

# **MALABAR**

**INTERNATIONAL**

***AIRCRAFT MAINTENANCE & SUPPORT EQUIPMENT***

***OWNER'S MANUAL FOR MALABAR MODEL***

## **160-9**

***1 QUART O-C FLUID GUN DISPENSER***

***READ  
AND  
SAVE***

**THIS  
INSTRUCTION  
MANUAL**

- \* GENERAL DESCRIPTION
- \* OPERATION
- \* SERVICE
- \* PARTS BREAKDOWN

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***OVER 65 YEARS OF SERVICE & EXPERIENCE***

## GENERAL DESCRIPTION, OPERATION, SERVICE AND PARTS BREAKDOWN

# **MALABAR MODEL 160-9 1 QUART O-C FLUID GUN DISPENSER**

**CAUTION:** AIRCRAFT MANUFACTURER'S SPECIFICATION AND INSTRUCTIONS MUST BE FOLLOWED IN THE EVENT OF CONTRADICTION BETWEEN AIRCRAFT MANUFACTURER'S SPECIFICATIONS AND MALABAR'S AIRCRAFT MANUFACTURER'S SPECIFICATIONS WILL PREVAIL.

### **SPECIFICATIONS:**

|                           |                        |
|---------------------------|------------------------|
| Fluid-----                | SKYDROL LD4            |
| Fluid Capacity-----       | 1 quart (.95 liters)   |
| Pump Outlet Pressure----- | 80 psig (551 kg/sq cm) |
| Volume Per Stroke -----   | 2 cubic inches (33 cc) |
| Hose Length-----          | 74 inches (1880 mm)    |
| Net Weight (empty)-----   | 6.5 lbs (2.9 kg)       |
| Filter Rating-----        | 3 micron nominal       |

### **GENERAL DESCRIPTION:**

The Malabar Model 160-9 is a one quart original container fluid gun dispenser used to service various commercial aircraft. The O-C Fluid Gun Dispenser consists of a hand pump assembly, filter assembly and a fluid delivery hose with a coupling.

### **PREPARATION FOR USE:**

1. Attach the hose assembly to the gun. Avoid over tightening the swivel nut.
2. The two latches attached to the clamp bars may require adjustment. Loosen the four screws, washers and self-locking nuts and adjust latches to fit oil can before tightening screws.

### **OPERATION:**

1. Slide piercer rod fully up and latch oil can to gun. Check the fluid specification and brand for compatibility with the aircraft system.
2. Strike piercer handle firmly using palm of hand or rubber mallet to drive piercer through top of oil can. Assure piercer is firmly placed in oil can.

**CAUTION: TO PREVENT DAMAGE TO THE PIERCER ROD OR PIERCER HANDLE, DO NOT USE ANY TOOL OTHER THAN A RUBBER Mallet.**

3. Open the bleed screw on the sight gage (one turn only) and carefully pump the gun to prime and eliminate any air bubbles. Close bleed screw.

**CAUTION: AIR PUMPED IN WITH OIL MAY CAUSE FALSE LEVEL READINGS IN AIRCRAFT SYSTEMS AS THE AIR EVENTUALLY BUBBLES OFF AND THE LEVEL DROPS.**

4. Remove dust plug from hose end coupling and connect hose end coupling to the aircraft service

point.

5. Use full steady pump strokes when operating pump assembly during replenishing. Stop pumping oil when can is empty or air bubbles are detected in sight gage. Reprime gun when changing cans.
6. When finished, disconnect the hose end coupling from the aircraft service point. Replace the dust plug and store the gun in a dry dust free location.
7. When gun is stored, it is advisable to keep oil can latched to the gun to prevent contamination and oil mess.

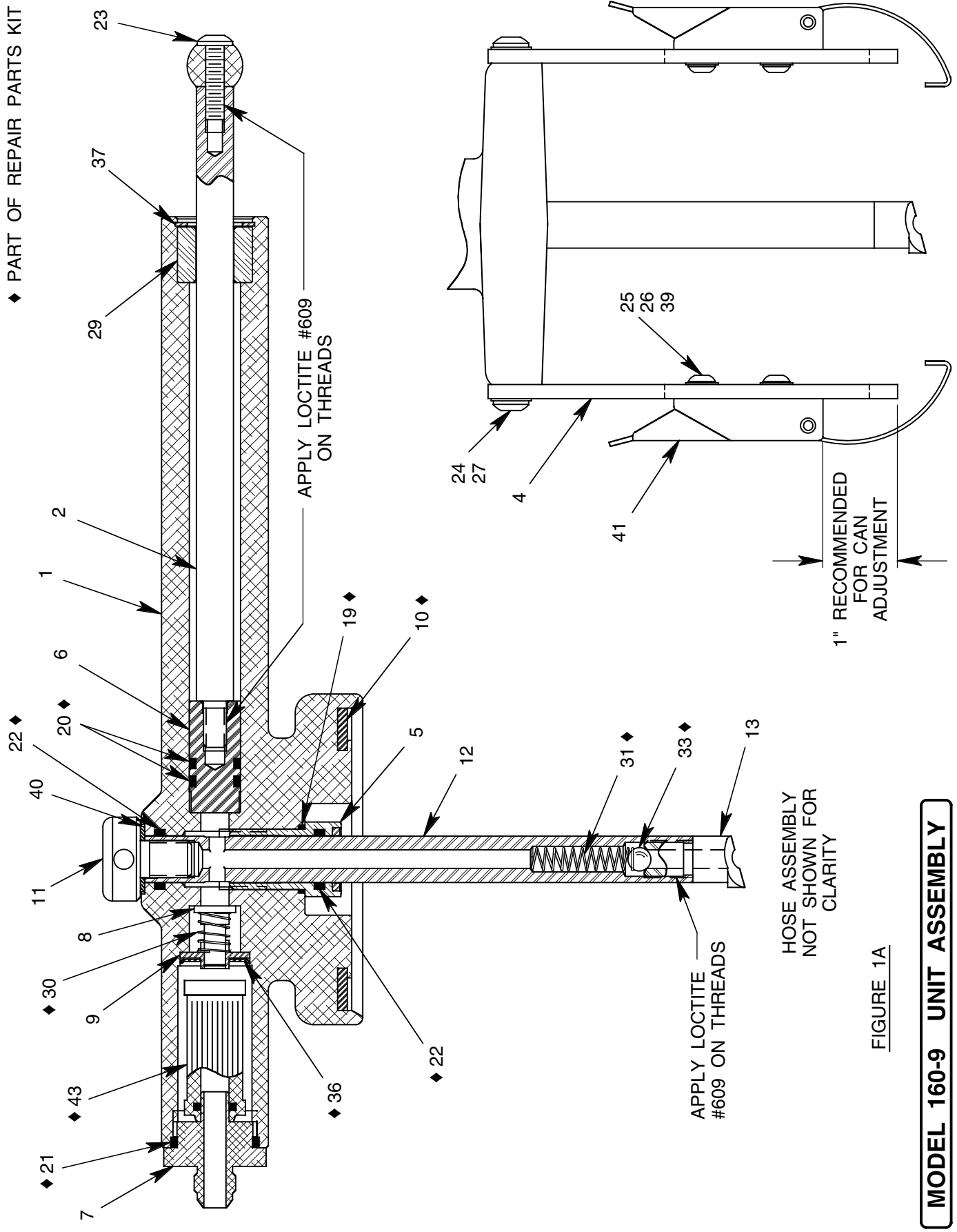
## **SERVICING:**

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 figure 1A, item 43 to change filter element.

## **REPAIR AND REPLACEMENT:**

No definite time schedule can be established for the overhaul of the O-C fluid gun dispenser assembly for the replacement of the various moving parts. The number of times the pump assembly is operated materially affects the life of the working parts. The moving piston seals (figure 1A, item 20) and piercer rod seals (figure 1A, item 22) are normally the first to wear. This is usually indicated by leakage of fluid past the piston rod (figure 1A, item 2) or the piercer rod (figure 1A, item 12). It is advisable to change piston seals (figure 1A, item 20) and piercer rod seals (figure 1A, item 22) immediately if leakage is discovered. Regardless of apparent condition, replace all parts marked with (◆). A repair parts kit (P/N 160-4PK) which contains all of the parts marked with (◆) is available and recommended to keep on hand at your facility. Coat all o-rings with petroleum jelly prior to assembly. Clean all metal parts with solvent and dry with compressed air. Lubricate all threads. Refer to sheet 6 for the complete list of parts contained in the repair parts kit.

◆ PART OF REPAIR PARTS KIT



HOSE ASSEMBLY  
NOT SHOWN FOR  
CLARITY

FIGURE 1A

**MODEL 160-9 UNIT ASSEMBLY**

◆ PART OF REPAIR PARTS KIT

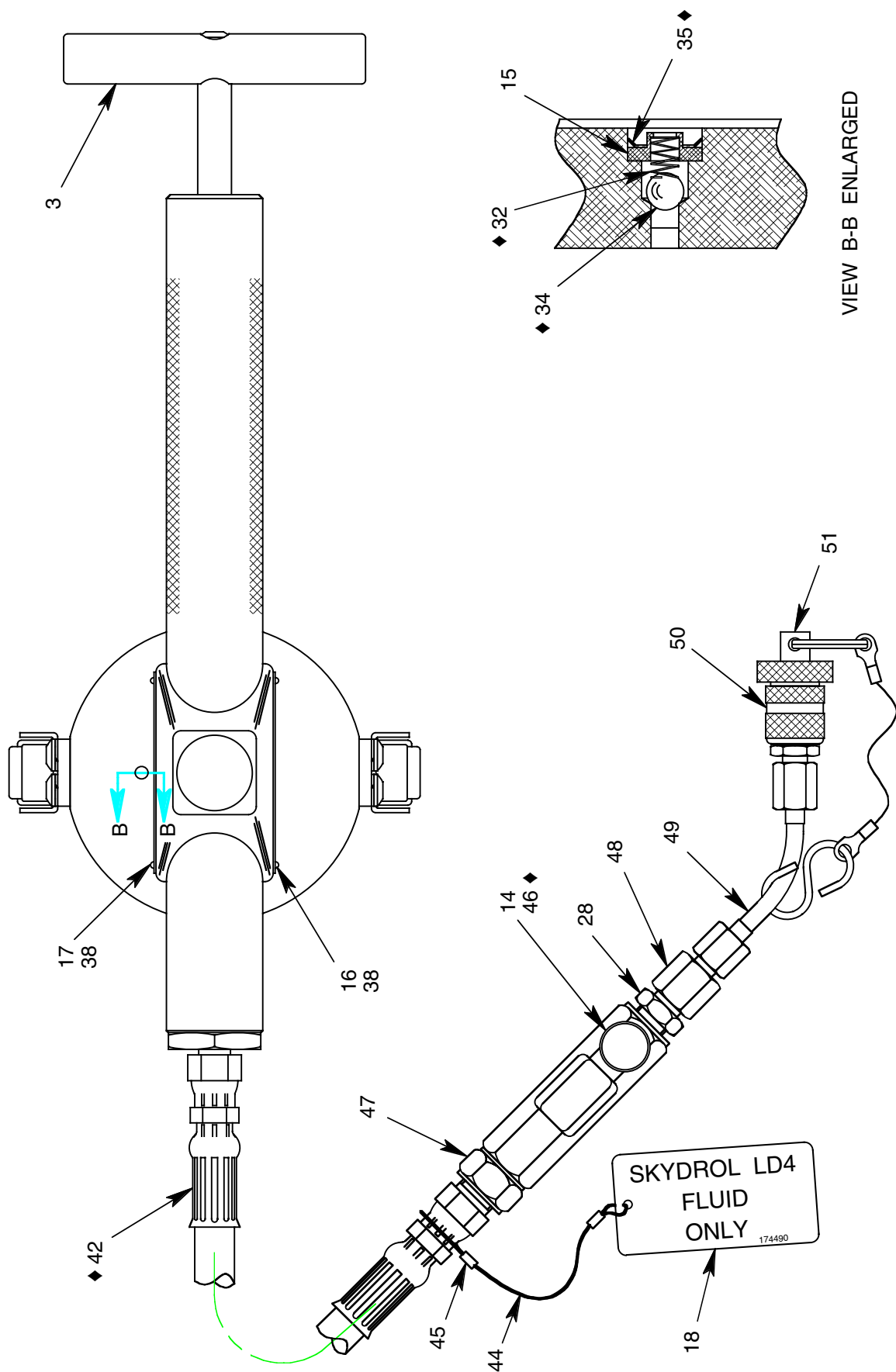


FIGURE 1B

**MODEL 160-9 UNIT ASSEMBLY**

## 160-9 UNIT ASSEMBLY PARTS LIST

| NO. | QTY | PART NO.  | PART NAME                    |
|-----|-----|-----------|------------------------------|
| 1   | 1   | *174493-1 | PUMP BODY MACHINE            |
| 2   | 1   | 174405    | PISTON ROD                   |
| 3   | 1   | 174406    | HANDLE                       |
| 4   | 2   | 174407    | CLAMP BAR                    |
| 5   | 1   | 174459    | BEARING BOLT ASSEMBLY        |
| 6   | 1   | 174411    | PISTON                       |
| 7   | 1   | 174412    | ADAPTER FITTING              |
| 8   | 1   | 174413    | VALVE POPPET                 |
| 9   | 1   | 174414    | POPPET GUIDE                 |
| 10  | 1   | 174446    | CAN SEAL                     |
| 11  | 1   | 174416    | PIERCER HANDLE               |
| 12  | 1   | 174460    | PIERCER ROD                  |
| 13  | 1   | 174461    | PIERCER                      |
| 14  | 1   | 174419    | BLEED SCREW                  |
| 15  | 1   | 174420    | SPRING SUPPORT               |
| 16  | 1   | 174421    | PLACARD                      |
| 17  | 1   | 174491    | PLACARD, SKYDROL LD4         |
| 18  | 1   | 174490    | PLACARD, SKYDROL LD4         |
| 19  | 1   | 55930-019 | O-RING                       |
| 20  | 2   | 55930-112 | O-RING                       |
| 21  | 1   | 55930-120 | O-RING                       |
| 22  | 2   | 55930-114 | O-RING                       |
| 23  | 1   | 326-009   | BHCS, 1/4-20 x 1" LG         |
| 24  | 4   | 326-010   | BHCS, 1/4-20 x 5/8 LG        |
| 25  | 4   | 326-020   | BHCS, 10-24 x 1/2 LG         |
| 26  | 4   | 355-025   | HEX LOCKNUT, 10-24           |
| 27  | 4   | 363-001   | SPLIT LOCKWASHER, 1/4        |
| 28  | 1   | 721-004   | CONNECTOR, 3/8 37° x 1/4 MPT |
| 29  | 1   | 410-017   | BRONZE BEARING               |
| 30  | 1   | 495-035   | SPRING                       |
| 31  | 1   | 495-036   | SPRING                       |
| 32  | 1   | 495-037   | SPRING                       |
| 33  | 1   | 412-002   | BALL, CHROME, 5/16 DIA       |
| 34  | 1   | 412-004   | BALL, CHROME, 1/4 DIA        |
| 35  | 1   | 380-005   | RETAINING RING, PUSH ON      |
| 36  | 1   | 380-004   | RETAINING RING, PUSH ON      |
| 37  | 1   | 55926-100 | RETAINING RING, PUSH ON      |
| 38  | 8   | 393-004   | DRIVE SCREW, #2 x 3/16 LG    |
| 39  | 4   | 362-045   | FLAT WASHER, #10             |
| 40  | 1   | 369-002   | NYLON FLAT WASHER            |
| 41  | 2   | 491-056   | LATCH                        |
| 42  | 1   | 174445    | HOSE ASSEMBLY                |
| 43  | 1   | 481-007   | FILTER ELEMENT               |
| 44  | 1   | 491-027   | CABLE, .048 DIA x 6" LG      |
| 45  | 2   | 491-028   | SLEEVE CRIMP                 |
| 46  | 1   | 55930-904 | O-RING                       |
| 47  | 1   | 174447    | SIGHT GAGE                   |
| 48  | 1   | 714-019   | REDUCER, 3/8 37° x 1/4 37°   |
| 49  | 1   | PF55877   | ELBOW ASSEMBLY               |
| 50  | 1   | 736-030   | COUPLING                     |
| 51  | 1   | PF55680   | DUST PLUG AND CHAIN ASSEMBLY |

\* NOTE: PUMP BODY MACHINE P/N 174493-1 REPLACES FORMER PUMP BODY ASSEMBLY P/N 174427, COVER P/N 174462 AND O-RING P/N 55930-123

**160-4PK REPAIR PARTS KIT**

| QTY | PART NO.   | PART NAME               |
|-----|------------|-------------------------|
| 1   | 174445     | HOSE ASSEMBLY           |
| 1   | 481-007    | FILTER ELEMENT          |
| 1   | 174446     | CAN SEAL                |
| 1   | 55930-904  | O-RING                  |
| 2   | 55930-114  | O-RING                  |
| 1   | 55930-120  | O-RING                  |
| 2   | 55930-112  | O-RING                  |
| 1   | 55930-019  | O-RING                  |
| 1   | 495-035    | SPRING                  |
| 1   | 495-036    | SPRING                  |
| 1   | 495-037    | SPRING                  |
| 1   | 412-002    | BALL, CHROME, 5/16 DIA  |
| 1   | 412-004    | BALL, CHROME, 1/4 DIA   |
| 1   | 380-005    | RETAINING RING, PUSH ON |
| 1   | 380-004    | RETAINING RING, PUSH ON |
| 1   | 160-4PKDOC | REPAIR PARTS KIT LIST   |