Master Cylinder Section Relief Valve

Service Instructions

MICO®

DISASSEMBLY

(Refer to Figure 1)

1. Drain fluid from unit before disassembling.
2. Separate housings (6 & 20) by removing four hex cap screws (4) and lock washers (5). Remove seal (7) and o-ring (19).
3. Remove piston (8) from housing (6). Remove piston ring (9) from piston (8). **NOTE: Be careful not to damage piston (8).**
4. Remove retaining ring (1), washer (2), and cup (3) from housing (6).
5. Thread a #10-24UNC screw into plug (32) and pull it out of housing (20). Remove o-ring (31) from plug (32).
6. Use a flat head screwdriver and turn check valve (30) out of housing (20).
7. Remove cap screw (21) from housing (20). Remove o-ring (22) from plug (21).
8. Loosen the set screw located in housing (20) and unscrew retainer (10) using a spanner wrench.
9. Remove sleeve assembly (11) from housing (20).
10. Use a spanner wrench and remove plug (12) from sleeve (17).
11. Remove spring (13), spool (14), and push rod (16) from sleeve (17). Remove cup (15) from spool (14). **NOTE: Be careful not to damage spool (14).**
12. Loosen the two set screws located in the lock nut on housing (25) and loosen the lock nut.
13. Unscrew housing (25) from housing (20) and remove sleeve (23) and sleeve assembly (24) from housing (25). Remove cup (3) from sleeve assembly (24). **NOTE: Do not disassemble sleeve assembly (24) unless it is damaged.**
14. Note the position in which fitting assembly (26) is oriented. Remove fitting assembly (26) from housing (25). Remove o-ring (27) from fitting assembly (26).
15. Remove plug (28) from housing (20). Remove o-ring (29) from plug (28). **NOTE: End plug (28) is under tension from spring (30).**
16. Remove spring (30), shim(s) (31), and washer (32) from housing (20). Note the number of shim(s) removed for reassembly purposes.
17. Carefully remove spool (33) and sleeve (34) from housing (20) bore. Remove o-rings (29) from sleeve (34). **NOTE: Be careful not to damage spool (33), sleeve (34), or housing (20) bore.**

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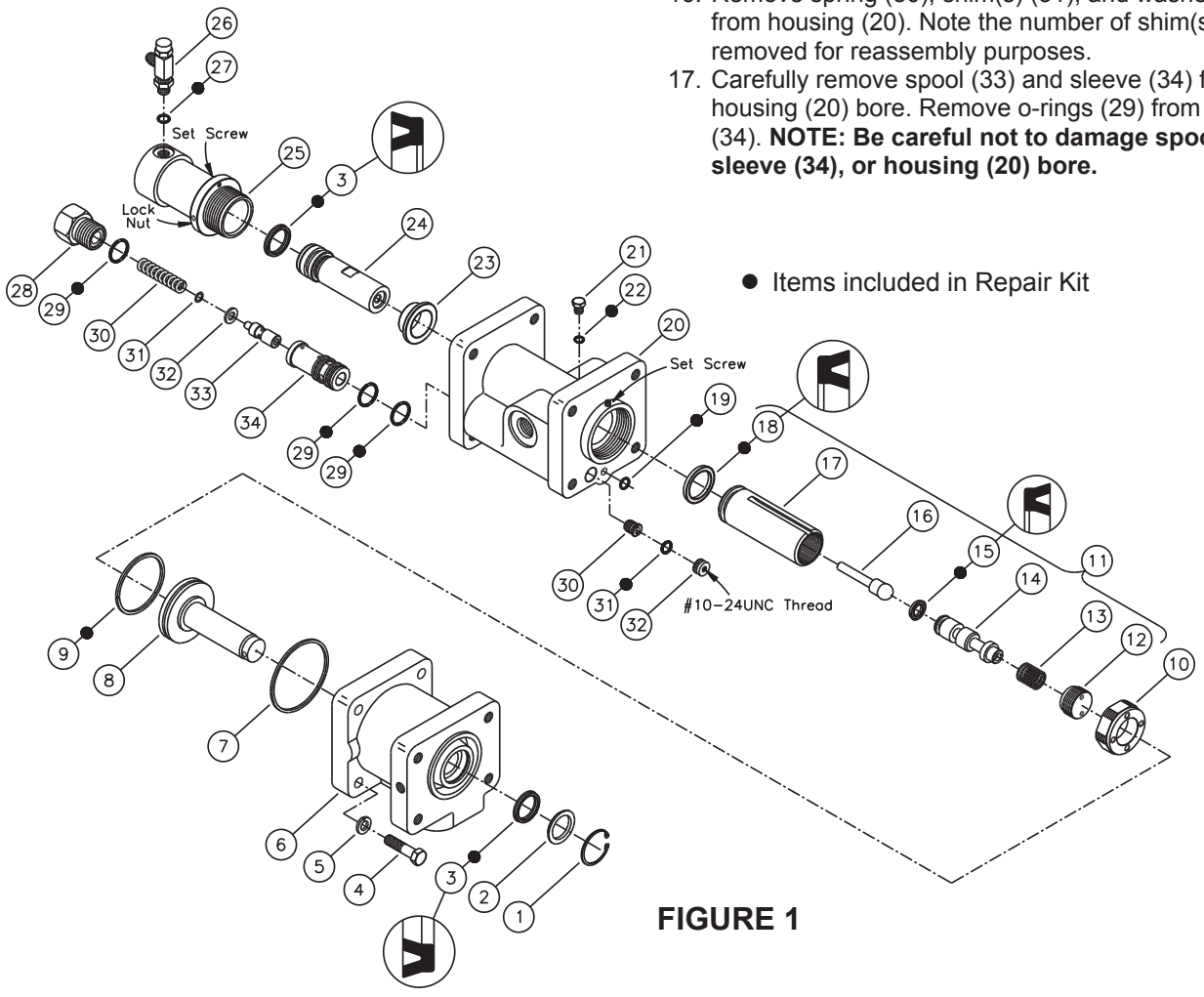

FIGURE 1

ASSEMBLY

(Refer to Figure 1)

Use only hydraulic oil in Booster Section.

CLEAN ALL PARTS THOROUGHLY WITH CLEAN SOLVENT AND LET DRY. LUBRICATE ALL RUBBER COMPONENTS FROM REPAIR KIT WITH CLEAN TYPE FLUID USED IN THE SYSTEM. BE SURE ENTIRE ASSEMBLY PROCEDURE IS DONE USING CONTAMINATION FREE METHODS.

1. Install two new o-rings (29) on sleeve (34).
2. Lubricate sleeve (34) and housing (20) bore with clean system fluid and install sleeve (34) in housing (20) bore. Note direction of sleeve (34). **NOTE: Be careful not to damage sleeve (34) or housing (20) bore.**
3. Lubricate spool (33) with clean system fluid and install spool (33) in sleeve (34). Note direction of spool (33). **NOTE: Be careful not to damage spool (33) or sleeve (34).**
4. Install washer (32), shim(s) (31), and spring (30) in housing (20) bore. Be sure to install the same number of shim(s) as were removed.
5. Install new o-ring (29) on plug (28). Install plug (28) in housing (20). Torque plug (28) 40.1-47.5 N·m (30-35 lb·ft).
6. Install new o-ring (27) on fitting assembly (26). Install fitting assembly (26) in housing (25). Torque fitting assembly (26) 12.2-20.3 N·m (9-15 lb·ft) to the position it was oriented before disassembling.
7. Install new cup (3) on sleeve assembly (24). Note direction of cup (3). **NOTE: Be careful not to damage sleeve assembly (24).**
8. Install sleeve assembly (24), and sleeve (23) in housing (25) bore.
9. Thread housing (25) into housing (20) to the depth and position to which it was oriented before disassembling. Torque the lock nut on housing (25) 67.8-81.4 N·m (50-60 lb·ft). Tighten the two set screws on the lock nut.
10. Install new cup (18) on sleeve (17). Note direction of cup (18). **NOTE: Be careful not to damage sleeve (17).**
11. Install new cup (15) on spool (14). Note direction of cup (15). **NOTE: Be careful not to damage spool (14).**
12. Install push rod (16), spool (14), spring (13), and plug (12) in sleeve (17). Use a spanner wrench and torque plug (12) 40.7-47.5 N·m (30-35 lb·ft). **NOTE: Be careful not to damage sleeve assembly (11).**
13. Install sleeve assembly (11) in housing (20) bore with the groove facing upward as shown in Figure 1.
14. Install new o-ring (22) on plug (21). Install plug (21) into housing (20) and into groove on sleeve assembly (11). Torque plug (21) 3.4-6.8 N·m (30-60 lb·in).
15. Screw retainer (10) into housing (20). Torque retainer (10) 4.1-8.2 N·m (3-6 lb·ft) and then back-off to the nearest flat for set screw in housing (20). Tighten set screw against flat.
16. Be sure the ball in check valve (30) moves freely. Install check valve (30) in housing (20) and torque 13.6-17.6 N·m (10-13 lb·ft).
17. Install new o-ring (31) on plug (32). Slide plug (32) into housing (20) bore.
18. Carefully install new piston ring (9) on piston (8). **NOTE: Be careful not to damage piston (8).**
19. Install new cup (3), washer (2), and retaining ring (1) in housing (6).
20. Install piston (8) in housing (6).
21. Install new o-ring (19), and new seal (7) in the pockets on housing (6).
22. Apply two drops of Loctite #242 to threads of four cap screws (4). Attach housings (6 & 20) using the four cap screws (4) and lock washers (5). Alternately torque cap screws (4) evenly 43.4-50.2 N·m (32-37 lb·ft). **NOTE: Be sure o-ring (19) and seal (7) remain in their pockets during assembly.**

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