PRESSURE INTENSIFIER

Installation and Service Instructions

TABLE 1

Model Number	Fluid Type	Repair Kit Number	Intensifier Ratio	Reservoir Inlet Port
03-465-020	HO	02-400-172	5:1	1/4-18NPTF
03-465-022	HO	02-400-172	5:1	1/8-27NPTF

HO = Hydraulic Oil

NOTE: If your product number is not listed, contact ZF Off-Highway Solutions Inc. for information.

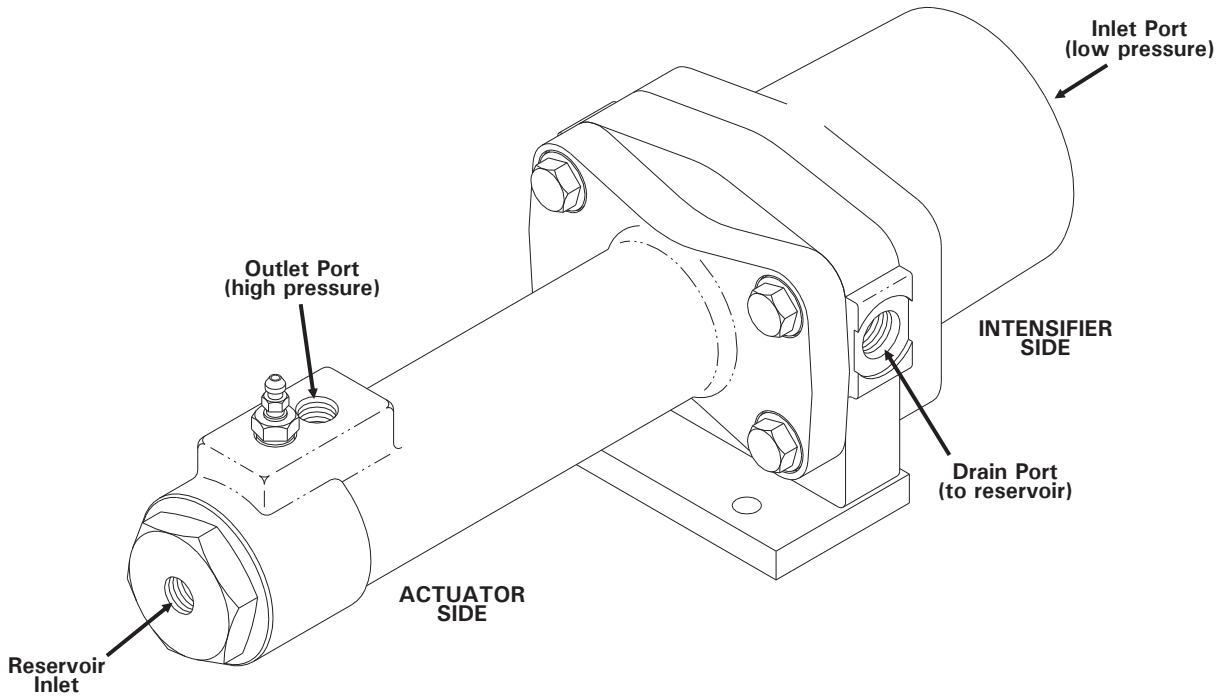

FIGURE 1

ZF Off-Highway Solutions Minnesota Inc.
1911 Lee Boulevard / North Mankato, MN U.S.A. 56003
Tel: +1 507 625 6426 **Fax:** +1 507 625 3212

Form No. 81-465-003 Revised 2002-06-19

www.mico.com

MOUNTING PROCEDURE

(Refer to Figures 2, 3, and 4)

Mount unit either vertically with actuator side up or horizontally with actuator side bleeder screw up. Use mounting holes provided.

Vertical Installation - Remotely mount the reservoir so bottom of reservoir is highter than actuator side inlet and also higher than lines and fittings. Refer to hydraulic diagram Figure 2.

If remote mounting of reservour cannot be used, the reservoir can be mounted directly to the actuator inlet using a 1/4-18NPTF **steel** hex nipple. **(Do not use brass or other material pipe nipple).** Refer to hydraulic diagram Figure 3.

Horizontal Installation - Remotely mount reservoir higher than outlet lines and fittings. Refer to hydraulic diagram Figure 4.

When the unit and reservoir have been properly installed, proceed to connect the lines as shown on hydraulic diagram Figure 2.

When all connections are complete, proceed to bleed brake system as recommended by machine manufacture.

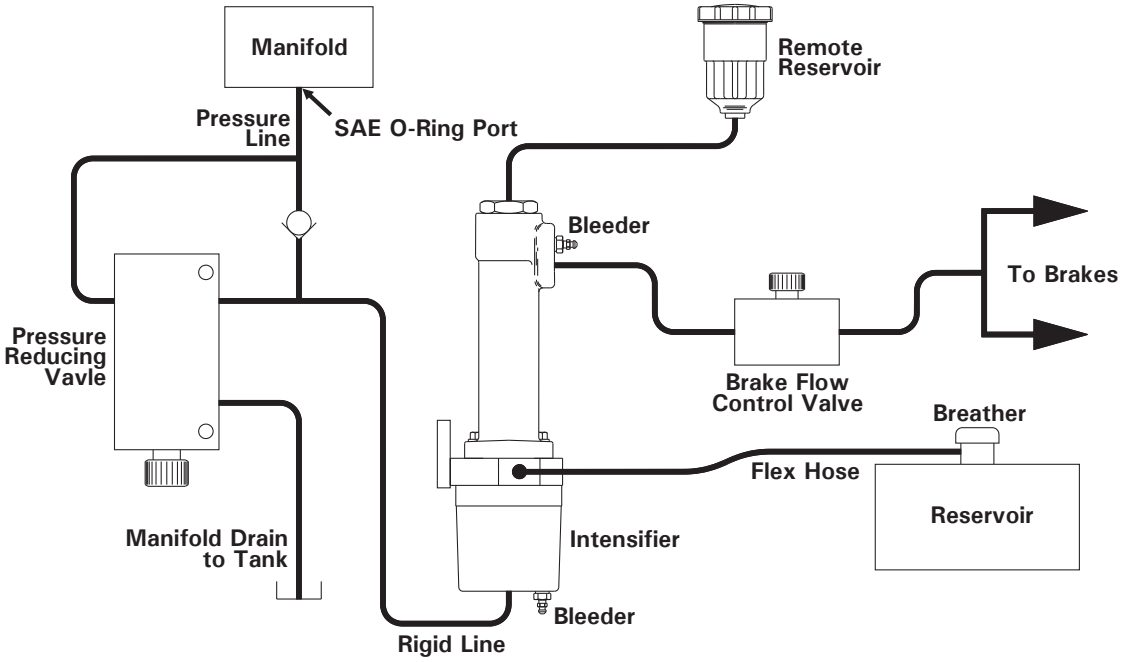

FIGURE 2

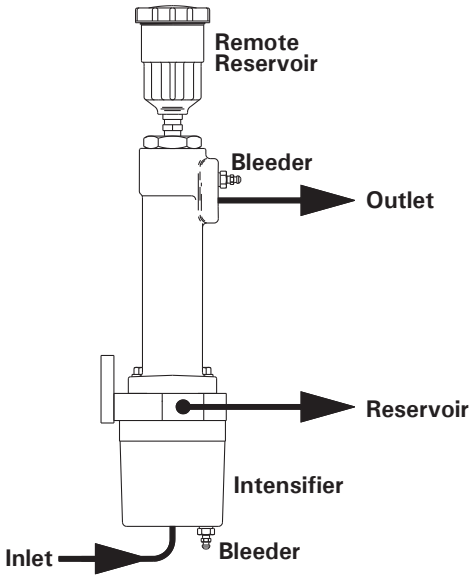

FIGURE 3

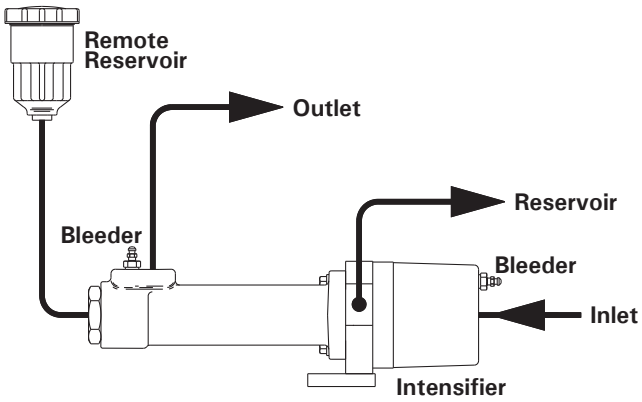

FIGURE 4

DISASSEMBLY PROCEDURE

(Refer to Figure 5)

1. Disconnect the necessary fluid lines.
2. Remove unit from machine by removing mounting bolts.
3. Remove four cap screw (14) and four washers (15).
4. Separate intensifier housing (23) and spacer assembly (18) from actuator housing (13). Remove seals (17 & 20). **NOTE: Do not disassemble spacer assembly (18).**
5. Remove piston (21) from intensifier housing (23).
6. Remove push rod (19) from intensifier housing (23).
7. Remove end plug (1) from actuator housing (13).

⚠ CAUTION

End plug (1) is under tension of spring (5).

8. Remove retainer (3), valve seat (2), and o-ring (4) from end plug (1).
9. Remove spring (5) and piston assembly (6) from actuator housing (13).
10. Remove retaining ring (7), stem (8), and spring (9) from piston (12).
11. Remove cup (10) and o-ring (11) from piston (12).
12. Remove retaining ring (16) from actuator housing (13).

ASSEMBLY PROCEDURE

(Refer to Figure 5)

LUBRICATE ALL RUBBER COMPONENTS FROM THE REPAIR KIT WITH CLEAN TYPE FLUID USED IN THE SYSTEM.

1. Thoroughly clean all components and housing bores before assembling.
2. Install new o-ring (11) and new cup (10) on piston (12). Note direction of cup (10).
3. Install spring (9), stem (8), and retaining ring (7) in piston (12).
4. Install retaining ring (16) in actuator housing (13).
5. Install piston assembly (6) and spring (5) into actuator housing (13). Note direction of piston assembly (6).
6. Install new valve seat (2) in new retainer (3) and install in end plug (1). Torque new retainer (3) 9.5-13.6 N·m (7-10 lb·ft).
7. Install new o-ring (4) on end plug (1). Install end plug (1) in actuator housing (13) and torque 27.1-29.8 N·m (20-22 lb·ft).
8. Install push rod (19) in actuator housing (13).
9. Install new cup (22) on new piston (21). Note the direction of cup (22). Install new piston (21) in intensifier housing (23).
10. Install new seals (17 & 20) and assemble intensifier housing (23) to spacer assembly (18) and actuator housing (13) using four washers (15) and four cap screws (14). Torque cap screws (14) 27.1-29.8 N·m (20-22 lb·ft).
11. Install the unit on the machine. Refer to bleeding procedure on page 4.

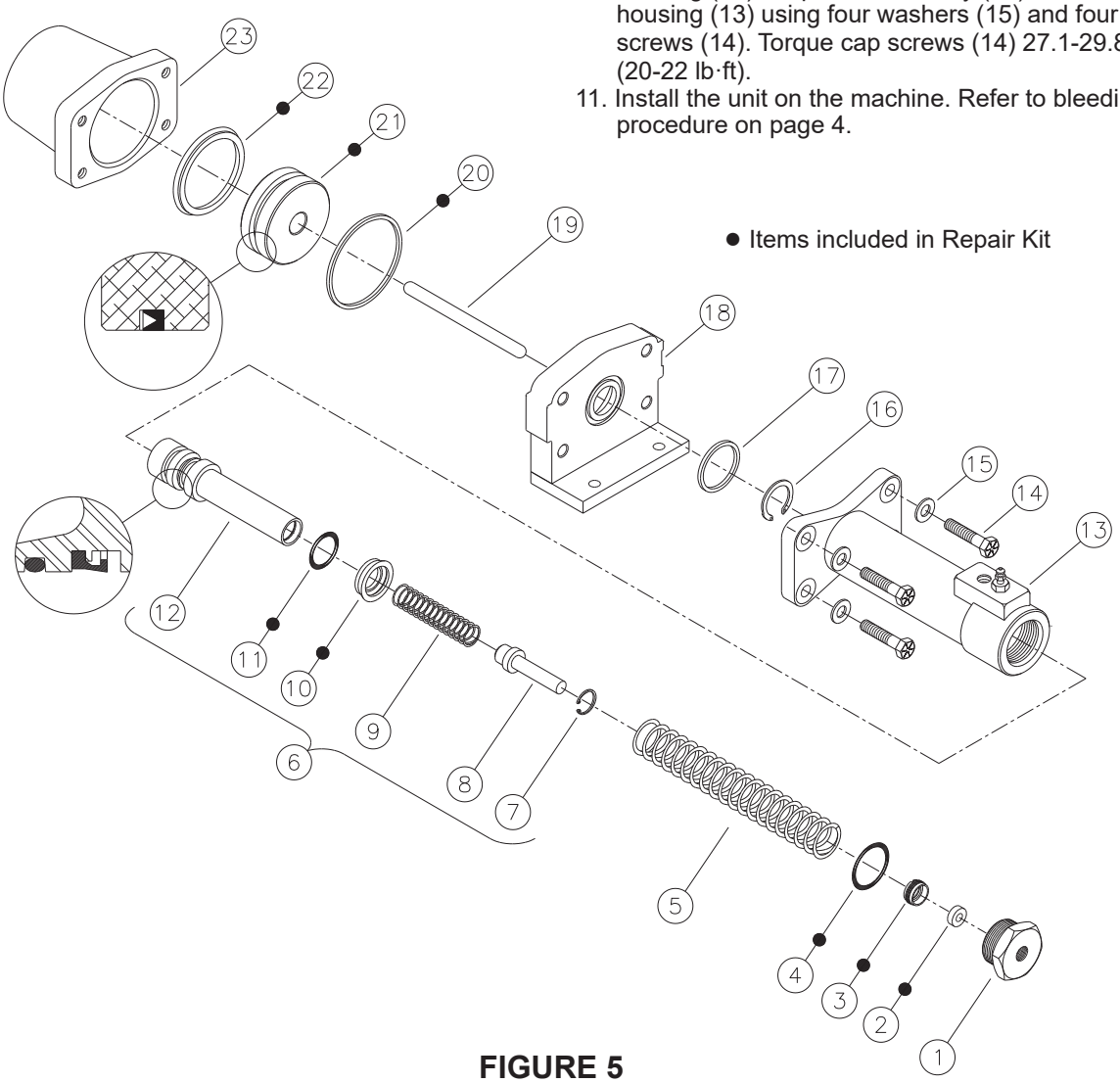

FIGURE 5

BLEEDING PROCEDURE

(Refer to Figure 6)

1. All air must be bled from the intensifier, lines, hoses, cylinders, brakes, etc., for proper operation.
2. Continuous bleeding can be accomplished by cycling the intensifier with three-way or four-way valving.
3. The continuous bleeding function can also be aided by installing a one-way valve between the inlet and outlet ports of the intensifier, checked against the outlet.

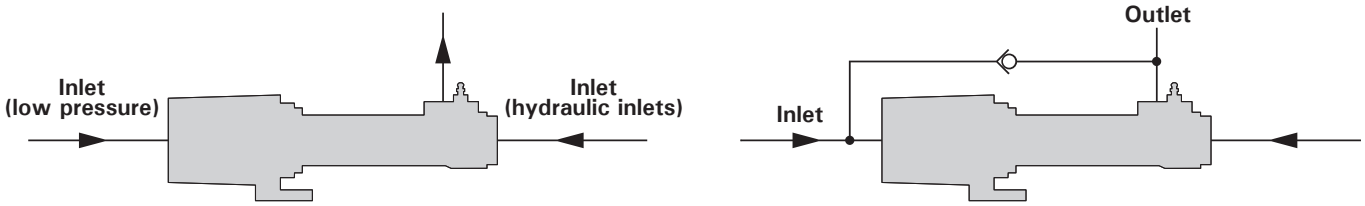

FIGURE 6