

INSTALLATION INSTRUCTIONS FOR STUCKI ROLLER SIDE BEARING MODELS 656-C AND 688-B

I. INTRODUCTION

The Stucki roller style truck side bearings, models 656-B (single roller type) and 688-B (double roller type) consist of one steel housing, or cage, and one or two 4" diameter by 3" wide steel rollers. Refer to Figure 1.



Figure 1. 688-B (left) & 656-C (right) Side Bearings

II. WARNING

Stucki roller side bearing cages are designed for use only with Stucki rollers or Stucki resilient side bearing components. The use of Stucki cages with non-Stucki components are not recommended and can result in cage failure, which in turn can lead to catastrophic results. In cases where components not approved by Stucki Company are inserted into Stucki cages, A. Stucki Company can assume no responsibility for the integrity of the cages or the consequences resulting from any failures thereof.

III. TRUCK BOLSTER SIDE BEARING MOUNTING PADS

Truck bolster side bearing mounting pads must conform to the requirements of AAR Specification M-210, Figure 29A and AAR Standard S-394-82 (Section D, Manual of Standards and Recommended Practices).

IV. FASTENING CAGES TO TRUCK BOLSTER

Both the 656-C and 688-B side bearing cages have two fastener holes which are spaced 8-1/2" apart. A. Stucki Company's recommendation for fasteners is as follows:

1. 656-C Cage (Also Includes: 662, 675, 685 & ISB-3 cages)

The side bearing cage shall be fastened to the truck bolster with two 7/8"-9 threaded fasteners and self-locking nuts,* or two approved Huck fasteners. **

The fasteners must have a minimum tensile strength 150,000 psi, and should conform to one of the following specifications:

ASTM A 354 Grade BD
SAE J 429 Grade 8
ASTM A 490

The self-locking nuts must conform to the Industrial Fasteners Institute Standard IFI-100, Grade C.

**Other designs of fasteners with the strength and endurance properties to meet AAR "Specification for Truck Side Bearings, M-948, which can be applied within the specified clamping force limits, shown in paragraph 2, may also qualify.*

***The approved Huck fastener for the 656-C cage consists of a Huck Pin (Part# C71LR134-BR24-28), Huck Collar (Part# 8LC134-2R24), and a 3/4" x 1/8" hardened washer.*

The fasteners must be torque in a manner prescribed by the manufacturer of the fasteners in order to achieve a clamping force of between 20,000 and 30,000 lbs each.

Fasteners recommended for application with a lubricant must have a torque limiting drive or breakaway head to positively limit the clamping force to the maximum recommended values.

The portion of the fastener in the side bearing cage must not project into the path of, or interfere with, the free movement of the 4" diameter roller between the cage end limits.

2. 688-B Cage (Also Includes: 690, ISB-8, & ISB-10 cages)

The side bearing cage must be fastened to the truck bolster with two countersunk 7/8"-9 threaded fasteners and self-locking nuts.*

The fasteners must have a minimum tensile strength of 150,000 psi, and should conform to one of the following specifications:

ASTM a 354 Grade BD
SAE J 429 Grade 8
ASTM A 490

The self-locking nuts shall conform to Industrial Fasteners Institute Standard IFI-100, Grade C.

The fasteners must be torque in a manner prescribed by the manufacturer of the fasteners in order to achieve a clamping force of between 25,000 and 35,000 lbs each.

Fasteners recommended for application with a lubricant must have a torque limiting drive or breakaway head to positively limit the clamping force to the maximum recommended values.

The portion of the fastener in the side bearing cage must not project into the path of or interfere with, the free movement of the 4" diameter rollers between the cage end limits.

V. ROLLER CLEARANCE ADJUSTMENT

AAR Specification M-948 requires that all truck side bearings be designed to operate at a nominal working height of 5-1/16" for roller type side bearings. Roller clearance is specified to be 3/16" minimum, 5/16" maximum. For new side bearing applications, proper roller clearance can be obtained by measuring the height from the truck bolster side bearing mounting pad to the underside of the body side bearing wear plate, and adjusting the shim thickness to achieve the 5-1/16" ± 1/16" standard setup height. Alternatively, and particularly when applying or adjusting used side bearings, a roller clearance step gage may be used to check the 1/4" ± 1/16" gap between the top of the roller and underside of the body side bearing wear plate, again adjusting the shims above the body side bearing wear plate accordingly.

The use of shims between side bearing cages and truck bolster is not recommended and should only be considered in cases where the body side bearing is an integral part of the body bolster structure. Shims must never be applied beneath the side bearing rollers inside the side bearing cage.

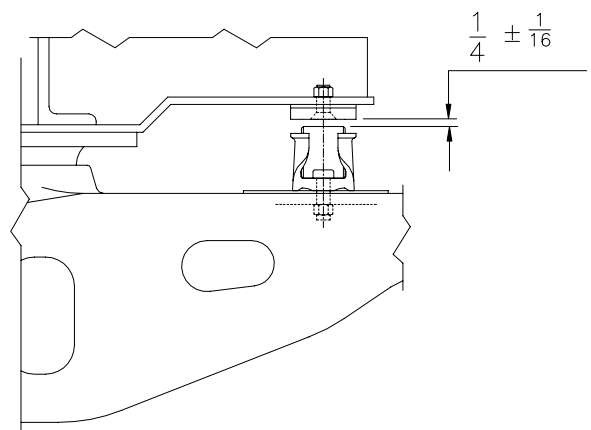


Figure 2. Side Bearing Roller Clearance Adjustment