

Installation and Service Instructions for 320 Series AAB Spring-Set Brakes

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, Inc., 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.

Installation

The brake can be mounted on either face. With units mounting on the hub end, the hub should be secured to shaft before mounting brake. Two set screws are provided and should be tightened securely. Refer to Table A for set screw torque. The key should not extend towards the armature or past the face of the hub. Refer to Table B or C for positioning of hub. Mount brake to register using

screws or bolts. Refer to Table A for mounting torque. Lock washers are optional. The rated voltage should be available at the brake and allowance should be made for voltage drop in long wiring runs. The optional, factory installed, manual release lever is a rotary maintained design.

Note: Position of hub should allow full engagement of friction disc without interfering with the movement of the armature. Motor shaft end float should be taken into consideration when positioning the hub.

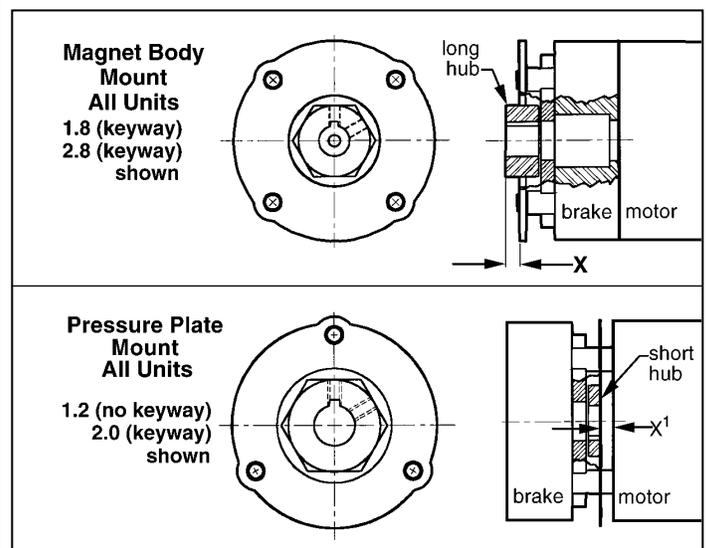


Table A

Set Screw Torque			Mounting Screws		
AAB Size	Short Hub	Long Hub	Size	Max Torque	Min Req
1.2	9-10 lb-in	9-10 lb-in	#6	20 lb-in	3
1.8	9-10 lb-in	18-20 lb-in	#8	37 lb-in	2
2.0*	9-10 lb-in	18-20 lb-in	#6	20 lb-in	3
2.8	9-10 lb-in	18-20 lb-in	#8	37 lb-in	2

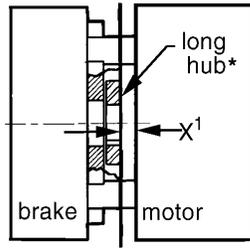
*An adapter plate is available for mounting on motors with four equally spaced holes on a 2.844 inch bolt circle.

Table B

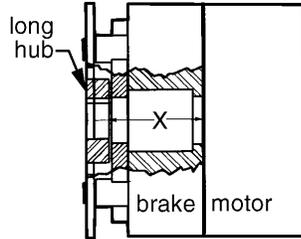
Size	Hub Position (inch)		Operating Range Air Gap (inches)	Maximum Allowed Misalignment (inches)	
	X	X ¹		Parallel	Angular
1.2	.21	.015*	.003 to .012	.005	.005
1.8	.17	.015*	.003 to .015	.005	.005
2.0	.49	.015*	.003 to .015	.005	.005
2.8	See back page				

*This dimension is for units mounting on hub end, and using short version of the hub. Factor in motor shaft end float; do not allow hub to contact armature.

Pressure Plate Mount
Size 2.8



Magnet Body Mount
Size 2.8



*Size 2.8 can be pressure plate mounted using the long hub.

Size	Hub Position (inch)		Operating Range Air Gap (inches)	Maximum Allowed Misalignment (inches)	
	X	X¹		Parallel	Angular
2.8	.954	.050	.003 to .015	.005	.005

Repairs

The hub is the only replaceable item in this brake.

General

After proper installation, no further adjustment should be required for the life of the unit.

Full rated torque of a new AAB brake may not develop until the mating surfaces have been burnished or *run-in*.

Power supply

The voltage to be applied is determined by rating shown on the nameplate. Resistance and other coil data for various voltages are tabulated on appropriate Engineering Data Sheets. This data can be secured by contacting the factory.

Troubleshooting for AAB Brakes

Overheating, coil burned out or loss of torque

1. Check ambient temperature. It is above 40° C? Consult factory for assistance.
2. Check thermal capacity of unit versus actual heat dissipation requirements. Consult factory.
3. Check voltage supply as close to coil as feasible. Compare to nameplate data, if incorrect apply proper voltage.
4. Is coil resistance correct? Consult factory for resistance of the specific coil.

Caution: To avoid damage to power supply, hipot testing should not exceed 1500 volts for one second. Brake coil leads must be connected together.

5. Stop time on brake normally should not exceed one second. If excessive, recheck torque rating versus load characteristics.
6. Check for oil/grease on friction elements. If this is found, replacement of entire brake may be required.
7. On pressure spring, check for broken, missing or substituted springs not of our design.
8. Failure to release after unit has performed satisfactorily for a period indicates wear has occurred. Replacement of the brake is required.

Fuse in DC power supply blows

1. Never put in a higher rating fuse or replace with a slo-blow type.
2. Check resistance of coil, if shorted, replacement of brake is required. If not shorted, obtain coil resistance from factory and compare to your reading.
3. If cause was not found in Step 2 above, check rectifier bridge by removing all loads and replacing fuse. If fuse blows when AC is applied to rectifier, bridge is shorted. Replace bridge if feasible or discard control and replace.

