

Service Instructions for No. 5 and 6 AC Coil Kits Single and Dual Voltage Coils

Item No.	Description of Parts Included in Kit (Kit contents will vary based on style of coil or plunger guide)	Qty. per Kit
12A/B	Coil	1
82A	Plunger guide	2
84	Plunger guide screws	2
12AN	Wire nut	2

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.

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.

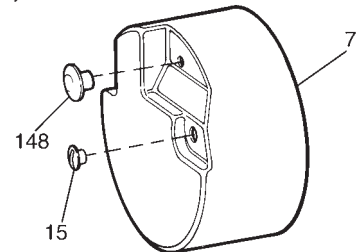
- a) Wear a filtered mask or a respirator while removing dust from the inside of a brake.
 - b) Use a vacuum cleaner or a soft brush to remove dust from the brake. When brushing, avoid causing the dust to become airborne. Collect the dust in a container, such as a bag, which can be sealed off.
5. Maintenance should be performed only by qualified personnel familiar with the construction and operation of the brake.
 6. 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

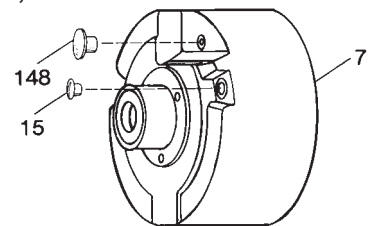
1. To remove housing, follow instructions listed under each individual brake series shown in next column, then continue with the following steps.
2. To replace coil (12A) or (12B), disconnect leads or lead wire terminal screws (139S), lock washers (139W) and lead wires and terminal assembly (139). It is *not* necessary to remove the support plate assembly (142).
3. Remove solenoid link screw (13C), nut (13N) and lift out solenoid plunger (29).
4. To remove non-metallic plunger guides (82A), remove screw(s) (84) if used. Insert shim stock or other thin gauge material at top center of coil

87,000 Series



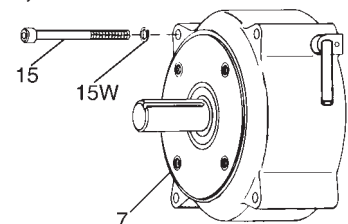
Remove manual release knob (148), two housing nuts (15), and housing (7) by pulling back.

87,200 Series



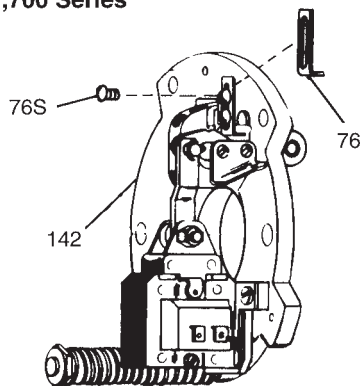
- a) Remove any accessories, sprockets, sheaves, etc. and bearing lock collar on standard enclosure brake from brake shaft on housing side.
- b) Remove manual release knob (148), two housing nuts (15), and housing (7) by pulling back

87,700 Series

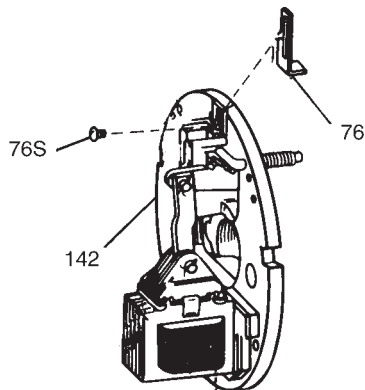


- a) Remove the brake and motor as a unit from the gear reducer.
- b) Remove four housing cap screws (15), lock washers (15W), housing (7) and shaft assembly.

87,700 Series



87,000 and 87,200 Series



between coil and solenoid frame. Push to release lock tab while lifting up on plunger guide. Repeat for other plunger guide. On 87,700 style remove right plunger guide screw and insert shim stock to remove right guide as above. If coil (12A) is installed, slide coil to left in frame, remove left plunger guide screw and plunger guide as above, remove coil.

a) For metallic plunger guide (82), remove plunger guide screw(s) (84) if used. Remove both plunger guides (82) by prying up on the flanges. Slide coil out of frame.

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

- Slide coil 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.
- Install new coil (12A) in same relative position as old coil if same style coil is used. If replacing coil (12B) with coil (12A), one of the following

paragraphs of instructions would apply depending on model. On brakes without solenoid actuated auxiliary switch, position leads on upper outboard side of solenoid frame.

On all (except the 87,700) with solenoid actuated switch, position leads at the upper inboard side of solenoid frame.

On the 87,700 with solenoid actuated auxiliary switch, position leads at the lower inboard side of solenoid frame.

- Assemble new non-metallic plunger guides (82A) by inserting into position following reverse of Step 4. Check that lock tab snaps under top bar of solenoid frame.

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

- Install new coil (12B) in same relative position as old coil. Install new non-metallic plunger guides (82A) (Guide screws are no longer required with plastic guides.)
- Reassemble plunger into solenoid by reversing Step 3.
- 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 shown in diagram.
- If original lead wires (139) are damaged, replace with new lead wires. New terminal screws (139S) and lock washers (139W) are also provided in kit with encapsulated coil.

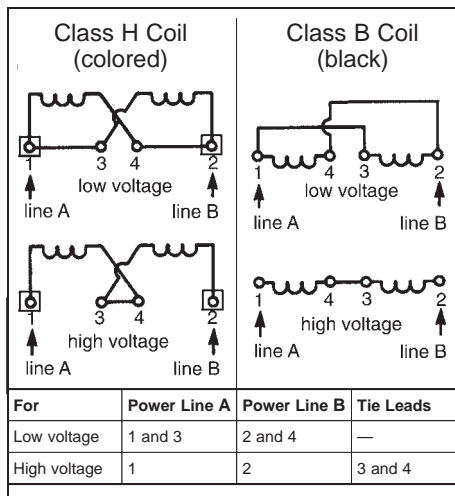
Be sure to check the following when installing lead wires.

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

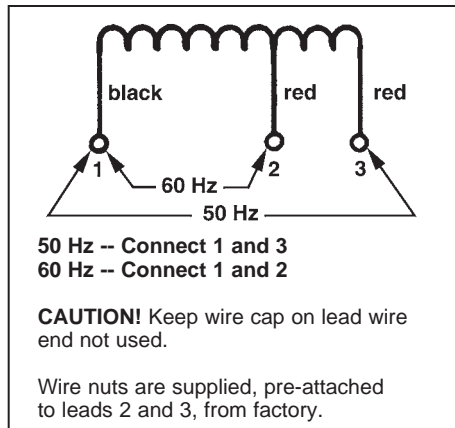
- Manually lift solenoid plunger to maximum travel. Depress fully and allow solenoid plunger to snap out several times. Measure solenoid air gap between mating surfaces of solenoid frame and solenoid plunger. (On vertically mounted brakes, it will be necessary to push solenoid plunger into solenoid frame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

- 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".

- Reconnect coil leads.
- Replace housing, screws and manual release knob in the reverse order of the appropriate point in Step 1.
- 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.



Wiring Diagram — Dual Frequency Coil



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.