



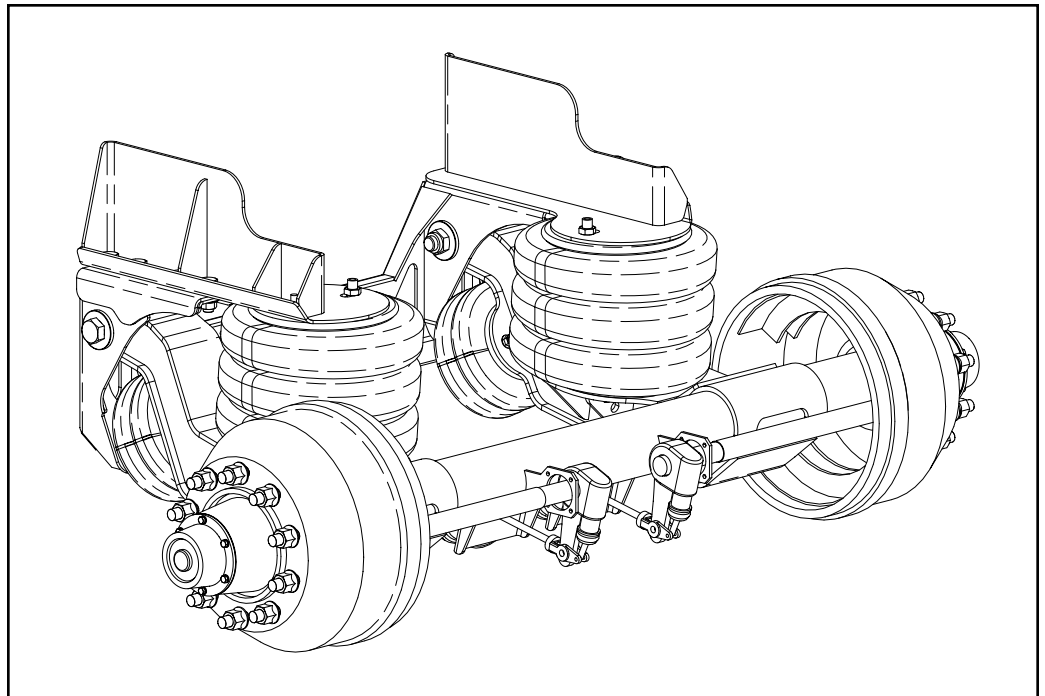
Link

LIFTABLE

SUSPENSIONS

INSTALLATION INSTRUCTIONS

MODEL 5500



Link Mfg. Ltd.
223 15th St. NE
Sioux Center, IA USA
51250-2120

(712) 722-4874
Fax (712) 722-4876

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

AVAILABLE IN 13K CAPACITY

1. INTRODUCTION

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

WARNING:

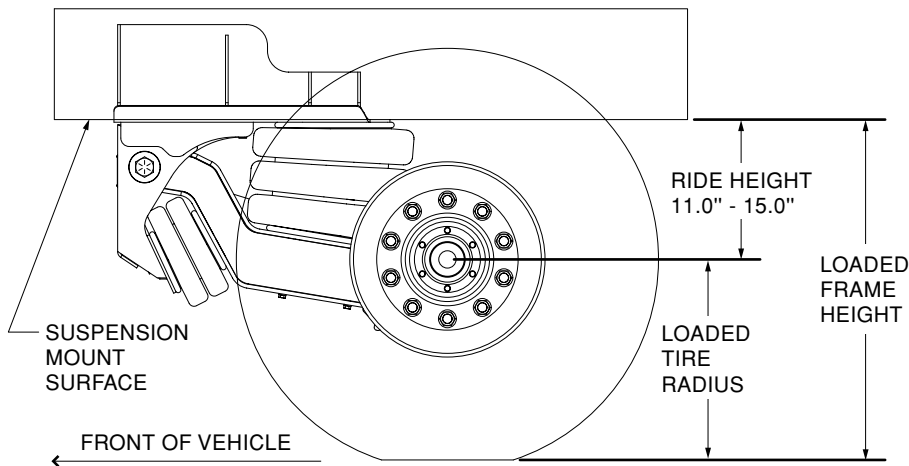
- In order for this suspension to operate properly, it must operate in the parameters specified by Link Mfg.
- The installer must verify the vehicle is configured properly for the liftaxle(s) being added.
- It is the responsibility of the installer to determine the location of the suspension in order to obtain proper load distribution.
- 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.
- Suspension components shall only be welded in areas specified by Link Mfg.
- No alterations of any suspension components is permitted.

PRE-INSTALLATION CHECKLIST

- Verify axle spacing to be used conforms to Federal and local bridge laws
- Verify adequate air supply exists to support braking requirements for the lift axle being installed
- Maintain clearance between the drive shaft and liftaxle, with liftaxle lifted and lowered
- Maintain tire clearance in all directions, with axle lifted and lowered
- Maintain air spring clearance in all directions, with axle lifted and lowered
- Maintain suspension cross-member clearance with truck components

2. RIDE HEIGHT AND FRAME ACCOMMODATIONS

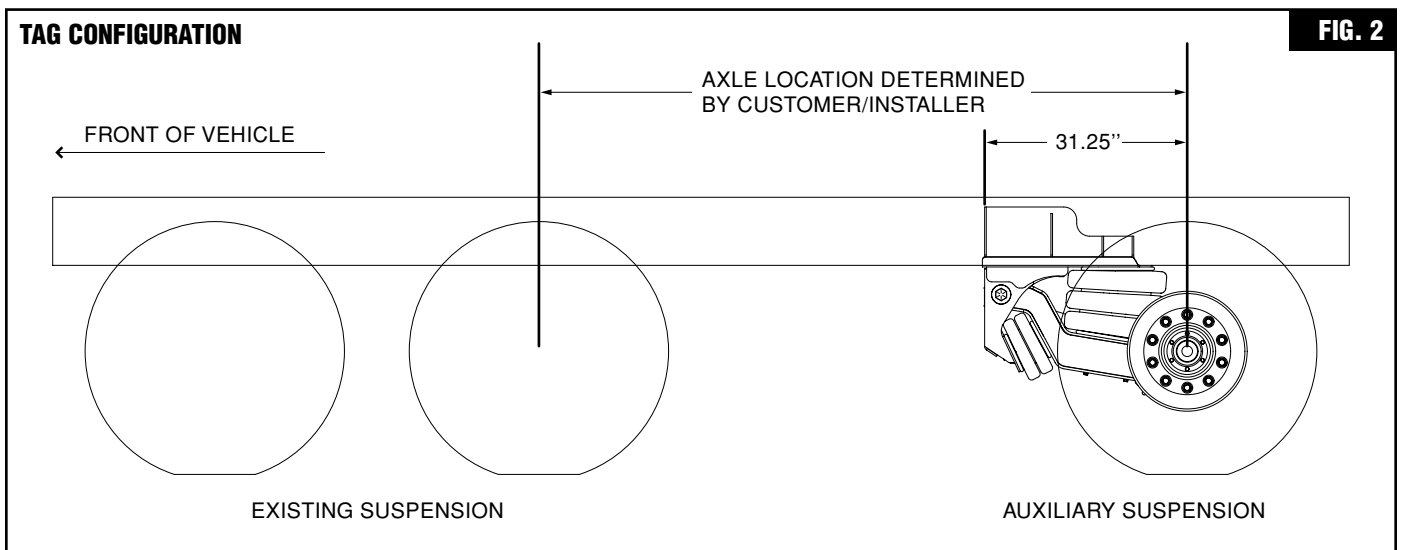
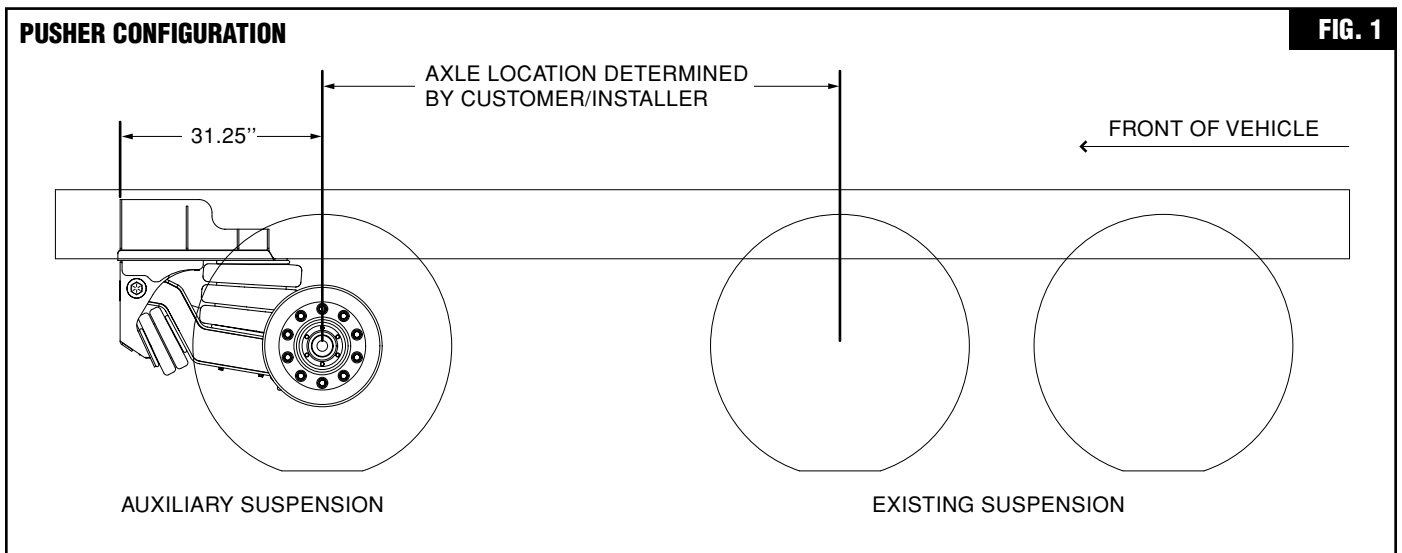
1. In order for the suspension to function properly, the "ride height" of the suspension must be within the range specified by Link Mfg. See the chart below for more information on available lift. **NOTE:** When measuring frame to ground clearance, be sure to measure at intended suspension location.



MODEL 5500 LIFT CHART	RIDE HEIGHT 11" - 15"										
	STRAIGHT OR 6" DROP CENTER AXLE										
LOADED FRAME HEIGHT ►	26	27	28	29	30	31	32	33	34	35	36
TIRE RADIUS ▼											
15 (LOADED)	8	9	10	11	12						
16 (LOADED)		8	9	10	11	12					
17 (LOADED)			8	9	10	11	12				
18 (LOADED)				8	9	10	11	12			
19 (LOADED)					8	9	10	11	12		
20 (LOADED)						8	9	10	11	12	
21 (LOADED)							8	9	10	11	12

3. SUSPENSION LOCATION

1. Before determining suspension location, thoroughly review the pre-installation checklist found in the Introduction section of this manual. Be sure that vehicle is located on a flat and level surface before measuring for suspension location. When this is complete, mark suspension location and boundaries on truck frame rail. (See Fig. 1 & 2 for details)
2. Prior to suspension installation, any interference with existing frame bolts or brackets should be addressed. If any modifications to the auxiliary suspension is needed, you should consult Link Mfg.
3. Frame cross-members should be located at or near the front and rear hanger brackets.



4. SUSPENSION INSTALLATION

1. **IMPORTANT:** The mounting surfaces of the auxiliary suspension must set tight to the sides and bottom of the truck frame rail.
2. With suspension location determined, clamp the suspension to the truck frame rails. Remember, alignment slots will allow the axle to move for and aft.
3. Double check the suspension location and any interference concerns. Also, check that drilling will not interfere with any brake or fuel lines, wiring or other components that might be located on the inside of the frame.

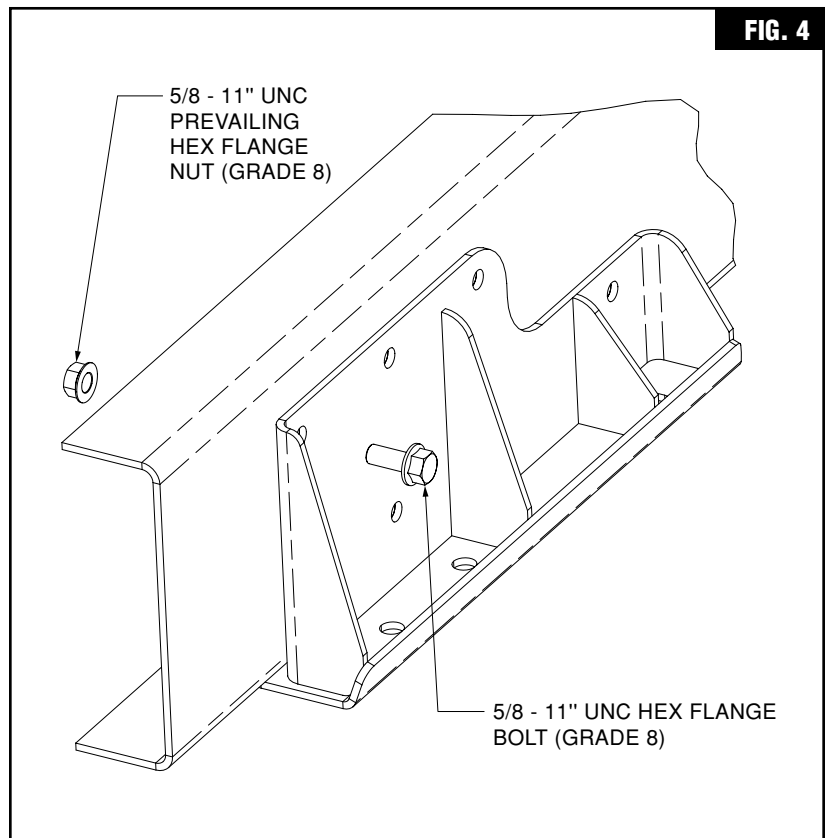
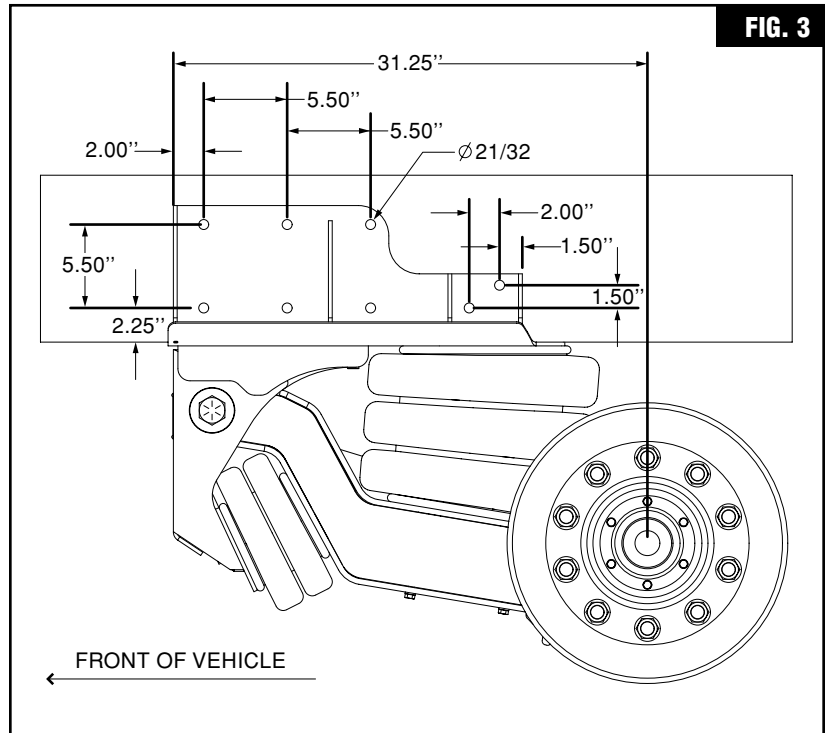
4. Once the suspension is clamped tightly to the outside and bottom surfaces of the truck frame, check all clearance issues and then center punch all mount holes. (See Fig. 3 for recommended mount hole location.)

5. With mount holes marked, drill $21/32$ " diameter holes at hole locations.

6. Fasten suspension side to frame rail with SAE $5/8$ " UNC GRADE 8 HEX FLANGE BOLT and $5/8$ " GRADE G PREVAILING TORQUE HEX FLANGE NUT, not supplied with suspension. (See Fig. 4 for fastener details).

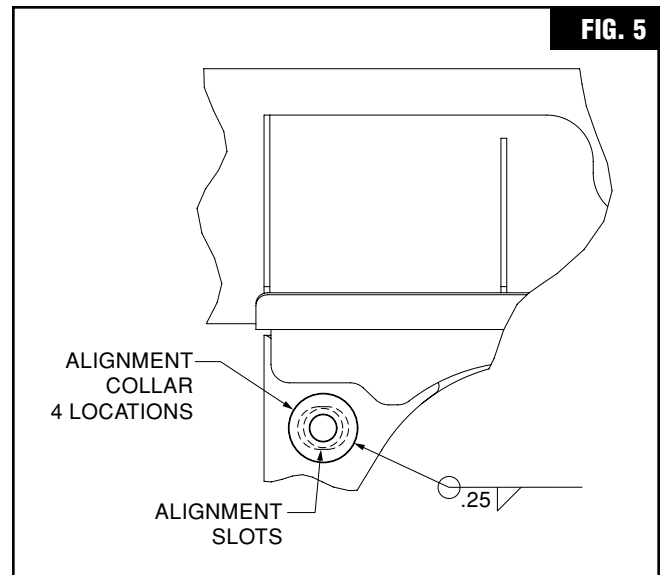
7. Double check the passenger's side suspension location for any interference concerns. Also check that drilling will not interfere with any brake or fuel lines, wiring or other components that might be located on the inside of the frame. Repeat steps 5, 6 & 7 for the passenger side of the suspension.

8. After all $5/8$ " UNC mount fasteners are installed and snug, torque to 185-235 ft. lbs.



5. AXLE ALIGNMENT

1. Once the suspension is securely fastened and the mount fasteners tightened to the proper torque, the axle must be aligned. To accomplish this, there are (4) alignment slots and (4) alignment collars in the hanger brackets, which allow fore and aft movement of the axle (Fig. 5). **NOTE:** Alignment collars are held in place by 1 1/8" UNC bolts that have been pre-torqued at factory, but still will allow fore and aft movement of axle.
2. Set suspension at ride height and set front steer axle wheels so that they are steering straight ahead.
3. Inspect each tire set so that they are inflated to the proper air pressure. Also check that each tire's radius is matched to within 1/8" of the other tires within that wheel set.
4. Secure the truck and release the brakes on the auxiliary suspension. This will allow fore and aft adjustment of the axle within the alignment slot.
5. Position auxiliary axle so that the alignment collar is centered in the alignment slot on one side. Tack weld the alignment collar to the hanger bracket (one side only).
6. With one side of the auxiliary suspension tacked, measure the distance from the center of the front axle spindle to the center of the auxiliary axle spindle.
7. Adjust the non-tacked side of the auxiliary suspension within the alignment slot so that it is equal distance from the center of the front axle spindle on both sides. A maximum difference of 1/8" is acceptable.
8. If alignment is not attainable by steps 5 - 7, remove tack weld from step 5 and adjust axle as needed.
9. Double check alignment, if acceptable, finish weld with a 1/4" weld completely around (4) alignment collars. Perform welds in 3-4 steps to avoid excess heat.
10. Paint over welds to prevent rust.



6. FINAL ASSEMBLY AND INSPECTION CHECKLIST

- Are all (4) alignment collars welded around completely? **NOTE:** These are located on the insides and outsides of the frame mounted hanger brackets.
- Are all fasteners installed and bolts 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?
- 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 truck 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?

IMPORTANT: 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.



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

LINK SUSPENSION PREVENTATIVE MAINTENANCE

Every month or 1,000 miles	<input type="checkbox"/> Check wheel bearing oil level and inspect wheels for leaks (SAE 80W-90 Mineral Based Gear Lube). <input type="checkbox"/> Check suspension for debris rubbing air springs.
Every three months or 2,500 miles	<input type="checkbox"/> Grease camshaft bushings (Multipurpose NLGI 2). <input type="checkbox"/> Check for worn suspension bushings. <input type="checkbox"/> Check for loose suspension fasteners (Tighten to values given on Torque Table). <input type="checkbox"/> Check brake lining wear and replace any cracked, broken or oil soaked linings. <input type="checkbox"/> Inspect brake drums for heat checks, grooves, hot spots, glazing, cracks and out of round and replace if necessary. <input type="checkbox"/> Inspect wheel ends for excessive play.
Every twelve months or 10,000 miles	<input type="checkbox"/> Grease slack adjusters (Multipurpose NLGI 2). <input type="checkbox"/> Replace wheel bearings lubricating oil (SAE 80W-90 Mineral Based or SAE 75W-80 Synthetic Gear Lube). <input type="checkbox"/> Check brake chambers and slack adjusters for proper function and excessive wear. <input type="checkbox"/> Inspect brake rollers, roller shafts, anchor pins and bushings for excessive wear and replace if necessary. <input type="checkbox"/> Check shoes for bent shoe ribs, cracks in shoe table welds and elongated rivet holes and replace if necessary. <input type="checkbox"/> Inspect suspension air controls for proper function and leaks.

TORQUE TABLE

SUSPENSION PIVOT FASTENERS	1.125 UNF	750-1000 FT-LBS
FRAME BRACKET HANGER FASTENERS	3/4 UNC	270-300 FT-LBS
AIR SPRING NUT	3/4 UNC	40-50 FT-LBS
AIR SPRING NUT	1/2 UNC	20-30 FT-LBS
AIR SPRING BOLT	3/8 UNC	15-20 FT-LBS

CROSS REFERENCE COMMON REPLACEMENT PARTS

ITEM	LINK PART NO.	MFR. PART NO.
LIFT AIR SPRINGS	.1103-0019	.FS W01-358-6884
LOAD AIR SPRINGS	.1103-0057	.FS W01-358-7797



DEALER /INSTALLER:

Please remove this section and give to vehicle owner

Link Manufacturing, Ltd. 1-800-222-6283
 223 15th St. NE 1-712-722-4874
 Sioux Center, IA 51250-2120 www.linkmfg.com

Serial No: _____

Part No: _____

Capacity: _____

Date Installed: _____

WARRANTY

Link warrants their suspension's fabricated structural components against failure under normal use for a period of three (3) years from date of delivery to the original purchaser. Under this warranty Link will replace or repair any part that by it's inspection is determined to be defective. In addition, for a period not to exceed one (1) year,** Link will provide a labor allowance, which it determines to be adequate to properly replace or repair defective structural parts and/or components.

All parts and components thought to be defective must be returned with company authorization, freight prepaid, to Link. These returns must be accompanied by a complete written explanation of claimed defects and circumstances of failure, the serial number, and date of installation. Labor allowance must be authorized by Link prior to initiation of repairs.

*Purchased components and/or accessories other than the fabricated structure (axle and axle assemblies, air springs, wheel end equipment, brake and brake components, and air control parts) are warranted for a period of one (1) year from date of delivery.

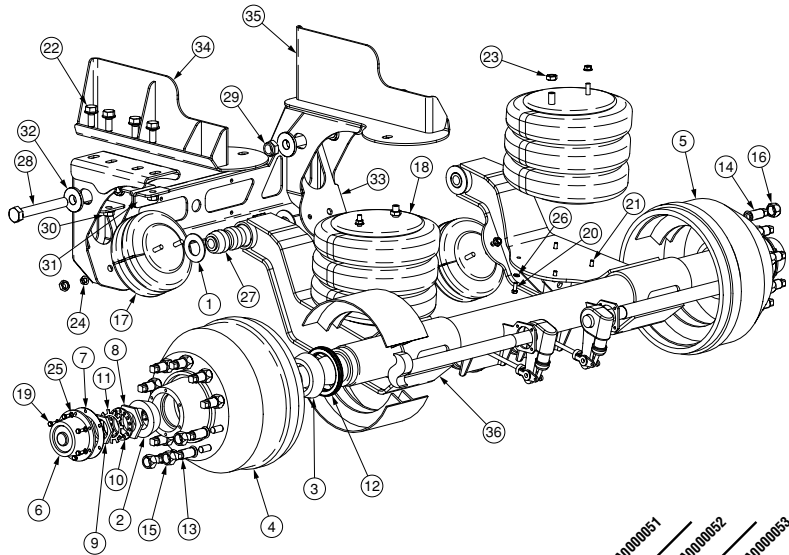
**Purchased components and/or accessories other than the fabricated structure are eligible for a warranted labor allowance for one (1) year from date of delivery.

LIMITATIONS

Link accepts no warranty responsibility for:

- Incidental or consequential damages or loss of time or profits resulting from product failure.
- Damage resulting from owner or operator abuse, misuse or neglect.
- Failure due to improper installation.
- Component parts manufactured by others for Link, beyond those companies' implied or expressed warranty.

This warranty is in lieu of any other warranty, obligation, or liability on the part of Link and no other person is authorized to make any representation or warranties beyond those expressed herein. All implied warranties of fitness and merchantability for any particular purpose are hereby excluded. There are no warranties of fitness which extend beyond the description on the face hereof.



ITEM	PART NO.	DESCRIPTION	QTY	QTY	QTY
1	80000087	THRUST WASHER	4	4	4
2	84001404	BEARING-ROLLER, CONE	2	2	2
3	84001405	BEARING-ROLLER, CONE	2	2	2
4	84001531	HUB & DRUM-BSN MNT, 16.5 X 7 R	1	1	1
5	84001532	HUB & DRUM-BSN MNT, 16.5 X 7 L	1	1	1
6	84001671	CAP, HUB	2	2	2
7	84001673	GASKET	2	2	2
8	84001674	NUT-SPINDLE, INNER	2	2	2
9	84001675	NUT-SPINDLE, OUTER	2	2	2
10	84001676	WASHER-LOCK	2	2	2
11	84001677	WASHER-STAR	2	2	2
12	84001679	SEAL-OIL	2	2	2
13	84001703	INNER CAP NUT, LONG RIGHT	10	10	10
14	84001704	INNER CAP NUT, LONG LEFT	10	10	10
15	84001707	NUT-CAP, 1 1/8 RH	10	10	10
16	84001708	NUT-CAP, 1 1/8 LH	10	10	10
17	1103-0019	SPRING-AIR	2	2	2
18	1103-0057	SPRING-AIR	1	1	1
19	1401-1006	5/16 X 3/4 UNC HEX CAP SCR (GR 5)	12	12	12
20	140A-1208	3/8 X 1 UNC HEX CAP SCR (GR 5) O&P	4	4	4
21	140A-1251	3/8 X 6 1/2 UNC HEX CAP SCR (GR 5) O&P	4	4	4
22	141A-2414	3/4 X 1 3/4 UNC FLANGE BOLT (GR 8) O&P	8	8	8
23	1475-2402	3/4 UNF HEX JAM NUT, O&P	4	4	4
24	1480-1604	1/2 UNC TOP LOCK FL NUT (GR G) O&P	6	6	6
25	1485-1000	5/16 LOCK WASHER	12	12	12
26	1485-1200	3/8 LOCK WASHER	8	8	8
27	1500-0870	BUSHING-PIVOT, RUBBER	2	2	2
28	1506-0021	1 1/8 X 8 UNF HEX CAP SCR, (GR 8)	2	2	2
29	1506-0023	1 1/8 UNF HEX TOP LOCK NUT, COLLAR STYLE	2	2	2
30	800A0047	STRAP-FASTENER, MOUNT	2	2	2
31	800A0048	BRACKET-MOUNT, CAPTIVE	2	2	2
32	8100-0128	COLLAR, ALIGNMENT, STEEL	4	4	4
33	810A0073	BRACKET-MOUNT, HANGER	1	1	1
34	810A0074	BRACKET-MOUNT, FRAME	1	1	1
35	810A0075	BRACKET-MOUNT, FRAME	1	1	1
36	830A0021	ASSEMBLY-ARM, AXLE	1	1	1
	830A0022	ASSEMBLY-ARM, AXLE	1	1	1
	830A0023	ASSEMBLY-ARM, AXLE	1	1	1

**AIR PRESSURE
AXLE LOAD CHART**

LOAD IN LBS AT GROUND	MODEL 5500
4000	33
5000	41
6000	49
7000	57
8000	65
9000	73
10000	81
11000	89
12000	97
13000	105

TROUBLESHOOTING GUIDE

TROUBLE	PROBABLE CAUSE	REMEDY
Axle will not stay up	Loose Air Fittings	Check and retighten.
	Damaged Air Lines	Check for excessive wear. A) If worn or damaged, replace.
	Damaged or Worn Air Springs	
Punctured Load Air Springs	Other Components too close to Air Spring	Check for clearance all around air spring under full load and deflated. A) Move anything coming in contact with air springs.
Loose Convolution Ribs	Under Extended Air Springs -Improper ride height	Check for proper ride height. A) Use smaller tires.
Air Spring Separation at End Plates	Over Extended Air Springs -Improper ride height	Check for proper ride height. A) Use bigger tires. B) Lower suspension.
Lift Air Spring Wear or Broken Bumper	Over Extended Load Springs -Crushes lift bag	Check for proper ride height. A) Use bigger tires B) Lower suspension. C) Install over extension straps.