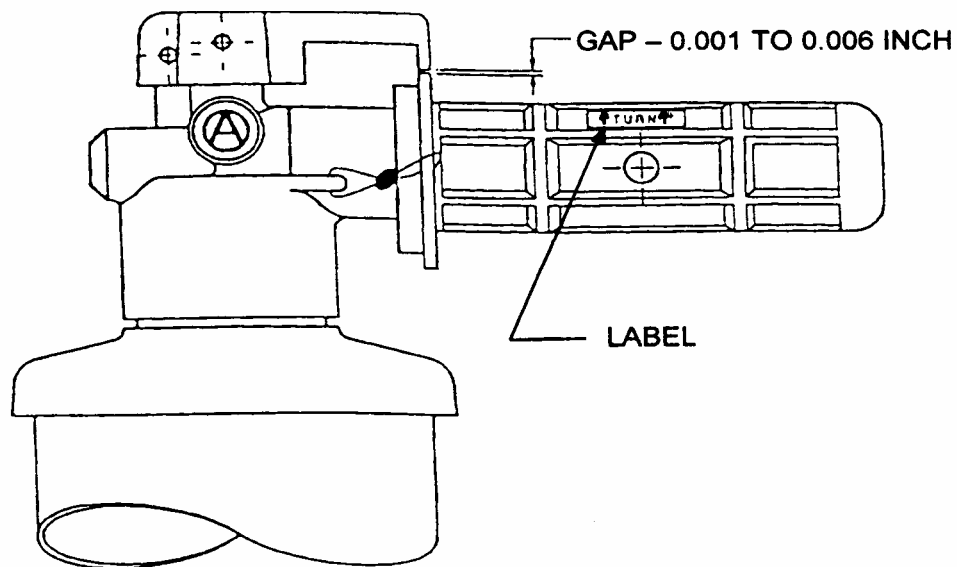
**C. Assemble Cylinder Assembly to Valve Assembly (Refer to Figure 701).**

- (1) If the overflow tube (115) was removed for hydrostatic testing, press it into the cylinder assembly (120) neck until it bottoms.
- (2) Fill the cylinder assembly with one and 3/8 quarts to one and 7/16 quarts (44 to 46 ounces) (1,30 to 1,36 liters) of the extinguishing agent.



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- (3) While depressing the discharge lever (80), install the check valve assembly (65) onto the cylinder assembly (120) and hand tighten only.
- (4) Insert the cartridge spring (20) and the new pressure cartridge (25) into the cartridge handle (10). Apply lubricant 3452 to the external threads of the valve body (100).
- (5) Turn the cartridge handle (10) into the valve body (100) until the discharge lever (80) and the ring on the cartridge handle (10) align; and the seal wire holes on the cartridge handle (10) align with the hole in the valve body (100).
- (6) Install both handle position labels (15) on the cartridge handle (10), if required. Refer to Figure 701.
- (7) Install the maintenance data label (110) and the manufacturing data label (105), if required. The maintenance data label (110) is located 180 degrees from the manufacturing data label (105). Install the applicable contents label, Model A or Model B (-125 or -125A) below the manufacturing data label (105). See Figure 1.



**Handle Gap Adjustment and Label Installation**  
**Figure 701**





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**STORAGE INSTRUCTIONS**

The recommended storage materials are given in Table 702. Equivalent items may be used.

**Table 702. Storage Materials**

<b>NOMENCLATURE</b>	<b>PART OR SPECIFICATION NUMBER</b>	<b>SOURCE (CAGE)*</b>
Cardboard Carton		Commercially available
Packing Material	---	Commercially available
Plastic Bag	Suitably sized	Commercially available



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**SECTION 901: SPECIAL TOOLS, FIXTURES AND EQUIPMENT**

1. General

Special tools, fixtures, and test equipment required for maintenance of the fire extinguishers are listed in Table 901. Equivalent items may be used.

**Table 901. Special Tools, Fixtures and Equipment**

<b>NOMENCLATURE</b>	<b>SPECIFICATION NUMBER</b>	<b>SOURCE (CAGE)*</b>
Alcohol, Isopropyl	Federal Specification TT-I-735	Commercially available
Crow Foot	1-inch	Commercially available
Extinguishing Agent	M3923	MASS Systems 0FRR4
Extinguishing Agent	213923	Kidde Aerospace 61423
Hydrostatic Test Setup	---	DOT approved hydrostatic test facility
Force Scale	0- to 10-pounds (0- to 4,5 kg)	Commercially available
Leak Test Setup	---	Customer supply
Lubricant	3451	Dow Corning 71984
Lubricant	3452	Dow Corning 71984

\* Refer to the IPL, paragraph 2, for the address.



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**SECTION 1001: ILLUSTRATED PARTS LIST**

**1. Introduction**

**A. Purpose**

This section provides illustrations and parts breakdown of all parts of the assembly shown on the title page that can be disassembled, repaired, replaced, and reassembled.

**B. Explanation and Usage of Section**

**(1) Assembly Order Indenture System**

The indenture system used in the parts list shows the relationship of one part to another. For a given item, the number of indentures depicts the relationship of the item to the next higher assembly as follows:

- |                                      |  |                              |
|--------------------------------------|--|------------------------------|
| <b>1</b>                             | <b>2</b>   | <b>3</b>                     |
| Assembly, End Item or Major Assembly |  |                              |
| •                                    | Detail parts for subassembly                                 |                              |
|                                      | Subassembly  |                              |
|                                      | Attaching parts for subassembly detail parts for subassembly |                              |
| •                                    | •  | Detail parts for subassembly |

**(2) Effectivity Code**

Reference letters (A, B, C, etc.) are assigned in the EFF CODE column to each top assembly. The reference letter is shown for detail parts and subassemblies used on all top assemblies.

**(3) Quantity Per Assembly**

The UNITS PER ASSY column shows the total number of units required per assembly, per subassembly, and per sub-subassembly, as applicable. For bulk items, the letters AR indicate "as required". The letters REF indicate the item is listed for reference purposes.

**(4) Parts Replacement Data**

The interchangeability relationship between parts is identified in the NOMENCLATURE column of the parts list. A list of the terms used to show interchangeability and their definitions is as follows:



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<u>TERM</u>	<u>PARTS LIST</u>	<u>DEFINITION</u>
Optional	OPT	This part is optional to an interchangeable with other parts in the same item number variant group or other item number if designated.
Superseded by	SUPSD BY	The part in the part number column is replaced by and is not interchangeable with the item number shown in the notation.
Supersedes	SUPSDS	The part in the part number column replaces and is not interchangeable with the item number shown in the notation.
Replaced by	REPLD BY	The part in the part number column is replaced by and interchangeable with the item number shown in the notation.
Replaces	REPLS	The part in the part number column replaces and is interchangeable with the item number shown in the notation.

(5) Service Bulletin Incorporation

- (a) Except as indicated, the following assemblies, subassemblies, and detail parts subject to modification, deletion, addition, or replacement by an issued service bulletin are annotated to show both pre- and post-service bulletin configuration, and the term (PRE SB XXXX) in the nomenclature column designates the original configuration, and the term (POST SB XXXX) identifies assemblies and parts after the service bulletin modification has been completed.
- (b) Subassemblies and detail parts used on assemblies bearing the pre- or post-service bulletin notation will not carry the same notation themselves if the use code(s) assigned to them clearly reflects their pre- or post-service bulletin status.
- (c) Top assemblies subject to modification by a service bulletin without assignment of a new part number (no production equivalent of the modified assembly) are not annotated with pre or post-service bulletin information.



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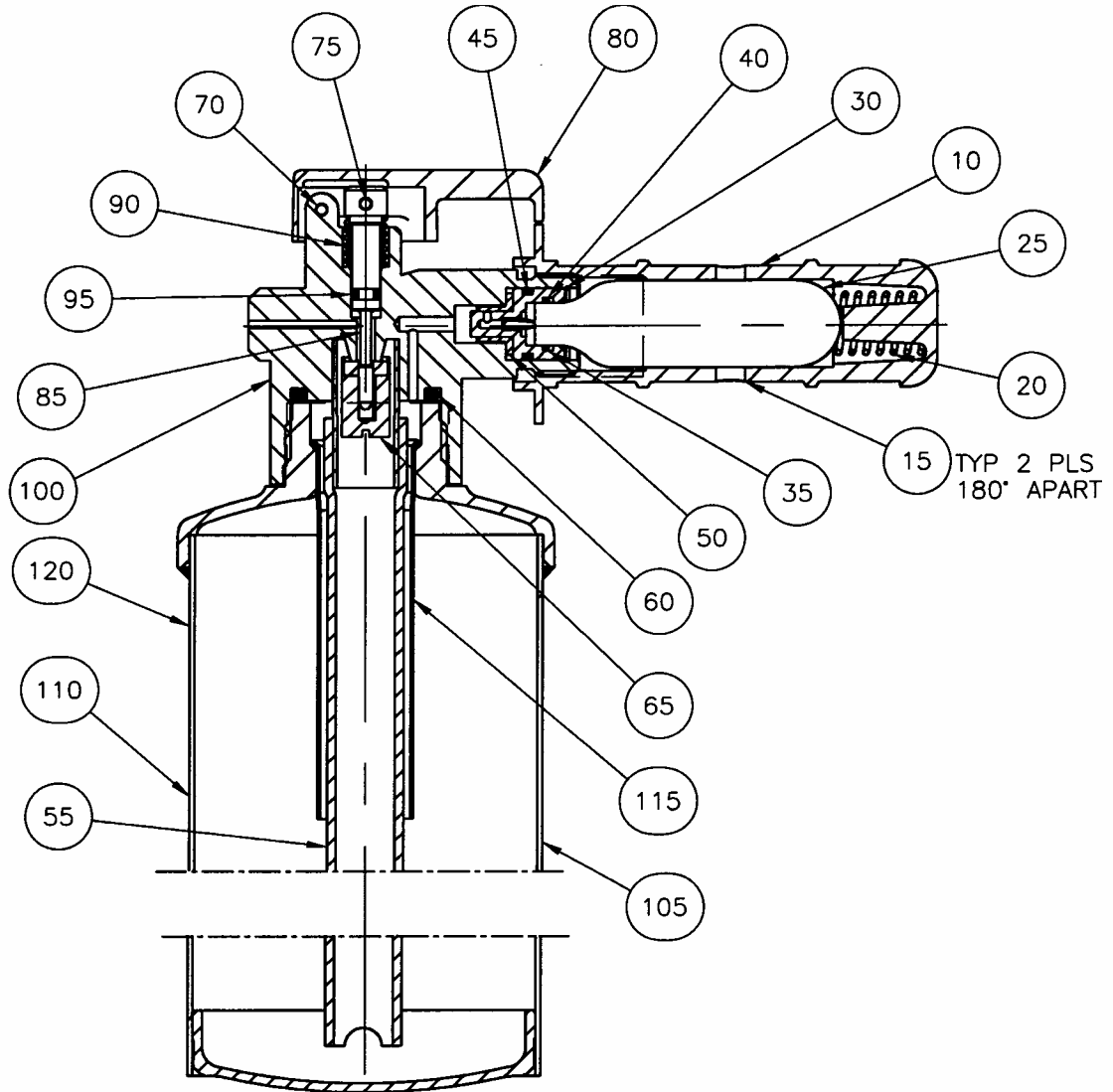
- (6) Items Not Illustrated
  - (a) Items not illustrated are indicated by a dash (-) preceding the item number in the FIG & ITEM NO. column.
- (7) Alpha Variant Items Numbers
  - (a) Alpha variants A-Z (except the letters I and O) are assigned to existing items numbers when necessary to show:
    - 1) Added items
    - 2) Service Bulletin modifications
    - 3) Configuration differences
    - 4) Optional parts
- (8) Product Improvement Part (non-service bulletin)
  - (a) Alpha variant items numbers are shown on the exploded view when the appearance and location of the alpha variant item is the same as the basic item.

2.0 Manufacturer Name and Address

<u>Cage Code</u>	<u>Name and Address</u>	<u>Telephone</u> <u>TeleFAX</u>
0FRR4	MASS Systems, Inc. 4601 Littlejohn Street Baldwin Park, CA 91706-2285 U.S.A.	626-337-4640 FAX 626-337-1641 <a href="mailto:service@mass-systems.com">service@mass-systems.com</a>
61423	Kidde Aerospace Kidde Technologies, Inc. 4200 Airport Drive NW Wilson, North Carolina 27896 U.S.A.	252-246-7074 FAX 252-246-7181
71984	Dow Corning Corporation 2200 West Salzburg Road Auburn, Michigan 48611-9517 U.S.A.	800-248-2481 FAX 989-496-5956
83504	Driv-Lok, Inc. 1140 Park Avenue Sycamore, IL 60178 U.S.A.	815-895-8161 FAX 815-895-4265



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**Figure 1. Illustrated Parts List - Fire Extinguisher**



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**Illustrated Parts List - Fire Extinguisher**

FIG. ITEM NO.	PART NUMBER	AIRLINE PART NO.	NOMENCLATURE							EFF	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-1	M892480-1 <u>MODEL A</u>		FIRE EXTINGUISHER, PORTABLE WATER-SOLUTION, FILLED WITH AGENT P/N M3923							A	RF
-1A	M892480-1 <u>MODEL B</u>		FIRE EXTINGUISHER, PORTABLE WATER-SOLUTION, FILLED WITH AGENT P/N 213923							B	RF
-5	---		. COPPER WIRE, SOFT 0.014- TO 0.020-INCH DIA., LENGTH 6-INCH APPROXIMATELY (0,36 to 0,51MM DIA., LENGTH 15,24 CM) (ALT - OA15262)								A/R
10	52348-2		. HANDLE, CARTRIDGE (ALT - 11004)								1
15	52365-1		. LABEL, HANDLE POSITION (ALT - 11023)								2
20	52355-1		. SPRING, CARTRIDGE (ALT - 11008)								1
25	M1386		. CARTRIDGE, PRESSURE								1
30	RR-62		. RING, RETAINER								1
35	52350-1		. PIERCING PIN ASSEMBLY (ALT - 11014)								1
40	52344-0012		. O-RING (ALT - 31100-0012)								1
45	52344-0014		. O-RING (ALT - 31100-0014)								1
50	52357-1		. CHECK (ALT - 11020)								1
55	52358-1		. HOSE, SYPHON (ALT - 11024)								1
60	52344-0214		. O-RING (ALT - 31100-0214)								1
65	52360-1		. CHECK VALVE ASSEMBLY (ALT - 11017)								1
70	3/32X5/8		. GROOVE PIN, TYPE B.S.S. (83504) (ALT - 332625)								1
75	3/32X7/8		. GROOVE PIN, TYPE (83504) (ALT - 332875)								1
80	52345-2		. LEVER, DISCHARGE (ALT - 11002)								1



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**Illustrated Parts List - Fire Extinguisher  
Cont.**

FIG. ITEM NO.	PART NUMBER	AIRLINE PART NO.	NOMENCLATURE							EFF	UNITS PER ASSY
			1	2	3	4	5	6	7		
85	52359-1		.	STEM, SEAT (ALT – 11005)							1
90	52354-1		.	SPRING, STEM (ALT – 11007)							1
95	52344-0006		.	O-RING (ALT – 31100-0006)							1
100	52346-2		.	BODY, VALVE (ALT – 11003)							1
105	52332-2		.	LABEL, MANUFACTURING DATA							1
110	52333-2		.	LABEL, MAINTENANCE DATA							1
115	52353-1		.	TUBE, OVERFLOW							1
120	52340-2		.	CYLINDER ASSEMBLY							1
-125	52369-1		.	LABEL, CONTENTS, <u>MODEL A</u>					A		1
-125A	52369-2		.	LABEL, CONTENTS, <u>MODEL B</u>					B		1

- ITEM NOT ILLUSTRATED