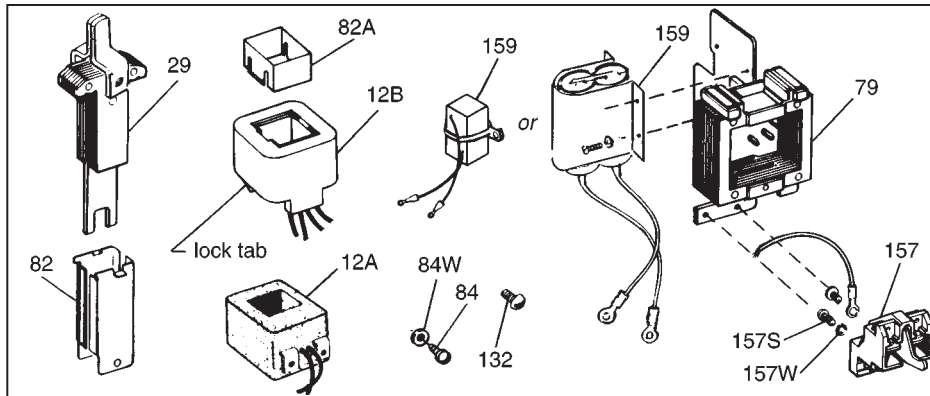


## Service Instructions for No. 4 DC Solenoid Assembly Series 55,000; 55,200; 55,700 and 57,500 Disc Brakes



| Table: Components |                                    |      |
|-------------------|------------------------------------|------|
| Item No.          | Item Description                   | Qty. |
| 29                | Solenoid plunger and link assembly | 1    |
| 79                | Solenoid frame                     | 1    |
| 132               | Solenoid mounting screw            | 3    |

### 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 serviced or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Industries, Inc., 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.  
DO NOT BLOW OFF DUST using an air hose. It is important to avoid dispersing dust into the air or inhaling it, as this may be dangerous to your health.
  - a) Wear a filtered mask or a respirator while removing dust from the inside of a brake.

- b) Use a vacuum cleaner or a soft brush to remove dust from the brake. When brushing, avoid causing the dust to become airborne. Collect the dust in a container, such as a bag, which can be sealed off.

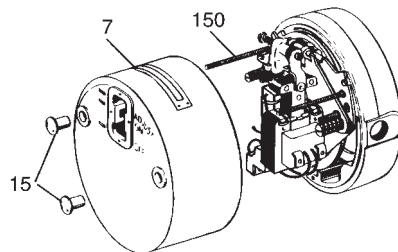
6. Maintenance should be performed only by qualified personnel familiar with the construction and operation of the brake.
7. For proper performance and operation, only genuine Stearns parts should be used for repairs and replacements.

**Warning!** Any mechanism or load held in position by the brake should be secured to prevent possible injury to personnel or damage to equipment before any disassembly of the brake is attempted or before the manual release knob or lever is operated on the brake.

### Instructions

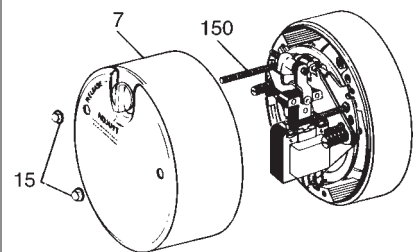
1. To remove housing, follow instructions listed below, then continue with the following steps.

#### 55,000 Series



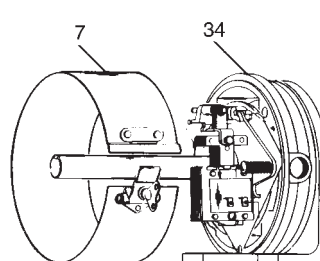
Remove housing nuts (15) by unscrewing from housing studs (150). Remove housing (7) by pulling back.

#### 55,500 and 57,500 Series



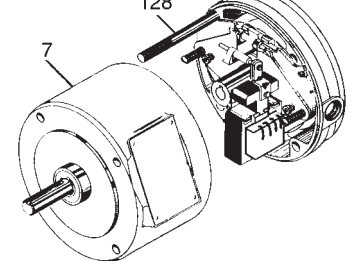
Remove housing nuts (15) by unscrewing from housing studs (150). Remove housing (7) by pulling back.

#### 55,200 Series

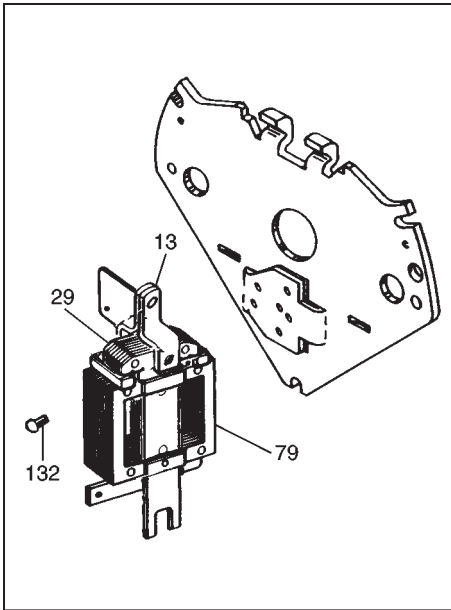


- a) Remove wraparound sheet metal housing (7) by turning wing-nut on latch counterclockwise until the latch releases.
- b) Open housing and slide over the brake or away from the floor stand (34).

#### 55,700 Series



- a) Remove housing (7) by unscrewing nuts from the four mounting studs (128) that protrude through the reducer flange.
- b) Grasp the coupler brake and motor as a unit and pull free from the reducer.
- c) Pull housing from the mounting studs (128). These studs are threaded into the motor C-face and should remain in place.



2. Solenoid replacement can be accomplished without removing the support plate from brake.
3. Disconnect coil lead wires. Remove DC switch (157) and arc suppressor (159) from solenoid frame mounting bracket. Save both for reuse later. Coil leads and arc suppressor leads may be left connected to switch. Remove three solenoid mounting screws (132) to free solenoid frame (79). On 55,700 the capacitors are remote, but arc suppression module is on support plate.
4. Disconnect solenoid plunger (29) and solenoid link (13) as an assembly and discard.
5. To remove coil (12A), unscrew plunger guide screws (84) and lock washers (84W). Remove both plunger guides (82) by prying up on the flanges.
  - a) To remove coil (12B), lift plunger guide (82A) out of top of solenoid frame (79).
6. Slide coil (12A) sideways from solenoid frame (79). If necessary, tap coil lightly with a soft hammer.  
  
To remove coil (12B) from solenoid frame (79), depress lock tab at side opposite of lead wires and slide coil sideways from frame.

7. Install coil (12A) into the new solenoid frame in the same relative position as removed. Assemble plunger guides (82), plunger guide screws (84) and lock washers (84W).

Install coil (12B) with lead wires in same relative position as when removed, with lead wires at outboard lower side of frame. Except on the 55,700 series, position coil so that leads are toward the outboard upper side of frame. Be sure lock tab locks. Place plunger guide (82A), lock tabs down, into top of solenoid frame. (79).

8. Install new solenoid plunger and link assembly (29) and (13). See figure in last column, install two spacers 9-45-0168-00, the solenoid link, three spacers and retaining ring. Slide new solenoid frame (79) over plunger and mount with screws (132) in upper set of holes, except on the 55,700 use the lower set of holes. Align frame and plunger. Tighten to 43 in-lbs torque. Remount DC switch (157) and arc suppressor (159).

Be sure to check the following when installing lead wires:

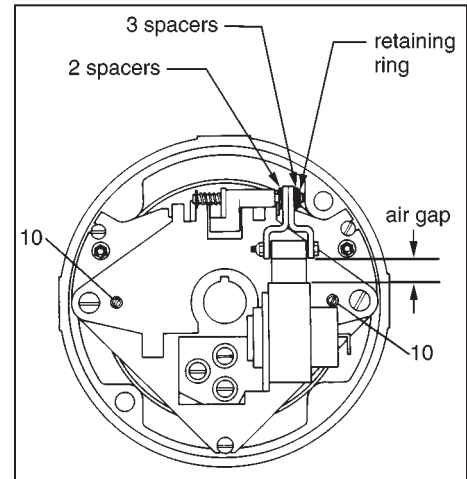
- 1) Must not be tight or pinched.
- 2) Must not make contact with friction disc.
- 3) Must not be trapped between solenoid plunger and frame.

9. Manually lift solenoid plunger to maximum travel. Depress 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.) If solenoid air gap exceeds air gap listed in Table, adjustment is necessary.
10. The solenoid air gap may be decreased by turning both wear adjustment screws (10) equal amounts clockwise, approximately 1/8 turn, until appropriate solenoid gap is attained. To increase gap, turn screws equal amounts counterclockwise.

**Table: Solenoid air gap measurements**

| Nominal Static Torque (lb-ft) | 55,000<br>55,200 | 55,500<br>55,700 |
|-------------------------------|------------------|------------------|
| 1.5 and 3                     | 13/32"           | 13/32"           |
| 6                             | 12"              | 1/2"             |
| 10                            | 9/16"            | 1/2"             |
| 15                            | 9/16"            | 9/16"            |
| 25                            | 9/16"            | —                |

11. Reconnect solenoid coil leads.
12. Replace housing and housing nuts in reverse order of the appropriate point in Step 1.



13. **Caution!** 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.

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