



H ASSEMBLY INSTRUCTIONS

Steering Stabilizer Kit AIRTEK® for Volvo Vehicles

SUBJECT: Kit No. 66083-010

LIT NO: 59310-066

DATE: May 2017

REVISION: A

INTRODUCTION

Hendrickson Truck Commercial Vehicle Systems has worked with Volvo Trucks North America, Inc. to develop a Steering Stabilizer Kit (Hendrickson Kit No. 66083-010; Volvo Kit No. 85150449) available for Volvo 12K/12.5K (338 mm Ride Height) day cab tractors manufactured with a Hendrickson AIRTEK® integrated front air suspension and STEERTEK NXT steer axle system. This aftermarket kit is intended, on an as-needed basis, for any such tractors that may be exhibiting signs of front end shimmy in the field.

These assembly instructions cover the proper installation of the Steering Stabilizer Kit. This kit is also available through Volvo, (Volvo Kit No. 85150449). Contact Hendrickson toll-free at 1-866-755-5968 (U.S. and Canada) with any questions regarding these assembly instructions.

STABILIZER KIT INSTALLATION INSTRUCTIONS

CAUTION

A TECHNICIAN 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 WILL ASSUME ALL RISKS OF CONSEQUENTIAL PERSONAL INJURY OR DAMAGE TO EQUIPMENT INVOLVED.

DISASSEMBLY

1. Turn the wheels left and right and ensure that the steer wheel stops contact the axle (it may be necessary to turn the vehicle engine on to perform this step).
2. After checking to see that the steer wheel stops contact the axle, ensure the tires are returned to the straight position.
3. Turn off vehicle engine (if turned on). Chock the wheels.

WARNING

PRIOR TO DISASSEMBLY OF THE SUSPENSION, AIR SPRING ASSEMBLIES MUST BE DEFLATED. UNRESTRICTED AIR SPRING ASSEMBLIES CAN VIOLENTLY SHIFT. DO NOT INFLATE AIR SPRING ASSEMBLIES WHEN THEY ARE UNRESTRICTED. AIR SPRING ASSEMBLIES MUST BE RESTRICTED BY SUSPENSION OR OTHER ADEQUATE STRUCTURE. DO NOT INFLATE BEYOND PRESSURES RECOMMENDED BY AIR SPRING MANUFACTURER, CONTACT HENDRICKSON TECHNICAL SERVICES FOR DETAILS. IMPROPER USE OR OVER INFLATION MAY CAUSE AIR SPRING ASSEMBLIES TO BURST, CAUSING PROPERTY DAMAGE AND/OR SEVERE PERSONAL INJURY.

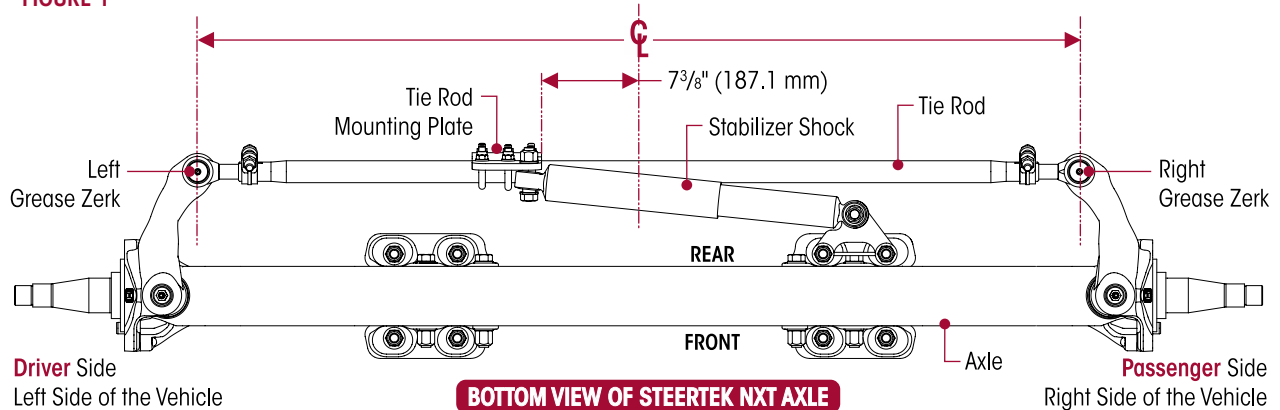
**Hendrickson Kit No. 66083-010
(Volvo Kit No. 85150449)**

CONTENTS

Description	QTY.
½"-13 UNC U-bolt	3
½" Hardened Washer	6
½"-13 UNC Nylocknut	6
¾"-10 UNC 3½" Bolt	2
¾" Flat Washer	4
¾"-10 UNC Locknut	2
M20 x 2.5-6G U-bolt 255 mm	1
M20 x 2.5-6G U-bolt 128 mm	1
M20 Hardened Washer	4
M20 x 2.5-6H Nylocknut	4
Stabilizer Shock	1
Bottom Adapter Plate	1
Tie Rod Mounting Plate	1
Stabilizer Support Spacer	1

4. Remove all air pressure from the front suspension air system by disconnecting the suspension height control valve linkage(s) at the rubber grommet(s) and allowing the lever to drop. This will exhaust air from the system.
5. Raise the vehicle.
6. Support the frame with safety stands and suspend the front axle with the shocks attached.
7. Support the axle with a jack.
8. Unseat the right air spring at the axle top pad.

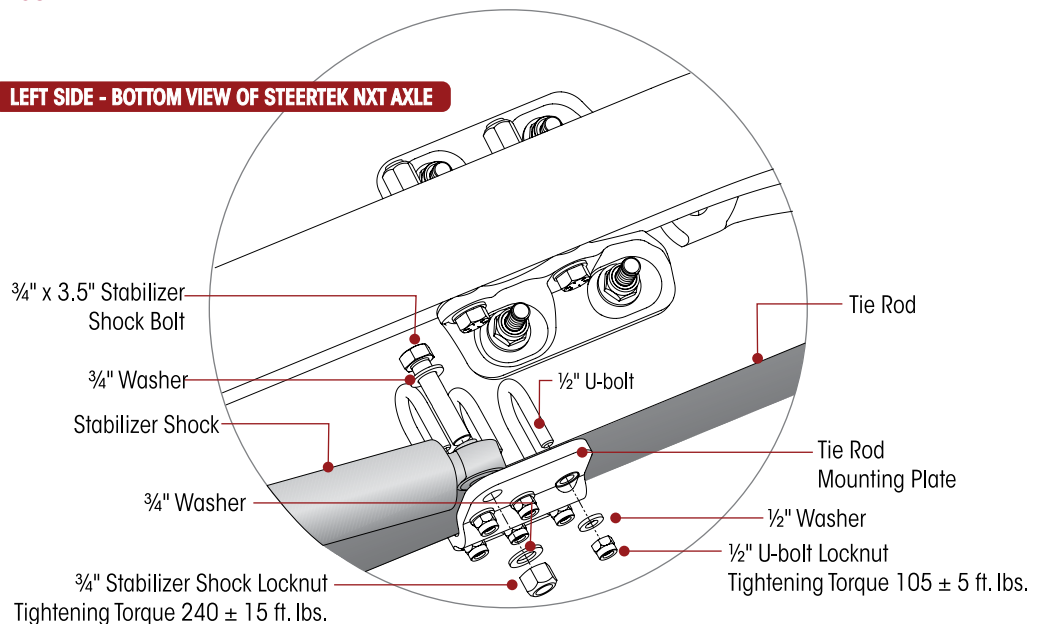
FIGURE 1



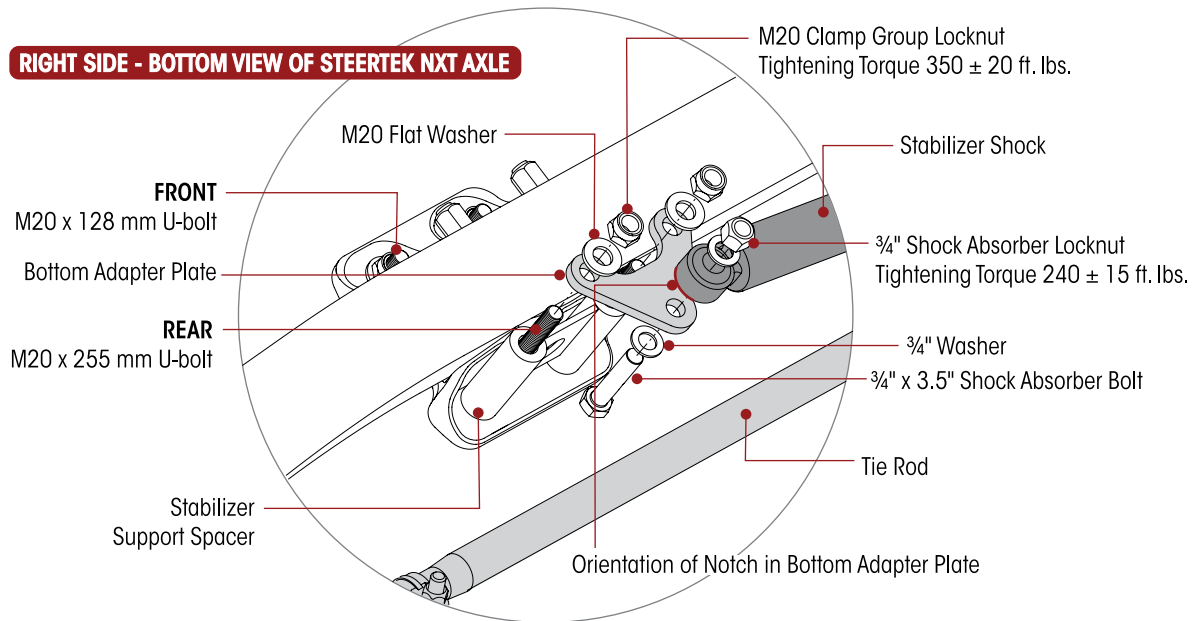
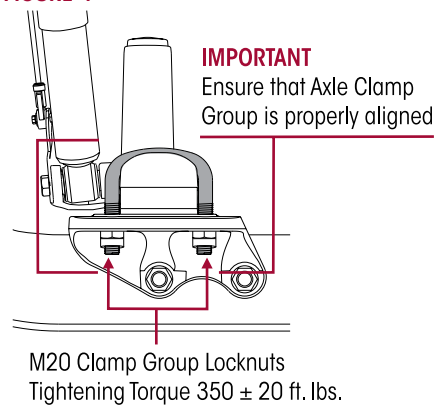
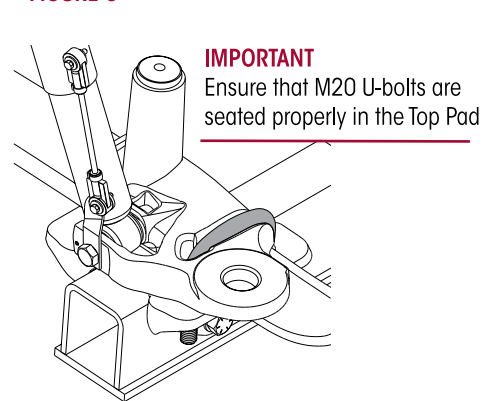
ASSEMBLY

1. Measure the distance between the left and right grease zerks on the tie rod assembly, see Figure 1.
2. Divide this measurement in half, and use this value to mark the centerline of the tie rod tube.
3. Position the **tie rod mounting plate** $7\frac{3}{8} \pm \frac{1}{16}$ (187.1 mm) to the left of the centerline (towards the driver's side) of the tie rod, see Figure 1.
4. Attach the **tie rod mounting plate** using the $\frac{1}{2}$ " hardware provided, see Figure 2. **DO NOT** tighten at this time.
5. From the **RIGHT SIDE ONLY**, remove and discard the axle clamp group M20 U-bolt fasteners, see Figure 3. This is the location where the new stabilizer support spacer will be installed.

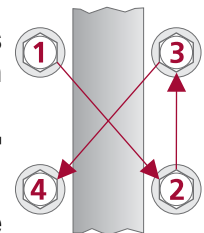
FIGURE 2






6. Install the new clamp group U-bolts (the shorter M20 x 128 mm installed on the front of the axle and the longer M20 x 255 mm installed on the rear of the axle), see Figure 3.
7. Install the stabilizer support spacer, see Figure 3.
8. Place the bottom adapter plate over the rear clamp group U-bolts as shown. See notch orientation in Figure 3.
9. Attach the new M20 locknuts. Snug the locknuts, **DO NOT** tighten at this time.
10. Ensure that the clamp group is properly aligned and the U-bolts are seated properly in the top pad, see Figures 4 and 5.

FIGURE 3

FIGURE 4

FIGURE 5

FIGURE 6

11. Tighten the M20 clamp group locknuts evenly in 50 foot pound increments to 350 ± 20 foot pounds torque in the proper pattern to achieve uniform bolt tension, see Figure 6.
12. Attach steering stabilizer shock to bottom adapter plate using the $\frac{3}{4}$ " x 3.5" long hex bolt, locknut and washer. **DO NOT** tighten at this time.
13. Attach the other end of the stabilizer shock to the tie rod mounting plate using the remaining $\frac{3}{4}$ " x 3.5" long bolt, locknut and washer, see Figure 2.
14. Verify that the tie rod mounting plate is still $7\frac{3}{8}$ " \pm $\frac{1}{16}$ " (187.1 mm) from the centerline of the tie rod and is vertical, see Figure 1.



15. Verify that the tie rod ends are centered.
16. Tighten the ½" U-bolt locknuts to the tie rod mounting plate evenly to  105 ± 5 foot pounds in a cross pattern.
17. Tighten the ¾" locknut for the stabilizer shock on the **adapter plate** to  240 ± 15 foot pounds, see Figure 3.
18. Tighten the ¾" stabilizer shock locknut for the **tie rod mounting plate** to  240 ± 15 foot pounds, see Figure 2.
19. Verify that the vehicle can achieve full left and right wheel cut without the steering stabilizer running out of travel. If the wheel cut test fails adjust the location of the tie rod mounting plate left or right to achieve full wheel cut.
20. Re-seat the air spring at the axle top pad.
21. Remove safety stands.
22. Re-install the height control valve linkage(s) and inflate the suspension to normal operating pressure.
23. Verify proper ride height, adjust if necessary per the vehicle manufacturer's specifications.
24. Remove chocks from wheels.

Refer any questions regarding this publication to Hendrickson Tech Services.



Toll-free U.S. and Canada
1.866.755.5968

Outside U.S. and Canada
1.630.910.2800



Parts Identification
truckparts@hendrickson-intl.com

Technical Support
techservices@hendrickson-intl.com



1.630.910.2899



Additional Hendrickson
Product Information
www.hendrickson-intl.com

www.hendrickson-intl.com



Truck Commercial Vehicle Systems
800 South Frontage Road
Woodridge, IL 60517-4904 USA

1.866.755.5968 (Toll-free U.S. and Canada)
1.630.910.2800 (Outside U.S. and Canada)
Fax 1.630.910.2899