

**Suspension
Controls**



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

INSTALLATION INSTRUCTIONS

1501 SERIES Height Control Valve

PRESSURE DUMP CONFIGURATION
WITH 3/8" & 1/4" PTC FITTINGS
(H01501)



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 Suspension Control. We want to help you get the best results from this height control valve and to operate it safely. This instruction contains information to assist in the installation of the Height Control Valve. 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	DANGER indicates a hazardous situation which if not avoided, will result in death or serious injury.
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.
NOTICE	NOTICE indicates a potentially hazardous situation which, if not avoided, may result in property damage.
TORQUE	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

▲CAUTION

When handling parts, wear appropriate gloves, eye-glasses, ear protection, and other safety equipment.

▲CAUTION

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

4. SAFE WORKING PRACTICES

▲CAUTION

4.1

Air lines are pressurized and may blow debris, USE EYE PROTECTION.

5. PARTS INCLUDED

ITEM NO	DESCRIPTION	QTY
1	8" ADJUSTABLE LEVER	1
2	7" ADJUSTABLE LEVER	1
3	7" STRAIGHT LEVER	1
4	3/8" PTC PLUG	1
5	MOUNTING BOLT	2
6	3/8" PTC 90° STEM FITTING	1
7	1/4" PTC 90° STEM FITTING	1
8	1/4-20 LOCK NUT	2
9	WASHER	2
10	INSTRUCTION SHEET	1

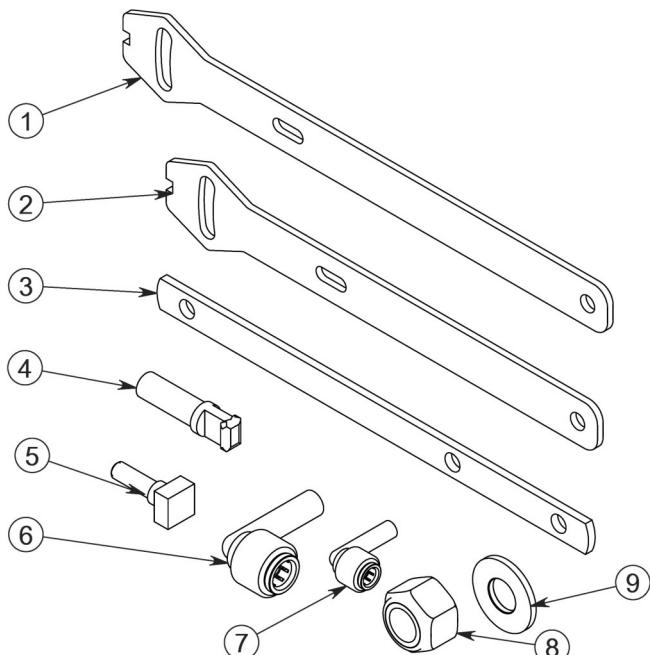
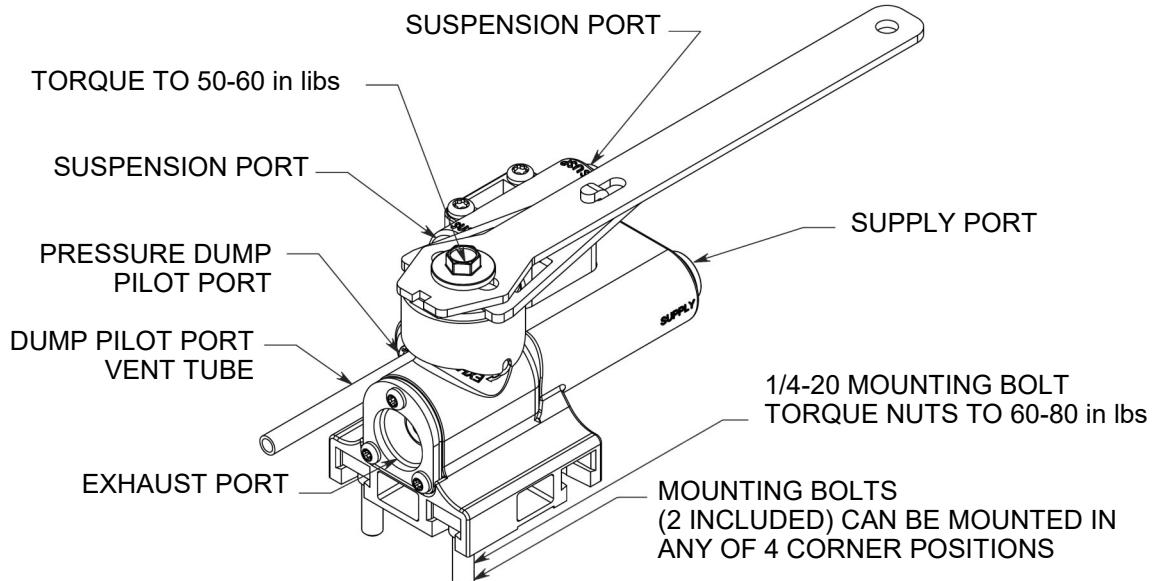


Figure 1.

Figure 2.



6. DETERMINE MOUNTING AND VALVE ORIENTATION

6.1

Hold 1501 Series Valve next to height control valve to be replaced and determine mounting orientation of the 1501 Series Valve for best hose routings.

6.2

NOTE: The supply port must be horizontal or pointing up.

6.3

Determine location of the 2 mounting studs and proper lever length.

7. DETERMINE FILL AND EXHAUST ORIENTATION

7.1

Each side of the 1501 Series Valve has arrows pointing toward the fill and exhaust directions.

7.2

Align the U-shaped cap detail with the fill/exhaust arrows that correspond with the fill and exhaust movements on the lever. Rotating the cap 180° will result in the opposite fill and exhaust lever movement.

8. ASSEMBLE 1501 SERIES VALVE

8.1

Install the correct lever onto the valve. The lever can be mounted in one of four directions.

8.2

Tighten screw to 50-60 in-lbs.

8.3

Install mounting studs into the T-slots. Use a hammer to tap square head into the T-slot if needed.

9. INSTALL 1501 SERIES VALVE

9.1

Remove old height control valve and note the hoses and ports.

9.2

Attach the 1501 Series Valve to mounting bracket and tighten nuts to 60 – 80 in lbs.

9.3

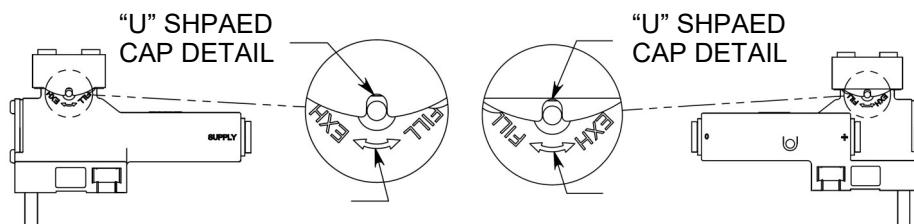
Examine the end of each tube prior to insertion and trim the end as necessary to get a clean, 90° cut.

9.4

Attach hoses into the proper ports by pushing the tubs into the push-to-connect (PTC) fittings. Use the plug and 90° stem fitting included in this kit if necessary. Make sure tubing does not interfere with lever rotation.

Figure 3.

WHEN CAP DETAIL IS ON THIS SIDE OF THE VALVE THE FILL/EXHAUST WILL BE IN THIS ORIENTATION



WHEN CAP DETAIL IS ON THIS SIDE OF THE VALVE THE FILL/EXHAUST WILL BE IN THIS ORIENTATION

10.1501 SERIES VALVE TEST PROCEDURE

10.1

NOTE: 90 PSI minimum supply and pilot pressure

10.1

Rotate lever in the fill direction and fill air springs.

10.2

Rotate lever in the exhaust direction and exhaust air.

NOTE: if fill and exhaust modes are backwards, exhaust air from suspension, loosen lever screw enough to separate lever from valve. Rotate lever 180°, reseat in cross pattern of valve and retighten lever screw. Rotate lever 180° to original position. Retest fill and exhaust modes.

11. RIDE HEIGHT ADJUSTMENT

11.1

Check the vehicle manufacturer's ride height recommendations for correct height.

11.2

Reconnect linkage to end of lever and allow the valve to air up the suspension.

11.3

Measure ride height.

11.4

Readjust ride height by loosening the lever screw enough to rotate the bottom lever to fill or exhaust the air until the correct ride height is attained.

14. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE
Air springs flat	Obstructed air line Insufficient air pressure to suspension Defective Pressure Protection Valve Defective HCV (see test procedure) Air leak in system
Air springs raise to full height but do not exhaust	Obstructed air line Supply line installed in suspension port Defective HCV (see test procedure)
Air springs deflate when parked	Leak in air system (check with soapy water) Defective HCV (see test procedure)
Suspension will not maintain proper height	Obstructed air line Ride height out of adjustment Defective HCV (see test procedure)
Hard ride	Ride height out of adjustment (readjust per vehicle service manual)
Ride height unequal side to side for (2) valve system	Reset ride height on each side

11.5

Tighten the lever screw to 50 – 60 in lbs. Double check the ride height measurement by dumping the suspension and allowing the 1501 Series Valve to air up to ride height (Disconnect and reconnect the linkage).

11.6

Remeasure ride height and adjust if necessary.

12. INSTALLATION NOTES

12.1

Optimal lever angle for full up or down travel is between 20° and 45°

12.2

Mount HCV with supply port horizontal or pointing up

12.3

If NOT using the dump option, the dump pilot port vent tube must be left in place

12.4

If using the dump option, remove dump pilot port vent tube and connect directly to 3-way selector valve, ensure that selector valve is vented to atmosphere at all times, even when not being active

NOTE: Dump pilot port system must not be plugged in at any time as this may affect valve centering

13. HCV TEST PROCEDURE

13.1

1. With a minimum of 90 psi at the supply port, rotate the lever up (as indicated on the side of the valve) 30° to 45°. Air should flow into the air springs.
2. Rotate the lever to the neutral position. Air flow should stop.
3. Rotate the lever down 30° to 45°. Air should exhaust from the air springs.
4. Rotate the lever to the neutral position. Air flow should stop.
5. If a valve fails to flow air or shut off as specified, replace with a new one.

15. REASONS TO REPLACE THE HCV

15.1

1. HCV did not pass the test procedure
2. Air leaks form the HCV
3. HCV is damaged

Figure 4. OPTIONAL PLUMBING VERSION A

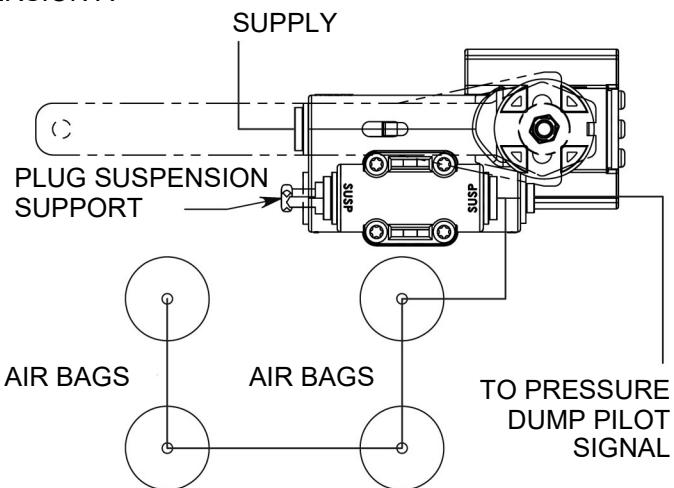


Figure 5. OPTIONAL PLUMBING VERSION B

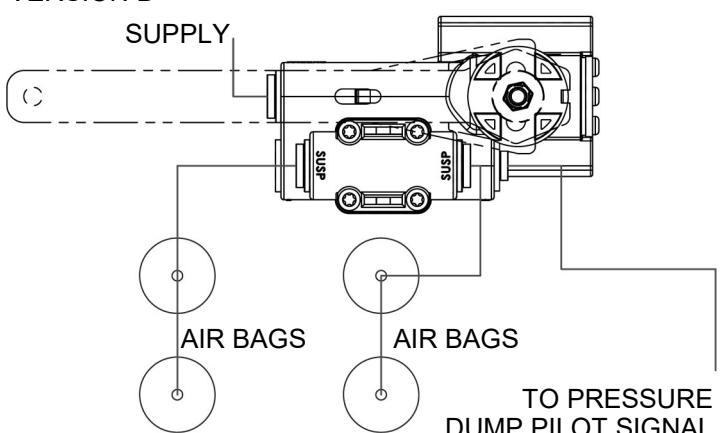


Figure 6. OPTIONAL PLUMBING VERSION C
NON-DUMP

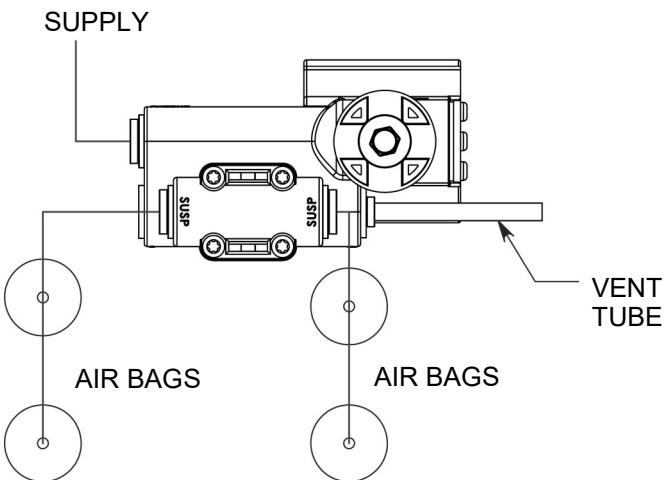
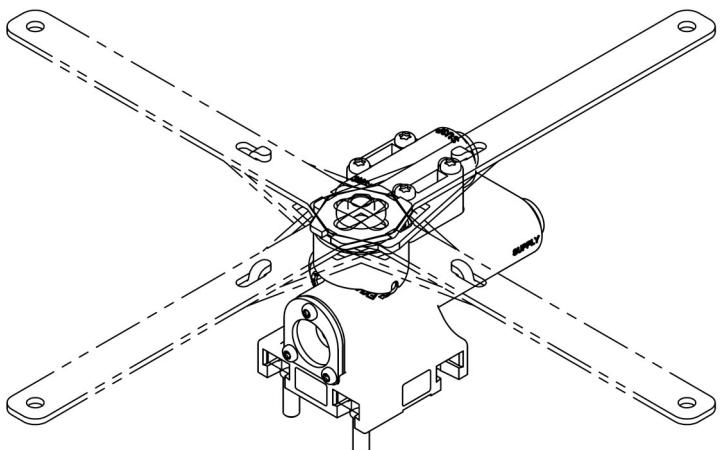


Figure 7.



LEVER CAN BE
MOUNTED IN ANY ONE
OF FOUR
POSITIONS

