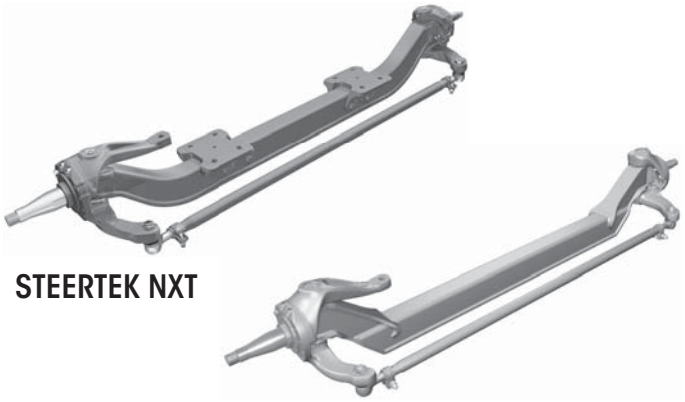


STEERTEK NXT

STEERTEK

ASSEMBLY INSTRUCTIONS

Kingpin Bushing and Thrust Bearing Service Kits

SUBJECT: Service Kit Nos.
STEERTEK NXT: 60961-628, -629,-630
STEERTEK: 60961-009, -039, -040

LIT NO: 59310-011

DATE: September 2013 **REVISION:** D

INTRODUCTION

This publication is intended to assist maintenance personnel with the installation of Kingpin Bushing and Thrust Bearing Service Kits to service AIRTEK® and SOFTEK® suspensions equipped with a STEERTEK NXT or STEERTEK front steer axle.

Proper maintenance, service, and repair are important to the reliable operation of the suspension and axle. For complete safety and service instructions on STEERTEK NXT / STEERTEK axles, see the particular AIRTEK or SOFTEK Technical Publication applicable to your make of vehicle. All such Hendrickson Technical Publications are available online at www.hendrickson-intl.com.

SERVICE KITS

KIT NO.	DESCRIPTION	QTY.
60961-628	**STEERTEK NXT AXLE SET CONTENTS**	
60961-629	Composite Thrust Bearing Kit	1
60961-630	Roller Thrust Bearing Kit	1
60961-040	**STEERTEK AXLE SET CONTENTS**	
60961-009	Composite Thrust Bearing Kit	1
60961-039	Roller Thrust Bearing Kit	1

NOTE: Service Kit contents and quantity may vary by Kit Number.

KINGPIN BUSHING

DISSASSEMBLY

Follow the Steering Knuckle Disassembly procedure located in the AIRTEK or SOFTEK Technical Publication applicable to your make of vehicle.

⚠ CAUTION

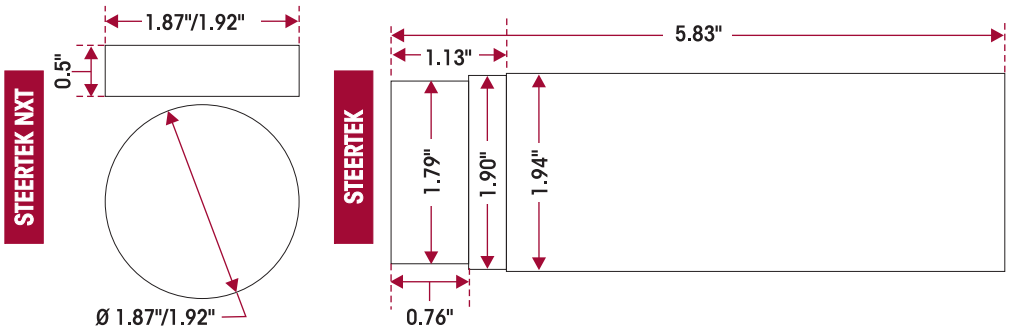
A MECHANIC USING A SERVICE PROCEDURE OR TOOL WHICH HAS NOT BEEN RECOMMENDED BY HENDRICKSON MUST FIRST SATISFY HIMSELF THAT NEITHER HIS SAFETY NOR THE VEHICLE'S SAFETY WILL BE JEOPARDIZED BY THE METHOD OR TOOL SELECTED. INDIVIDUALS DEVIATING IN ANY MANNER FROM THE INSTRUCTIONS PROVIDED ASSUME ALL RISKS OF CONSEQUENTIAL PERSONAL INJURY OR DAMAGE TO EQUIPMENT INVOLVED.

KINGPIN BUSHING INSTALLATION

You will need:

- A hydraulic shop press with a minimum forcing 2.5 ton capacity
- Kingpin bushing driver applicable to your axle, see Figure 1.

FIGURE 1 KINGPIN BUSHING DRIVERS



These shop made tools are designed to install and remove kingpin bushings. Bushing tools are to be made from cold rolled steel or equivalent. Drawings are for reference only. Hendrickson does not supply these tools.

HENDRICKSON
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⚠ WARNING

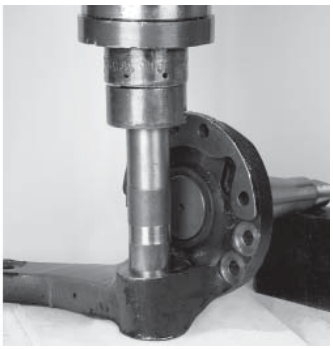
BEFORE APPLYING HYDRAULIC PRESSURE TO ANY TOOLING SET-UP, ALWAYS CHECK TO BE SURE THE PRESS PLATE, ADAPTERS, AND COMPONENTS BEING WORKED ON ARE POSITIONED PROPERLY, I.E. "IN LINE" WITH THE RAM. IMPROPER POSITIONING CAN CAUSE PERSONAL INJURY OR COMPONENT DAMAGE.

1. Install the upper/lower steering knuckle in the press. Ensure that each part of the steering knuckle assembly is squarely supported on the receiving tool before applying hydraulic pressure to press in the kingpin bushings.
2. Always install the kingpin bushing from the machined side (axle side) of the upper/lower steering knuckle using a bushing driver, see Figure 1. Press in bushing to a depth of no less than 15⁄64" (0.236") or 6 millimeters and no more than 5⁄16" (0.32") or 8 millimeters, see Figures 2, 3 and 4.
3. Proceed to Kingpin Bushing Reaming instructions.

FIGURE 2

FIGURE 3

FIGURE 4

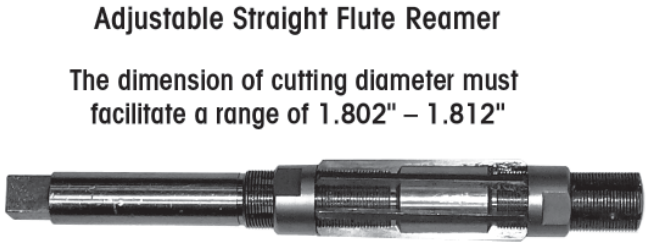


KINGPIN BUSHING REAMING

⚠ CAUTION

REAM THE KINGPIN BUSHINGS WITH AN ADJUSTABLE STRAIGHT FLUTE REAMER, SEE FIGURE 5. DO NOT HONE OR BURNISH THE KINGPIN BUSHINGS. HONING OR BURNISHING WILL DAMAGE THE BUSHINGS AND VOID ANY APPLICABLE WARRANTY.

FIGURE 5



⚠ WARNING

WHEN INSTALLING UPPER/LOWER STEERING KNUCKLE IN A VISE IT IS NECESSARY TO PROTECT THE MACHINED SURFACES FROM GOUGES OR MARRING BY USING BRASS JAWS. FAILURE TO DO SO CAN CAUSE PREMATURE PART DAMAGE, DAMAGE TO THE UPPER/LOWER STEERING KNUCKLE, LOSS OF WARRANTY, LOSS OF VEHICLE CONTROL, CAUSING PERSONAL INJURY OR PROPERTY DAMAGE.

4. Install the upper/lower steering knuckle in a vise with brass jaws.

SERVICE HINT

It is acceptable to mount the upper/lower steering knuckle in a vise either vertically or horizontally when performing the reaming procedure.

5. Install the reamer into the upper/lower steering knuckle until the blades touch the kingpin bushing.
6. Rotate the reamer with light downward pressure. Rotate the reamer smoothly. **DO NOT** apply too much pressure, see Figures 5 and 6.
7. Slide the reamer out of the upper/lower steering knuckle. If it is necessary to remove the reamer from the top, rotate the reamer opposite of cutting rotation.
8. Clean and remove all kingpin bushing material from the knuckle assembly. Take special attention to remove material from the grease channels and dimples.
9. Clean the 5⁄8" brake backing plate bolts with a wire wheel and run a tap through the threads of the upper/lower steering knuckle and then flush out with brake cleaner and dry with compressed air.

FIGURE 5

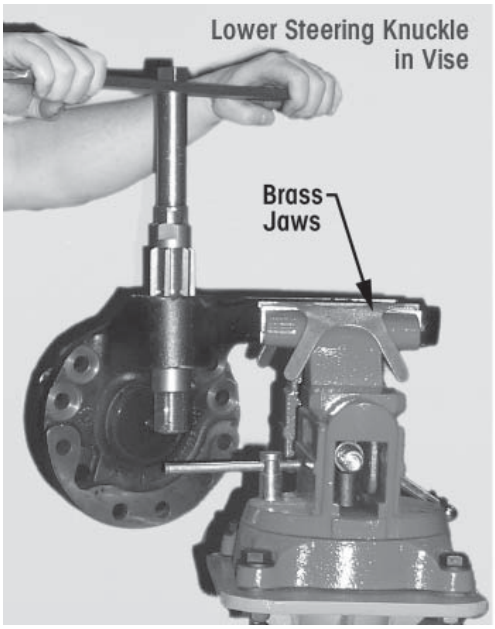
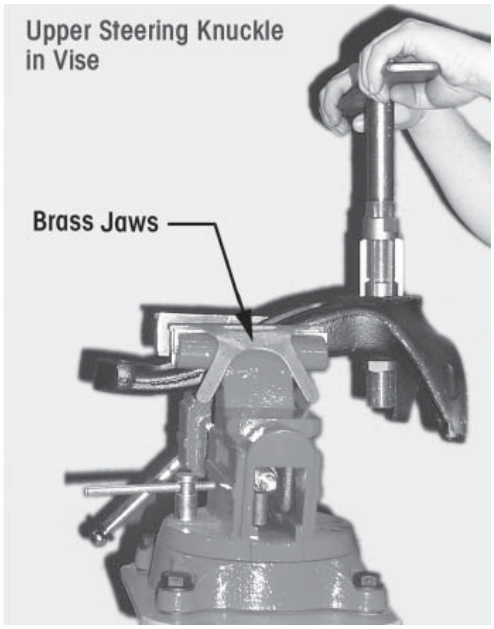


FIGURE 6



WARNING

PRIOR TO INSTALLATION ENSURE THAT ALL RESIDUAL LOCTITE MATERIAL IS REMOVED FROM THE MOUNTING BOLTS AND THE THREAD BORES IN THE UPPER/LOWER STEERING KNUCKLE, AND NEW LOCTITE 277 OR EQUIVALENT IS APPLIED TO HELP ENSURE THAT THE BOLTS SUSTAIN THE PROPER TORQUE REQUIREMENT. FAILURE TO DO SO CAN CAUSE LOSS OF VEHICLE CONTROL RESULTING IN PERSONAL INJURY OR PROPERTY DAMAGE.

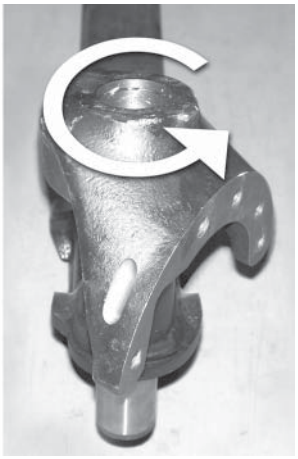
NOTE

The Hendrickson Genuine part, socket head cap screw comes with a pre-applied loctite compound.

10. Install the upper/lower knuckle on the kingpin.
11. Check for the proper fit by rotating the upper/lower knuckle back and forth to verify there is no binding on the kingpin, see Figures 7 and 8.
12. If the bushing is too tight repeat Steps 1 through 8 until the proper clearance is achieved.

FIGURE 7

FIGURE 8



NOTE

Bushing size is to be 0.001" larger than the kingpin size.

13. Proceed to Kingpin Seal installation instructions.

KINGPIN SEAL

INSTALLATION

WARNING

WHEN INSTALLING UPPER/LOWER STEERING KNUCKLE IN A VISE IT IS NECESSARY TO PROTECT THE MACHINED SURFACES FROM GOUGES OR MARRING BY USING BRASS JAWS. FAILURE TO DO SO CAN CAUSE PREMATURE PART DAMAGE, DAMAGE TO THE UPPER/LOWER STEERING KNUCKLE, LOSS OF WARRANTY, LOSS OF VEHICLE CONTROL, CAUSING PERSONAL INJURY OR PROPERTY DAMAGE.

1. Place the upper/lower steering knuckle in a vise with brass jaws or place on a suitable workbench. The steering knuckle will have the machined surface facing up (axle side up).

2. Lay the kingpin seal into the bore of the steering knuckle. The seal lip should face outward or toward the axle, see Figure 9.
3. Use a kingpin bushing driver tool and press seal firmly into the upper/lower steering knuckle.
4. **STEERTEK NXT** — Double Lip design, see Figure 10. Install the kingpin seal until it bottoms out in the kingpin bore.
5. **STEERTEK** — Single Lip design, see Figure 11. Install the kingpin seal until it makes contact with the kingpin bushing.

FIGURE 9

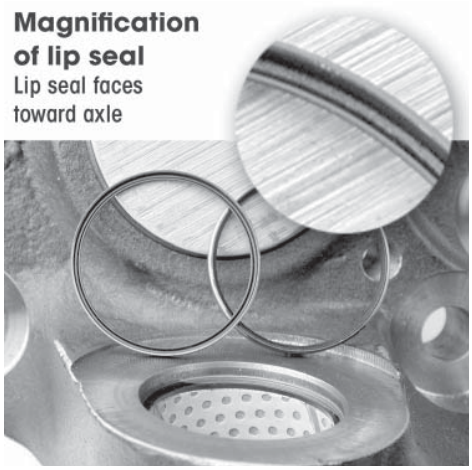


FIGURE 10

FIGURE 11

ASSEMBLY

To install the remaining items in the Service Kit, follow the Steering Knuckle Assembly procedure in the appropriate Hendrickson AIRTEK/SOFTEK/STEERTEK Technical Publication.

Refer any questions on this publication, contact Hendrickson Tech Services:

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