**Service Instructions for No. 8 Coil Kit**

**Single and Dual Voltage Coils**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description of Parts Included in Kit</th>
<th>Qty. Per Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>12A</td>
<td>Coil</td>
<td>1</td>
</tr>
<tr>
<td>12AN*</td>
<td>Wire nut</td>
<td>1</td>
</tr>
<tr>
<td>12AT*</td>
<td>Crimp terminal</td>
<td>2</td>
</tr>
<tr>
<td>139</td>
<td>Lead wire &amp; terminal assembly</td>
<td>2</td>
</tr>
<tr>
<td>139S</td>
<td>Terminal screw</td>
<td>2</td>
</tr>
<tr>
<td>139W</td>
<td>Terminal lock washer</td>
<td>2</td>
</tr>
<tr>
<td>82A</td>
<td>Plunger guide</td>
<td>1</td>
</tr>
</tbody>
</table>

*Dual voltage kits only.

**Included in Class H coil kits only:**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description of Parts Included in Kit</th>
<th>Qty. Per Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>12B</td>
<td>Coil</td>
<td>1</td>
</tr>
<tr>
<td>82A</td>
<td>Plunger guide</td>
<td>1</td>
</tr>
<tr>
<td>84</td>
<td>Plunger guide screws</td>
<td>2</td>
</tr>
<tr>
<td>12AN*</td>
<td>Wire nut</td>
<td>2</td>
</tr>
</tbody>
</table>

*Dual voltage kits only.

**Important**

Please read these instructions carefully before servicing your Stearns Brake. Failure to comply with these instructions could cause injury to personnel and/or damage to property if the brake is installed or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Industries, LLC, Stearns Division, 5150 S. International Dr., Cudahy, Wisconsin 53110, (414) 272-1100.

**Caution**

1. Servicing shall be in compliance with applicable local safety codes including Occupational Safety and Health Act (OSHA). All wiring and electrical connections must comply with the National Electric Code (NEC) and local electric codes in effect.

2. To prevent an electrical hazard, disconnect power source before working on the brake. If power disconnect point is out of sight, lock disconnect in the off position and tag to prevent accidental application of power.

3. Be careful when touching the exterior of an operating brake. Allow sufficient time for the brake to cool before disassembly. Surface may be hot enough to be painful or cause injury.

4. Do not operate brake with housing removed. All moving parts should be guarded.

5. After usage, the brake interior will contain burnt and degraded friction material dust. This dust must be removed before servicing or adjusting the brake.

**Note:** On 87,700 series brakes, insert a screwdriver under solenoid frame and pry up to free it from a driv-lok pin.

**Instructions**

1. To remove housing, follow instructions listed under each individual brake series shown in illustration, then continue with the following steps.

2. To replace coil (12A) or (12B), disconnect lead wire terminal screws (139S), lock washers (139W) and lead wire and terminal assembly (139). It is not necessary to remove the support plate assembly (142).

3. To remove coil (12A) or (12B), it is necessary to detach the solenoid frame (79) from the support plate assembly. To do this, remove three mounting screws (132) and conical spring washers (132W). A hex key with shortened leg is helpful.

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4. Do not operate brake with housing removed. All moving parts should be guarded.

5. After usage, the brake interior will contain burnt and degraded friction material dust. This dust must be removed before servicing or adjusting the brake.

**Note:** On 87,700 series brakes, insert a screwdriver under solenoid frame and pry up to free it from a driv-lok pin.
4. For metallic plunger guides (82), remove plunger guide screw(s) (84) and lock washer(s) (84W) if used. Insert shim stock or other thin gauge material at top center of coil between coil and solenoid frame. Push to release lock tab while lifting up on plunger guide. Repeat for other plunger guide.

   a) To remove non-metallic plunger guides (82A), remove screw(s) (84) and lock washer(s) (84W) if used. Insert shim stock or other thin gauge material at top center of coil between coil and solenoid frame. Push to release lock tab while lifting up on plunger guide. Repeat for other plunger guide.

   **Note:** Metallic plunger guides have been replaced by non-metallic guides in the class "H" applications.

5. Slide coil (12A) or (12B) out from solenoid frame (79) in the direction of the coil leads or terminals. If necessary tap coil lightly with a soft hammer. If solenoid coil had burned out, be sure to remove all foreign material from the solenoid plunger (29) and solenoid frame.

6. Install new coil (12A) or (12B) into solenoid frame with same relative position as old coil. Assemble new non-metallic plunger guides (82A), (Guide screws are no longer required with plastic guides).

   **Note 1:** 87,700 no. 8 coil lead wires must be to the inside of the brake.

   a) Assemble new non-metallic plunger guides (82A) by inserting into position and pushing down until lock tab snaps under top bar of solenoid frame.

   **Note 2:** For coils with terminals, check that lock tab face is flush with inside surface of guide. If not, file chamfer (about 1/16" by 45°) on coil at lock tab areas.

   Install self-tapping plunger guide locking screws (84) through the bottom hole of each guide.

7. Slide solenoid frame with the installed coil over solenoid plunger (29) and attach to support plate assembly (142) with three mounting screws (132) and conical spring washers (132W). Before tightening mounting screws, align solenoid plunger and solenoid frame so that mating surfaces are parallel. This can be accomplished by manually pulling the plunger down into its sealed position.

   **Note 3:** On 87,700 series brakes (pre-rev only), align hole for driv-lok pin engagement with the hole. If pin does not engage, it will be necessary to remove the support plate and force pin into the hole, then reinstall.

8. Torque the three mounting screws (132) with conical spring washers (132W) to 120-125 in-lbs.

9. Dual voltage class H (encapsulated) coils have two terminals and two black wires. Dual voltage class B (molded) coils have two red and two black wires. Follow proper leadwire sequence.

10. Be sure lead wires to coil are not tight or pinched; leads must not be rubbed by friction disc; leads must not be trapped between solenoid plunger and frame.

11. Manually lift solenoid plunger to maximum travel. Depress fully and allow solenoid plunger to snap out several times. Measure solenoid air gap between mating surfaces of solenoid frame and solenoid plunger. (On vertically mounted brakes, it will be necessary to push solenoid plunger into solenoid frame to the point where spring pressure is felt, before measuring solenoid air gap.) The solenoid air gap measurement should be as factory set between 13/16" to 15/16".

12. The solenoid air gap may be increased by raising or decreased by lowering the wrap spring stop (76). To accomplish this, loosen two stop screws (76S), move wrap spring stop slightly and retighten screws. Repeat Step 11 after each change in wrap spring stop position to obtain correct solenoid air gap measurement of 13/16" to 15/16".

13. Reconnect coil leads.

14. Replace housing, screws and manual release knob in the reverse order of the appropriate point in Step 1.

15. **Caution 1!** Do not run motor with brake in manual release position. It is intended only for emergency manual movement of the driven load, not as a substitute for full electrical release.

   **Caution 2!** Class H coils with terminals. Do not bend lead wire crimp connection as this causes fatigue in the metal which may break under vibration.

**NOTE:** For complete instructions, with troubleshooting, request sheet applicable to the series of brake that you have.