

## Installation, Service and Parts List for 358 Series Armature Actuated Brakes 3-58-734H-20-HR1

### Important

Please read these instructions carefully before installing, operating, or 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.

OEM's and subsystem suppliers, please forward these instructions with your components to the final user.

### 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 to system.
3. To avoid damage to internal power supply, hipot testing should not exceed 1500 volts for one second. Brake coil leads must be connected together.
4. Heat developed during normal operation (135°C) of the brake may be hot enough to be painful or cause injury. Be careful when touching exterior surfaces. Allow sufficient time for the brake to cool before servicing.
5. After usage, the brake will contain burnt and degraded friction material dust. This dust should 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.
  - 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. Maximum operating ambient temperature for these brakes should not exceed 40°C (104° F).

### I. Installation

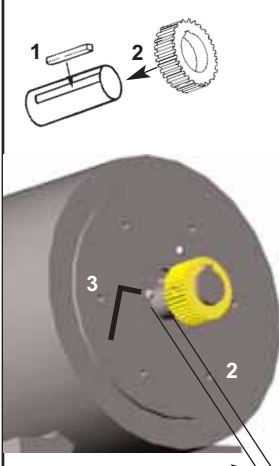
**Note 1:** Position of hub should allow full engagement of friction disc without interfering with the movement of the armature. **Motor shaft end float should not exceed .020". Shaft runout should be within .002" TIR. Motor mounting surface should be flat and perpendicular to within .004" of motor shaft.**

**Note 2:** Keep grease and oil from contacting friction surfaces.

**Note 3:** Hub should be a tight sliding fit. **For shrink fit hub consult the factory.**

**Note 4:** Torque wrench necessary for correct installation.

### I. Installation



1. Place key in motor shaft.

**Step 1**

1. Place key in motor shaft.

**Table A (H2)**

| Brake Model | Bolt Circle | Metric | English |
|-------------|-------------|--------|---------|
| 358-7       | 196         | 38 mm  | 1.50"   |

2. Position hub per Table A.


3. Tighten set screws per Table B.

**Table B**

| Brake Model | Bolt Circle | Metric  | English  | Hex Wrench |
|-------------|-------------|---------|----------|------------|
| 358-7       | 196         | 32.5 Nm | 24 ft-lb | 3/16"      |

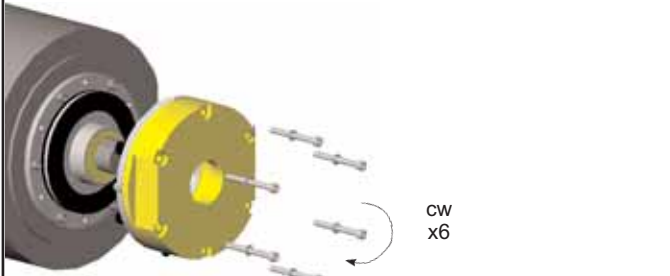
**Step 2**

Remove 3 access plugs at the 2, 5, and 10 o'clock positions. Remove 3 housing bolts (8mm hex wrench) lift housing from brake assembly/mounting plate.



**Step 3 Mounting Instructions: 358-7 with 7.25" B.C.**

1. Remove the six mag body to adapter plate mounting bolts to separate the adapter plate from the mag body.
2. Insert O-ring in groove of register mounting face.
3. Bolt adapter plate to motor register with four mounting bolts. (1/2-13 x 1.25" for 7.25" BC). Tighten to manufacturers specification using 3/8" hex wrench for 7.25" BC mounting.
4. Align carrier disc onto mounted hub and slide it into place against the mounting plate.
5. Position brake assembly over hub/carrier disc and slide up against the pressure plate. Tighten mounting bolts to 14 lb-ft (19 Nm).



#### Step 4

1. Align holes for housing bolts.
2. Place housing over brake making sure the manual release access holes align with the release bolts.  
**NOTE:** Ensure "captured O-ring" is seated in groove of housing.
3. Insert three (3) housing bolts and tighten to 11.2 Nm (100 in-lb)
4. See step IV, 2.



**CAUTION:** Be sure all internal wiring is clear of housing flange before replacing housing.

## II. Air Gap Setting and Wear Adjust

Figure 1

Air gap is factory set to .020-.024" (.508-.610 mm). Set air gap is measured at the adjusting bolts, between the armature and magbody.

Normal friction disc wear will cause air gap to increase from original setting. Air gap should be readjusted when gap reaches .035" (.99 mm).

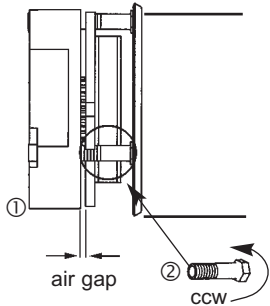


Table F - Disc Maximum Wear

| Brake Model | Bolt Circle | Min Thickness |         |
|-------------|-------------|---------------|---------|
|             |             | Metric        | English |
| 358-7       | 196         | 9.27mm        | 0.365"  |

#### Wear Adjustment

1. Loosen six mounting bolts 1/2 turn.
2. Rotate three alternate adjusting screws 1-1/2 turns counter-clockwise.
3. Rotate three remaining adjusting screws ccw to achieve original gap
4. Retighten mounting bolts.
5. Recheck gap. Repeat above procedures as necessary.
6. Rotate three alternate adjust screws clockwise until snug with pressure plate.

**Note 1:** 90° ccw rotation is approximately 0.38mm (0.015") air gap increase.

**Note 2:** Brake discs should be replaced when they reach the thickness shown in Table F. Normally this will occur after 4-5 adjustments.

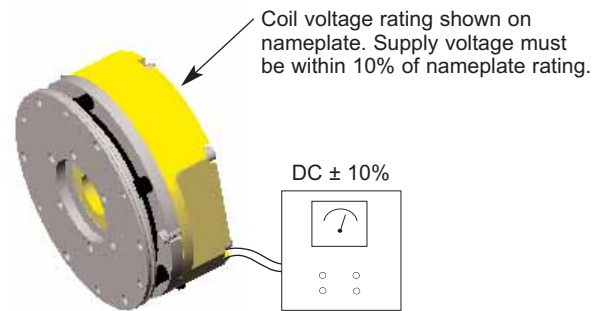
## III. Coil Wiring

**Caution:** Brake wiring should only be carried out by qualified personnel.

Stearns brake coils are wound for DC voltage input at  $\pm 10\%$  of nameplate rating. Coil resistances shown below are for references purposes. For applications where AC voltage is being rectified refer to AC control switching shown on next page.

|                |                  |
|----------------|------------------|
| Brake Model    | 3-58-734H-20-HR1 |
| Voltage rating | Ohms*            |
| 230/240        | 669              |

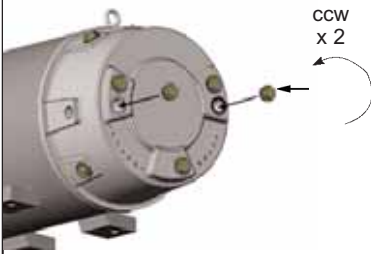
\* Resistance values at 20°C



## IV. Manual Release Engagement

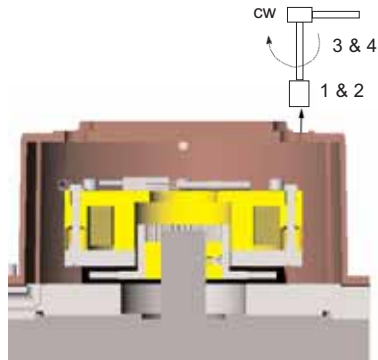
### Step 1

Remove access plugs from housing.



### Step 2

1. Insert a 13mm socket through the access hole and engage the release bolt.
2. Push down on the bolt while rotating the socket to engage the first threads of the bolt.
3. Tighten the release bolts until snug against the brake frame.
4. Tighten the bolts (cw) to 19-23 Nm (14-17 ft-lb) by alternately rotating each bolt 1/2 turn at a time.

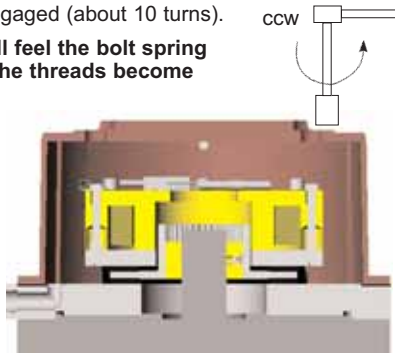


## V. Manual Release Disengagement

### Step 1

Loosen (ccw) release bolts until threads are fully disengaged (about 10 turns).

**Note:** You will feel the bolt spring loose when the threads become disengaged.



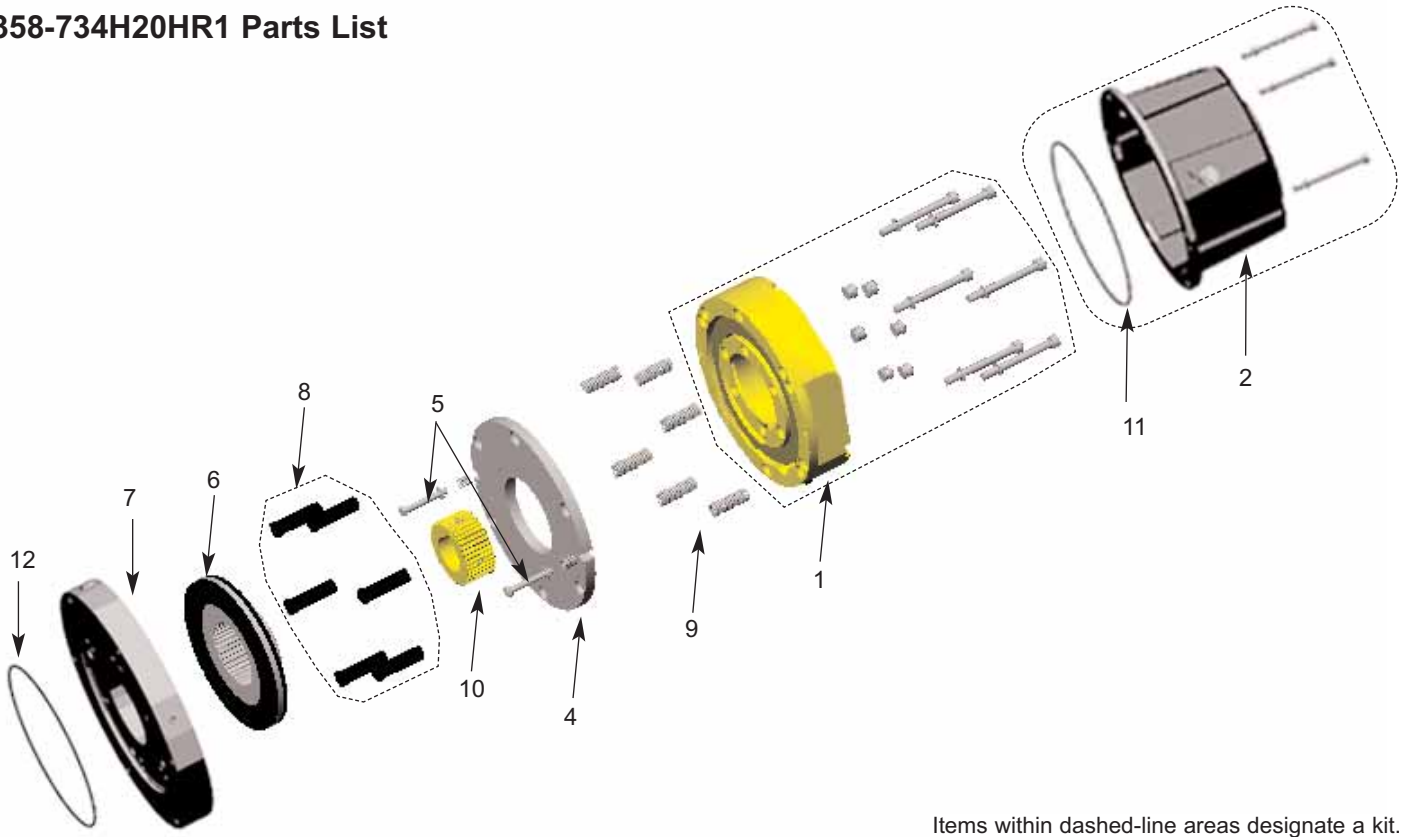
### Step 2

Replace access plugs.

**Note:** Ensure that gasket is securely located on the face of the plug. Add a drop of Loctite 242, or equivalent, to the thread of the plug and tighten to 28 lb-ft.



## 358-734H20HR1 Parts List



Items within dashed-line areas designate a kit.

Table L

| Item | Description                | Model 3-58-734H-20-HR1 |
|------|----------------------------|------------------------|
| 1    | Mag body & coil assembly   | 5-04-0986-21-02RK      |
| 2    | Housing assembly           | 8-007-131-02K          |
| 4    | Armature Kit               | 8-405-986-21K          |
| 5    | Manual Release Kit         | 9-17-9884-0K           |
| 6    | Carrier Disc Kit           | 5-14-0985-0K           |
| 7    | Adaptor                    | 8-001-920-02           |
| 8    | Adjusting Bolt Kit         | 8-434-985-0K           |
| 9    | Pressure Spring            | 9-70-0985-00 (6)       |
| 10   | Hub                        | 5-16-0981-01-01H       |
| 11   | O-ring, housing to adaptor | 9-02-0138-00           |
| 12   | O-ring, adaptor to motor   | 9-02-0132-00           |

### Kit Contents

| Item | Description   |
|------|---|
| 1    | Mag Body & Coil Assembly<br>Mounting Bolts (6)<br>Lockwashers (6) |
| 5    | Release Bolts<br>Release Springs<br>Washers<br>Locknuts           |

### Parts not shown

| Description                    | Part Number   |
|--------------------------------|---------------|
| Space heater                   | 9-62-2060-00K |
| Brake release indicator switch | 4-4-0724-001K |



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