

# **ASSEMBLY INSTRUCTIONS**

## **PRIMAAX® 230/460/690**

**SUBJECT:** Severe Service Kit No. 60961-169

**LIT NO:** 59310-035

**DATE:** September 2007

**REVISION:** A

### **INTRODUCTION**

This publication is intended to assist maintenance personnel with the installation of air spring for **PRIMAAX® Severe Service Vehicles**. Hendrickson Severe Service Air Spring Kit No. 60961-169 is available for **PRIMAAX 230/460/690** rear air suspensions.

See publication 17730-238 for complete service and safety instructions for the PRIMAAX suspension.

#### **SEVERE SERVICE AIR SPRING KIT NO. 60961-169**

<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
60271-002	Air Spring Assembly	1
22962-014	½" Flat Washer	2
17700-010	½"-13 UNC Locknut	2
67269-000	Upper Air Spring Shield	1
66975-000	Lower Air Spring Shield	1

### **SEVERE SERVICE AIR SPRING KIT**

#### **DISASSEMBLY**

1. Place the vehicle on a level floor.
2. Chock the wheels.
3. Support the frame of the vehicle at ride height.

#### **WARNING**

THE VEHICLE MUST BE FIRMLY SUPPORTED WITH JACK STANDS PRIOR TO SERVICING. FAILURE TO DO SO CAN RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE.

#### **WARNING**

AIR SPRING ASSEMBLIES MUST BE DEFLATED PRIOR TO SERVICING THE AIR SPRINGS. 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.

#### **WARNING**

PRIOR TO AND DURING DEFLATION AND INFLATION OF THE AIR SUSPENSION SYSTEM, ENSURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR FROM UNDER THE VEHICLE AND AROUND THE SERVICE AREA, FAILURE TO DO SO CAN CAUSE SERIOUS PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

4. Disconnect the height control valve linkage assembly from the height control valve arm. Lower the height control valve arm to exhaust the air in the air springs and deflate the rear suspension.

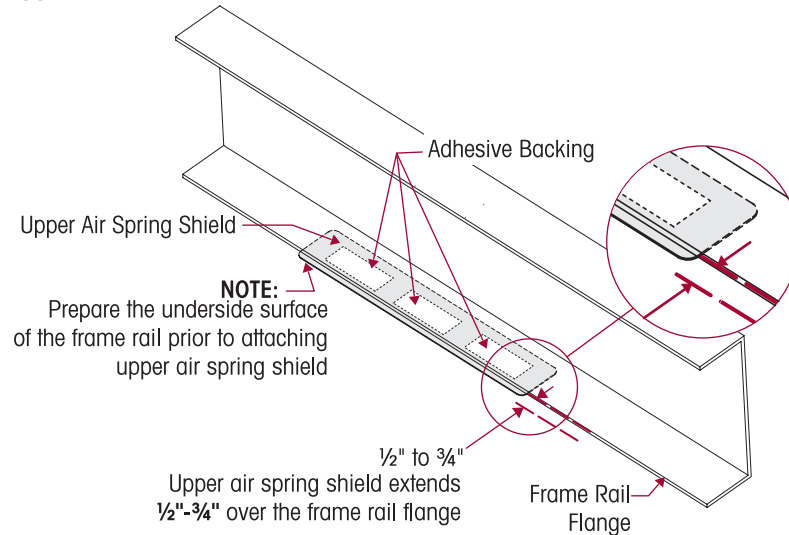
IT IS MANDATORY TO LUBRICATE THE LOWER AIR SPRING FASTENERS WITH PENETRATING OIL AND REMOVE WITH HAND TOOLS TO PREVENT DAMAGE TO THE LOWER AIR SPRING MOUNTING STUDS. FAILURE TO DO SO CAN CAUSE COMPONENT DAMAGE AND VOID WARRANTY.

5. **Using hand tools only**, remove the lower air spring mounting brackets from the air spring.
6. Remove the air line from air spring.
7. Remove the fasteners from the upper air spring mounting bracket and the frame.
8. Remove the air spring.

### ASSEMBLY

1. Prepare the frame rail for the upper air spring shield. Using a wire brush or sand paper, remove any loose paint, rust, or scale from the underside surface of the frame rail where the upper air spring shield will be installed. Lightly sand this area to roughen any glossy surfaces. Clean with soap and water, rinse and let dry.

**FIGURE 1**



2. Remove the adhesive backing and install the upper air spring shield to the underside of the frame rail flange, extending  $\frac{1}{2}$ " to  $\frac{3}{4}$ " over the frame rail flange as shown in Figure 1.
3. Install the lower air spring shield over the support beam assembly end and air spring locator tab. Ensure the slots in the lower air spring shield engage the lower air spring mounting studs, see Figure 2.
4. Install the air spring between the frame and cross brace so that the locating tab engages "V" notch in the end cap, see Figure 2.

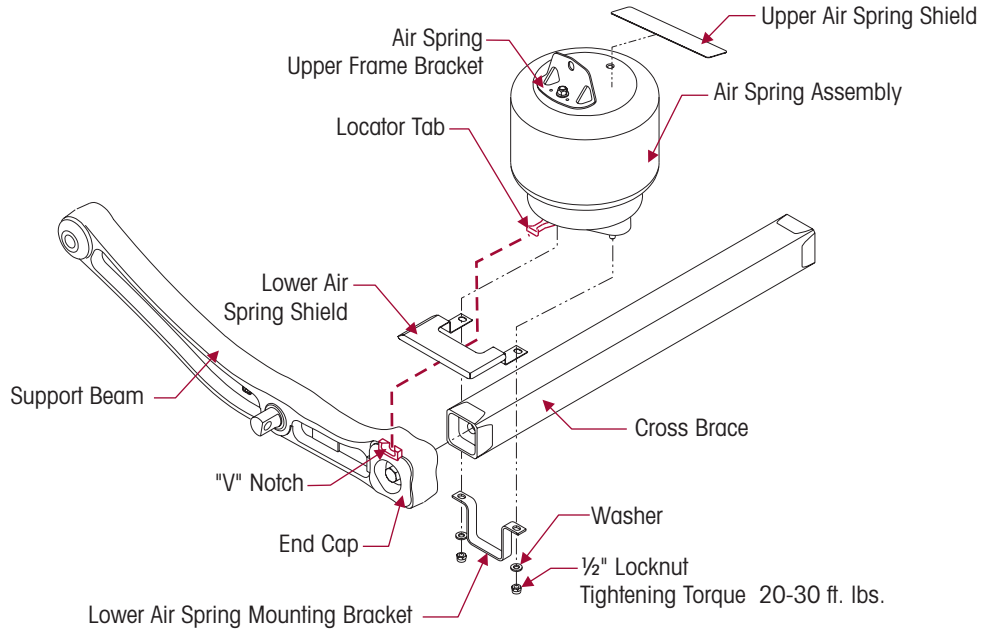
### WARNING

FAILURE TO PRESS THE AIR SPRING AGAINST THE UNDERSIDE OF THE FRAME WHILE TIGHTENING THE UPPER AIR SPRING BRACKET CAN RESULT IN COMPONENT DAMAGE AND PERSONAL INJURY OR PROPERTY DAMAGE.

5. Hold the air spring tight against the lower frame rail flange and tighten the upper air spring mounting fastener per original equipment manufacturer's specifications.
6. Install the lower air spring mounting bracket around the cross brace, engaging the mounting studs on the air spring.

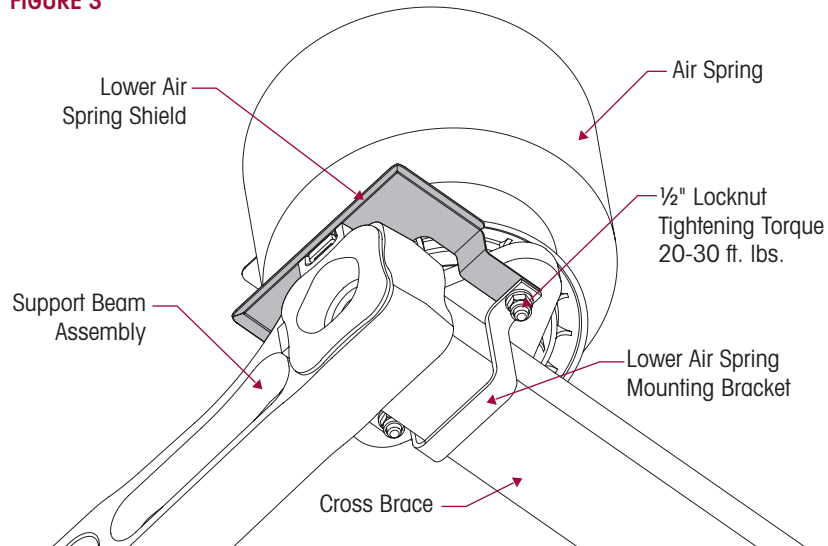


**FIGURE 2**



7. **Using hand tools only**, install the lower mounting fasteners. Tighten the locknuts to 20-30 foot pounds torque, see Figure 3.
8. Connect the air line to the air spring.

**FIGURE 3**



**WARNING**

PRIOR TO AND DURING DEFLATION AND INFLATION OF THE AIR SUSPENSION SYSTEM, ENSURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR FROM UNDER THE VEHICLE AND AROUND THE SERVICE AREA, FAILURE TO DO SO CAN CAUSE SERIOUS PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

**CAUTION**

INFLATE THE SUSPENSION SLOWLY AND ENSURE THAT THE RUBBER BLADDER OF THE AIR SPRING INFLATES UNIFORMLY AND IS NOT BINDING. FAILURE TO DO SO CAN CAUSE DAMAGE TO THE UPPER AIR SPRING MOUNTING BRACKET AND VOID WARRANTY.

9. Inflate the suspension by connecting the height control valve linkage assembly to the height control valve arm. Verify the air springs inflate uniformly without binding.

10. Remove the frame supports.
11. Remove the wheel chocks.
12. Verify proper ride height adjustment. See Ride Height Adjustment in the Alignment & Adjustments Section of Hendrickson publication no. 17730-238.

Refer any questions on this publication to Hendrickson Tech Services at 630.910.2800 or email: [techservices@hendrickson-intl.com](mailto:techservices@hendrickson-intl.com). For more information on Hendrickson products go to [www.hendrickson-intl.com](http://www.hendrickson-intl.com).

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