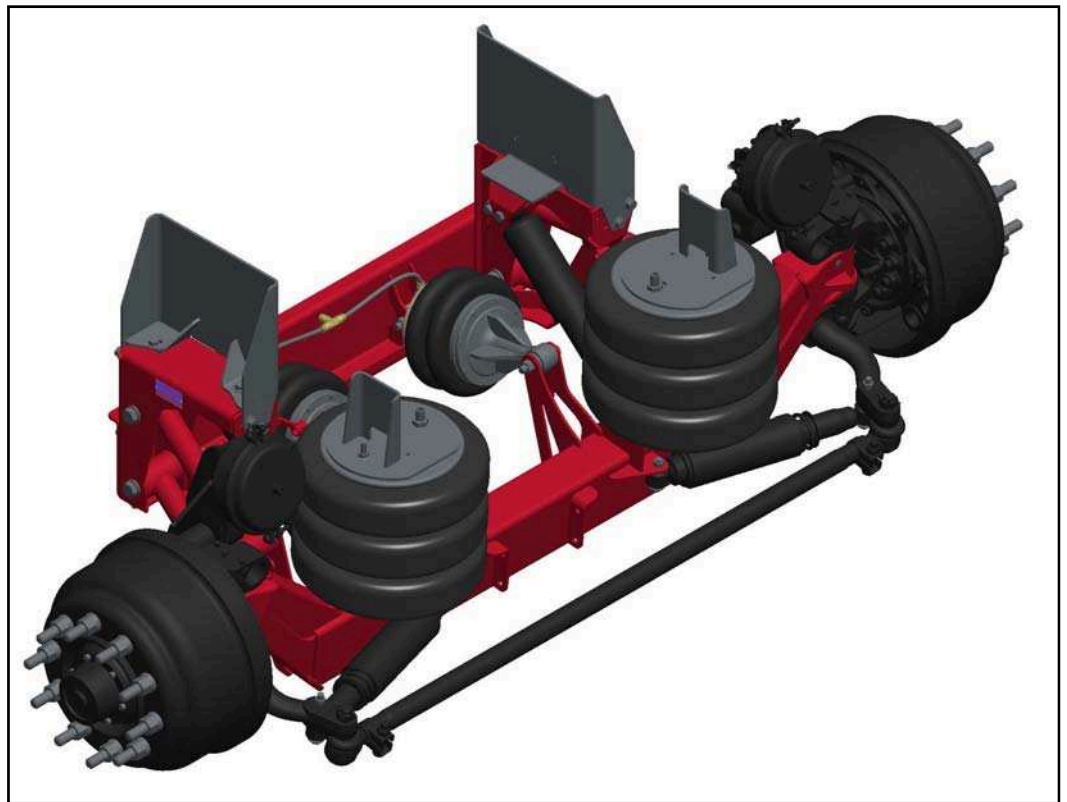


INSTALLATION INSTRUCTIONS



Liftable Suspensions

20K DURALIFT II (8A000684)



20K 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**

1. INTRODUCTION




Thank you for choosing a Link Duralift II liftable 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 Duralift II liftable 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.

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

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

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 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 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 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  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.

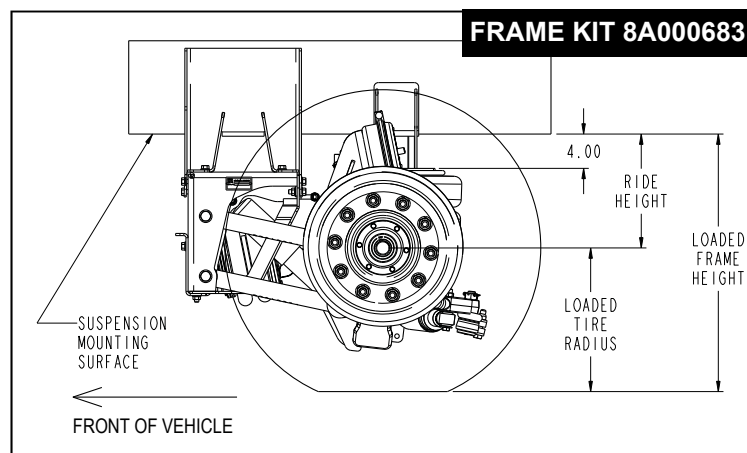
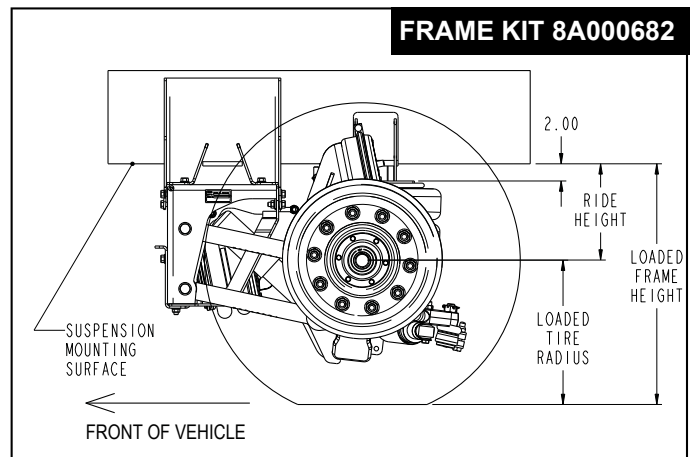
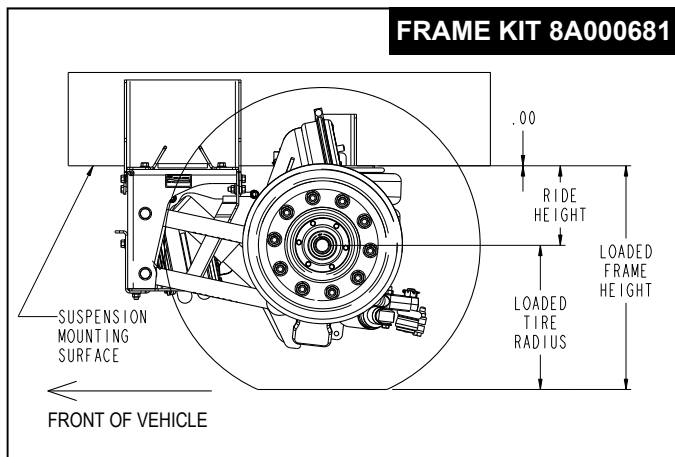
5. PRE-INSTALLATION CHECKLIST

- ☐ Verify that the axle spacing to be used conforms to Federal and local bridge laws.
- ☐ Verify that the frame width matches the suspension specifications (33.50" to 35.00").
- ☐ Verify that adequate air supply exists to support braking requirements for the lift axle being installed.
- ☐ Verify clearance between the drive shaft and the liftable 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.

6. FRAME BRACKET KITS:

There are 3 frame bracket kits available to allow for a wide range of ride heights. See charts on Page 4 for details.



7. RIDE HEIGHT AND FRAME ACCOMMODATIONS FOR 20K SUSPENSION (8A000684)

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 Three ride heights exist for this suspension; 8.00” to 10.50”, 10.00” to 12.50”, and 12.00” to 14.50”.

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

20K DURALIFT II LIFT CHART	RIDE HEIGHT 8.00" - 10.50" (FRAME MOUNT KIT 8A000681)													
LOADED FRAME HEIGHT	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
TIRE RADIUS														
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		
22 (LOADED)									7.0	7.5	8.0	8.5	9.0	9.5

20K DURALIFT II LIFT CHART	RIDE HEIGHT 10.00" - 12.50" (FRAME MOUNT KIT 8A000682)													
LOADED FRAME HEIGHT	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5
TIRE RADIUS														
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		
22 (LOADED)									7.0	7.5	8.0	8.5	9.0	9.5

20K DURALIFT II LIFT CHART	RIDE HEIGHT 12.00" - 14.50" (FRAME MOUNT KIT 8A000683)													
LOADED FRAME HEIGHT	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
TIRE RADIUS														
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		
22 (LOADED)									7.0	7.5	8.0	8.5	9.0	9.5

9. SUSPENSION LOCATION

9.1 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 **Fig. 1** & **Fig. 2** below for details).

9.2 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.

10. SUSPENSION INSTALLATION

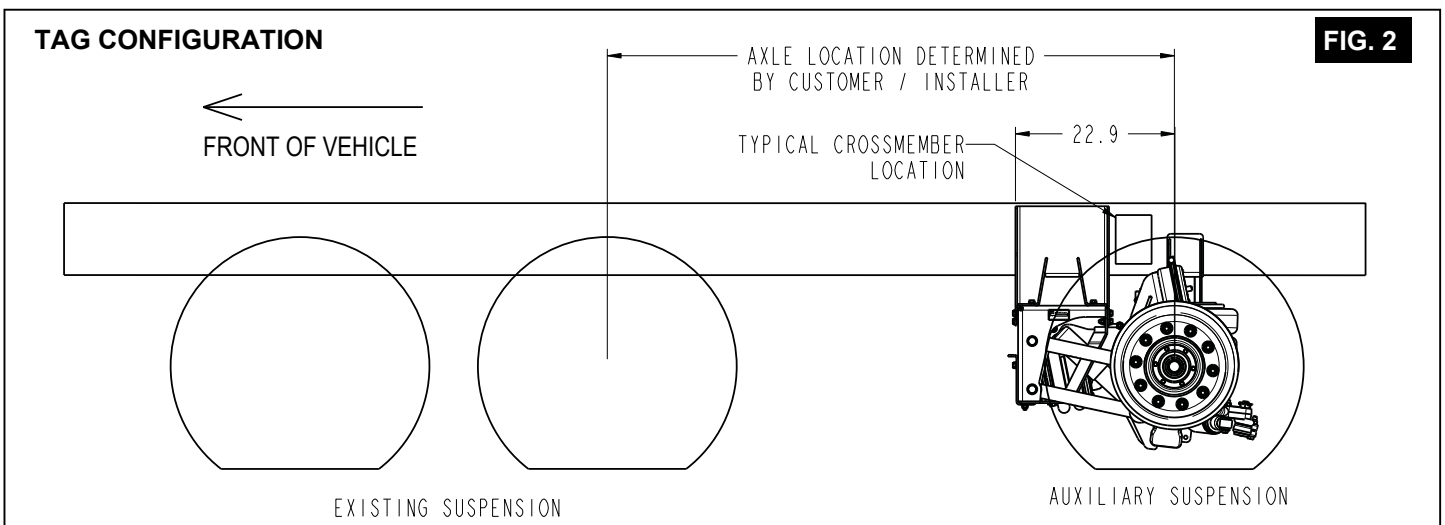
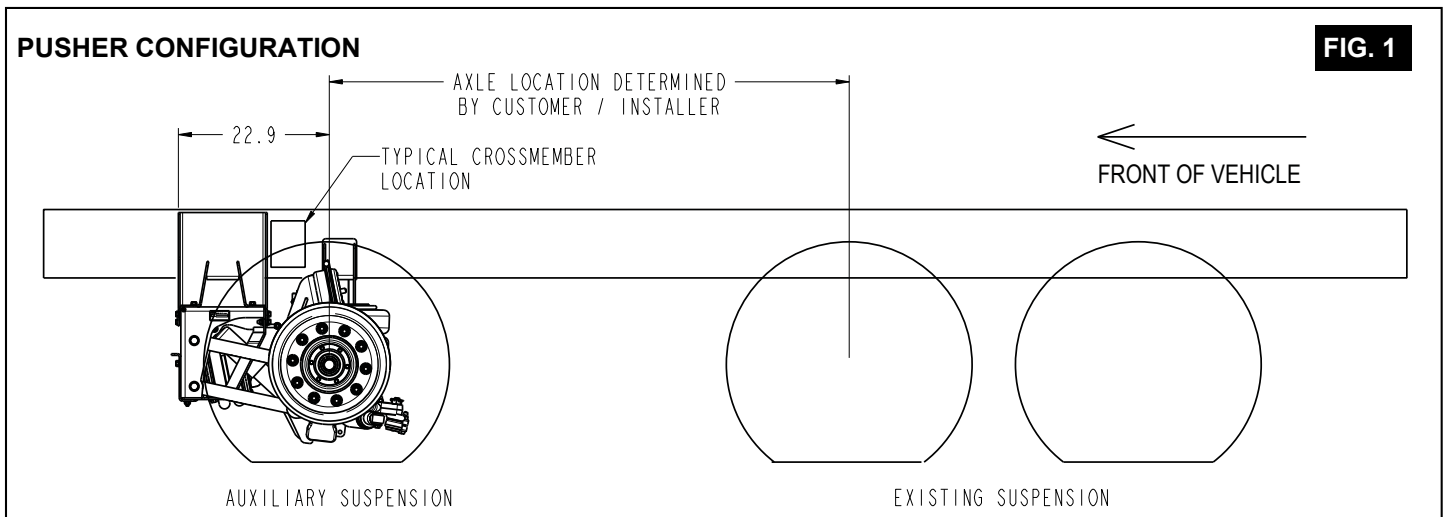
10.1 With suspension location determined, clamp the front and rear frame brackets to the truck frame rails.

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

10.2 Double check the suspension location and check 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.

10.3 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.)

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



10.5 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 FLANGE NUTS (not supplied, available with optional installation kit 800A0014).



TORQUE to 160-180 FT-LBS.

10.6 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 with the frame width adjustment slots.



TORQUE to 90-120 FT-LBS.

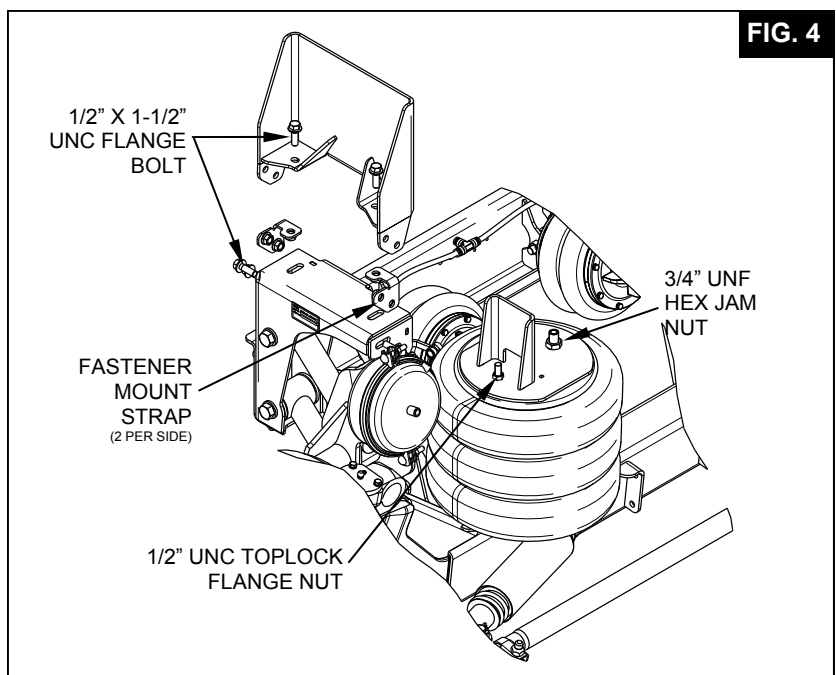
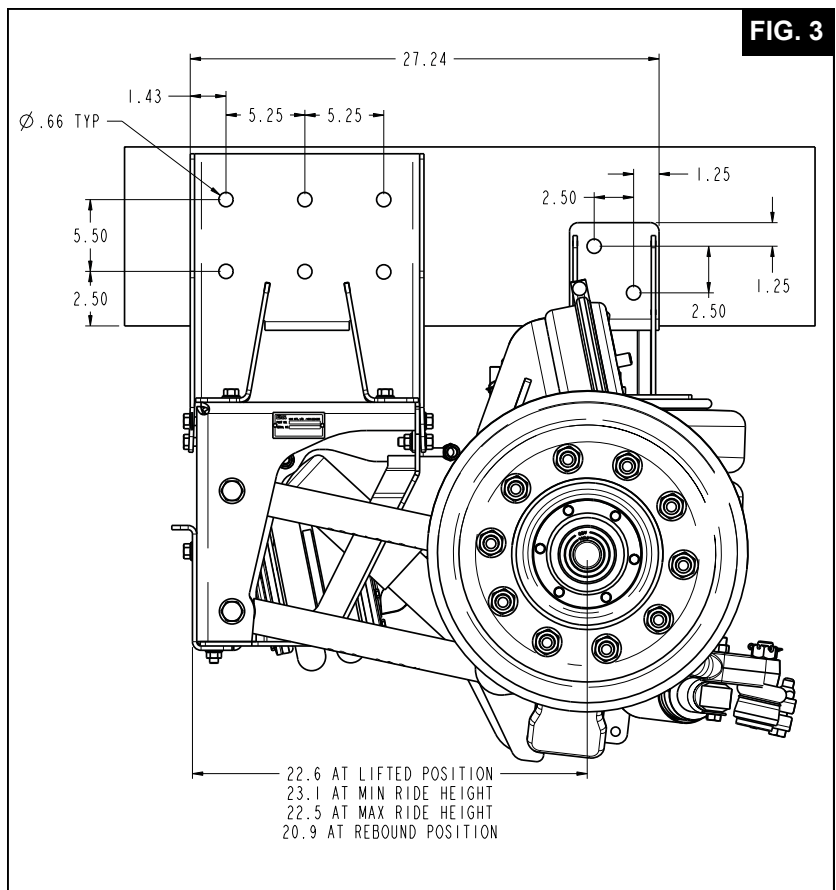
10.7 Assemble the air springs to rear frame brackets using the 1/2" and 3/4" mounting hardware (See Fig. 4 for fastener detail).



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



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



11. SPECIAL PLUMBING INSTRUCTIONS

11.1 Connect the fitting in **Fig. 5** to the port on the lift axle control valve that lifts the suspension. See **Fig. 6** for details.

11.2 Connect the control box to the quick release valve used on the load springs. See **Fig. 6** for details.

Contact Link for available integrated air control options.

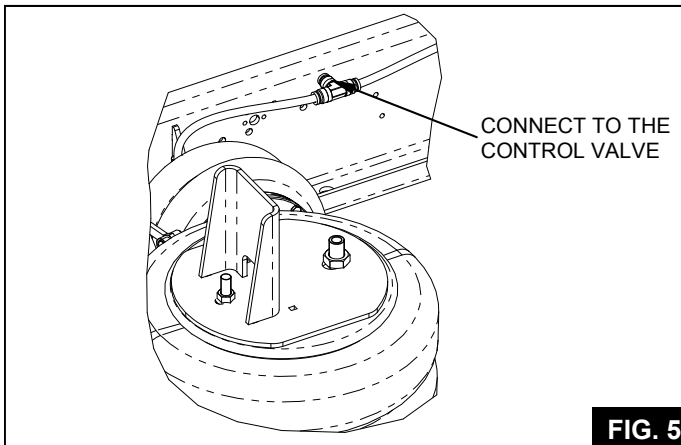


FIG. 5

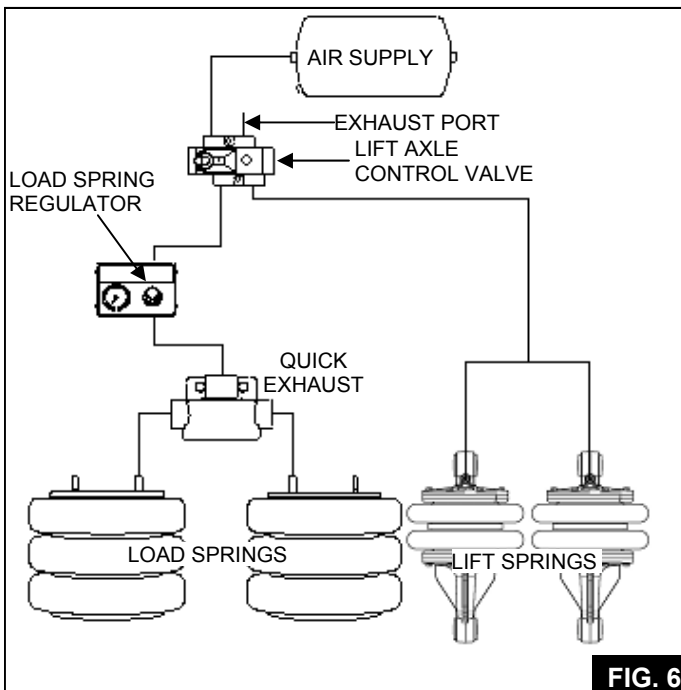


FIG. 6

12. 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 (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 truck components?

CAUTION: 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.

20K AIR PRESSURE AXLE LOAD CHART

(For reference only. Use scale to determine actual loads.)

LOAD IN LBS AT GROUND	DURALIFT II PSI
4000	20
5000	24
6000	30
7000	34
8000	40
9000	44
10000	50
11000	55
12000	59
13000	65
14000	68
15000	74
16000	79
17000	83
18000	88
19000	92
20000	96



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

TORQUE TABLE

SUSPENSION PIVOT FASTENERS.....	3/4 UNF	300-320 FT-LBS
FRAME MOUNT FASTENERS	5/8 UNC	160-180 FT-LBS
HANGER FASTENERS	1/2 UNC	90-120 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
SHOCK BOLT	1/2 UNF	90-120 FT-LBS

CROSS REFERENCE

COMMON REPLACEMENT PARTS

ITEM	LINK	FIRESTONE	CONTITECH
LIFT AIR SPRINGS	1103-0511	FD 200-25
LOAD AIR SPRINGS	1103-0001	W01-358-7850	161363

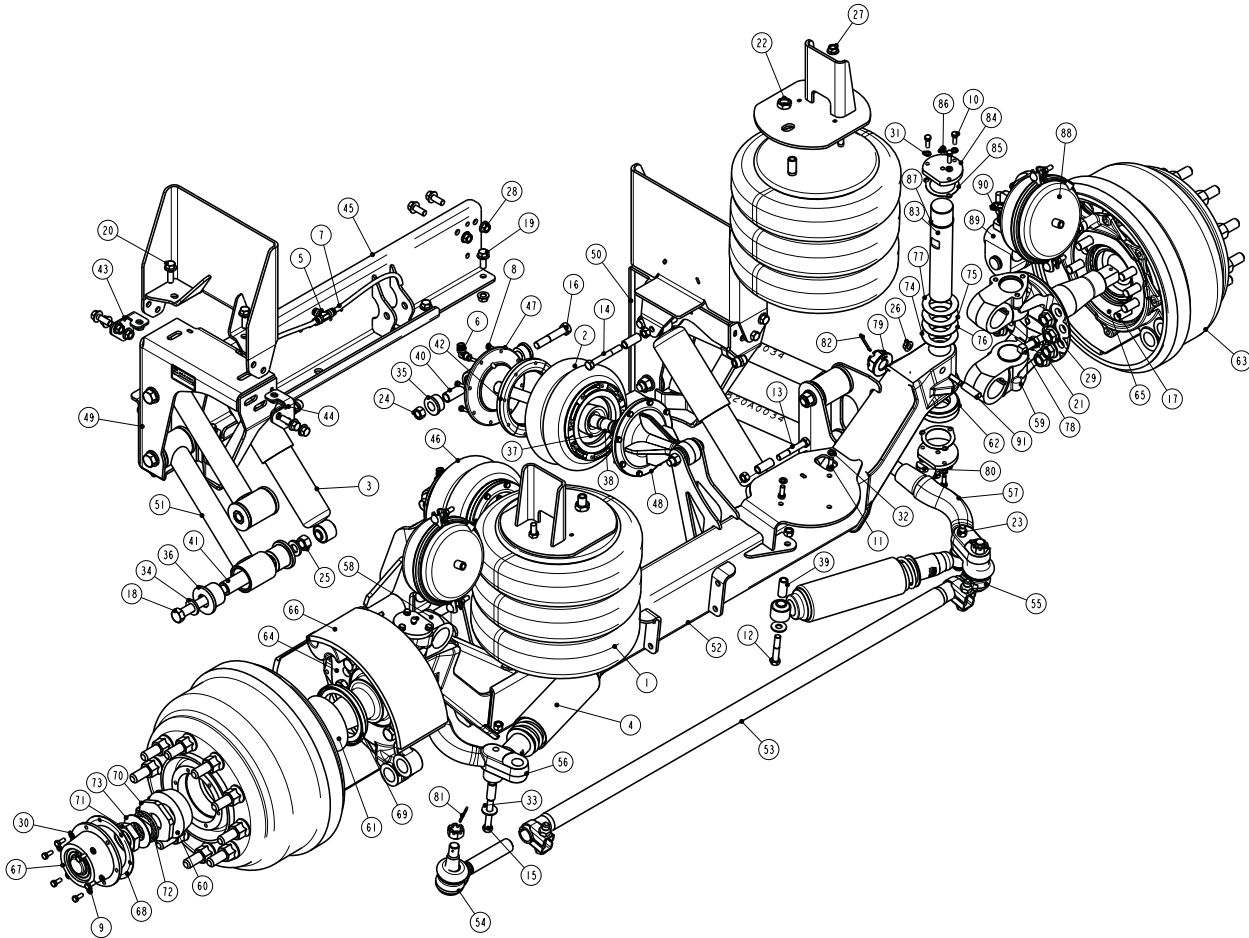
LINK SUSPENSION PREVENTATIVE MAINTENANCE

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. <input type="checkbox"/> Check for worn steering stabilizer shocks.
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.

TROUBLESHOOTING GUIDE

TROUBLE	PROBABLE CAUSE	REMEDY
Axle will not stay up	Loose Air Fittings	Check and retighten.
	Damaged Air Lines	Check for excessive wear. Replace if worn or damaged.
	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. 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.

20K DURALIFT II SELF-STEER (8A000684)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	1103-0001	SPRING-AIR	2	31	1485-1004	5/16 LOCK WASHER OIL&PHOS	12	61	84001417	BEARING-ROLLER, CONE	2
2	11030062	SPRING-AIR	2	32	1485-1200	3/8 LOCK WASHER	4	62	84001436*	BEARING-THRUST	2
3	12100011	SHOCK ABSORBER	2	33	14871600	1/2 TYPE A PLAIN WASHER	4	63	84001540	ASSEMBLY-HUB & DRUM, FN MNT	2
4	12100012	SHOCK ABSORBER, WIDE BODY	2	34	14882402	3/4 HARDENED WASHER, ZINC PLATED	16	64	84001616	BRAKE ASSY-20K (LH)	1
5	1302-5061	TEE-UNION, 3/8 TUBE	1	35	15000846	BUSHING	8	65	84001617	BRAKE ASSY-20K (RH)	1
6	1302-5104	ELBOW-3/8 TB, 1/4 M-NPT	2	36	15000890	BUSHING	16	66	84001655	PAD-BRAKE, 20K	4
7	1303-4000	AIRLINE-NYLON, .375 O.D., BULK	1	37	15000891	STOP-BUMPER, CYL.	2	67	84001671	CAP, HUB	2
8	1401-0808	1/4 X 1 UNC HEX CAP SCR (GR 5)	32	38	15000932	BEARING-LINEAR	4	68	84001673	GASKET	2
9	1401-1006	5/16 X 3/4 UNC HEX CAP SCR (GR 5)	12	39	80000009	BUSHING-SHOCK, ACETAL	8	69	84001743	SEAL-OIL	2
10	140B-1008	5/16 X 1 UNC HEX CAP SCR (GR 8) O&P	12	40	80000835	TUBE-BUSHING	4	70	84001745	NUT-SPINDLE, INNER	2
11	140B-1208	3/8 X 1 UNC HEX CAP SCR (GR 8) O&P	4	41	80001210	TUBE-BUSHING	8	71	84001746	NUT-SPINDLE, OUTER	2
12	140D-1622	1/2 X 2 3/4 UNF HEX CAP SCR (GR 8) O&P	2	42	80001328	RING-RETAINER, AIRSPRING	8	72	84001747	RING-LOCK	2
13	140D-1626	1/2 X 3 1/4 UNF HEX CAP SCR (GR 8) O&P	2	43	800A0250	BRACKET-MOUNT, FASTENER	2	73	84001748	WASHER-RETAINER	2
14	140D-1630	1/2 X 3 3/4 UNF HEX CAP SCR (GR 8) O&P	2	44	800A0251	BRACKET-MOUNT, FASTENER	2	74	84001749*	SHIM (.030)	2
15	140D-1636	1/2 X 4 1/2 UNF HEX CAP SCR (GR 8) O&P	2	45	800A0257	WELDMENT-CROSSMEMBER	1	75	84001750*	SHIM (.015)	2
16	140D-2028	5/8 X 3 1/2 UNF HEX CAP SCR (GR 8) O&P	4	46	800A0309	ACTUATOR-SPRING, LIFT	2	76	84001751*	SHIM (.010)	2
17	140D-2416	3/4 X 2 UNF HEX CAP SCR (GR 8) O&P	14	47	800A0310	CAP-CYL., AIR	2	77	84001752*	SHIM (.005)	2
18	140D-2446	3/4 X 5 3/4 UNF HEX CAP SCR (GR 8) O&P	8	48	800A0311	PISTON-CYL., AIR	2	78	84001753	BOLT-STOP, STEERING	2
19	141A-1610	1/2 X 1 1/4 UNC FLANGE BOLT (GR 8) O&P	8	49	810A0058	BRACKET-HANGER, SUSPENSION	1	79	84001754	NUT-HEX, SLOTTED	2
20	141A1612	1/2 X 1 1/2 UNC FLANGE BOLT (GR 8) O&P	12	50	810A0059	BRACKET-HANGER, SUSPENSION	1	80	84001756	KEY-ARM, KNUCKLE	2
21	1475-2000	5/8 UNF HEX JAM NUT	2	51	820A0034**	ARM-CONNECTING	4	81	84001757	PIN-COTTER, .13	2
22	1475-2402	3/4 UNF HEX JAM NUT, O&P	2	52	830A0030	AXLE-FAB., 20K DURALIFT II	1	82	84001758	PIN-COTTER, .15 X 3.00	2
23	1477-1606	1/2 UNF HEX TOP LOCK NUT (GR C) O&P	8	53	84001041***	ASSEMBLY-TUBE, TIE ROD	1	83	84001760	PIN-KING	2
24	1477-2006	5/8 UNF HEX TOP LOCK NUT (GR C) O&P	4	54	84001042***	ASSEMBLY-END, TIE ROD (LH)	1	84	84001762	CAP-KNUCKLE	4
25	1477-2406	3/4 UNF HEX TOP LOCK NUT (GR C) O&P	8	55	84001043***	ASSEMBLY-END, TIE ROD (RH)	1	85	84001763*	GASKET-CAP, KING PIN	4
26	1480-1404*	7/16 UNC TOP LOCK FL NUT (GR G) O&P	2	56	84001123	ARM-TIE ROD	1	86	84001764	FITTING-GREASE	4
27	1480-1600	1/2 UNC SERRATED FLANGE NUT	2	57	84001124	ARM-TIE ROD	1	87	84001765*	SEAL-KNUCKLE	4
28	1480-1604	1/2 UNC TOP LOCK FL NUT (GR G) O&P	20	58	84001247	ASSEMBLY-KNUCKLE, MERITOR 20K (LEFT)	1	88	84001767	CHAMBER-BRAKE	2
29	1480-2405	3/4 UNF TOP LOCK FL NUT (GR G) O&P	14	59	84001248	ASSEMBLY-KNUCKLE, MERITOR 20K (RIGHT)	1	89	84001777	SLACK ADJUSTER - AUTO	2
30	1485-1000	5/16 LOCK WASHER	12	60	84001416	BEARING-ROLLER, CONE	2	90	84001779	ASSEMBLY-CLEVIS, GUNITE	2
								91	84001928	PIN-DRAW, LOCKING	2

*ITEMS INCLUDED IN KINGPIN KIT 84001768

** INCLUDES (4) 15000890 AND (2) 80001210

*** ITEMS INCLUDED IN THE ROD ASSEMBLY 84001040



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