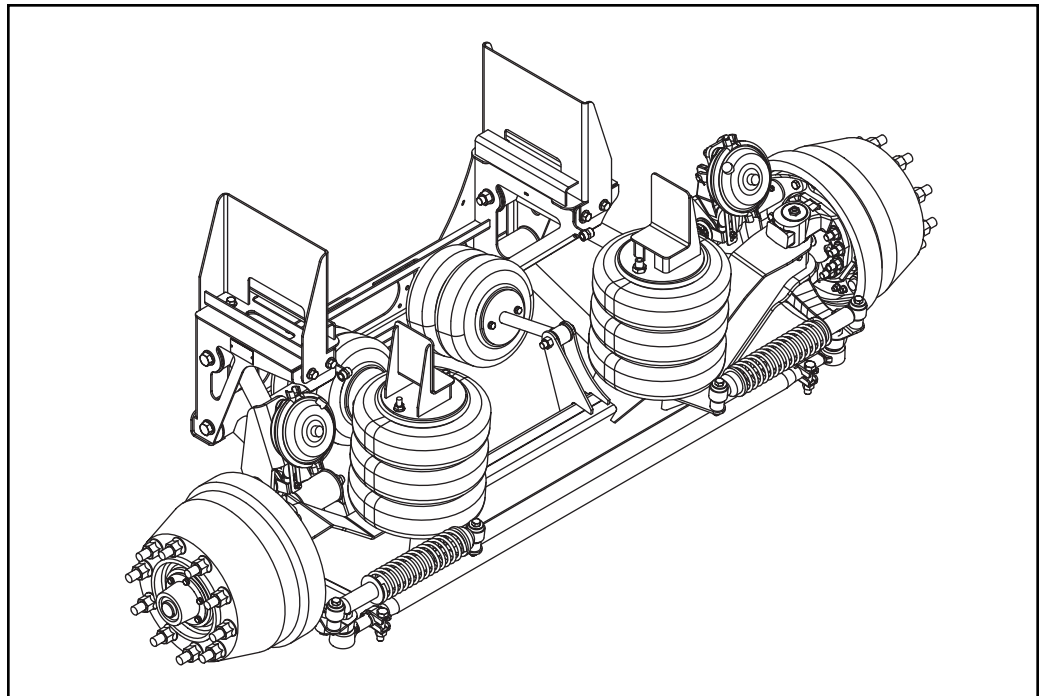




# INSTALLATION INSTRUCTIONS

## DURALIFT



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 13.2K CAPACITY

## 1. INTRODUCTION

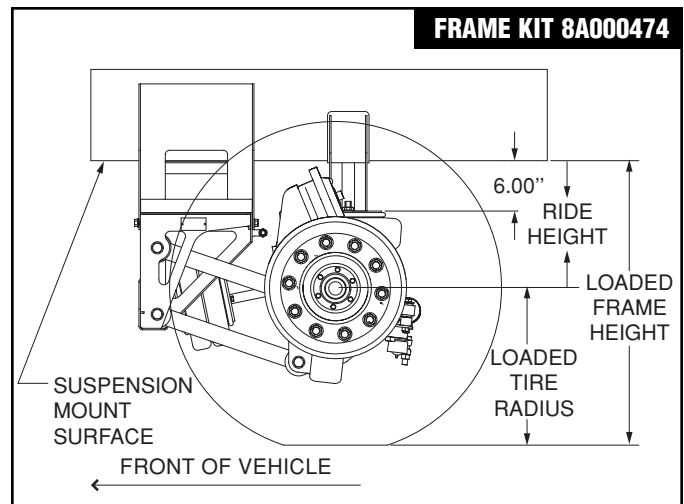
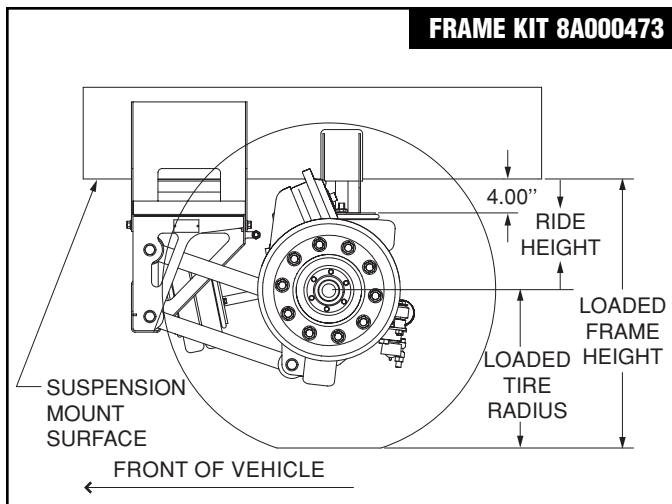
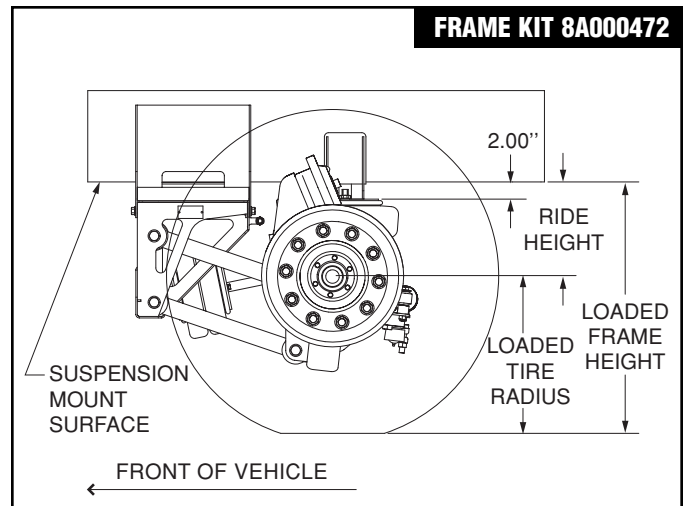
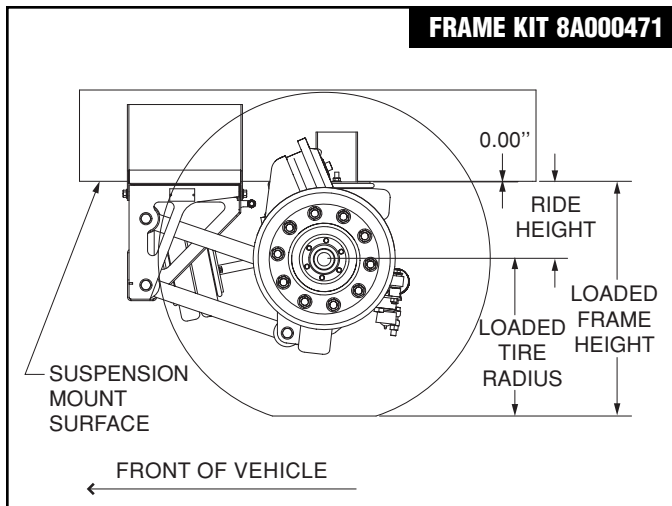
**IMPORTANT:** IT IS IMPORTANT THAT THE ENTIRE INSTALLATION INSTRUCTIONS BE READ THOROUGHLY BEFORE PROCEEDING WITH SUSPENSION INSTALLATION.

### 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.
- 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 frame width matches the suspension specifications (33.50" to 35.00")
- Verify adequate air supply exists to support braking requirements for the lift axle being installed
  
- Maintain clearance between the drive shaft and liftaxle, with axle 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 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 charts below for more information on available lift.
2. Four ride heights exist for this suspension, 8.00" to 10.50", 10.00" to 12.50", 12.00" to 14.50" and 14.00" to 16.50". To find the appropriate Frame Mount Kit and chart use the formula below.

(Loaded Frame Height - Loaded Tire Radius = Ride Height)

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 intended suspension location and on level ground.

DURALIFT LIFT CHART	RIDE HEIGHT 8.0" - 10.5" (FRAME MOUNT KIT 8A000471)																	
LOADED FRAME HEIGHT ➤	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5
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				

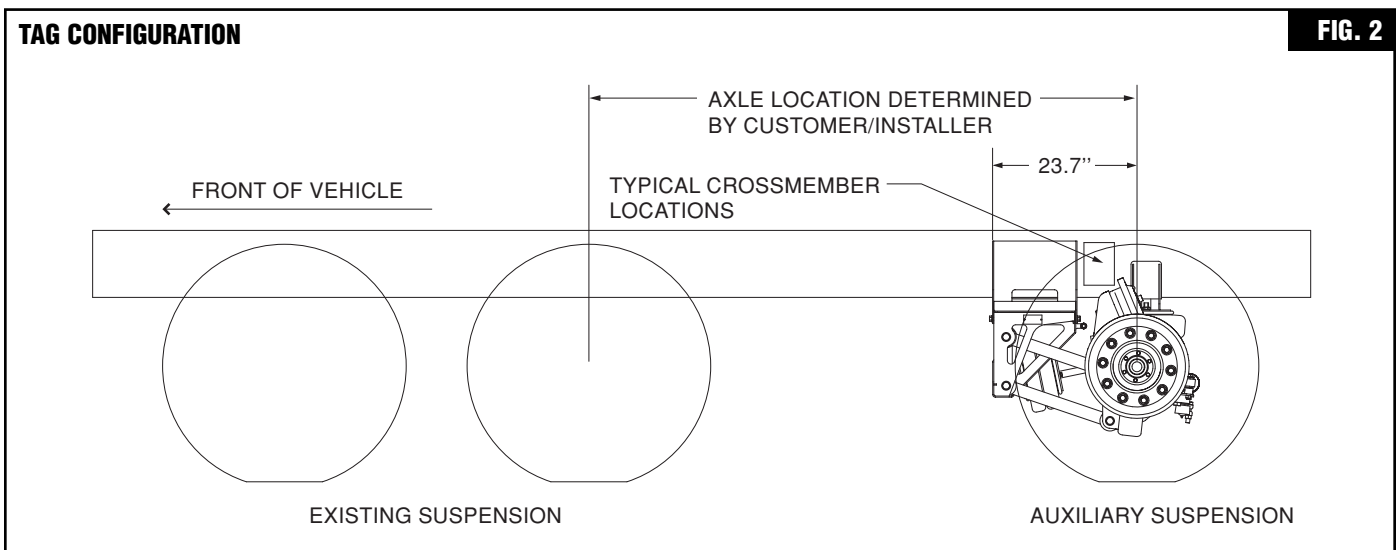
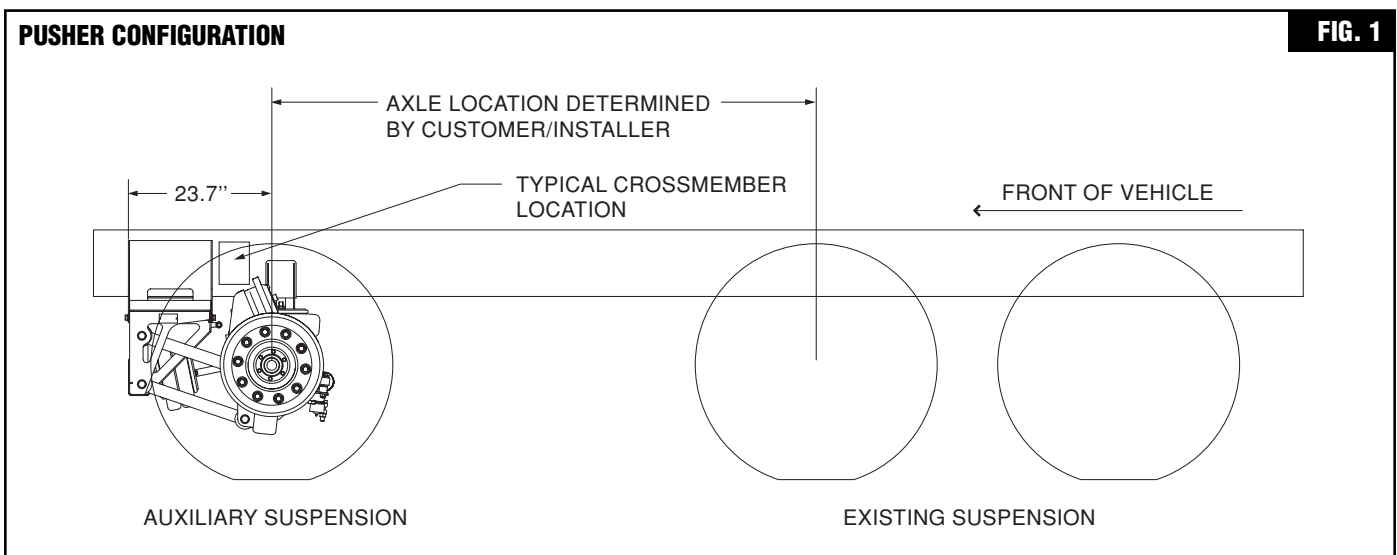
DURALIFT LIFT CHART	RIDE HEIGHT 10.0" - 12.5" (FRAME MOUNT KIT 8A000472)																	
LOADED FRAME HEIGHT ➤	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5
TIRE RADIUS ▼																		
17 (LOADED)					7.0	7.5	8.0	8.5	9.0	9.5								
18 (LOADED)							7.0	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

DURALIFT LIFT CHART	RIDE HEIGHT 12.0" - 14.5" (FRAME MOUNT KIT 8A000473)																	
LOADED FRAME HEIGHT ➤	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5
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				

DURALIFT LIFT CHART	RIDE HEIGHT 14.0" - 16.5" (FRAME MOUNT KIT 8A000474)																	
LOADED FRAME HEIGHT ➤	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5
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

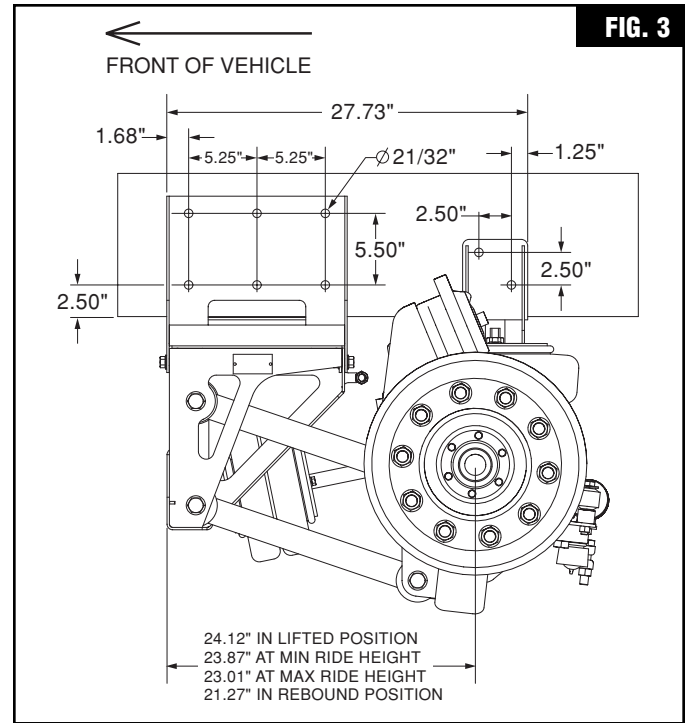
### 3. SUSPENSION LOCATION

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.

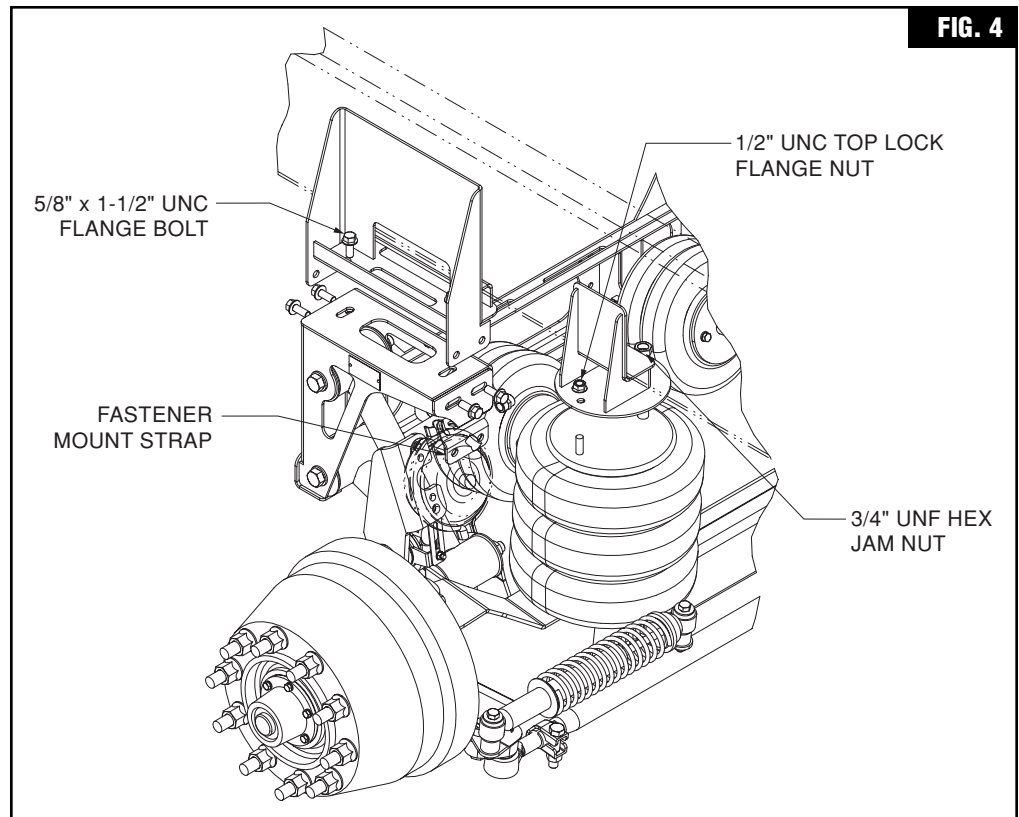


#### 4. SUSPENSION INSTALLATION

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 frame brackets to the truck frame rails.
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 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.)
5. With mount holes marked, drill  $21/32$ " diameter holes at hole locations.



6. Fasten frame brackets to the frame rail with SAE  $5/8$ " UNC GRADE 8 HEX FLANGE BOLT and  $5/8$ " GRADE G PRE-VAILING TORQUE HEX FLANGE NUT, not supplied with suspension.
7. Assemble suspension to the Frame Mount Bracket using the  $5/8$ " mounting hardware (See Fig. 4 for fastener detail) **NOTE:** Center the suspension on the truck with the frame width adjustment slots. TORQUE TO 160 TO 180 FT-LBS.
8. Assemble Air Spring to Air Spring Mount Bracket using the  $1/2$ " and  $3/4$ " mounting hardware (See Fig. 4 for fastener detail) TORQUE TO 160-180 FT-LBS.



## 7. FINAL ASSEMBLY AND INSPECTION CHECKLIST

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

**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**

<b>Every month or 1,000 miles</b>	<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. <input type="checkbox"/> Check for worn steering stabilizer shocks.
<b>Every three months or 2,500 miles</b>	<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.
<b>Every twelve months or 10,000 miles</b>	<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 . . . . .	.75 UNF . . . . .	.300-320 FT-LBS
FRAME BRACKET HANGER FASTENERS . . . . .	.5/8 UNC . . . . .	.160-180 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
LIFT ACTUATOR . . . . .	.5/8 UNF . . . . .	.150-190 FT-LBS

**CROSS REFERENCE COMMON REPLACEMENT PARTS**

ITEM	LINK PART NO.	MFR. PART NO.
LIFT AIR SPRINGS . . . . .	.1103-0059 . . . . .	.FS W01-358-5900
LOAD AIR SPRINGS . . . . .	.1103-0056 . . . . .	.FS W01-358-7996



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

**DEALER /INSTALLER:**  
 Please remove this section  
 and give to vehicle owner

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 installation by 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, using guidelines, which it determines to be adequate to properly replace or repair defective structural parts and/or components within constraints as noted below.

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 in accordance with warranty coverage provisions from date of installation.

**LIMITATIONS**

Link accepts no warranty responsibility for:

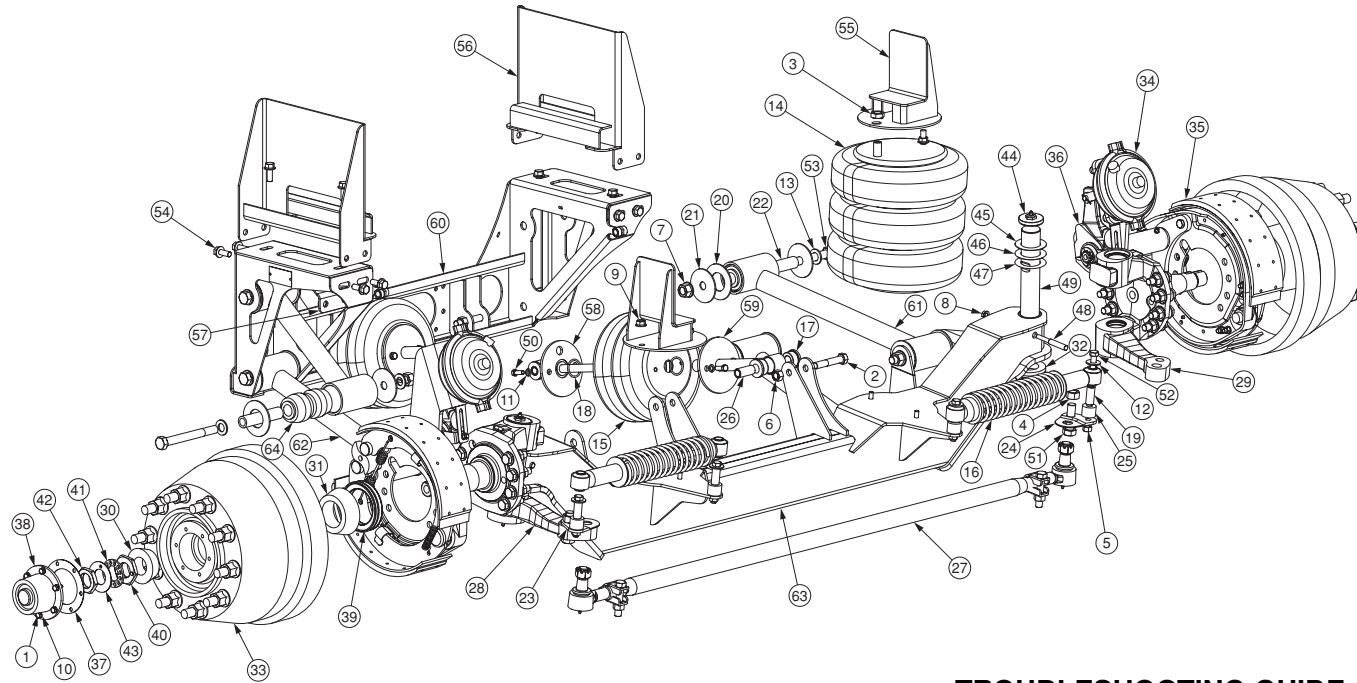
- Incidental or consequential damages or loss of time or profits resulting from product failure.
- Damage resulting from owner or operator abuse, misuse or neglect.
- Failure due to improper installation.
- Component parts manufactured by others for Link, beyond those companies' implied or expressed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

This warranty does not apply to failures resulting from improper installation, neglect, accident, misuse or operation beyond the rated capability of the model or the vehicle to which it is attached, nor to any parts which have been altered or repaired without the written consent of Link Manufacturing, Ltd. In no event shall Link be liable for indirect special, incidental or consequential damages of any nature. The foregoing is Link Manufacturing's only warranty, and all other warranties, whether expressed or implied, including, but not limited to, the implied warranties or merchantability or fitness for a particular purpose, are hereby disclaimed.

**WARRANTY COVERAGE PROVISIONS**

ITEM	MONTHS		MILEAGE (WHICHEVER COMES FIRST)	COVERAGE
	UP TO 12	12-36		
MAJOR STRUCTURAL COMPONENTS	UP TO 12	12-36	UP TO 100,000 100,000-300,000	PARTS & LABOR ALLOWANCE PARTS ONLY
PIVOT BUSHING	UP TO 12	12-36	UP TO 100,000 100,000-300,000	PARTS & LABOR ALLOWANCE PARTS ONLY
AIR CONTROLS	UP TO 12		UP TO 100,000	PARTS & LABOR ALLOWANCE
AIR SPRINGS	UP TO 12	12-36	UP TO 100,000 100,000-300,000	PARTS & LABOR ALLOWANCE PARTS ONLY
LINK MANUFACTURED AXLE COMPONENTS	UP TO 12	12-36	UP TO 100,000 100,000-300,000	PARTS & LABOR ALLOWANCE PARTS ONLY
OTHER SUSPENSION AND BRAKE COMPONENTS	WARRANTY AS PROVIDED BY THE ORIGINAL EQUIPMENT MANUFACTURER			



**AIR PRESSURE  
AXLE LOAD CHART\***

LOAD IN LBS AT GROUND	DURALIFT PSI
4000	28
5000	37
6000	46
7000	55
8000	64
9000	73
10000	79
11000	87
12000	93
13000	98

*\*To be used only as a guide assuming middle ride height. Actual loads will vary. Scale axle to desired loads.*

ITEM	PART NO.	DESCRIPTION	QTY
1	1401-1006	5/16 X 3/4 UNC HEX CAP SCR (GR 5)	12
2	1403-2028	5/8 X 3 1/2 UNF HEX CAP SCR (GR 5)	4
3	1475-2402	3/4 UNF HEX JAM NUT, O&P	2
4	1476-2406	3/4 UNC HEX TOP LOCK NUT (GR C) O&P	2
5	1477-1606	1/2 UNF HEX TOP LOCK NUT (GR C) O&P	4
6	1477-2006	5/8 UNF HEX TOP LOCK NUT (GR C) O&P	4
7	1477-2406	3/4 UNF HEX TOP LOCK NUT (GR C) O&P	8
8	1480-1204*	3/8 UNC TOP LOCK FL NUT (GR G) O&P	2
9	1480-1604	1/2 UNC TOP LOCK FL NUT (GR G) O&P	2
10	1485-1000	5/16 LOCK WASHER	12
11	1485-1200	3/8 LOCK WASHER	12
12	1487-1600	1/2 TYPE A PLAIN WASHER	4
13	1488-2402	3/4 SAE HARDENED WASHER	16
14	11030056	SPRING-AIR	2
15	11030059	SPRING-AIR	2
16	12100001	SHOCK ABSORBER	2
17	15000846	BUSHING	8
18	15001604	O-RING, 1.484 I.D. X .139 SECTION	4
19	80000009	BUSHING-SHOCK, ACETAL	4
20	80000130	WASHER-WEAR	4
21	80000131	WASHER-WEAR	14
22	80000135	SPACER-TUBE	8
23	80000802	TAB-MOUNT, SHOCK	1
24	80000803	TAB-MOUNT, SHOCK	1
25	80000804	SPACER-MOUNT, SHOCK	4
26	80000835	TUBE-BUSHING	4
27	84001038	ASSEMBLY-ROD, TIE	1
28	84001224	ASSEMBLY-KNUCKLE, DANA (LEFT)	1
29	84001225	ASSEMBLY-KNUCKLE, DANA (RIGHT)	1
30	84001403	BEARING-ROLLER, CONE	2
31	84001404	BEARING-ROLLER, CONE	2
32	84001432*	BEARING-THRUST	2

ITEM	PART NO.	DESCRIPTION	QTY
33	SEE NOTE	HUB & DRUM	2
34	84001635	CHAMBER-SERVICE, TYPE 20	2
35	84001653	PAD-BRAKE, DANA	4
36	84001663	SLACK ADJUSTER-AUTO	2
37	SEE NOTE	GASKET	2
38	SEE NOTE	CAP, HUB	2
39	84001687	SEAL-OIL	2
40	84001721	NUT-INNER, JAM	2
41	84001722	WASHER-LOCK, SPINDLE	2
42	84001723	NUT-OUTER, JAM	2
43	84001724	WASHER-RETAINER	2
44	84001902*	CAP-KNUCKLE	4
45	84001903*	SHIM (.030)	2
46	84001904*	SHIM (.010)	2
47	84001905*	SHIM (.005)	2
48	84001906*	PIN-DRAW, LOCKING	2
49	84001907*	PIN-KING, DANA	2
50	140B-1208	3/8 X 1 UNC HEX CAP SCR (GR 8) O&P	12
51	140B-2420	3/4 X 2 1/2 UNC HEX CAP SCR (GR 8) O&P	2
52	140D-1630	1/2 X 3 3/4 UNF HEX CAP SCR (GR 8) O&P	4
53	140D-2456	3/4 X 7 UNF HEX CAP SCR (GR 8) O&P	8
54	141A-1610	1/2 X 1 1/4 UNC FLANGE BOLT (GR 8) O&P	12
55	SEE NOTE	BRACKET-MOUNT, AIR SPRING	2
56	SEE NOTE	BRACKET-MOUNT, FRAME	2
57	800A0080	BRACKET-MOUNT, FASTENER	4
58	800A0088	BRACKET-MOUNT, AIR SPRING	2
59	800A0089	BRACKET-MOUNT, AIR SPRING	2
60	810A0017	BRACKET-MOUNT, SUSPENSION	1
61	820A0030**	ARM-CONNECTING, TOP	2
62	820A0031**	ARM-CONNECTING, BOTTOM	2
63	830A0006	AXLE-FAB., 13K DURALIFT	1
64	15000870	BUSHING - PIVOT, RUBBER	4

\* ITEMS INCLUDED IN KINGPIN KIT  
 \*\* INCLUDES (2) BUSHINGS, PART NO. 15000870  
 NOTE: MULTIPLE OPTIONS EXIST, CALL FOR DETAILS

**TROUBLESHOOTING GUIDE**

TROUBLE	PROBABLE CAUSE	REMEDY
<b>Axle will not stay up</b>	Loose Air Fittings	Check and retighten.
	Damaged Air Lines	Check for excessive wear. A) If worn or damaged, replace.
	Damaged or Worn Air Springs	
<b>Punctured Load Air Springs</b>	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.
<b>Loose Convolution Ribs</b>	Under Extended Air Springs -Improper ride height	Check for proper ride height. A) Use smaller tires.
<b>Air Spring Separation at End Plates</b>	Over Extended Air Springs -Improper ride height	Check for proper ride height. A) Use bigger tires. B) Lower suspension.
<b>Lift Air Spring Wear or Broken Bumper</b>	Over Extended Load Springs -Crushes lift bag	Check for proper ride height. A) Use bigger tires B) Lower suspension. C) Install over extension straps.