

AirBrake® QD-SK to QD-SF Bushing Mount Installation Instructions



Prior to installation please confirm that the following parts are present.



- Qty(1) QD-SF Airbrake® bushing mount assembly
- Qty(1) QD-SK Bushing adaptor ring
- Qty(2) Shackle with screw pin
- Qty(6) Wire rope clips
- Qty(2) Wire rope thimbles
- Qty(2) 1/2"-13 Eye bolt, washer, and nut
- Qty(3) 3/8"- 16 x 2" Socket head mounting bolts
- Qty(3) 5/16"- 18 x 1" Socket head mounting bolts
- Qty(2) Stainless steel restraining cable assembly

CAUTION:

Prior to installation confirm the operation direction of the fan, and ensure this coincides with the direction of free rotation of the AirBrake®. Also ensure that the maximum overrunning speed does not exceed 600 RPM.

Following conditions are required **BEFORE** installation of the QD-SK bushing adaptor ring may proceed!

- 1) Three 5/16-18 UNC threaded holes in the bushing flange **MUST** be available for the installation.
- 2) Flange threads must be clean of grease, dirt and rust. Chase threads with bottom tap if necessary.
- 3) Any protrusion of shaft or key **MUST** fit within the confines of the central hole of the adaptor.
- 4) Flange mounting surfaces must be clean of grease, dirt and rust.

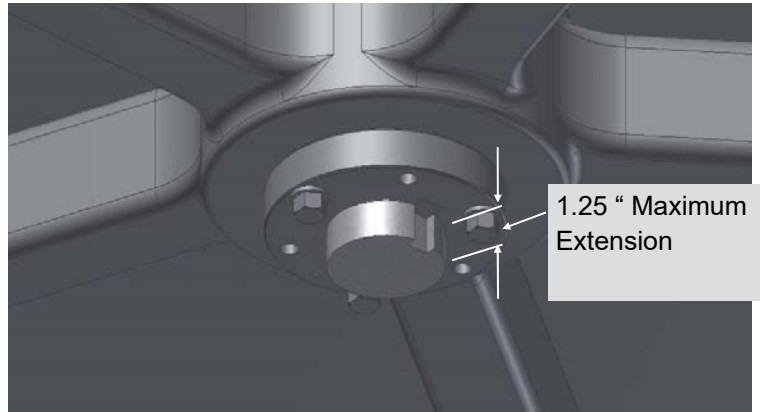


Figure 1. Maximum shaft extension.

STEP 1: Refer to **Figure 1**.

Confirm there is no more than 1.25 inches (31.8 mm) of shaft extension beyond the bushing and that there is at least 4 inches (101.6 mm) of clearance between the bottom of the bushing and the nearest obstacle. **On shafts greater than 2-9/16" (65 mm) diameter there can be no shaft extension beyond the face of the bushing.**

STEP 2: Refer to **Figure 2**.

Install the QD-SK to QD-SF AirBrake® adaptor ring onto the QD-SK bushing by aligning the counter-bored installation holes of the AirBrake® adaptor ring with the threaded holes of the QD-SK bushing. Fasten ring to bushing with provided 5/16-18 UNC x 1" long socket head cap screws. Install QD-SF AirBrake® onto the adaptor ring with the three supplied 3/8-16 UNC x 2" long socket head cap screws.

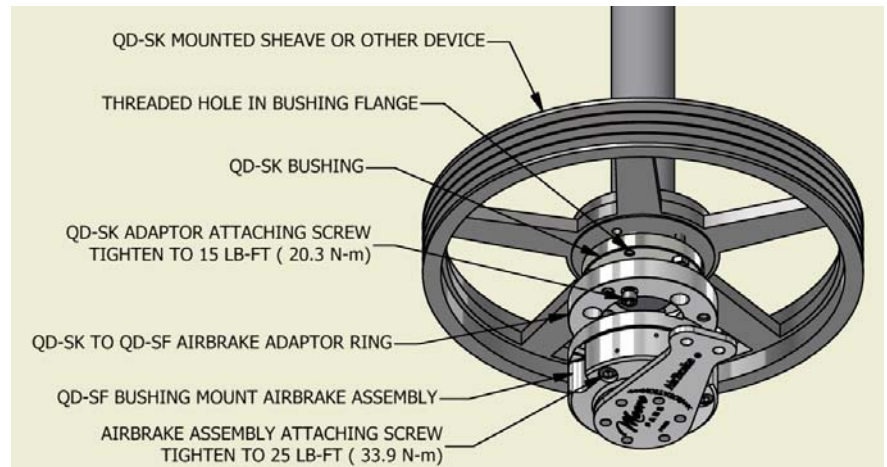


Figure 2. QD-SK TO QD-SF AIRBRAKE INSTALLATION

STEP 3: Refer to **Figure 3** on back of page.

Insert the thimble portion of the cable assembly onto each shackle. Apply Loctite® 262 to the threads of the screw pin of each shackle. Install each shackle onto one of the holes in the arm of the AirBrake® assembly. Tighten the screw pin nut and install the safety cotter pin.

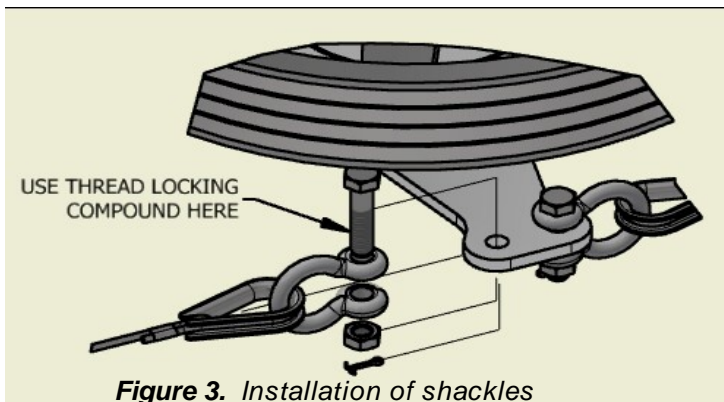


Figure 3. Installation of shackles

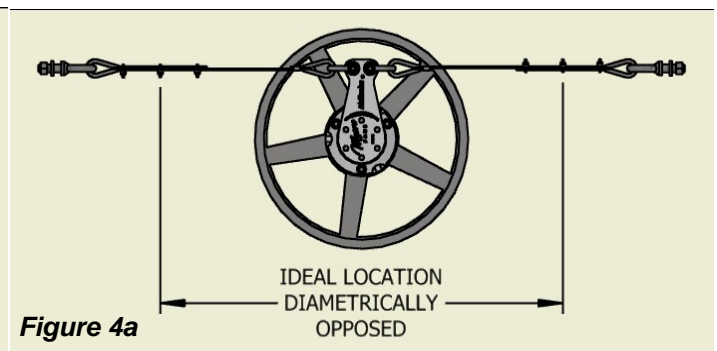


Figure 4a

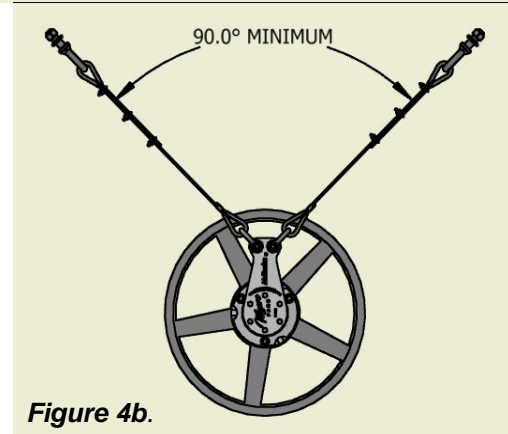


Figure 4b.

STEP 4: Refer to **Figure 4a, Figure 4b, Figure 5 & Figure 6**. Attach the supplied 1/2"-13 eye bolts to nearby suitable supports using supplied lock washers and nuts. Each eye bolt should be as near to straight-line opposite each other as possible (see **Figure 4a**). Effectively creating an imaginary line through the junction of the double cable AirBrake® arm shackle bolts. While 180° is the optimum cable placement, it is allowable for the cables to form as small an angle as 90° (see **Figure 4b**), on the plane of the AirBrake® arm. Secure the free ends of the restraining cables to the eye bolts by first inserting one of the supplied thimbles through each eye bolt. Pass each cable around it's associated thimble and secure with three wire rope clips on each cable. See **Figure 5** for proper wire rope clip installation. Ensure that the attachment of the cable to the support will not make the cable more than plus or minus 10° out of level as illustrated in **Figure 6**. Remove as much slack as practical from each cable. However, cables should **NOT** be taut. Apply Loctite® 262 (or equivalent) to the threads of the wire rope clips and tighten the clips.

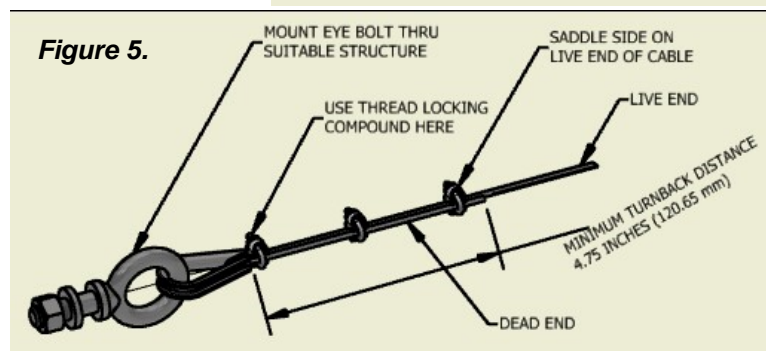


Figure 5.

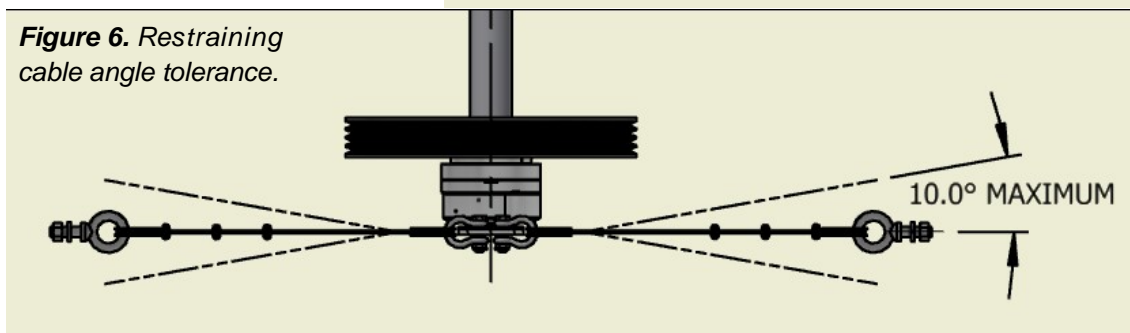


Figure 6. Restraining cable angle tolerance.

STEP 5: After installation of the restraining cables check, by hand, for free rotation of the fan in the normal direction. Then, again by hand, attempt to rotate the fan in the reversed direction and ensure the AirBrake® is working properly. In the normal rotation direction, of the fan, it is likely that both cables will be very slightly slack. In the reversed direction one cable should be taut. Ensure that both cables do **NOT** contact **ANY** edge or surface (moving or stationary) which may cause fraying and failure of the cables.

STEP 6: Install all required guards and confirm there is sufficient clearance for all AirBrake® associated hardware.

STEP 7: After all necessary guards have been installed, run the fan at full speed, ensure that the cables are not over-tight and are positioned properly with all equipment operating correctly.