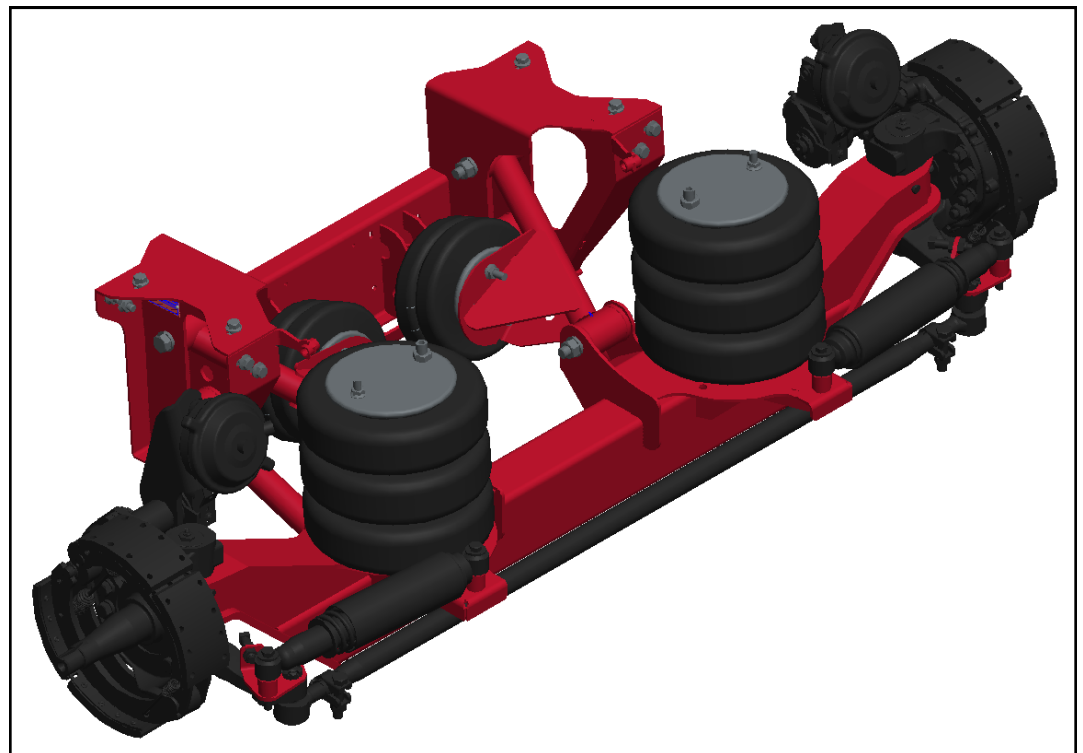




TRAILER INSTALLATION INSTRUCTIONS

8A000723 SS135
13,500 LB. CAPACITY



Link Mfg. Ltd.
223 15th St. N.E.
Sioux Center, IA USA
51250-2120
www.linkmfg.com

**QUESTIONS?
CALL CUSTOMER
SERVICE
1-800-222-6283**

Refer to separate Owner's Manual for details regarding operation and maintenance.

80003022
FEB 27, 2014

IMPORTANT: IT IS IMPORTANT THAT THE ENTIRE INSTALLATION INSTRUCTIONS BE READ THOROUGHLY BEFORE PROCEEDING WITH SUSPENSION INSTALLATION.





1. INTRODUCTION

Thank you for choosing a Link 13.5K Lifiable suspension. We want to help you to get the best results from the suspension and to operate it safely. This manual contains information to introduce you to the Link 13.5K Lifiable suspension and to assist you with its installation and maintenance. The manual is intended solely for use with this product.

All information in this manual is based on the latest information available at the time of printing. Link Manufacturing reserves the right to change its products or manuals at any time without notice. Contact Link at (800) 222-6283 for information on recent changes to products.

Damaged components should be returned to Link with a pre-arranged Returned Goods Authorization (RGA) number through the Customer Service Department. The damaged component may then be replaced if in compliance with warranty conditions.

2. SAFETY SYMBOLS, TORQUE SYMBOL, and NOTES

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
 WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
CAUTION	CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.
	The torque symbol alerts you to tighten fasteners to a specified torque value.

NOTE:	A Note provides information or suggestions that help you correctly perform a task.
--------------	---

3. SAFE WORKING PRACTICES:

3.1 CAUTION

When handling parts, wear appropriate gloves, eyeglasses, ear protection, and other safety equipment.

3.2 CAUTION

Practice safe lifting procedures. Consider size, shape, and weight of assemblies. Obtain help or the assistance of a crane when lifting heavy assemblies. Make certain the path of travel is clear.

4. INSTALLATION GUIDELINES

4.1 In order for this suspension to operate properly, it must operate in the parameters specified by Link.

4.2 The installer must verify the trailer is configured properly for the lift axle(s) being added.

4.3 It is the responsibility of the installer to determine the location of the suspension in order to obtain proper load distribution.

4.4 Suspension Identification: Each assembly has an identification tag located on the hanger of the suspension on the drivers side of the vehicle. The plate includes the Link part number for the axle and the wheel end kit, and the suspension serial number.

4.5 No alterations of any Link suspension component is permitted without proper authorization from qualified Link personnel.

4.6 No welding of any suspension components is permitted except when specified by Link.

4.7 CAUTION The trailer manufacturer should be consulted before any modifications are made to the frame of the trailer. Cutting or altering the frame in certain areas may affect the manufacturer's warranty.

4.8 WARNING

It is the responsibility of the installer to ensure that compliance with FMVSS 121 is maintained by the braking system.

4.9 WARNING

Proper tightening of fasteners is important to the performance and safety of the suspension. Follow all torque specifications throughout the instructions.

NOTE: All fasteners torque specifications are given for dry fasteners with no additional lubrication required.

5. PRE-INSTALLATION CHECKLIST

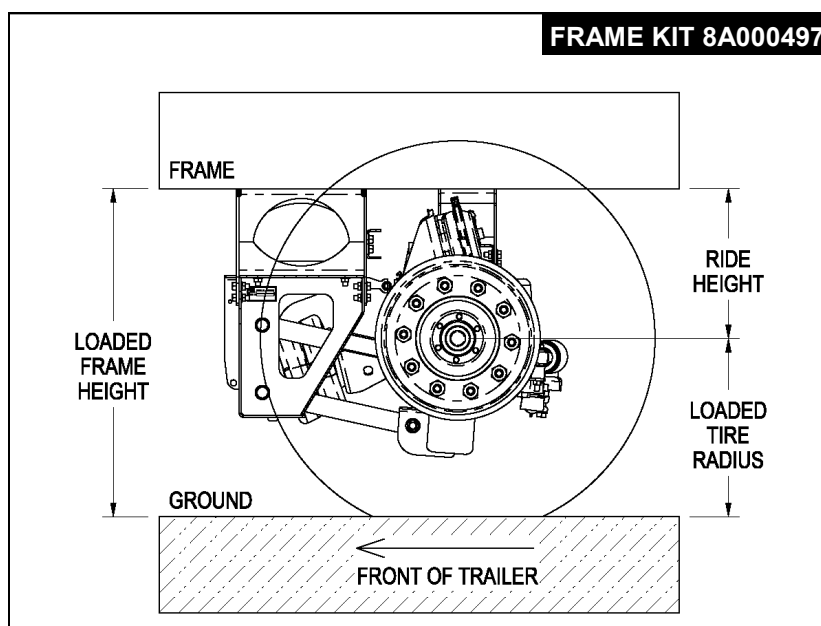
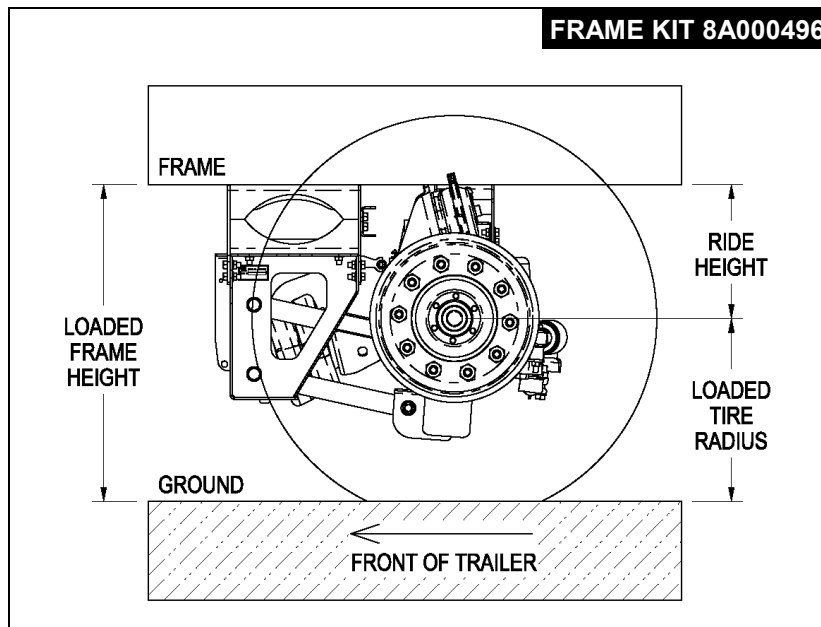
- Verify that the axle spacing to be used conforms to federal and local bridge laws.
- Verify that the frame outside width matches the suspension specifications (41.25" to 42.75").
- Verify that adequate air supply exists to support braking requirements for the lift axle being installed.
- Verify tire clearance in all directions, with the axle lifted and lowered.

Verify air spring clearance in all directions, with the axle lifted and lowered.

Verify suspension clearance with trailer components, with the axle lifted and lowered.

6. FRAME BRACKET KITS:

6.1 There are two frame bracket kits available to allow for a range of ride heights. See Section 7 for more information.



7. RIDE HEIGHT AND FRAME ACCOMMODATIONS FOR 13.5K SUSPENSION (8A000723)

7.1 CAUTION In order for the suspension to function properly, the “ride height” of the suspension must be within the range specified by Link Mfg. See the charts below for more information on available lift.

7.2 Two ride heights exist for this suspension; 15.00" to 17.50" and 17.00" to 19.50".

7.3 To determine the appropriate Frame Mount Kit and chart, use the formula below.

$$\text{Loaded Frame Height} - \text{Loaded Tire Radius} = \text{Ride Height}$$

7.4 With the correct chart, the amount of lift can be found by intersecting the Loaded Tire Radius with the Loaded Frame Height.

NOTE: When measuring frame to ground clearance, be sure to measure with trailer loaded, at intended suspension location and on level ground.

13.5K LIFT CHART	RIDE HEIGHT 15.0" - 17.5" (FRAME MOUNT KIT 8A000496)													
LOADED FRAME HEIGHT	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5
TIRE RADIUS														
17 (LOADED)	7.0	7.5	8.0	8.5	9.0	9.5								
18 (LOADED)			7.0	7.5	8.0	8.5	9.0	9.5						
19 (LOADED)					7.0	7.5	8.0	8.5	9.0	9.5				
20 (LOADED)							7.0	7.5	8.0	8.5	9.0	9.5		
21 (LOADED)									7.0	7.5	8.0	8.5	9.0	9.5

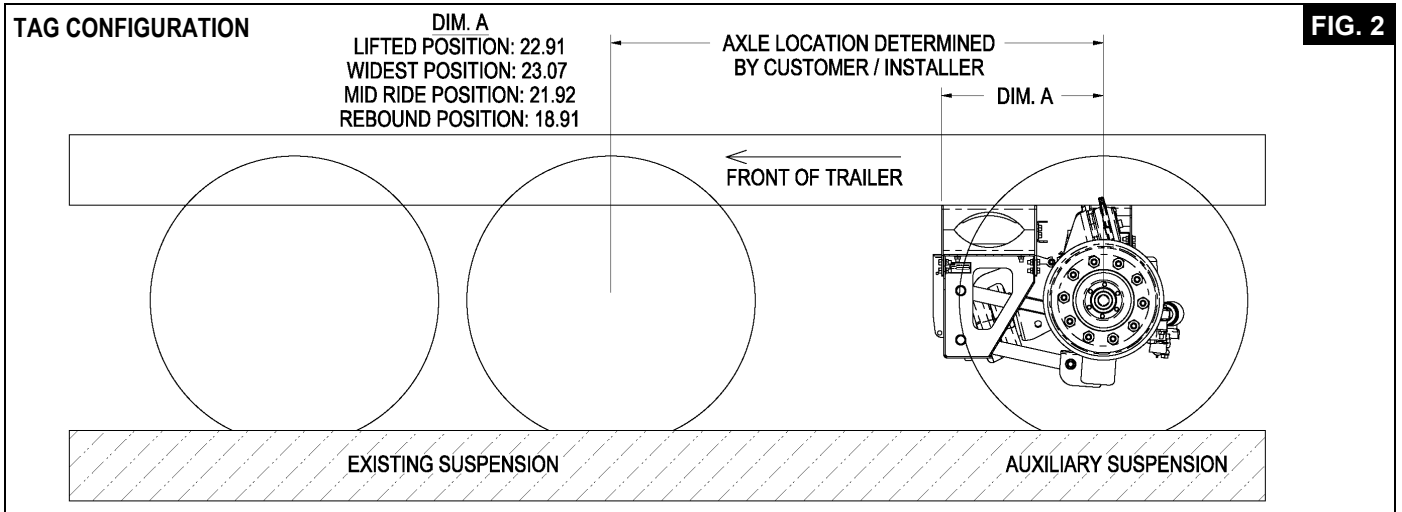
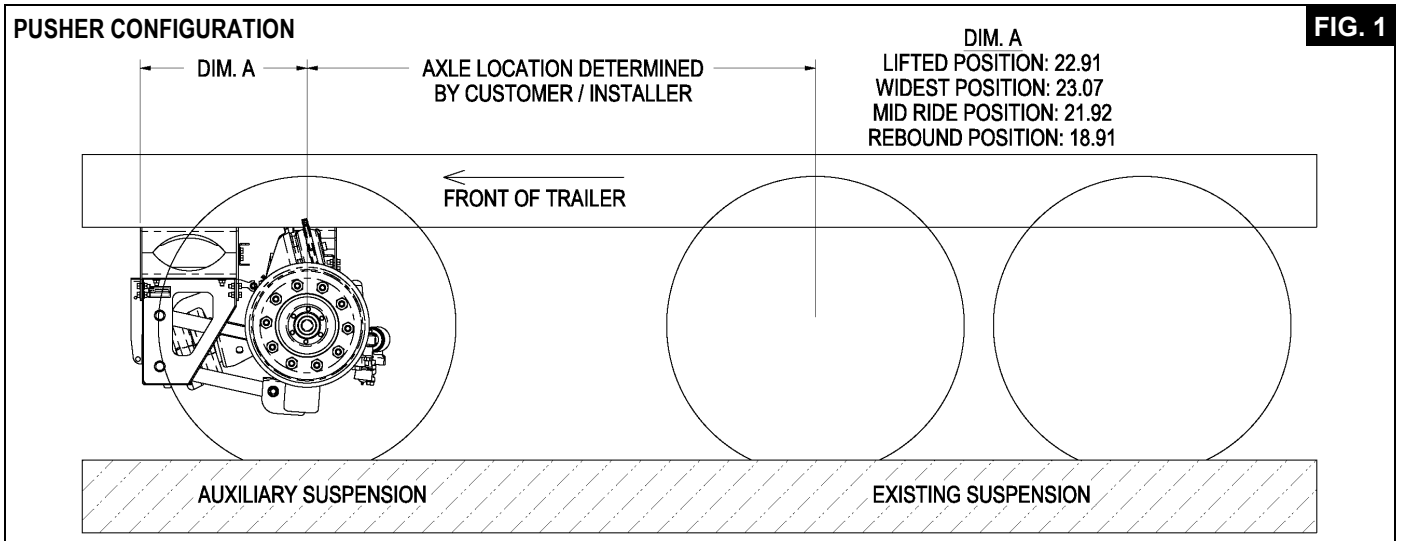
13.5K LIFT CHART	RIDE HEIGHT 17.0" - 19.5" (FRAME MOUNT KIT 8A000497)													
LOADED FRAME HEIGHT	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5
TIRE RADIUS														
17 (LOADED)	7.0	7.5	8.0	8.5	9.0	9.5								
18 (LOADED)			7.0	7.5	8.0	8.5	9.0	9.5						
19 (LOADED)					7.0	7.5	8.0	8.5	9.0	9.5				
20 (LOADED)							7.0	7.5	8.0	8.5	9.0	9.5		
21 (LOADED)									7.0	7.5	8.0	8.5	9.0	9.5

8. SUSPENSION LOCATION

8.1 Before determining the suspension location, thoroughly review the pre-installation checklist found in Section 5 of this manual. Be sure that the trailer is located on a flat and level surface before measuring for suspension location. When this is complete, mark the suspension location and boundaries on the trailer frame rails. (See **Fig. 1** & **Fig. 2** below for details).

8.2 Prior to suspension installation, any interference with existing frame bolts or brackets should be addressed. If any modification to the auxiliary suspension is needed, you should consult Link.

NOTE: Trailer frame cross-members should be located at or near the front frame brackets.



9. SUSPENSION INSTALLATION

NOTE: For trailers with aluminum frames or other applications that do not allow for weld-on installation, follow the trailer manufacturer's guidelines for attaching the suspension.

9.1 With suspension location determined, prepare the frame of trailer and trailer brackets for welding by removing paint from the areas requiring weld (see **Fig. 4** for details).

9.2 Clamp the front and rear frame brackets tightly to the bottom of the trailer frame rails at the distance shown in **Fig. 3**.

9.3 Loosely assemble one lateral crossmember to the back of the front frame bracket set and one to the back of the rear frame bracket set using mounting hardware provided (See **Fig. 5** for details).

9.4 Double check the suspension location and check for any interference concerns. Also, check that welding will not interfere with any brake lines, wiring or other components that might be located near the mounting areas of the frame brackets.

NOTE: The welding in the following steps should only be performed by a certified welder.

9.5 With the frame brackets clamped in place, tack the front and rear frame brackets into place.

9.6 Once tacking is complete, recheck position and alignment of the frame brackets. If the brackets have the correct position and alignment proceed with steps. If not, remove tack welds, adjust, and re-tack until brackets are in the proper place.

9.7 Using the welding information given in **Fig. 4**, completely weld all four frame brackets to the trailer frame.

9.8 Finish lateral crossmember installation by tightening mounting hardware that was loosely assembled earlier (See **Fig. 5** for details).

TORQUE to 90-120 FT-LBS.

9.9 Assemble the suspension to the front frame brackets using the provided mounting hardware (See **Fig. 6** on page 5 for fastener detail)

NOTE: Center the suspension on the truck with the frame width adjustment slots.

TORQUE to 90-120 FT-LBS.

9.10 Assemble the air springs to rear frame brackets using the 1/2" and 3/4" mounting hardware (See **Fig. 6** on page 5 for fastener detail).

TORQUE the 1/2" nut to 20-30 FT-LBS.

TORQUE the 3/4" nut to 45-50 FT-LBS.

FIG. 3

21.00

FRAME

GROUND

FRONT OF TRAILER

FIG. 4

REMOVE PAINT AND WELD BRACKETS TO TRAILER FRAME ALONG BOLD LINES SHOWN

.25

.25

.25

.25

-5-

FIG. 5

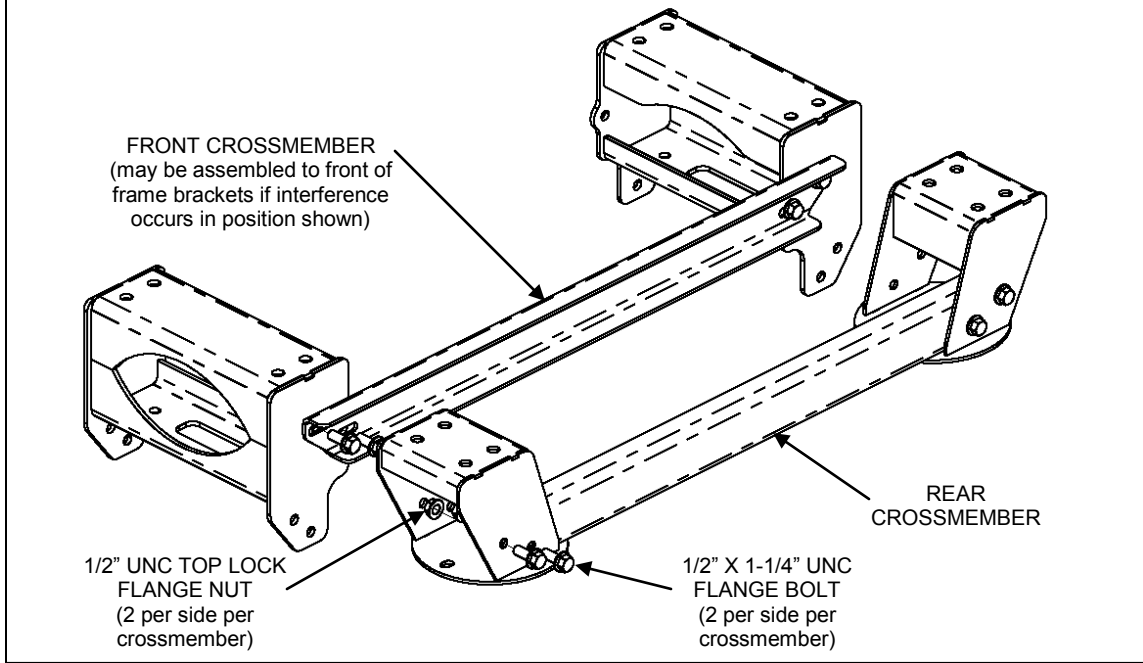
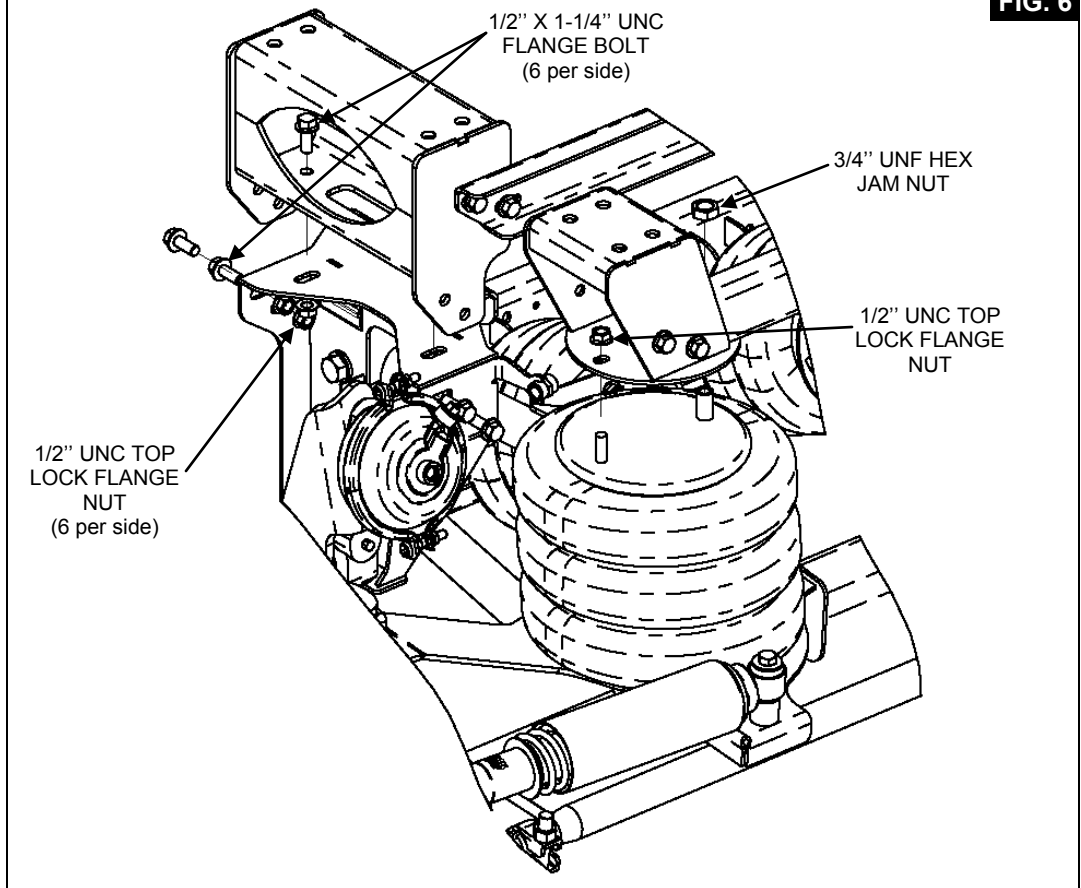


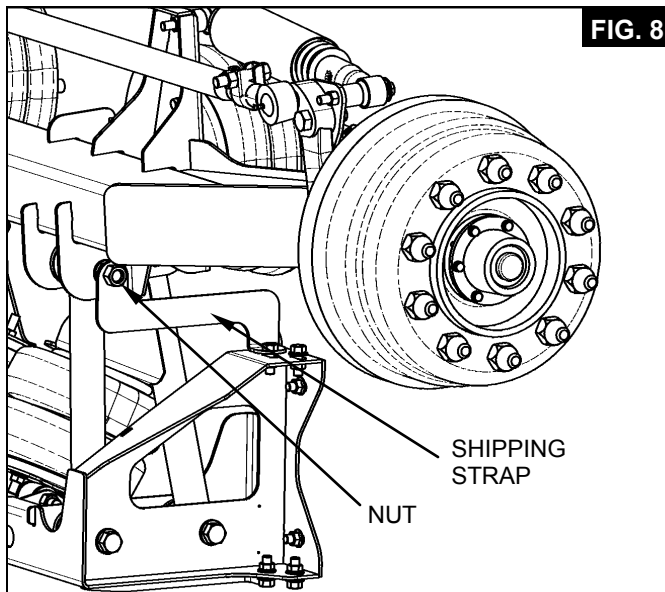
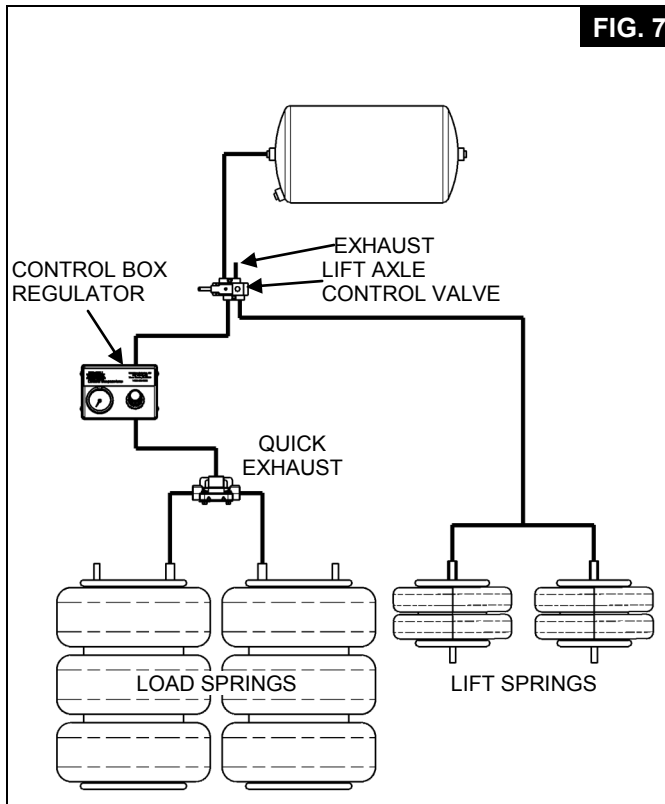
FIG. 6



10. PLUMBING INSTRUCTIONS

10.1 Connect the control box regulator to the quick exhaust valve used on the load springs (see **Fig. 7** for details).

NOTE: Contact Link for available integrated air control options.



11. FINAL ASSEMBLY AND INSPECTION CHECKLIST

Are both shipping straps and extra nuts removed? (see **Fig. 8**)

Are all fasteners installed and bolts tightened to proper torque specifications?

NOTE: All fasteners torque specifications are given for dry fasteners with no additional lubrication required.

Are all wheel lug nuts tightened to recommended torque specifications?

Is air control installation complete and checked for leaks and proper operation?

Has the suspension been raised and lowered, and inspected for any interference between the auxiliary suspension and any trailer components?

Are brakes and slack adjusters properly set, and the wheels free to rotate?

Are wheel hubs sufficiently filled with the manufacturer's specified lubricant? (SAE 80W-90 Mineral based or SAE 75W-80 Synthetic Gear Lube)?

Is the TOE-IN set properly ($1/8 \pm 1/16$ measured at the tire centers)?

Verify the steering knuckles come into contact with the stop bolts before the tires interfere with any other trailer components?

CAUTION: With the trailer unloaded, the auxiliary axle's ride springs must be limited to a maximum of 20 psi to avoid improper weight distribution or component damage.

Refer to separate Owner's Manual for details regarding operation and maintenance.



LINK MANUFACTURING, LTD.
223 15TH ST. NE
SIOUX CENTER, IA 51250
1-800-222-6283
www.linkmfg.com