

**SK-3103 SBX Installation & Maintenance Procedure**

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**1.0 Scope:**

- 1.1 Installation and maintenance procedures for all Cardwell Westinghouse Long Travel Constant Contact Side Bearings, SBX-30, SBX-4, SBX-45, SBX-60, and SBX-80.

**2.0 Preparation:**

- 2.1 Inspect car body side bearing and body side bearing wear plate to ensure surface uniformity.
- 2.2 Car body side bearing and body side bearing wear plate should be parallel to side bearing pad on bolster.
- 2.3 Check car body wear plate size and condition. The wear plate surface must be free of pitting, weld spatter, and surface protrusions. Wear plates with surface variation greater than  $\frac{1}{16}$ " over a 4" space, or  $\frac{1}{8}$ " between the fasteners holes need to be replaced. Minimum wear plate size shall be 4" wide by 12" long.
- 2.4 Car body side bearing wear plate application must meet AAR standard S-235.

**3.0 Installation:**

- 3.1 The side bearing cage is to be secured to the bolster pad by  $\frac{7}{8}$ "-9 Grade 5 or better bolts with self locking nuts. Bolts should be torqued to 365-435 ft-lbs if dry and 275-325 ft-lbs if lubricated.
- 3.2 Check the element markings to see if the model number matches the cage. The side bearing element should fit over the center cross. If the element doesn't fit over the cross or if the element has greater than  $\frac{1}{16}$ " side clearance, then the wrong element is being applied.
- 3.3 It is recommended, for new cars only, a thin layer of No. 2 lithium grease or equivalent be applied to the top cap surface. This will reduce the frictional resistance during the break in period.

**4.0 Setup:**

- 4.1 The distance between the side bearing bolster pad and the car body wear plate (set up height) must be adjusted to  $5\text{-}\frac{1}{16}\text{''}\pm\frac{1}{16}\text{''}$ . If a new elastomer center bowl liner is used, add  $\frac{1}{16}$ " to the standard set up height and adjust to  $5\text{-}\frac{1}{8}\text{''}\pm\frac{1}{16}\text{''}$ . This procedure should be performed on an empty car, on level track, without a lube disc, and without the side bearing element installed. It is recommended that inside calipers and steel ruler be used for accurate measurements.

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4.2 Add (reduce distance) or remove (increase distance) the necessary amount of shims on the car body wear plate to achieve a  $5\text{-}\frac{1}{16}\text{''} \pm \frac{1}{16}\text{''}$  distance between the bottom of the car body wear plate and the bolster side bearing pad using calipers and a steel ruler.

4.2.1 During measurements, make sure the center plate is seated in the bolster center bowl. Do not apply lube disc in center bowl when measuring the set-up height.

4.2.2 If cage is installed, do not apply element while adjusting set up height and measure closest to center of side bearing. If cage is not installed then measure height centered between the fasteners holes.

4.2.3 If new non-metallic horizontal bowl liners used, add  $\frac{1}{16}\text{''}$  to set-up height.

4.2.4 Do not expose side bearings to temperatures higher than 200° F for more than 1-2 hours.

4.3 After the side bearings are installed and car body lowered onto the trucks, the setup height may be greater than the original measured height. The side bearing will take a set and the car will reach the designed set-up height. At temperatures lower than 20°F the car may require 24 hours or more to settle to correct height. The elements should be stored in an environment at 20°F or greater for at least 24 hours prior to being installed on the trucks.

### 5.0 Inspection:

5.1 For side bearing wear limits, gaging, and cause for renewal or attention, please refer to the current revision of RULE 62 of the Field Manual of the AAR Interchange Rules.

