When installing this disc brake, it is of utmost importance that the caliper be centered evenly and squarely over the disc. This will ensure even and equal piston travel and lining to disc contact.

## MOUNTING PROCEDURE

(Refer to Figures 1 and 2)

1. When planning or designing an installation of this brake on a machine, the mounting surface to disc face dimension should be closely held. Use shims as needed to obtain the proper distance.
2. Using Table 2, determine “A” dimension and locate the caliper mounting holes. Bolt the caliper disc brake assembly securely to machine. See Torque Note.

### Torque Note

MICO recommends using 5/8-18UNC SAE grade 8 plated bolts and heat treated flat washers. Torque the bolts 257.6-271.2 N·m (190-200 lb·ft).

## PLUMBING PROCEDURE

1. After caliper assembly is mounted on machine, install hydraulic lines. **NOTE: All porting is designed for #4 SAE o-ring boss port adapter.**
2. Bleed the system making sure all air is eliminated. Apply hydraulic pressure and check for leaks.
3. Torque bleeder screws 12.2-20.3 N·m (9-15 lb·ft).

### TABLE 1

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Lining Kit Number</th>
<th>Repair Kit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-520-304 (HO)</td>
<td>20-060-125</td>
<td>02-500-251</td>
</tr>
</tbody>
</table>

**HO = Hydraulic Oil**  
**NOTE: If your product number is not listed, please contact MICO, Inc. for information.**

When installing this disc brake, it is of utmost importance that the caliper be centered evenly and squarely over the disc. This will ensure even and equal piston travel and lining to disc contact.

### CAUTION

The minimum allowable disc thickness for this brake is 38.1 mm (1.50 in). For use with a thinner disc, disassemble the caliper and reduce spacer thickness accordingly. Spacer thickness = disc thickness + 4.5 mm (0.178 in). A loss of fluid may occur at the time of complete lining wear if the above procedure is not followed. Uneven lining wear may occur if the caliper is not mounted squarely over the disc, or if the lining assemblies are not parallel to the disc surface. Reduced o-ring seal life may also be evident. When the linings have worn to the point of replacement, replace with the lining kit specified in TABLE 1.

### DISC CENTERLINE TO MOUNTING HOLE DIMENSION

<table>
<thead>
<tr>
<th>Disc Diameter</th>
<th>“A” dimension (see Figure 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>304.8 mm (12 in)</td>
<td>168.2 mm (6.62 in)</td>
</tr>
<tr>
<td>355.6 mm (14 in)</td>
<td>193.6 mm (7.62 in)</td>
</tr>
<tr>
<td>406.4 mm (16 in)</td>
<td>219.0 mm (8.62 in)</td>
</tr>
<tr>
<td>457.2 mm (18 in)</td>
<td>244.4 mm (9.62 in)</td>
</tr>
<tr>
<td>508.0 mm (20 in)</td>
<td>269.8 mm (10.62 in)</td>
</tr>
</tbody>
</table>

**NOTE: For disc diameters between 508 to 914 mm, add 15 mm (20 to 36 inches, add 0.62 inch) to disc radius to obtain “A” dimension.**

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**NOTE**
When installing new linings or servicing the brake, examine the disc for excessive wear. As a guide, the following limits are suggested for refinishing the disc:
- Surface finish 1.0-1.5 micron (40-60 micro inch).
- Surfaces to be parallel within 0.051 mm (0.002 in).
- Do not reduce thickness by more than 0.762 mm (0.030 in) when refinishing.

**CHANGE LINING PROCEDURE**
(Refer to Figure 3)

1. Remove brake from machine by disconnecting necessary fluid lines and removing bolts. Drain fluid from brake assembly.
2. It is not necessary to separate housing halves, however, if you must separate housing (3) halves remove cap screws (1), washers (2), and spacer (4). Use a bench vise.
3. Remove lining assemblies (8) from housings (3). Be sure to keep new lining assemblies (8) free of oil, grease, etc.
4. Gently press piston (7) into housing (3) bore. Piston (7) must bottom in housing bore to assure proper lining to disc clearance. Install new lining assembly (8) into the housing pocket. Repeat this process for the other housing half.
5. Position spacer (4) between housing (3) halves. Install cap screws (1) and washers (2). Lubricate cap screws (1) and torque 413.6-454.3 N·m (285-315 lb·ft).
6. Install brake on machine. Shim as required to center the caliper over the disc. **See Torque Note on page 1.**
7. Connect necessary fluid lines.
8. Bleed the system making sure all air is eliminated.
9. Make several static brake applications. Check for leaks and bleed once more.
10. Check linings to be sure there is no drag. If lining to disc drag occurs, refer to step 4 above to correct.

**CAUTION**
Do not move machine until a firm brake is obtained.

**CHANGE REPAIR KIT PROCEDURE**
(Refer to Figure 3)

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

1. Remove brake from machine by disconnecting necessary fluid lines and removing mounting bolts. Drain fluid from brake assembly.
2. Separate housing (3) halves by removing cap screws (1), washers (2), and spacer (4). Use a bench vise.
3. Remove lining assembly (8) from housing (3). Be sure to keep lining assembly (8) free of oil, grease, etc.
4. Remove piston (7) from one housing (3) half by pulling piston (7) from housing bore. If piston fails to move, place housing half face down on a bench. Protect the piston face by placing a cloth between piston and bench. Support the housing half on the bench in such a way that piston (7) can be eased out of the bore. This is accomplished by carefully introducing low air pressure 0.7-1.0 bar (10-15 PSI) through the fluid inlet ports.
5. Remove o-ring (5) and back-up ring (6) from housing (3) half. **NOTE: Be careful not to scratch or mar housing bore.**
6. Repeat steps 3 through 5 for the other housing half.
7. Clean housing (3) bores with clean type fluid used in the system.
8. Install new o-ring (5) and new back-up ring (6) in the groove in housing (3) bore. Note to order of components. **NOTE: Be careful not to scratch or mar housing bore.**
9. Gently press piston (7) into housing (3) bore. Piston (7) must bottom in housing bore to assure proper lining to disc clearance. Install lining assembly (8) into housing pocket. Note the order of the components.
10. Repeat steps 8 and 9 for the other housing half.
11. Position spacer (4) between housing (3) halves. Install cap screws (1) and washers (2). Lubricate cap screws (1) and torque 413.6-454.3 N·m (285-315 lb·ft).
12. Install brake on machine. Shim as required to center the caliper over the disc. **See Torque Note on page 1.**
13. Connect necessary fluid lines.
14. Bleed the system making sure all air is eliminated.
15. Make several static brake applications. Check for leaks and bleed once more.
16. Check linings to be sure there is no drag. If lining to disc drag occurs, refer to step 9 above to correct.

**CAUTION**
Do not move machine until a firm brake is obtained.
FIGURE 3

- Items included in Repair Kit

- Items included in Lining Kit