

## Service Instructions for Pressure Spring Tube Kit Series 87,000; 87,200 and 87,700 Disc Brakes

Item No.	Description of Parts Included in Kit	Quantity per Kit
19	Pressure spring screw	1
152	Pressure spring tube	1
152P	Pivot pin (spring tube)	1

\*Not needed on all brakes. See Instructions, Step 8

Figure 1

### 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 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 shall 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 is operated on the brake.

### Instructions

1. To remove housing, follow instructions listed under each individual brake series in Figure 2, then continue with the following steps.
2. Unscrew pressure spring screw (19) from pressure spring tube (152). Save spring washers (134), if included, they may be reused in reassembly. Remove pressure spring (11).
3. Disconnect coil leads. Remove three support plate mounting screws, lock washers and support plate assembly (126).
4. Clamp support plate assembly in a vise. Remove fluted pivot pin (130) using 3/8" diameter drift. The face of one side of pin will show marks from insertion. This is fluted side. Drive out from non-fluted end. Remove lever arm (17) and spring tube (152) as an assembly. Clamp lever arm in a bench vise. Drive out pivot pin (spring tube) (152P) using 1/4" diameter drift. Discard old spring tube (152) and pin (152P).
5. Insert new spring tube (152) into lever arm and faster with new pivot pin (152P).

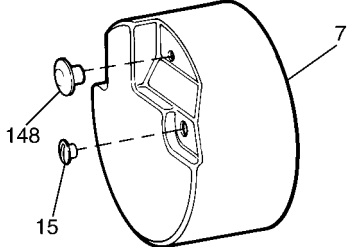
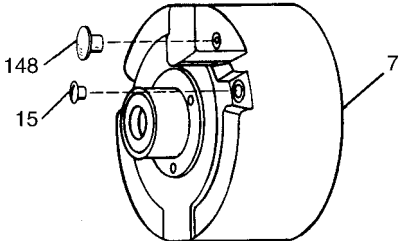
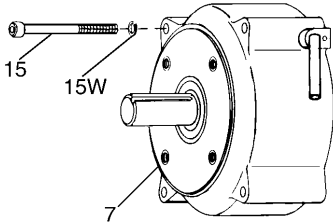
<p><b>87,000 Series</b></p>  <p>Remove manual release knob (148), two housing nuts (15) and housing (7).</p>
<p><b>87,200 Series</b></p>  <p>a) Remove any accessories, sprockets, sheaves, etc., from brake shaft on housing side. b) Remove manual release knob (148), two housing nuts (15), and housing (7).</p>
<p><b>87,700 Series</b></p>  <p>a) Remove the brake and motor as a unit from the gear reducer. b) Remove four housing cap screws (15), lock washers (15W). c) Pull back on housing and shaft assembly to remove as a unit.</p>

Figure 2

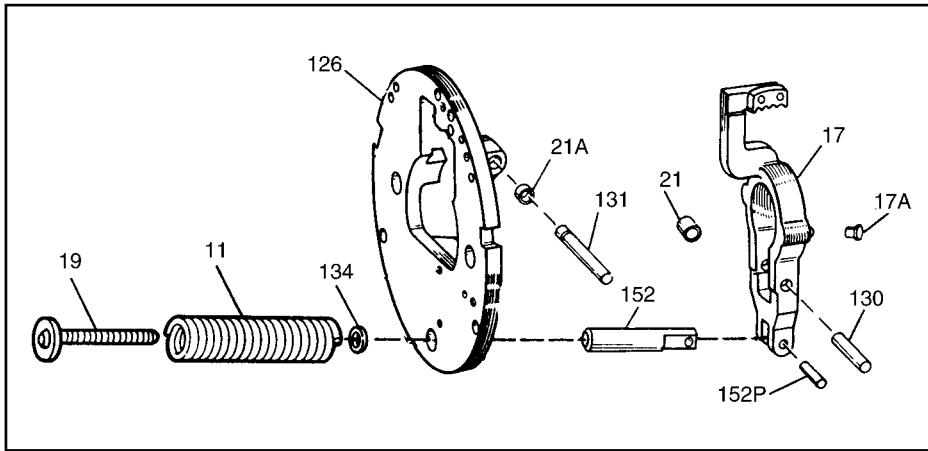


Figure 3

6. Clamp support plate assembly into a vise and insert lever arm and spring tube assembly. Reuse fluted pivot pin (130) to attach lever arm to support plate assembly. [Be sure that sector gear and pinion mesh freely and that fluted pivot pin (130) is seated securely.]
7. Install support plate assembly to brake.

Nominal Static Torque (lb-ft)	Color of Spring	Qty. of Spacers
6	Black	6
6	Blue	6
10	Black	0
10	Blue	1
15	White	0
15	Yellow	7
25 & 50	Orange	0
25 & 50	Red	4
35, 75 & 105	Purple	0
35, 75 & 105	Green	3

**NOTE:** Black, white, orange and purple springs were designed to eliminate the use of spacers, except on 6 lb-ft brakes.

8. Replace pressure spring with screw (19) using the required number of pressure spring washers (134) as shown in Table above.
9. Compress pressure spring by tightening screw (19) until it is firmly seated. Do not overtighten, maximum torque to be applied is 100 in-lbs (8 ft-lbs).

10. 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.) The solenoid air gap measurement should be as factory set between 13/16" to 15/16".

11. 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 10 after each change in wrap spring stop position to obtain original solenoid air gap measurement of 13/16" to 15/16".

12. Reconnect solenoid coil leads.
13. Replace housing, screws and manual release knob in reverse order of the appropriate point in Step 1.
14. **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.**