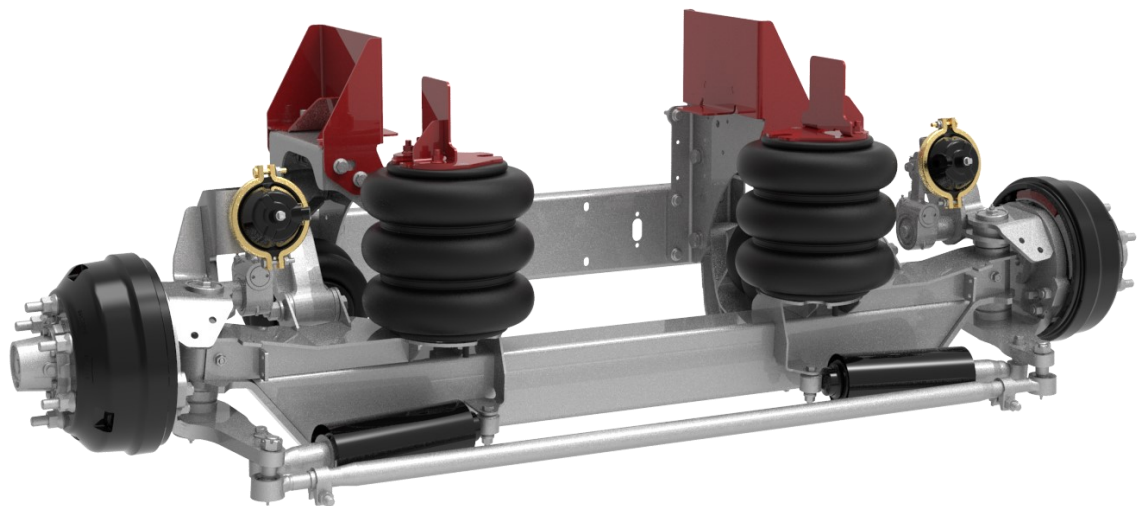




# INSTALLATION INSTRUCTIONS

## 8K Auxiliary Suspension 8,000 LBS. CAPACITY



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

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

80003567  
SEP 17, 2019

**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 8K Auxiliary Suspension. We want to help you get the best results from this suspension and to operate it safely. This manual contains information to introduce you to the Link 8K Auxiliary Suspension and to assist you with its installation. This 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.

Damaged components should be returned to Link with a pre-arranged Returned Materials Authorization (RMA) 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

	<b>DANGER</b> indicates a hazardous situation which if not avoided, will result in death or serious injury.
	<b>WARNING</b> indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	<b>CAUTION</b> indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
	<b>NOTICE</b> indicates a potentially hazardous situation which, if not avoided, may result in property damage.
	<b>TORQUE</b> indicates named fasteners are to be tightened to a specified torque value.
<b>NOTE:</b>	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 vehicle 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 label located on the hanger of the suspension on the drivers side of the vehicle. The label includes the Link part number for the axle 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 vehicle manufacturer should be consulted before any modifications are made to the frame of the vehicle. 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 CAUTION

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

## 5. PRE-INSTALLATION CHECKLIST

- Verify that the intended axle spacing to be used conforms to Federal and local bridge laws.
- Verify that the frame width matches the suspension specifications (33 3/8" to 35").
- Verify that adequate air supply exists to support braking requirements for the lift axle being installed.
- Verify clearance between the drive shaft and the auxiliary suspension, with the axle lifted and lowered.
- 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 truck components, with the axle lifted and lowered.

## 6. RIDE HEIGHT AND FRAME ACCOMMODATIONS FOR LINK 10K AUXILIARY SUSPENSION

### 6.1 **NOTICE**

In order for the suspension to function properly, the "Ride Height" of the suspension must be within the range specified by Link Mfg. Refer to the charts on the following pages to select the correct frame kit based on the combination of variables present in your truck's configuration.

**6.2** To determine the appropriate Frame Mount Kit use the formula below and then refer to the Lift Chart.

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

**6.3** 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 vehicle loaded, at the intended suspension location and on level ground.

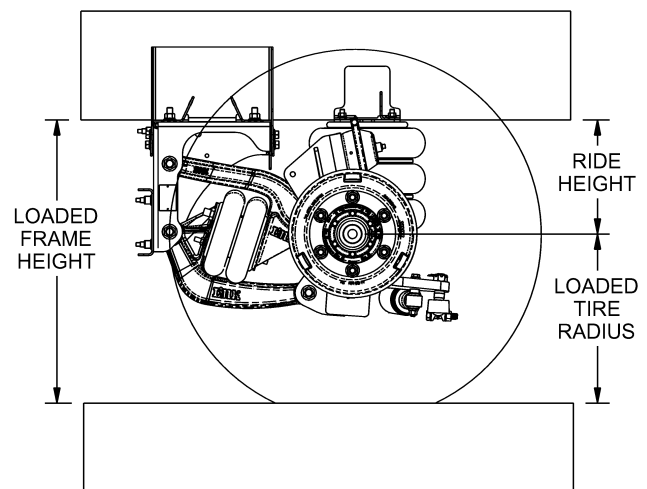
## 7. FRAME BRACKET KITS:

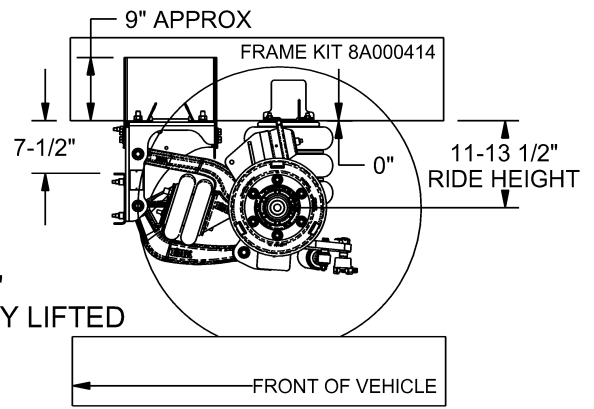
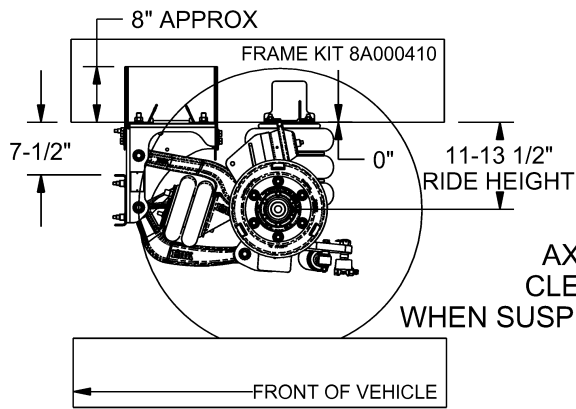
There are 8 frame bracket kits available to allow for a wide range of ride heights and mounting requirements. See the pictures and charts on the following pages for details on Loaded Tire Radius and Suspension Lift.

8A000410-13 are standard height mounting kits. These kits are designed primarily for use in configurations where additional equipment may need to be bolted to the truck frame above the mounting brackets. From the bottom of the truck frame to the top of the bracket, approximately 8 inches of clear space is required.

8A000414-17 are tall height mounting kits. These kits are designed for configurations where additional equipment is not bolted to the truck frame above the brackets. From the bottom of the truck frame to the top of the bracket, approximately 9 inches of clear space is required.

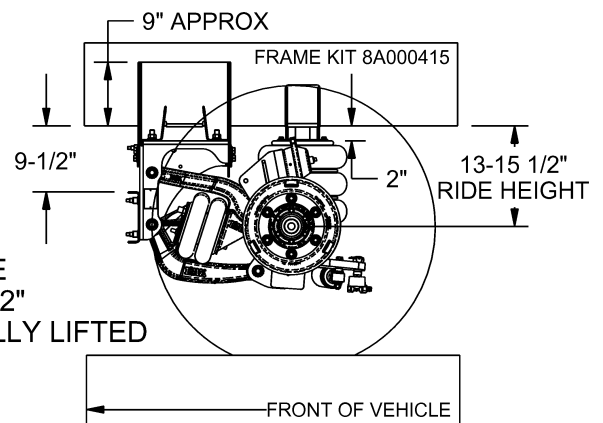
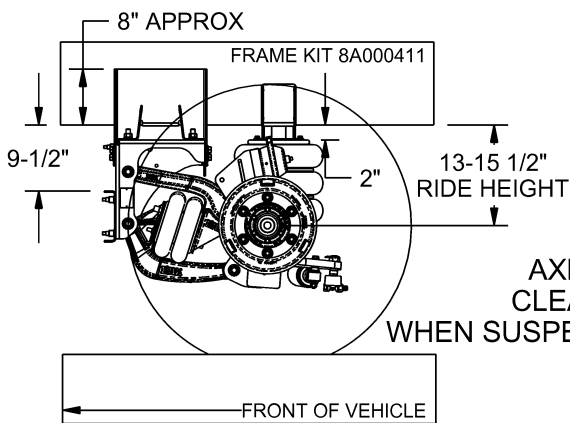
TUBE TYPE	TUBELESS	ISO (METRIC)	LOADED TIRE RADIUS	DIAMETER
7.50R15		215/75R17.5	14	30.2
8.25R15	8.5R17.5	225/70R19.5	15	32.9
	9R17.5	245/70R19.5	15.5	33.1
	10R17.5		15.5	33.9
	8R19.5		16	34
10.00R15			16.5	35.8
7.50R20	8R22.5	255/70R22.5	17	36.5
	11R17.5	245/75R22.5	17	36.6
8.25R20	9R22.5	235/80R22.5	17.5	37.8
		255/75R22.5	17.5	37.7





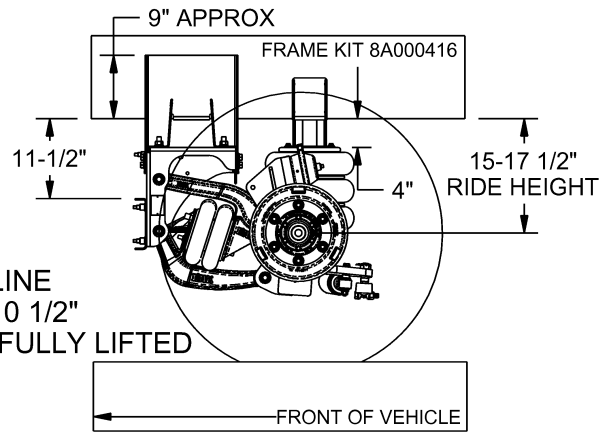
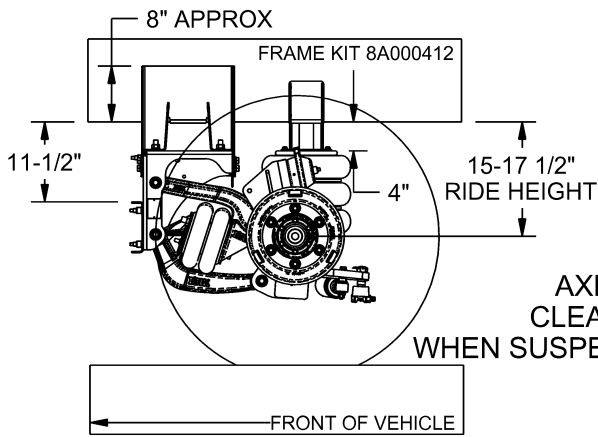
AXLE DRIVE LINE  
CLEARANCE - 6 1/2"  
WHEN SUSPENSION IS FULLY LIFTED

8K LIFT CHART	RIDE HEIGHT 11-13 1/2" (FRAME MOUNT KIT 8A000410 OR 8A000414)											
LOADED FRAME HEIGHT	25"	25 1/2"	26"	26 1/2"	27"	27 1/2"	28"	28 1/2"	29"	29 1/2"	30"	30 1/2"
TIRE RADIUS												
14" (LOADED)	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"						
15" (LOADED)			7"	7 1/2"	8"	8 1/2"	9"	9 1/2"				
16" (LOADED)					7"	7 1/2"	8"	8 1/2"	9"	9 1/2"		
17" (LOADED)							7"	7 1/2"	8"	8 1/2"	9"	9 1/2"



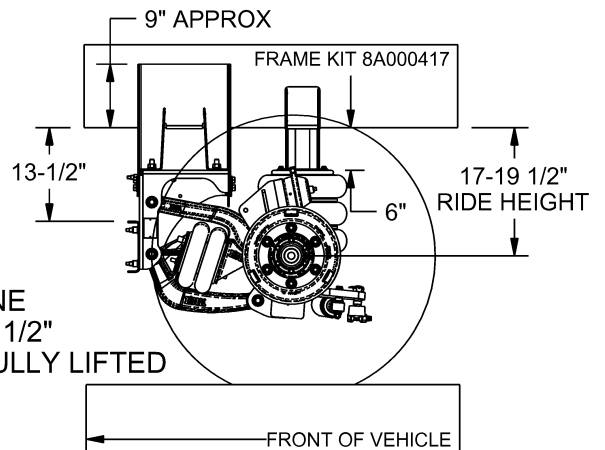
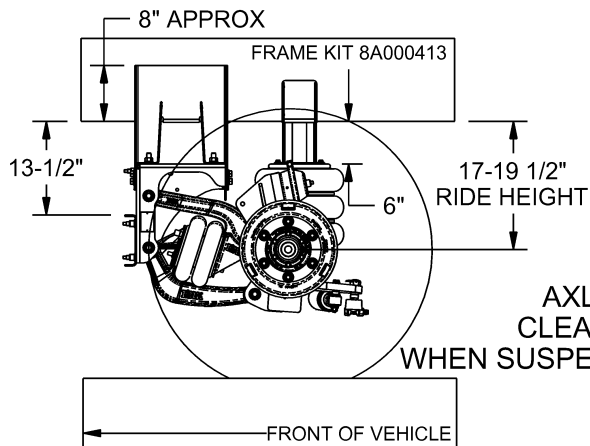
AXLE DRIVE LINE  
CLEARANCE - 8 1/2"  
WHEN SUSPENSION IS FULLY LIFTED

8K LIFT CHART	RIDE HEIGHT 13-15 1/2" (FRAME MOUNT KIT 8A000411 OR 8A000415)											
LOADED FRAME HEIGHT	27"	27 1/2"	28"	28 1/2"	29"	29 1/2"	30"	30 1/2"	31"	31 1/2"	32"	32 1/2"
TIRE RADIUS												
14" (LOADED)	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"						
15" (LOADED)			7"	7 1/2"	8"	8 1/2"	9"	9 1/2"				
16" (LOADED)					7"	7 1/2"	8"	8 1/2"	9"	9 1/2"		
17" (LOADED)							7"	7 1/2"	8"	8 1/2"	9"	9 1/2"



AXLE DRIVE LINE  
CLEARANCE - 10 1/2"  
WHEN SUSPENSION IS FULLY LIFTED

8K LIFT CHART	RIDE HEIGHT 15-17 1/2" (FRAME MOUNT KIT 8A000412 OR 8A000416)											
LOADED FRAME HEIGHT	29"	29 1/2"	30"	30 1/2"	31"	31 1/2"	32"	32 1/2"	33"	33 1/2"	34"	34 1/2"
TIRE RADIUS												
14" (LOADED)	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"						
15" (LOADED)			7"	7 1/2"	8"	8 1/2"	9"	9 1/2"				
16" (LOADED)					7"	7 1/2"	8"	8 1/2"	9"	9 1/2"		
17" (LOADED)							7"	7 1/2"	8"	8 1/2"	9"	9 1/2"



AXLE DRIVE LINE  
CLEARANCE - 12 1/2"  
WHEN SUSPENSION IS FULLY LIFTED

8K LIFT CHART	RIDE HEIGHT 17-19 1/2" (FRAME MOUNT KIT 8A000413 OR 8A000418)											
LOADED FRAME HEIGHT	31"	31 1/2"	32"	32 1/2"	33"	33 1/2"	34"	34 1/2"	35"	35 1/2"	36"	36 1/2"
TIRE RADIUS												
14" (LOADED)	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"						
15" (LOADED)			7"	7 1/2"	8"	8 1/2"	9"	9 1/2"				
16" (LOADED)					7"	7 1/2"	8"	8 1/2"	9"	9 1/2"		
17" (LOADED)							7"	7 1/2"	8"	8 1/2"	9"	9 1/2"

## 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 vehicle 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 truck frame rails. (See below for details). Contact Link Application Specialists for answers to any additional questions.

**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:** Truck frame cross-members should be located at or near the front frame brackets.

**NOTE:** For purposes of increased weight carrying capacity or better weight distribution, these dimensional distances may be increased but never decreased less than the specified minimum distance between references.

## 9. SUSPENSION INSTALLATION

**9.1** With the suspension location determined, clamp the front and rear frame brackets to the truck frame rails.

**NOTICE** The mounting surfaces of the auxiliary suspension brackets must be tight against the sides and the bottom of the truck frame rails.

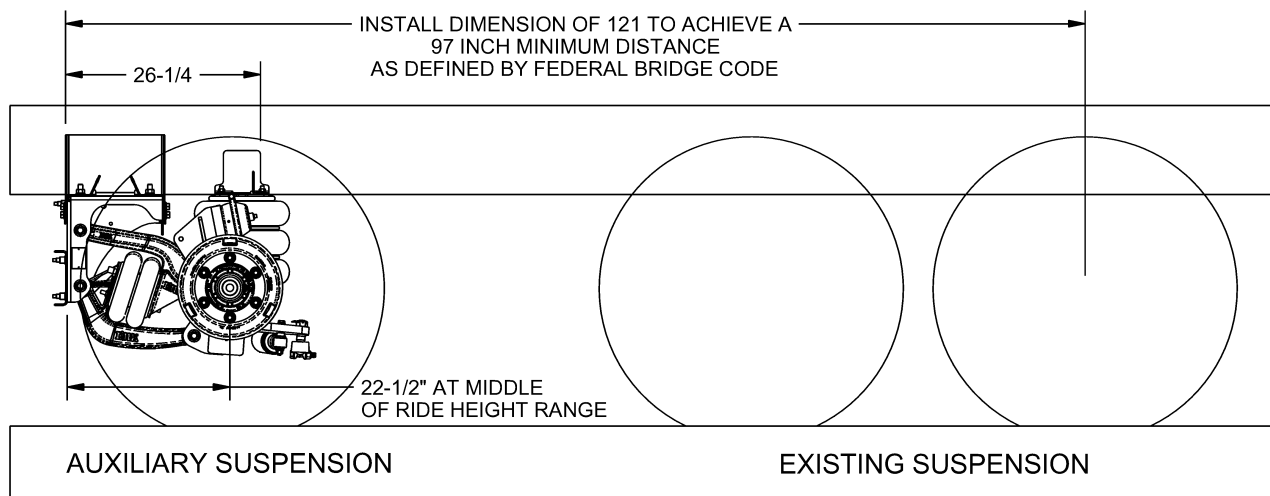
**9.2** Double check the suspension location and check for any interference concerns. Also, check that drilling will not interfere with any brake, fuel, or air lines, wiring or other components that might be located on the inside of the frame.

**9.3** Once the frame brackets are clamped tightly to the outside and bottom surfaces of the truck frame, check all clearance issues and then center punch all mount holes. (See Fig. 3 for recommended mount hole location.)

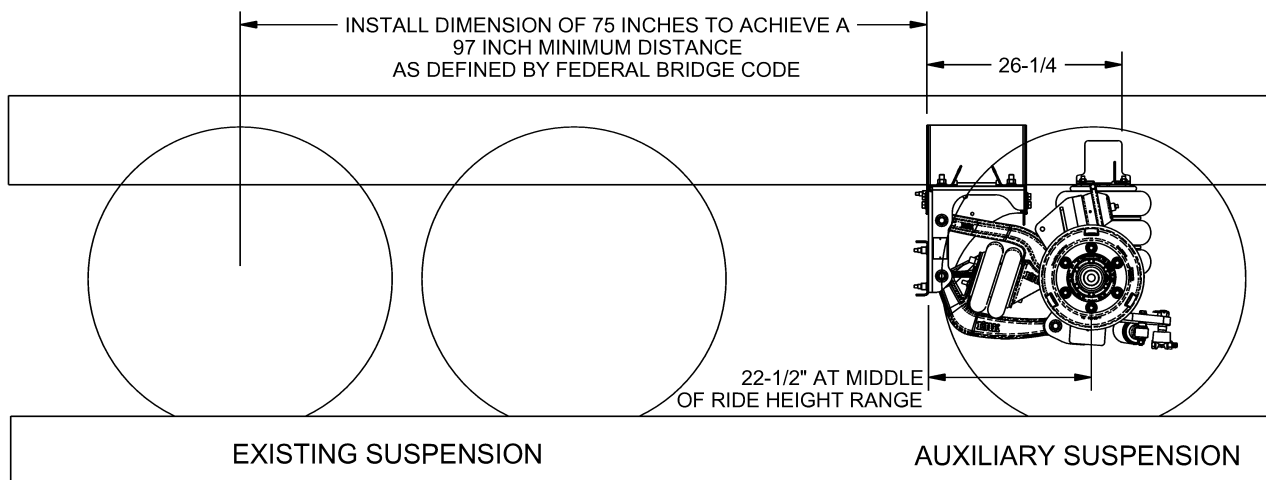
**9.4** With mount holes marked, drill 21/32" diameter holes at hole locations.

**9.5** Fasten frame brackets to the frame rail with SAE 5/8" UNC GRADE 8 HEX FLANGE BOLTS and 5/8" GRADE G PREVAILING TORQUE HEX

### PUSHER CONFIGURATION



### TAG CONFIGURATION



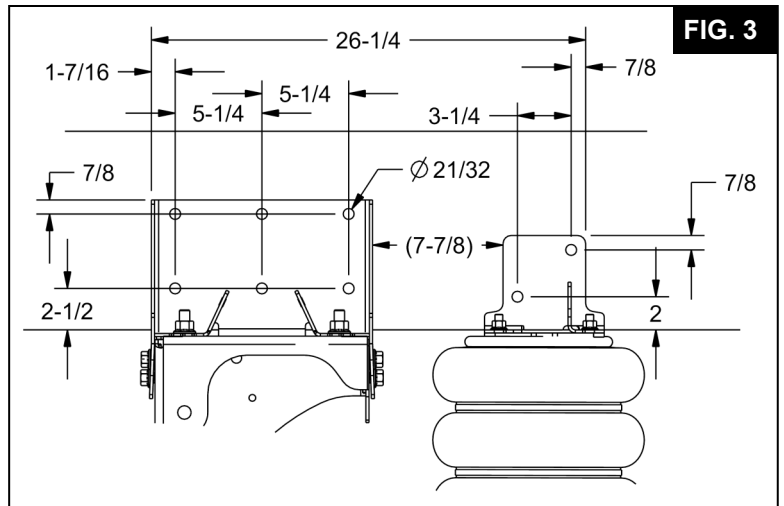
FLANGE NUTS (not supplied, available with optional installation kit 800A0032 or 800A0305).

**TORQUE** 5/8" fasteners to 170-236 FT-LBS.

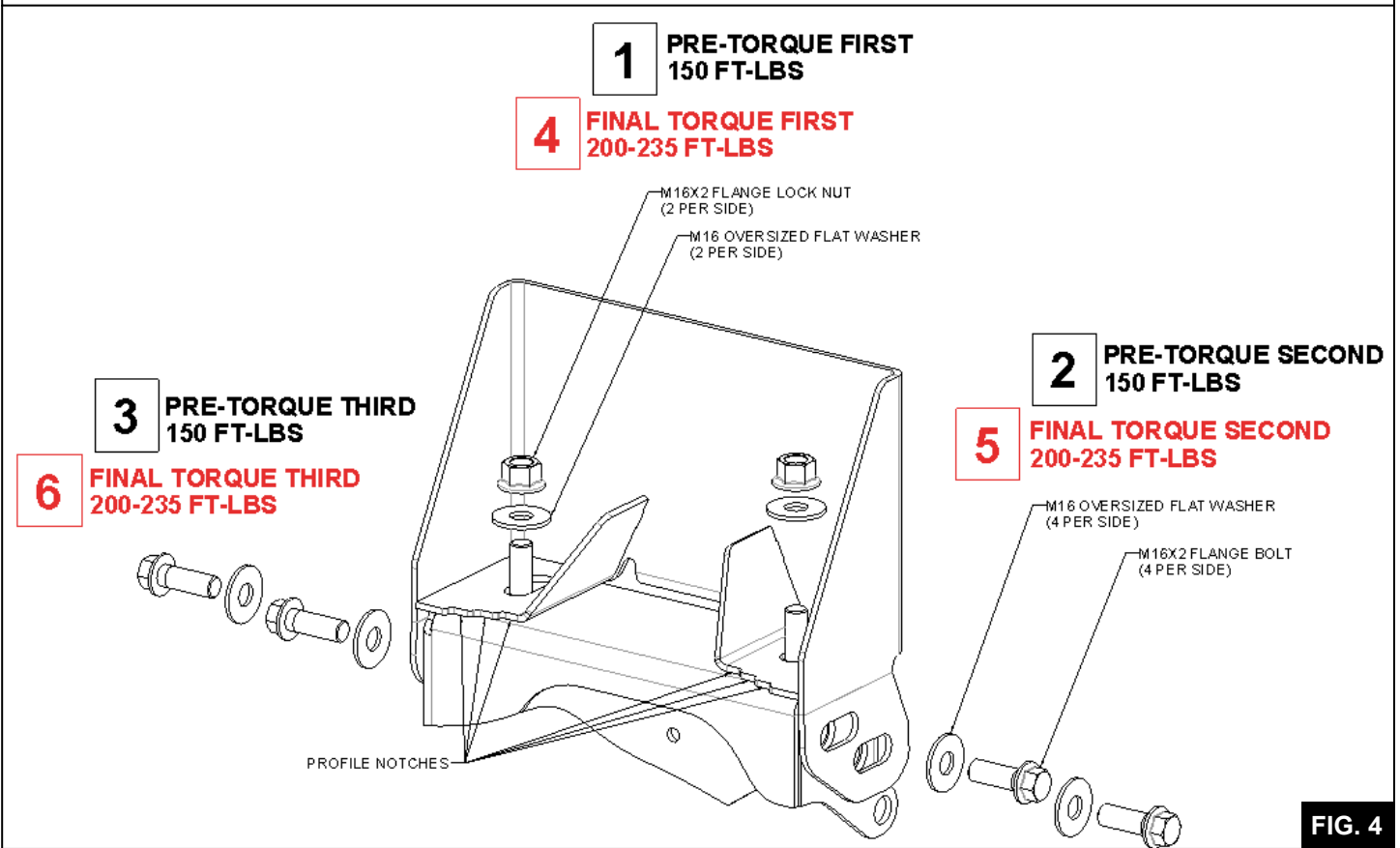
9.6 Assemble the suspension to the front frame brackets using the provided mounting hardware (See Fig. 4 for fastener detail).

**NOTE:** Center the suspension on the truck using the profile notches on the hanger as a visual indicator (See Fig. 4).

**TORQUE** M16 fasteners as shown in Fig. 4.



**CAUTION** FOLLOW THE PROPER SEQUENCE LISTED BELOW FOR PRE-TORQUE AND FINAL TORQUE PROCEDURES TO INSURE PROPER PERFORMANCE AND DURABILITY OF THE SUSPENSION.

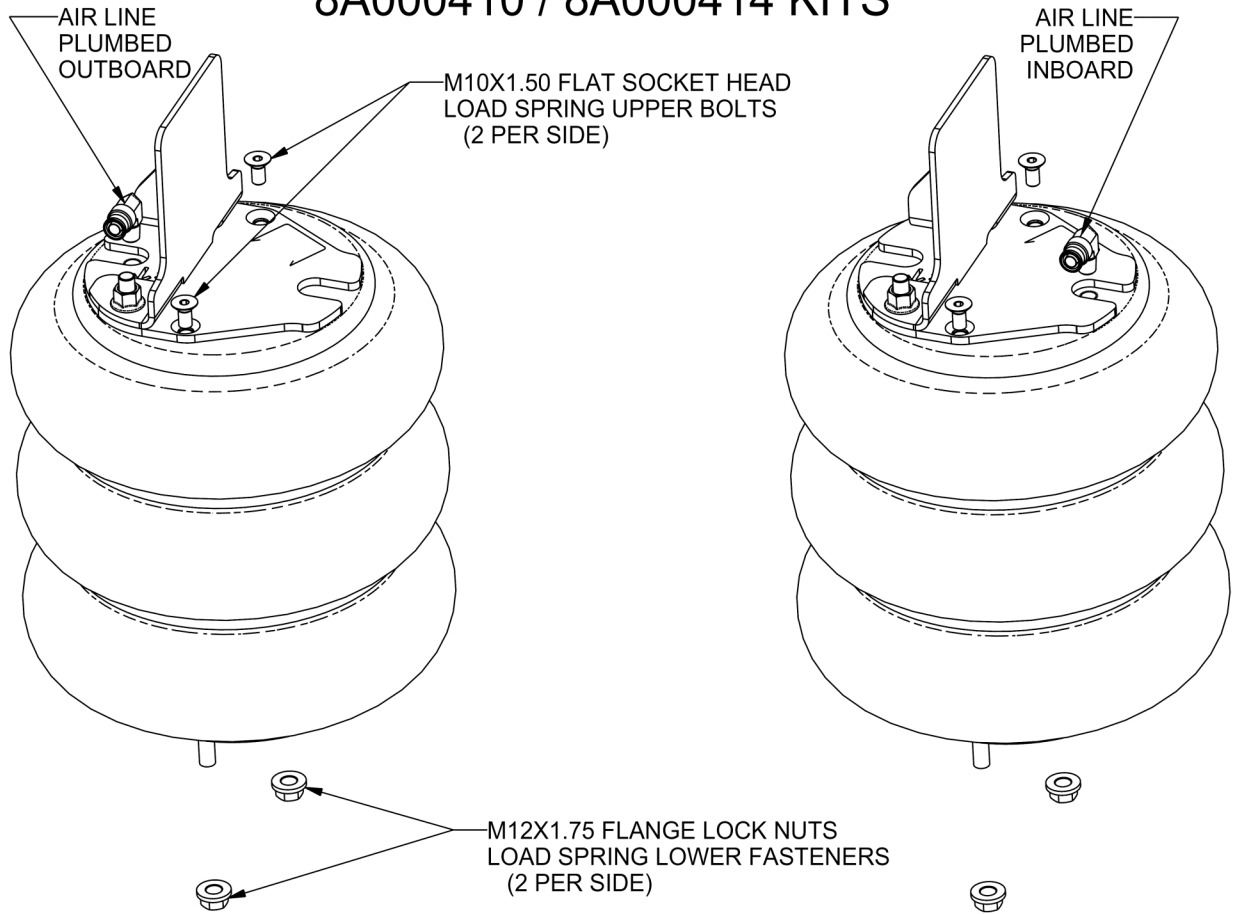


9.7 Assemble the load springs to rear frame brackets using the M10x1.50 load spring upper bolts (See Fig. 5 and Fig. 6 for fastener detail).

**TORQUE** M10 fasteners to 20-30 FT-LBS.

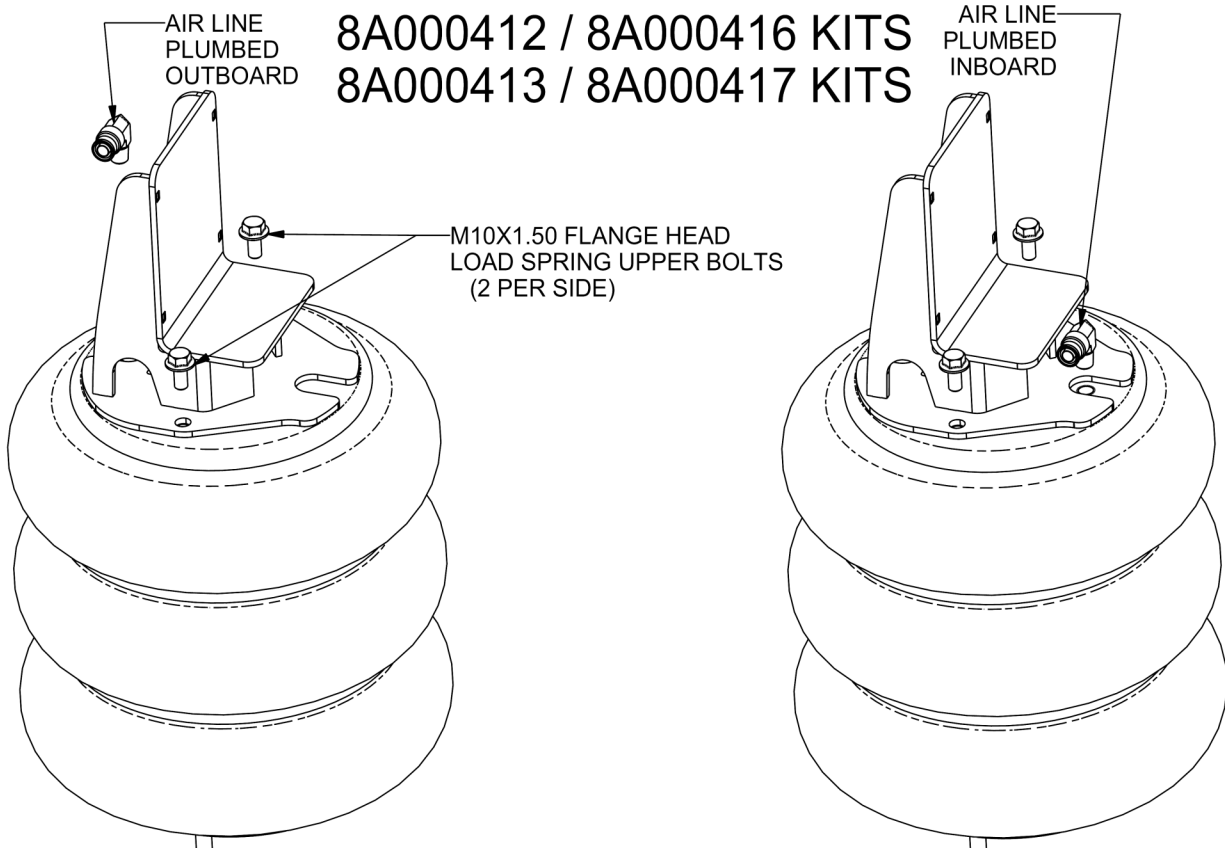
**FIG. 5**

### 8A000410 / 8A000414 KITS



**FIG. 6**

### 8A000411 / 8A000415 KITS 8A000412 / 8A000416 KITS 8A000413 / 8A000417 KITS





## 10. STEERING STOP ADJUSTMENT

**10.1** The Steering Stop Screw is preset for maximum steer angle available without bottoming the steering shock absorber. The steering radius can be reduced to avoid tire contact with other parts of the vehicle by loosening the jam nut and turning out the steering stop screw (see Fig. 7).

**10.2** After adjustment, tighten 5/8" jam nut.

**TORQUE** 5/8" jam nut to 45-60 FT-LBS

## 11. PLUMBING

**11.1** Refer to the installation instructions that came with your chosen air control kit.

**11.2** Suspensions are shipped from the manufacturer with the load springs oriented for in-board plumbing. To change the orientation to outboard, remove the lower stud fasteners beneath the load springs, rotate the air springs 180 degrees, and re-install stud fasteners (See Fig. 5 and Fig. 6 on previous page for fastener detail).

**TORQUE** M12 fasteners to 20-30 FT-LBS.

**NOTE:** Contact Link for available air control options.

## 12. FINAL ASSEMBLY AND INSPECTION CHECKLIST

\_\_\_ Are all fasteners installed and tightened to proper torque specifications? **NOTE:** All fastener torque specifications are given for dry fasteners with no additional lubrication required.

\_\_\_ Are all wheel lug nuts tightened to recommended torque specifications?

\_\_\_ Has the air control installation been completed, checked for leaks, and operating properly?

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

\_\_\_ Are brakes and slack adjusters properly set, and

the wheels are free to rotate?

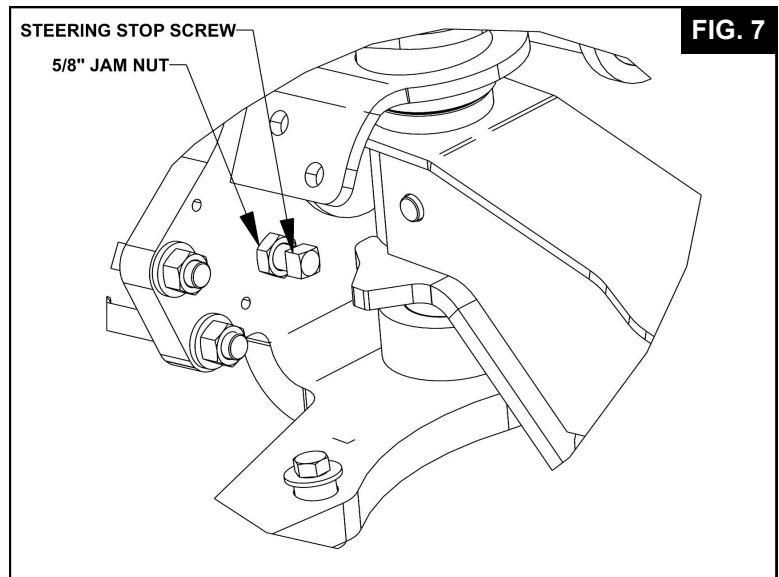
\_\_\_ Are wheel hubs sufficiently filled with the manufacturer's specified lubricant? (SAE 80W-90 Mineral based)?

\_\_\_ **Is the TOE-IN set properly (1/8 +/- 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 truck components?

**NOTICE** With the vehicle 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.





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