

Self-Steer Axle Kingpin Replacement Instructions

SAF-HOLLAND® Self Steering Axles

June 2018

Introduction

These instructions provide the necessary information to properly replace a king pin on SAF-HOLLAND self-steering axles.

Read this manual before using or servicing this product and keep it in a safe location for future reference. Updates to this manual, which are published as necessary, are available on the internet at www.safholland.us.

Use only SAF-HOLLAND Original Parts to service the SAF-HOLLAND self-steer axle. A list of technical support locations that supply SAF-HOLLAND Original Parts and an Aftermarket Parts Catalog are available on the internet at www.safholland.us or contact Customer Service at 888-396-6501.

Notes, Cautions, and Warnings

Before starting any work on the unit, read and understand all the safety procedures presented in this manual. This manual contains the terms "NOTE", "IMPORTANT", "CAUTION", and "WARNING" followed by important product information. These terms are defined as follows:

NOTE: Includes additional information to enable accurate and easy performance of procedures.

IMPORTANT: Includes additional information that if not followed could lead to hindered product performance.

CAUTION Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could result in property damage.

CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

1. General Safety Instructions

- Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

WARNING Failure to follow the instructions and safety precautions in this manual could result in improper servicing or operation leading to component failure which, if not avoided, could result in death or serious injury.

- All installation should be performed by a properly trained technician using proper/special tools, and safe procedures.

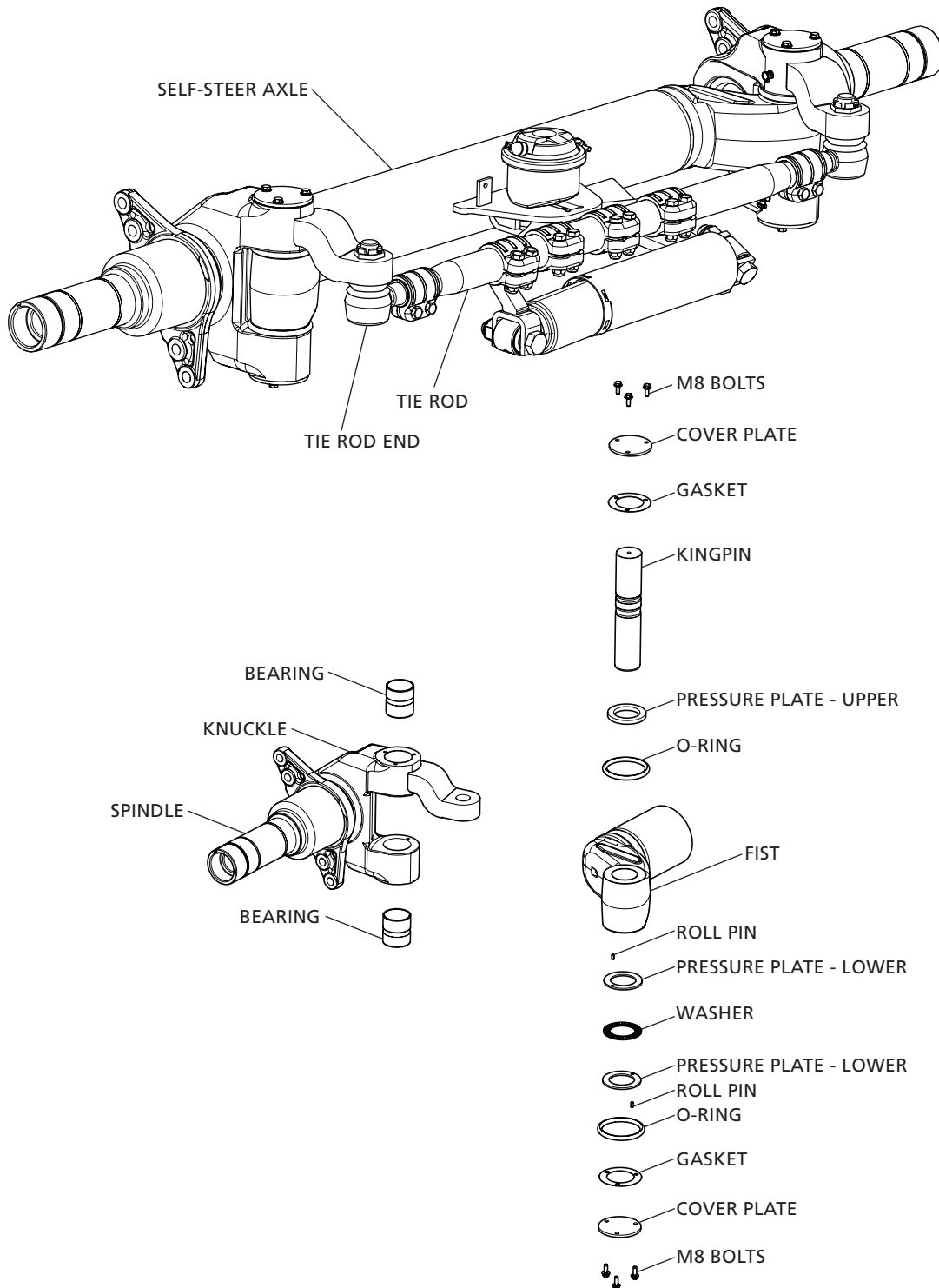
NOTE: In the United States, workshop safety requirements are defined by federal and/or state Occupational Safety and Health Act (OSHA). Equivalent laws may exist in other countries. This manual is written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.

- Properly support and secure the vehicle and axles from unexpected movement when servicing the unit.

WARNING Failure to properly support the vehicle and axles prior to commencing work could create a crush hazard which, if not avoided, could result in death or serious injury.

- If possible, unload the trailer before performing any service procedures.

Self Steering Axle Exploded View



2. Removal Instructions

NOTE: For ease of installation, the replacement kingpin should be placed in a freezer to cool, resulting in a reduction of diameter.

1. Remove wheels and wheel end components to expose the spindle per corresponding SAF-HOLLAND service manual. The service manuals can be accessed at www.safholland.us. See below for service manuals:
 - C88 - XL-SA100590M-en-US
 - P89 - XL-SA20018UM-en-US
 - P89 Plus - XL-SA20024UM-en-US
 - Drum Brakes - XL-TA100060M-en-US
2. Remove the cotter pin and then the nut from both tie rod ends. Remove the damper nut and bolt and then remove the tie rod as illustrated in **Figure 1**.
3. Remove the M8 bolts, kingpin cover plates and gaskets on the top and bottom of the knuckle as illustrated in **Figure 2**.
4. Heat up the top and bottom of the fist with two oxy acetylene torches on opposite sides of the fist simultaneously as illustrated in **Figure 3**.

⚠ WARNING ALWAYS consult the owner's manual of the tool you are using for recommended operating procedures. Failure to follow standard practices when operating oxy acetylene cutting equipment could cause a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Heating the fist creates a hot surface which, if not avoided, could result in minor or moderate injury.

Figure 1

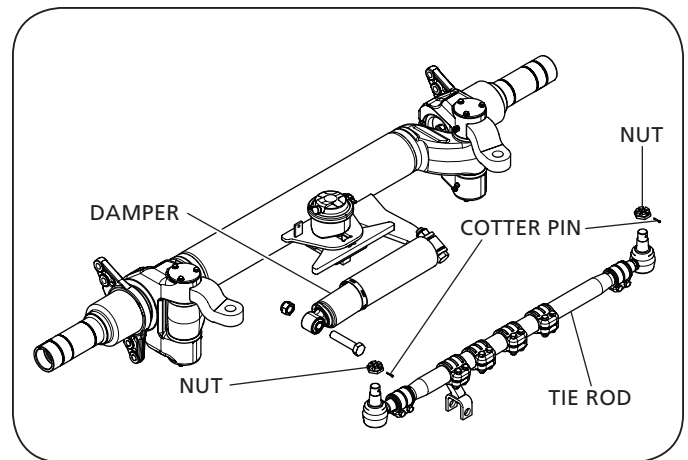


Figure 2

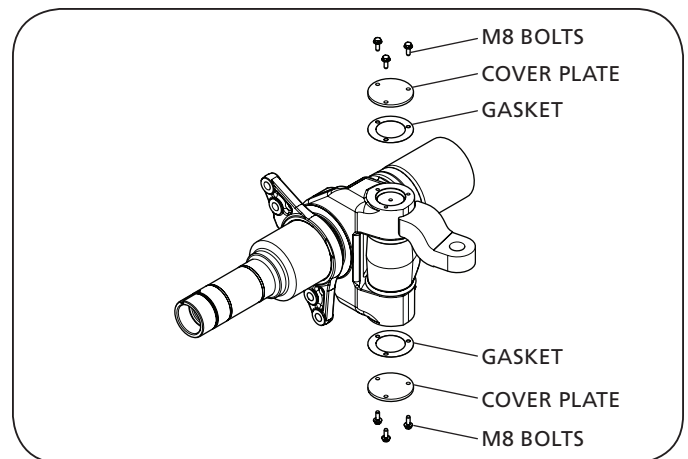
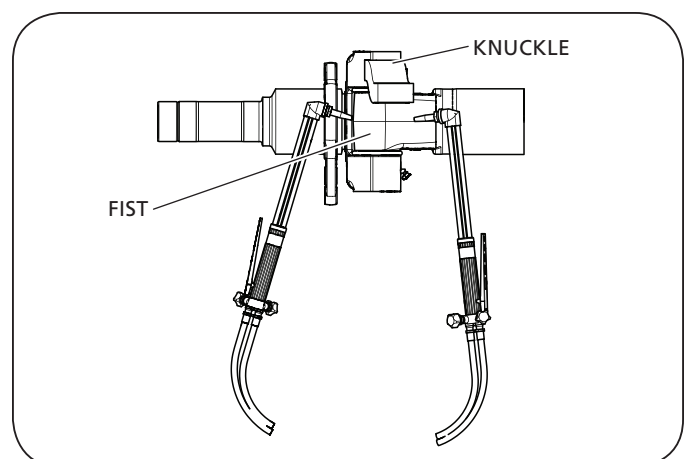


Figure 3



5. Apply a force to the top or bottom of the kingpin to press the kingpin out of the fist as illustrated in **Figure 4**.

NOTE: If the kingpin is hung up in the fist, reheat the fist as illustrated in **Figure 3** until the kingpin is able to be pressed out.

6. Remove and discard O-rings, upper and lower pressure plates, roll pins and washers.
7. If the knuckle is being reused, remove the top and bottom bearings as illustrated in **Figure 5**. Skip this step if the knuckle is being replaced.

Figure 4

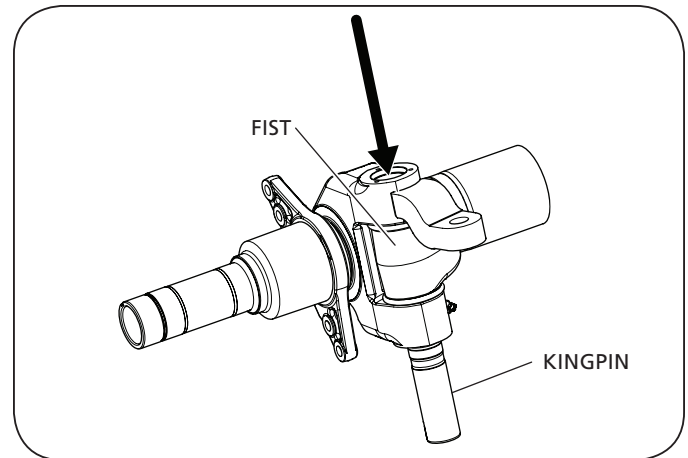
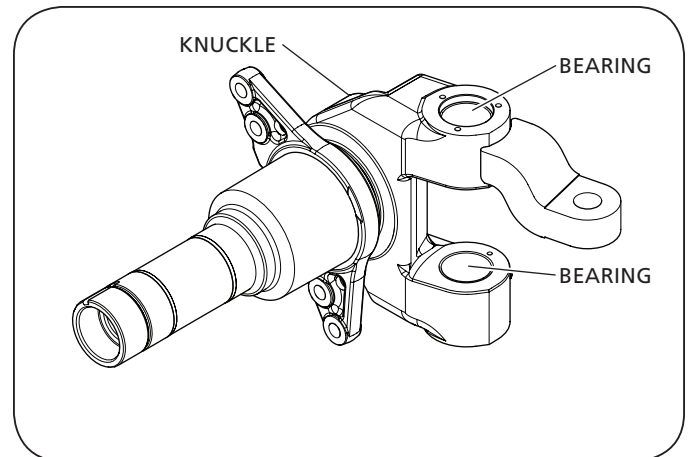


Figure 5



3. Installation Instructions

1. Install the top and bottom bearings into the knuckle so that the bearings are flush with the inner edge of the knuckle as illustrated in **Figure 6**.
2. Install one (1) lower pressure plate on the inner face of the knuckle and secure with a roll pin. Install one (1) lower pressure plate on the lower face of the fist and secure with the roll pin as illustrated in **Figure 7**.
3. Position the knuckle over the fist, while installing the upper pressure plate, O-rings and washer as illustrated in **Figure 8**.

Figure 6

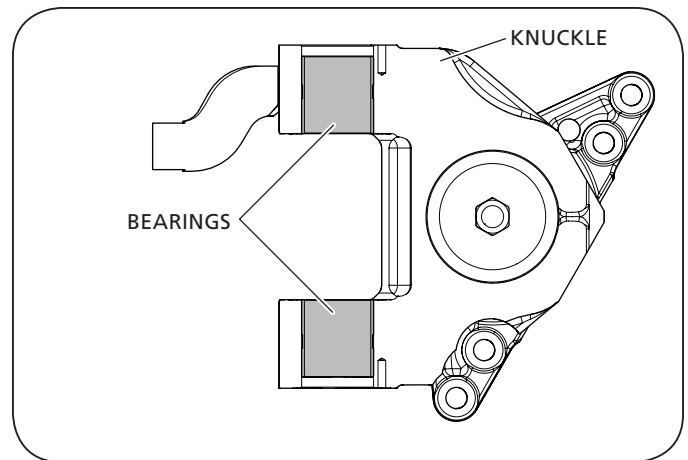


Figure 7

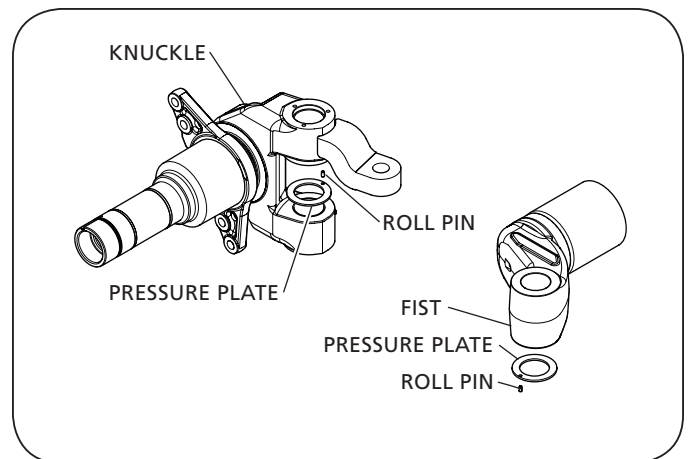
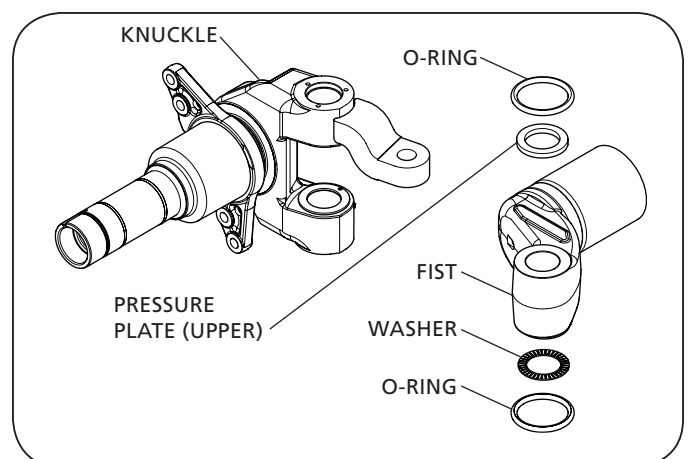


Figure 8



- Install the kingpin starting at the top of the knuckle, so that the end of the kingpin with the larger taper enters the knuckle first as illustrated in **Figure 9**. It is important that the ends of the kingpin are not deformed during this process. The kingpin should be centered between the top and bottom of the knuckle.

IMPORTANT: A force will need to be applied to set the kingpin in the fist. The ends of the kingpin must not be deformed during the installation process.

- Install the M8 bolts, kingpin cover plates and gaskets on the top and bottom of the knuckle as illustrated in **Figure 10**. Torque the M8 bolts to 20 ft.-lbs. (25 N•m).
- Reinstall the steering damper and tie rod assembly. Torque the steering damper mounting nut to 400 ft.-lbs. (600 N•m). Torque the tie rod ball joint nut to 250 ft.-lbs. (340 N•m).
- Reinstall the wheel end components per the corresponding SAF-HOLLAND service manual. The service manuals can be found on the internet at www.safholland.us. See below for service manuals:
 - C88 - XL-SA100590M-en-US
 - P89 - XL-SA20018UM-en-US
 - P89 Plus - XL-SA20024UM-en-US
 - Drum Brakes - XL-TA100060M-en-US
- Adjust the toe-in as necessary per SAF-HOLLAND service manual XL-AA10006BM-en-US. The service manual can be found on the internet at www.safholland.us.

Figure 9

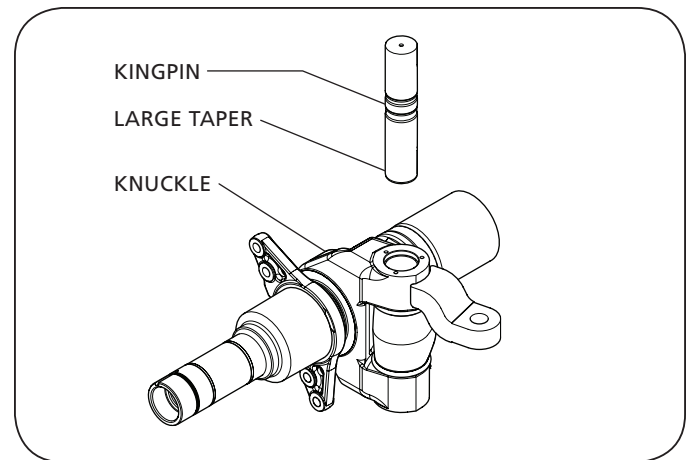
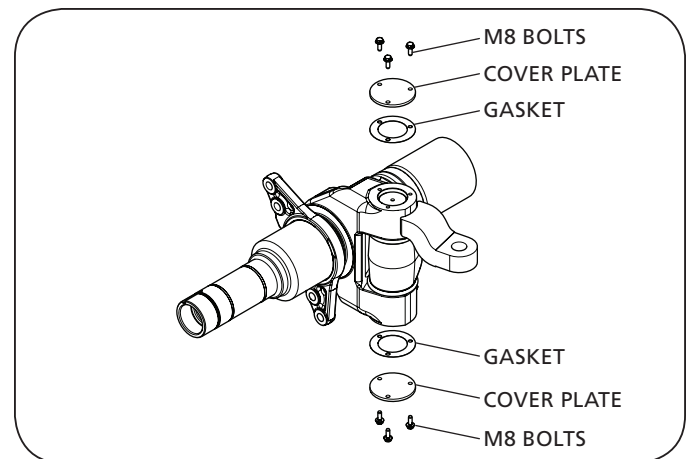


Figure 10





From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly.

SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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