

**Model: PF55905B**  
**2 gal (7.6 l) Hand Pump Dispenser**  
**(Fan Thrust Reverser Ducts Service)**

04/2026 – Rev. 06

For Spare Parts, Operations & Service Manuals or Service Needs  
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01	10/2018	Original release
02	07/2020	Modified section 6.0 Maintenance
03	08/2020	Modified Parts List
04	05/2023	Modified 1.4 Specifications, 5.0 Operation, 6.3 Hand Pump Dispenser Pressure/Leak Test and 6.4 Hand Pump Relief Valve Adjustment Procedure
05	08/2023	Modified Parts Lists
06	04/2026	Modified 6.0 Maintenance

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This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., its suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.



**CAUTION!**

**Aircraft manufacturer's specifications and instructions must be followed. In the event of contradiction between aircraft manufacturer's specifications and Malabar's, aircraft manufacturer's will prevail.**

**1.0 PRODUCT INFORMATION**

**1.1 DESCRIPTION**

The Malabar Model PF55905B is a 2 gallon fluid dispenser used to open/close the Fan Thrust Reverser Ducts to perform maintenance and inspection. The hand pump dispenser consists of a reservoir, pump assembly, relief valve, by-pass valve, filter assembly, pressure gauge, fluid level indicator, and a fluid delivery hose with a coupling.

**1.2 MODEL & SERIAL NUMBER**

Reference nameplate on unit

**1.3 MANUFACTURER**

**TRONAIR, Inc./Malabar International**  
1 Air Cargo Pkwy East  
Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301  
Fax: (419) 867-0634  
E-mail: sales@tronair.com  
Website: www.tronair.com

**1.4 SPECIFICATIONS**

Fluid .....	MIL-PRF-7808 or MIL-PRF-23699
Reservoir capacity .....	2 gal (7.6 l)
Operating reservoir capacity .....	1.3 gal (4.9 l)
Operating pressure range .....	0-3000 psig (0-207 bar)
Volume per stroke .....	0.3 cubic in (4.9 cc) min
Relief valve setting .....	2750 +25/-60 psig
Hose length .....	24 ft (7.3 m)
Net weight (dry) .....	38 lbs (17.2 kg)
Handle force to generate 3000 psig .....	53 lbs (24 kg)

**2.0 SAFETY INFORMATION**

**2.1 USAGE AND SAFETY INFORMATION**

To ensure safe operations please read the following statements and understand their meaning. Also refer to your equipment manufacturer's manual for other important safety information. This manual contains safety precautions which are explained below. Please read carefully.



**WARNING!**

Warning is used to indicate the presence of a hazard that can cause **severe personal injury, death, and/or substantial property damage** if the Warning Notice is ignored.



**CAUTION!**

Caution is used to indicate the presence of a hazard, which will or can cause **minor personal injury or property damage** if the Caution Notice is ignored.

**3.0 PREPARATION PRIOR TO FIRST USE**

The unit is shipped fully assembled. Fill reservoir at fillport with MIL-PRF-7808 or MIL-PRF-23699 fluid until fluid level indicator reads full. Open by-pass valve below gauge. Operate hand pump assembly a few strokes to bleed all air out of the system. The unit is now ready for use.

## 4.0 TRAINING

### 4.1 TRAINING REQUIREMENTS

The employer of the operator is responsible for providing a training program sufficient for the safe operation of the unit.

### 4.2 TRAINING PROGRAM

The employer provided operator training program should cover safety procedures concerning use of the unit in and around the intended aircraft at the intended aircraft servicing location.

### 4.3 OPERATOR TRAINING

The operator training should provide the required training for safe operation of the unit.

**NOTE: Maintenance and Trouble Shooting are to be performed by a skilled and trained technician.**

## 5.0 OPERATION

1. Remove dust plug from hose coupling and connect the hose to the aircraft service point coupling.

**NOTE: The hand pump will not dispense fluid unless the quick disconnect coupling is connected.**

2. Close the by-pass valve located below the pressure gauge.
3. Use full steady pumping strokes when operating pump assembly.

**NOTE: Relief valve is set to relieve at 2750 +25/-60 psig.**

4. Open by-pass valve to allow fluid to drain from aircraft service point back to unit reservoir.
5. Disconnect the quick disconnect coupling from the aircraft service point, replace the dust plug and store the unit in a dry, dust free location.

## 6.0 MAINTENANCE

### 6.1 SERVICING

The frequency of filter change depends on operating conditions. Generally, changes should be made every 3-4 months or sooner if more than normal resistance is felt on the pumping stroke at low pressure. Refer to item 4 in Figure 1B to change element. A repair parts kit (P/N PF2-17PK) is available and recommended to keep on hand at your facility. Refer to repair parts kit for the complete list of parts contained in the repair parts kit.

### 6.2 HAND PUMP FILTER ELEMENT REPLACEMENT PROCEDURE

1. Open bypass valve (see Figure 1A, #2).
2. Disconnect tube fitting (Figure 1B, #15) from elbow (Figure 1B, #21).
3. Disconnect filter cap (Figure 1B, #3) and remove filter and O ring (Figure 1B, #2 & #8).
4. Install replacement O ring (Figure 1B, #8) and filter element (Figure 1B, #4) and connect filter cap (Figure 1B, #3).
5. Connect tube fitting (Figure 1B, #15) to elbow (Figure 1B, #21) and torque 110-130 in-lbs.
6. Close bypass valve (see Figure 1A, #2) and pump handle.
7. Perform Hand Pump Dispenser Pressure/Leak test

### 6.3 HAND PUMP DISPENSER PRESSURE/LEAK TEST

1. Remove coupling assembly (see Figure 1A, #17) from end of TR pump hose.
2. Install Test Gauge to end of TR pump hose. Torque 110-130 in-lbs.
3. Close bypass valve (see Figure 1A, #2) and pump handle.
4. Verify pressure relieves at 2750 +25/-60 psi on the Test Gauge and TR pump Gauge (see Figure 1A, #16).

**Note: Relief Valve (see Figure 1B, #6) may require adjustment if pressure does not relieve at 2750 +25/-60 psi. See Hand Pump Relief Valve Adjustment Procedures**

5. Remove test gauge and install coupling assembly (see Figure 1A, #17). Torque 110-130 in-lbs.

### 6.4 HAND PUMP RELIEF VALVE ADJUSTMENT PROCEDURE

1. Loosen jam nut on Hand Pump Relief Valve (Figure 1B, #6).
2. Turn adjustment screw on Hand Pump Relief Valve (Figure 1B, #6) to achieve desired pressure of 2750 +25/-60 psi. (Counterclockwise to decrease pressure, clockwise to increase pressure.)
3. Close Bypass Valve (Figure 1A, #2) and pump handle to verify pressure relieves at 2750 +25/-60 psi.
4. Tighten jam nut on Hand Pump Relief Valve (Figure 1B, #6).
5. If proper pressure cannot be obtained, remove and replace Hand Pump Relief Valve (Figure 1B, #6).

**6.5 REPAIR AND REPLACEMENT**

See items 9, 10, 11 and 12 in Figure 2. The moving plunger seals, items 9 and 10, are normally the first to wear. This is usually indicated by leakage of fluid past the plunger. It is advisable to change plunger seals (items 9 and 10), static seal (item 11) and wiper (item 12) immediately if leakage is discovered.

**7.0 PROVISION OF SPARES**

**7.1 SOURCE OF SPARE PARTS**

Spare parts may be obtained from the manufacturer:

<b>TRONAIR, Inc./Malabar International</b>	Telephone: (419) 866-6301 or 800-426-6301
1 Air Cargo Pkwy East	Fax: (419) 867-0634
Swanton, Ohio 43558 USA	E-mail: <a href="mailto:sales@tronair.com">sales@tronair.com</a>
	Website: <a href="http://www.tronair.com">www.tronair.com</a>



For Spare Parts, Operations & Service Manuals or Service Needs:  
Scan the QR code or visit [tronair.com/pages/tronair-information-center](http://tronair.com/pages/tronair-information-center)

**7.2 SPECIAL TOOL**

The following special tool is necessary to pressure test the hand pump dispenser. This tool may be purchased upon request:

Test Gauge and Hose ..... PF55925

**7.3 RECOMMENDED SPARE PARTS LISTS**

Reference the following page(s) for Replacement Parts and Kits available.

Refer to figure 1A & 1B for unit assembly or figure 2 for pump assembly.

**8.0 IN SERVICE SUPPORT**

Contact Malabar, Inc. for technical services and information

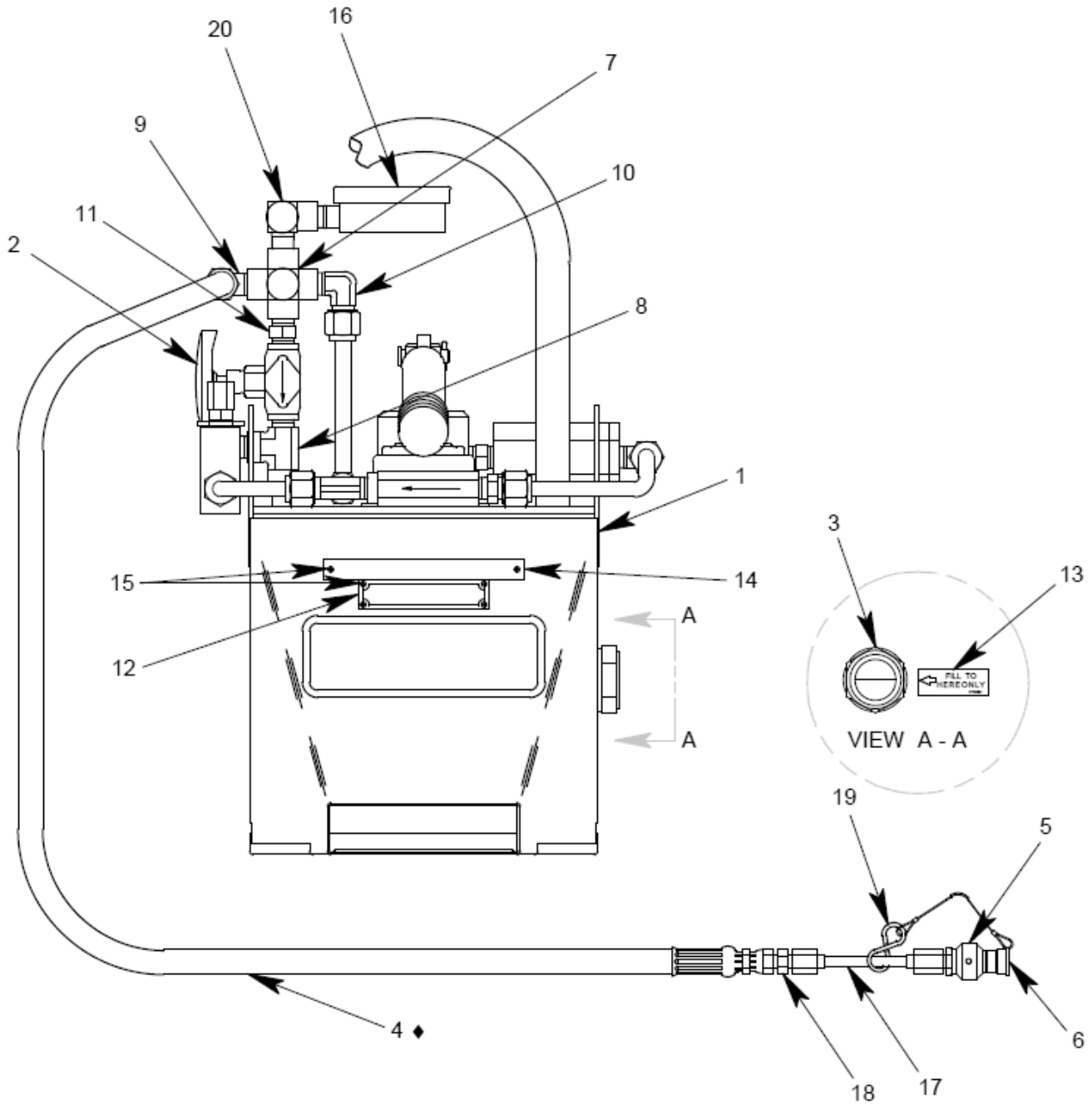
**9.0 GUARANTEES/LIMITATION OF LIABILITY**

- I. Seller warrants each new product of its manufacture to be free from defects in material or workmanship, under proper, reasonable, and normal use and service.
- II. The warranty period shall be as follows:
  - A. For Malabar equipment, with the exception of Tripod Jacks, the warranty period is one (1) year after date of shipment.
  - B. For Malabar Tripod Jacks, the warranty period is three (3) years after date of shipment.
- III. Where Buyer claims an alleged defect in material or workmanship and so advises Seller in writing within ten (10) days after discovery thereof, then and in such event, Buyer shall return said equipment, transportation prepaid, to the Seller, provided such return is timely and within the above-mentioned warranty period. This warranty and liability of the Seller is expressly limited solely to replacement or repair of defective parts or goods, and return at Buyer's expense to Buyer after finding by Seller the product was defective prior to original shipment or, at the option of Seller, to providing refund to Buyer of the purchase price for said product.
- IV. It is further expressly understood and agreed that:
  - A. THERE IS NO WARRANTY, REPRESENTATION OF CONDITION OF ANY KIND, EXPRESS OR IMPLIED, (INCLUDING NO WARRANTY OF MERCHANTABILITY OR OF FITNESS) EXCEPT THAT THE MATERIAL SHALL BE OF THE QUALITY SPECIFIED IN APPLICABLE SPECIFICATIONS, AND NONE SHALL BE IMPLIED BY LAW. Except as otherwise provided herein, quality shall be in accordance with Seller's specifications. Final determination of the material for the use contemplated by Buyer is the sole responsibility of Buyer and Seller shall have no responsibility in connection with such suitability, and
  - B. Buyer's sole and exclusive remedy shall be repair or replacement of defective parts or goods by the Seller. Should the goods, in the judgment of Seller, preclude the remedying of the warranted defects by repair or replacement, the Buyer's sole and exclusive remedy shall be the refund of the purchase price, and
  - C. Seller shall not be liable for prospective profits or special, indirect or consequential damages, nor shall any recovery of any kind against Seller be greater in amount than the purchase price of the specific material sold and causing the alleged loss, damage or injury. Buyer assumes all risk and liability for loss, damage or injury to persons or property of Buyer or others arising out of use or possession of any product or part sold hereunder, and
  - D. Seller shall in no way be deemed or held to be obligated, liable or accountable upon or for any guarantees or warranties, express or implied, or created by statute or by operation of law or otherwise, in any manner of form beyond its express agreement above set forth, and
  - E. No warranty herein shall apply to any product which shall have been repaired or altered, unless such alteration or repair has been made by Seller or if, after return to and inspection by Seller, the product is found by Seller to have been subject to misuse, negligence or accident, and
  - F. No warranty of any nature is made by Seller as to any component forming a part of the product sold and Buyer shall receive only such warranties offered by such other manufacturer of such component, and
  - G. Seller does not assume nor does Seller authorize any other person to assume for it any other liability or make any warranty in connection with the sale of its products.

**Parts List – Figure 1A**

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

◆ PART OF REPAIR PARTS KIT



**Parts List – Figure 1A**

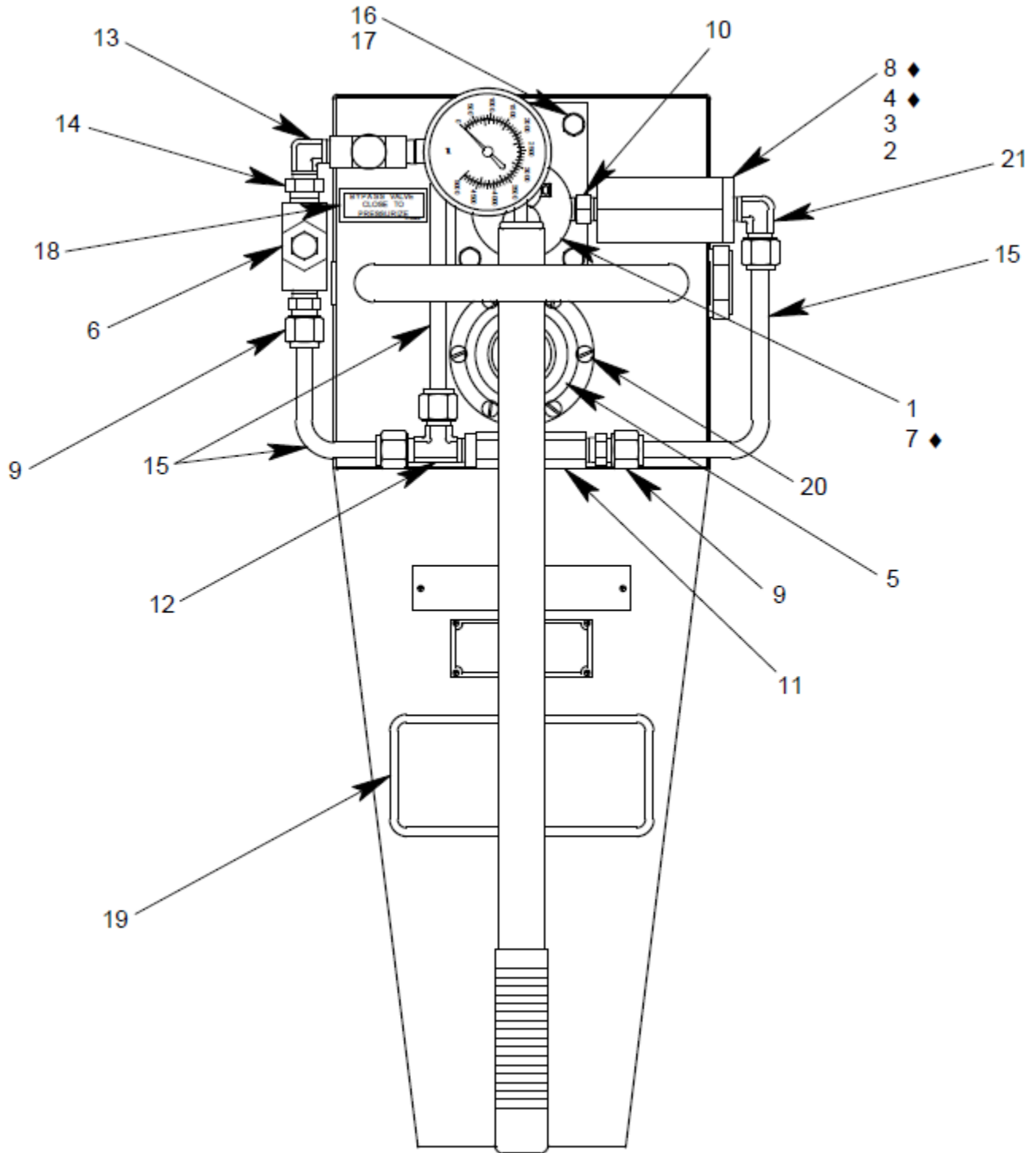
When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
1	PF55906A	TANK	1
2	424-017	BY-PASS VALVE	1
3	484-006	FLUID LEVEL INDICATOR	1
4	PF55557-8	HOSE ASSEMBLY	1
5	736-103	COUPLING	1
6	736-079	DUST PLUG	1
7	715-002	CROSS	1
8	713-012	RUN TEE	1
9	722-005	ELBOW, 3/8 37° x 1/4 NPT	1
10	722-014	ELBOW, 3/8 TUBE x 1/4 NPT	1
11	711-003	NIPPLE	1
12	55997-2	NAMEPLATE	1
13	PF55561	PLACARD	1
14	PF55910	PLACARD	1
15	397-010	SELF TAPPING SCREW, 6-32	6
16	482-025	GAUGE, 0-5000 PSI	1
17	PF55668	COUPLING ASSEMBLY	1
18	721-023	CONNECTOR	1
19	491-018	S-HOOK	1
20	712-008	ELBOW, STREET, 1/4 NPT	1

**Parts List – Figure 1B**

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

◆ PART OF REPAIR PARTS KIT



### Parts List – Figure 1B

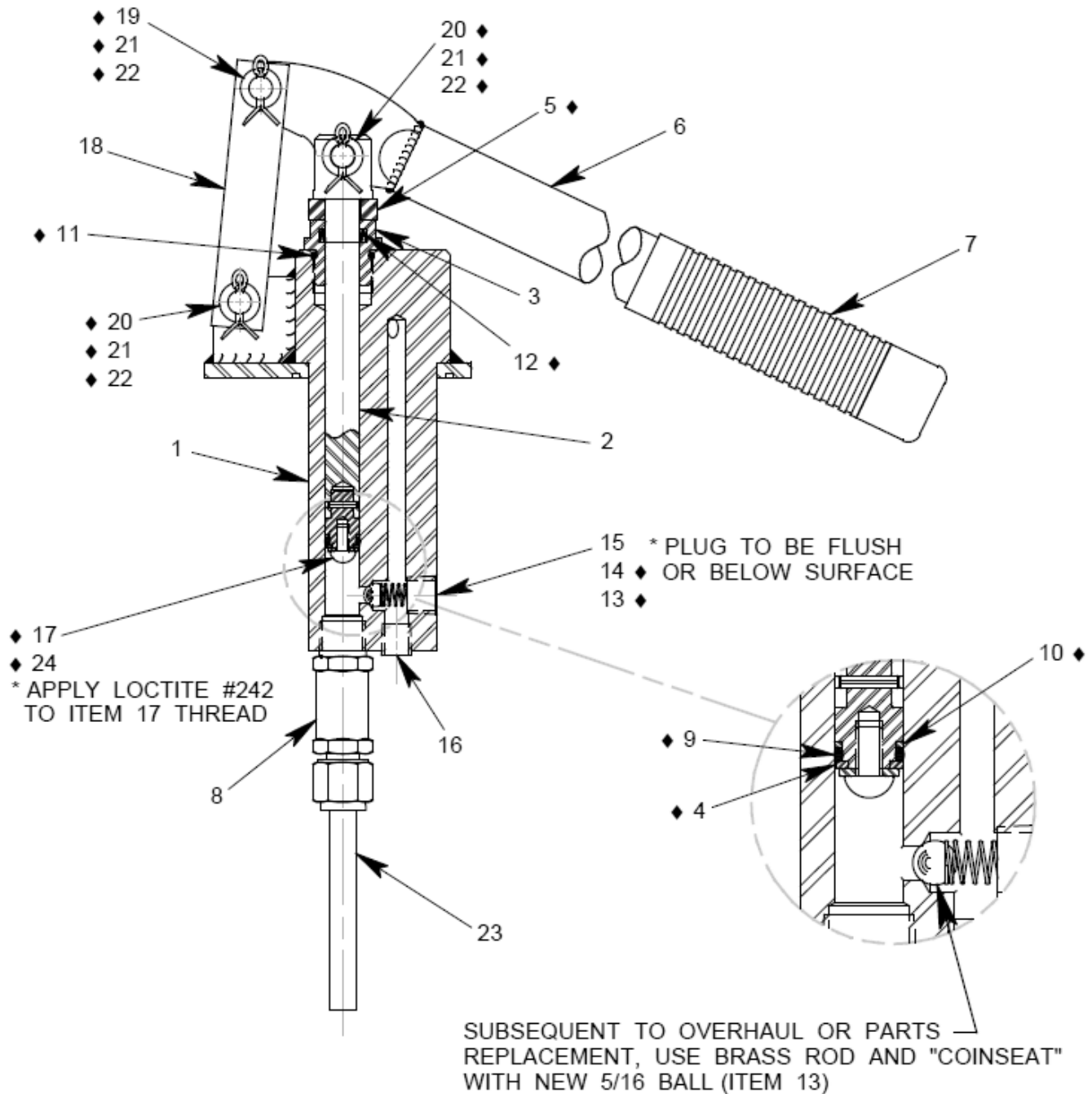
When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
1	PF55900	PUMP ASSEMBLY	1
2	PF55555	FILTER BODY	1
3	PF55556	FILTER CAP	1
4	481-005	FILTER ELEMENT	1
5	PF55447	FILLPORT ASSY w / SCREWS	1
6	423-002	RELIEF VALVE	1
7	MS28775-034	O-RING	1
8	MS28775-120	O-RING	1
9	721-009	CONNECTOR	2
10	711-003	NIPPLE	1
11	422-013	CHECK VALVE	1
12	723-009	RUN TEE	1
13	712-022	ELBOW, 90°, 1/4 NPT	1
14	714-009	REDUCER, FEMALE	1
15	732-002	TUBING, 3/8 OD x .049 WALL	25
16	MS35338-44	SPLIT LOCKWASHER, 1/4	1
17	321-134	HHCS, 1/4-28 x 5/8 LG	1
18	PF55909	PLACARD	1
19	55998	STICKER, MALABAR	1
20	341-009	RHMS, 10-32 x 1/2 LG	6
21	722-014	ELBOW, 3/8 TUBE x 1/4 NPT	1

**Parts List – Figure 2**

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

◆ PART OF REPAIR PARTS KIT

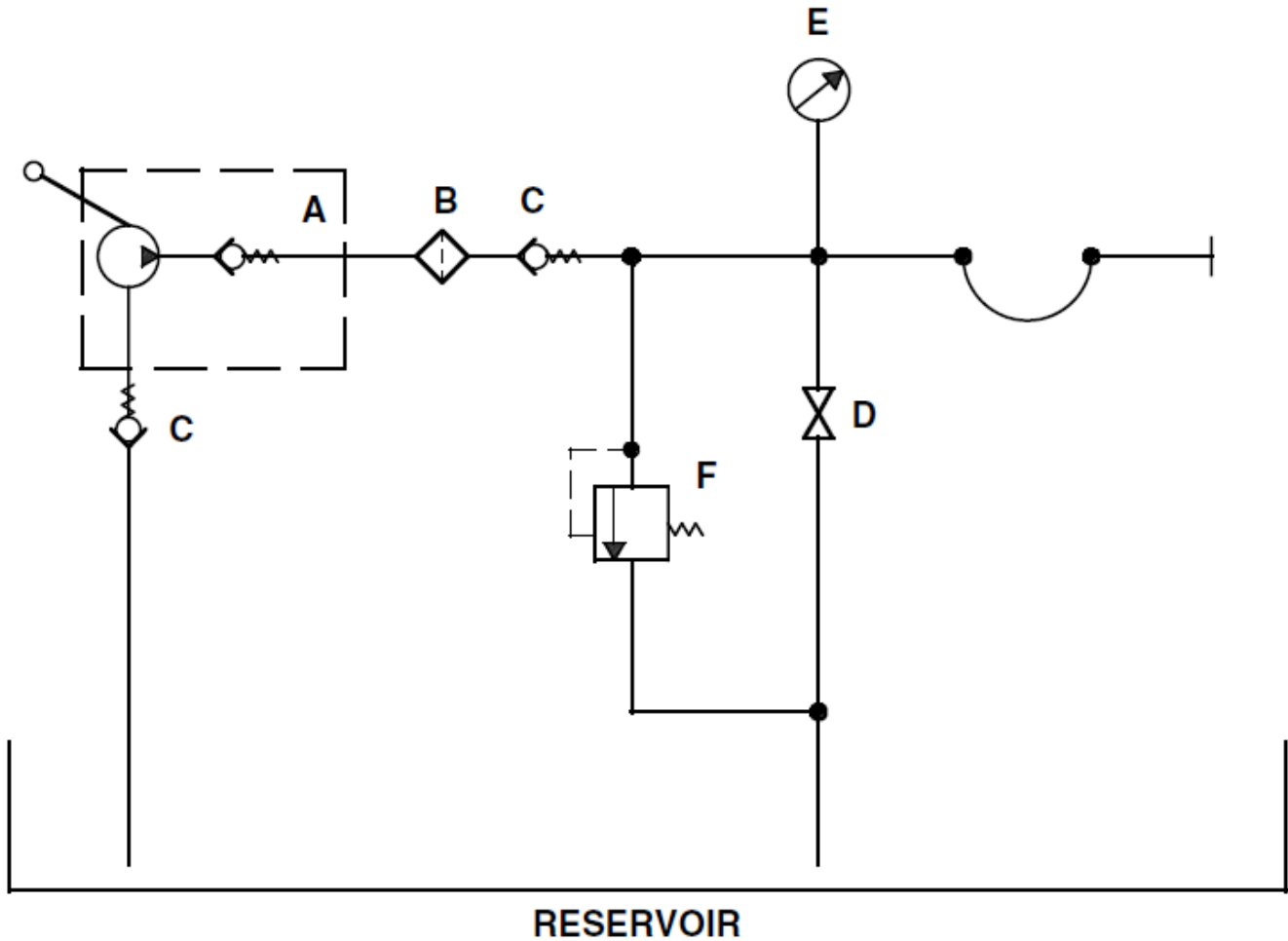


### Parts List – Figure 2

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>PF55900</b>	<b>PUMP ASSEMBLY</b> ; <i>consists of:</i>	
1	PF55897	PUMP BODY	1
2	PF55899	PUMP PLUNGER	1
3	PF55901	PUMP GLAND	1
4	PF55904	RETAINER RING	1
5	PF55902	CUSHION	1
6	PF55903	PUMP HANDLE WELDMENT	1
7	494-002	HANDLE GRIP	1
8	422-055	CHECK VALVE CONNECTOR	1
9	MS28775-012	O-RING	1
10	55929-012	BACK-UP RING	1
11	MS28778-10	O-RING	1
12	AN6232-2.25	WIPER	1
13	412-002	STEEL BALL, 5/16 DIA	1
14	495-040	SPRING	1
15	PF55908	PLUG-MODIFIED	1
16	717-005	PIPE PLUG, 1/8 NPT	1
17	341-002	RHMS, 10-24 x 3/8 LG	1
18	PF55898	PUMP LINK	1
19	MS20392-4C25	FLAT HEAD PIN	1
20	MS20392-4C33	FLAT HEAD PIN	2
21	AN960-516	FLAT WASHER, 5/16 DIA	3
22	AN380C3-3	COTTER PIN	3
23	732-002	TUBING, 3/8 OD x .049 x 3" LG	1
24	AN960-10	FLAT WASHER, #10	1

### HYDRAULIC DIAGRAM



- A - HAND PUMP
- B - FILTER
- C - CHECK VALVE
- D - BY-PASS VALVE
- E - GAUGE
- F - RELIEF VALVE

**Parts List – PF2-17PK Repair Parts Kit**

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Part Number	Description	Qty
341-002	RHMS, 10-24 x 3/8 LG	1
412-002	STEEL BALL, 5/16 DIA	1
481-005	FILTER ELEMENT	1
495-040	SPRING	1
55929-012	BACK-UP RING	1
AN380C3-3	COTTER PIN	3
MS20392-4C25	FLAT HEAD PIN	1
MS20392-4C33	FLAT HEAD PIN	2
AN960-10	FLAT WASHER, #10	1
AN960-516	FLAT WASHER, 5/16 DIA	3
AN6232-2.25	WIPER	1
MS28775-012	O-RING	1
MS28775-034	O-RING	1
MS28775-120	O-RING	1
MS28778-10	O-RING	1
PF55557-8	HOSE ASSEMBLY	1
PF55902	CUSHION	1
PF55904	RETAINER RING	1