

80003783
APR 25, 2023

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






1. INTRODUCTION

Thank you for choosing a Link Air Link™ Suspension. We want to help you get the best results from this suspension and to operate it safely. This instruction contains information to assist in the installation of the Height Control Valve (HCV) for your Link Air Link™ Suspension. This instruction is intended solely for use with this product.

All information in this instruction 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

	DANGER indicates a hazardous situation which if not avoided, will result in death or serious injury.
	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
	NOTICE indicates a potentially hazardous situation which, if not avoided, may result in property damage.
	TORQUE indicates named fasteners are to be tightened 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

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

3.2

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

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

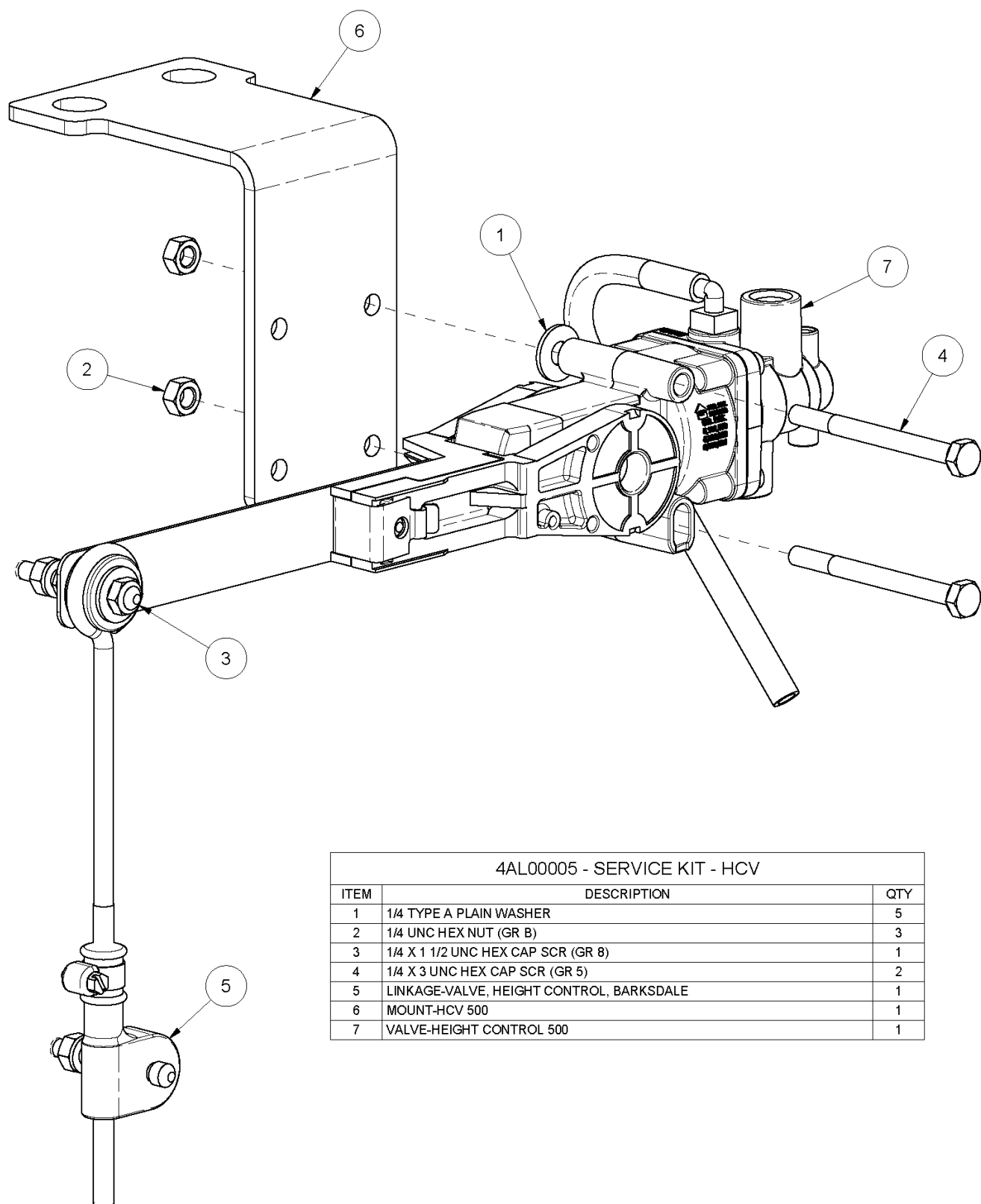
4.4 No welding of any suspension components is permitted except when specified by Link.

4.5

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.

4.6

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



4AL00005 - SERVICE KIT - HCV		
ITEM	DESCRIPTION	QTY
1	1/4 TYPE A PLAIN WASHER	5
2	1/4 UNC HEX NUT (GR B)	3
3	1/4 X 1 1/2 UNC HEX CAP SCR (GR 8)	1
4	1/4 X 3 UNC HEX CAP SCR (GR 5)	2
5	LINKAGE-VALVE, HEIGHT CONTROL, BARKSDALE	1
6	MOUNT-HCV 500	1
7	VALVE-HEIGHT CONTROL 500	1

5. REMOVAL OF EXISTING HEIGHT CONTROL VALVE (GENERATION 2 & 3)

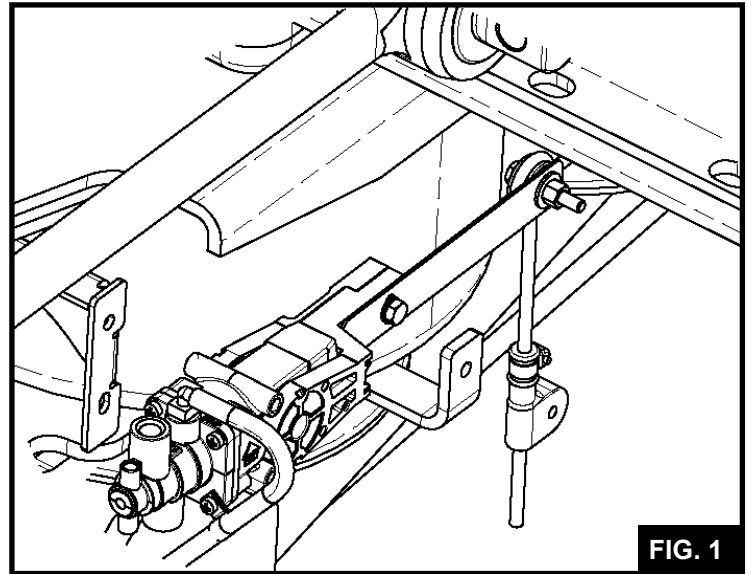
5.1 Prior to removal of the height control valve it is recommended that the air be dumped from the suspension and the vehicle.

5.2 Prior to removal of the height control valve also note and record the installed length of the linkage (**See FIG. 1**).

5.3 Remove the air lines that are connected to the height control valve. Making note of where each line plugged in to the valve for installation.

5.4 Remove bolt that attaches the linkage to the trailing arm.

5.5 Remove the bolts that attach the valve to the hanger bracket.



6. ASSEMBLING THE HCV BRACKET, HEIGHT CONTROL VALVE AND LINKAGE ROD

6.1 Required Tools

- Torque Wrench 250 FT-LB minimum
- Sockets (15/16" & 7/16")
- Wrenches (15/16" & 7/16")
- Ratcheting Wrench
- Screwdriver - Flathead

6.2 Install Height Control Bracket (HCV Bracket) along with the additional fasteners for securing the front hanger to the bottom side of the frame rail. There are 4 - 5/8" Hex Flange Bolts and 4 - 5/8" Hex Flange Nuts **Not Included** per side. Insert the bolts for the HCV Bracket through the HCV bracket, through the front hanger, in through the spacer plate, and into the frame rail. The procedure for the other 2 bolts are the same, but starting through the front hanger. Secure all bolts with 5/8" Hex Flange Bolts (See FIG. 2).

TORQUE 5/8" fasteners to 180 FT-LBS.

6.3 With the HCV Bracket secure, install the height control valve (HCV) onto each trailing arm hanger using the 1/4" bolt, flat head washer (2X), and the Nylock nut (See FIG. 2).

TORQUE 1/4" fasteners to 80-100 IN-LBS.

CAUTION Pay attention to the "UP" direction on the HCV and the orientation to the suspension (See FIG. 3).

6.4 Loosen the clamp on the P-boot which secures it to the HCV linkage rod with a flat head screw driver in order to position the linkage rod with the bracket of the trailing arm (See FIG. 4).

6.5 Set length of linkage rod so upper and lower holes align with the pins (See FIG. 5).

NOTE: The linkage rod length should be set when the trailing arm and the HCV arm are parallel to the frame rail of the bottom flange. This will be a close initial setting for the HCV to maintain the design ride height. The length of the linkage rod should be similar to what was recorded in section 5.2.

6.6 Install the 1/4" Lock Washer and 1/4" Hex Nut to the in on the P-boot (See FIG. 5).

6.7 Tighten the clamp on the P-boot with flat heat screwdriver at this length until final ride height is achieved (See FIG. 6).

6.8 Repeat steps 2 - 7 for opposite side of the suspension.

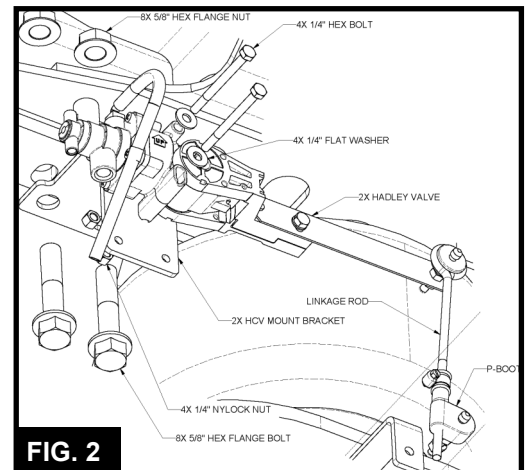


FIG. 2

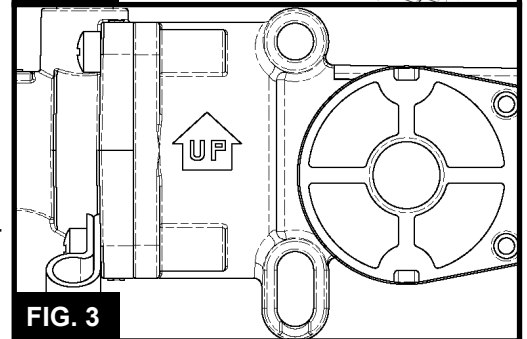


FIG. 3

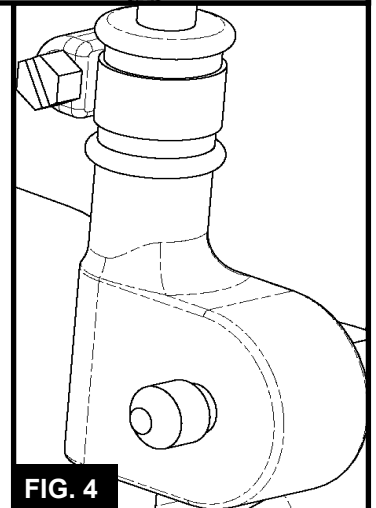


FIG. 4

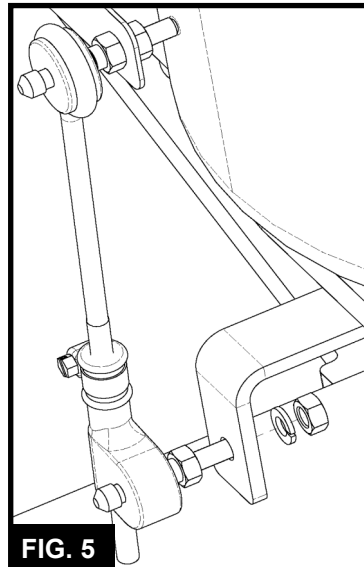


FIG. 5

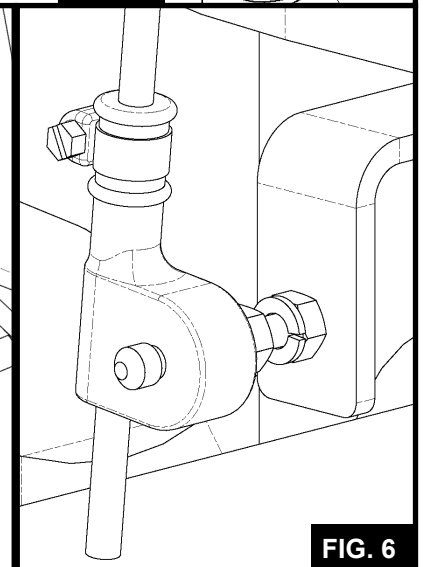


FIG. 6

7. FINAL RIDE HEIGHT ADJUSTMENT

7.1 Park the vehicle on flat and level ground .

7.2 Ensure that the suspension air system will dump and inflate the air springs.

7.3 Measure both trailing arms to determine the correct ride height setting for both sides of the suspension. There are two options for measuring ride height.

- I. Option 1: Digital Level
 - a) Place a digital level on the bottom flange of the chassis frame rail near the suspension. Record this angle or zero the digital level.
 - b) Place the digital level on the trailing arm. Record this angle.
 - c) Compare the angle of the bottom flange of the frame rail to the trailing arm. The maximum allowable difference between the two surfaces is 0.75 degree (**See FIG. 7**).
- II. Option 2: Tape Measure
 - a) Use a tape measure to measure the distance between the bottom flange of the chassis frame rail and the top surface of the trailing arm (ahead of the forward air spring). Record this distance.
 - b) Measure the distance between the bottom flange of the chassis frame rail and the top surface of the trailing arm (behind the rear air spring). Record this distance.
 - c) Subtract these two measurements. The maximum allowable difference between these two measurements is 5/32" (**See FIG. 8**).

7.4 If both trailing arm ride height measurements are within the allowable tolerance the suspension ride height is correct and no further action is needed. However, If one or both of the trailing arm ride height measurements are outside of the allowable tolerance continue with step 7.5.

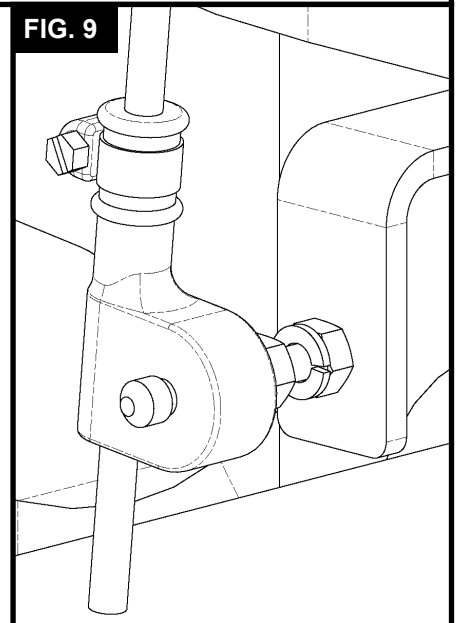
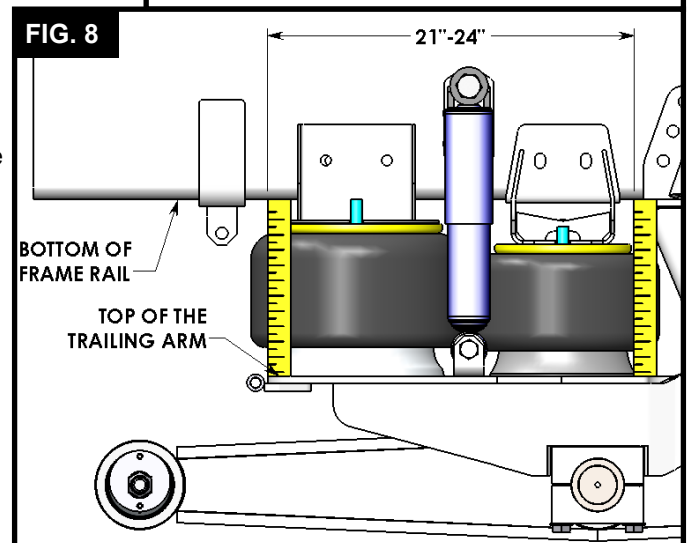
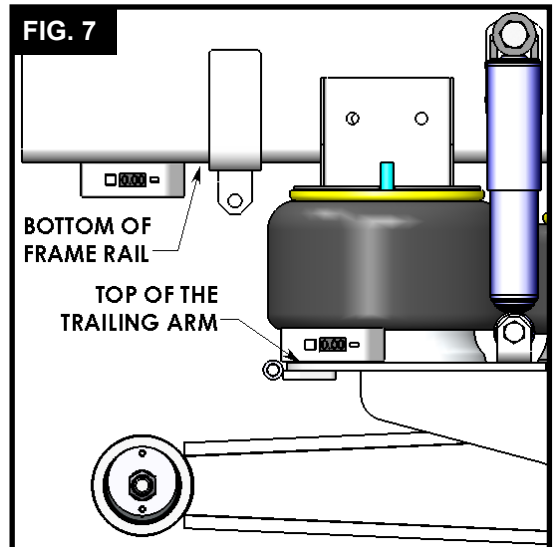
7.5 Begin adjusting the ride height on the trailing arm that is furthest outside of the allowable tolerance.

7.6 Use a screwdriver to loosen the clamp on the P-boot (**See FIG. 9**).

7.7 Adjust the length of the HCV linkage. Note that decreasing the length of the HCV linkage will decrease the ride height and increasing the length of the HCV linkage will increase the ride height.

7.8 Use a screwdriver to tighten the clamp on the P-boot.

7.9 Dump the air from the suspension.



8. ADDING AIR BACK TO THE SUSPENSION FOR NEW RIDE HEIGHT

8.1 Air needs to be added back to the suspension and allow the suspension to settle at the new ride height.

8.2 Measure the ride height using one of the methods from step 7.3 and confirm that the ride height is within tolerance. If the ride height is within tolerance proceed to step 8.2. If the ride height is out of tolerance repeat steps 7.6 through 8.0.

8.2 Measure and confirm the ride height of the opposite trailing arm is within tolerance. If the ride height of the opposite trailing arm is within tolerance the final ride height adjustments of the AirLink suspension are complete. If the ride height is out of tolerance repeat steps 7.6 through 8.0.



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