



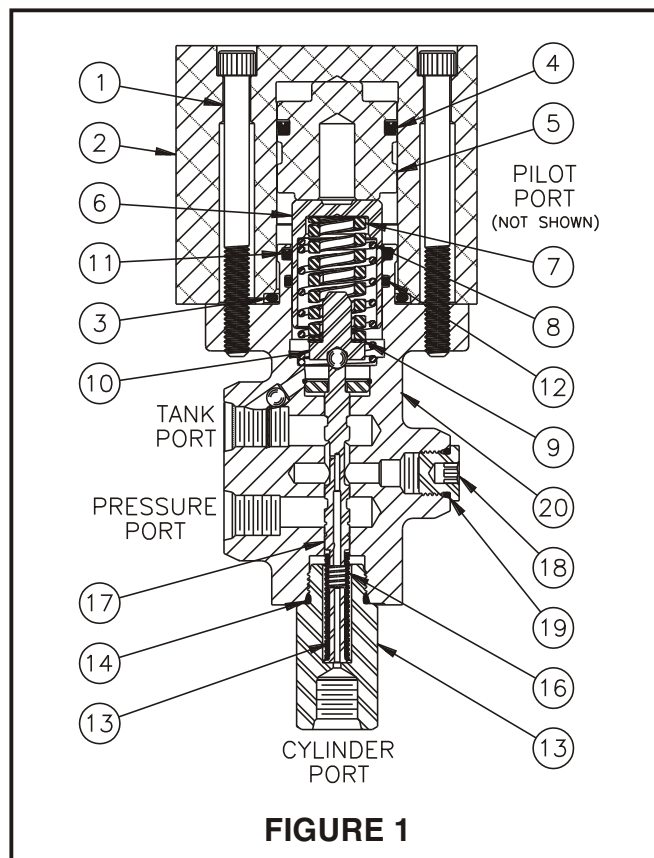
Air/Hydraulic RELAY VALVE

Service Instructions

TABLE 1 (Specifications)

Model Number	Repair Kit Number	Brake Pressure Setting at 8.3 bar (120 PSI) Pilot Pressure	
		bar	PSI
03-466-900	06-400-321	151.7 ± 6.9	2200 ± 100

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



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DISASSEMBLY

(Refer to Figure 2)

NOTE

Housing (20) and the spool (17) are manufactured as a matched set. This set (Housing & Spool) should not be intermixed with other parts.

1. Remove cap screws (1) and separate housing (2) from housing (20). Remove o-ring (3) from housing (2).
2. Remove piston (5) from housing (2). Remove cup (4) from piston (5).
3. Remove breather fitting (21) from housing (2).
4. Remove piston (6), springs (7 & 8), shim(s) (9) and retainer assembly (10) from housing (20). **NOTE: Be aware of the number of shim(s) being removed from housing.**
5. Carefully remove cup (11) and seal (12) from housing (20) bore. **NOTE: Be careful not to scratch or mar housing bore.**
6. Remove plug (18) from housing (20). Remove o-ring (19) from plug (18).
7. Remove end plug (13), retainer (15) and spring (16) from housing (20). Remove o-ring (14) from end plug (13).
8. Carefully remove spool (17) from end plug (13) end of housing (20). **NOTE: Be careful not to damage spool or housing bore.**

2. Lubricate spool (17) with clean system fluid and carefully slide into plug (13) end of housing (20) bore. Note direction of spool (17). **NOTE: Spool must slide freely into bore. If either part is damaged, a new spool/housing assembly may be required.**
3. Install new o-ring (14) on end plug (13).
4. Install spring (16), retainer (15) and end plug (13) into housing (20). Torque end plug (13) 47.5-54.2 N·m (35-40 lb·ft).
5. Carefully install new cup (11) and and new seal (12) into housing (20) bore. Note direction and order of cup and seal. See Figure 2a. **NOTE: Be careful not to scratch or mar housing bore.**
6. Assemble springs (7 & 8), shim(s) (9) and retainer assembly (10) in piston (6). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (6) assembly into housing (20) bore.
8. Fully apply a thin coat of light grease to new cup (4) and bore of housing (2). Install new cup (4) on piston (5) and carefully install piston (5) into housing (2). Note direction of cup (4). See Figure 2b.
9. Install new o-ring (3) in housing (2).
10. Apply two drops of Loctite 242 to threads of cap screws (1). Assemble housing (2) to housing (20) using cap screws (1). Torque cap screws (1) 29.8-33.9 N·m (22-25 lb·ft).
11. Install new o-ring (19) on plug (18). Torque plug (18) 27.1-32.5 N·m (20-24 lb·ft).
12. Install new breather fitting (21) in housing (2) and torque 13.6-20.3 N·m (10-15 lb·ft).
13. Refer to Machine Servicing Instructions to reinstall valve on machine.

ASSEMBLY

(Refer to Figure 2)

LUBRICATE ALL RUBBER COMPONENTS FROM REPAIR KIT, EXCEPT NEW CUP (4), WITH CLEAN TYPE FLUID USED IN THE SYSTEM. DO NOT LUBRICATE NEW CUP (4).

1. Clean all parts thoroughly before assembling.

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. shim(s) (9) may be added or removed to obtain the correct pressure setting.

