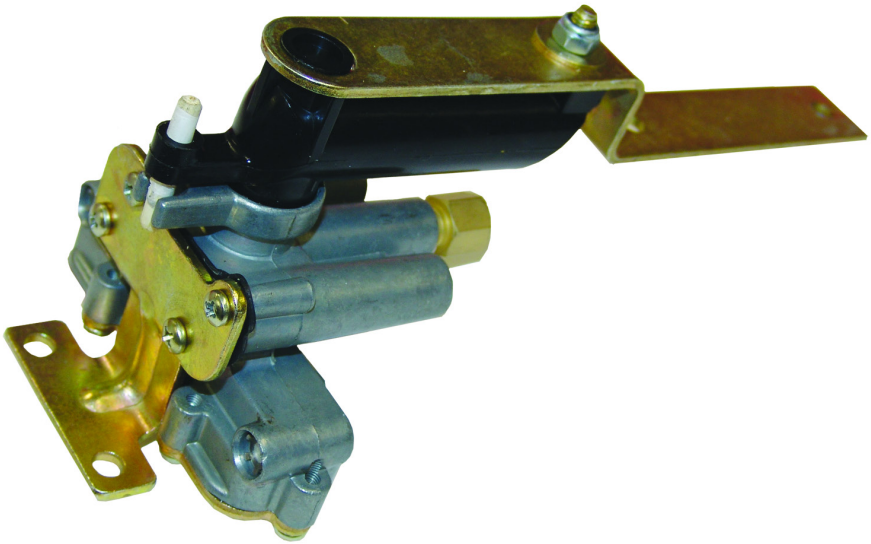
Installation Instructions for Height Control Valve



Controlled Response Height Contol Valve

GENERAL INFORMATION

The Controlled Response (CR) Height Control Valve (HCV) automatically adds air to, or exhausts air from air suspension to maintain a constant static design height. The Type CR Height Control Valve does not respond to short durations dynamic changes in axle position.

-The CR HCV can be used for the right hand or left hand and long or short control arm applications. Refer to installation instructions herein for proper plumbing connection.

-All valve ports are 1/8" NPT

-Compression fittings for 1/4", 3/8" or metric tubing, or push-in fittings are available specify when ordering.

-Several different linkage assemblies can be purchased. Contact your Distributor for detains.

PRE-INSTALLATION INFORMATION

IMPORTANT: The Height Control Valve (HCV_ and linkage are designed to maintain the vehicle ride height as loads increase and decrease. Proper set up of the HCV(s) is critical to the system performance. Prior to any assembly or disassembly, please read all instructions. Should you feel unable to properly perform the installation and adjustments of a CR HCV contact Technical Services or have a certified mechanic install or adjust the valve.

CAUTION: Incorrect installation of valves and associated components can impair suspension and vehicle performance. It is extremely important that the original equipment manufacturers specifications of a one-or two – HCV system are followed when installing the air control system. Refer to vehicle and suspension manufacturer's instructions for recommended valve location.

DO NOT: Install a single height control valve of any type if the suspension or vehicle manufacturer specifies a two (2) height control valve system.

DO NOT: Use antifreeze or other solvents in air supply line. Use of solvents or antifreeze can damage seals and voids the valve warranty.

ALWAYS: Use a pressure Protection Valve (PPV) and filter. Attach PPV directly to the air reservoir for supply to the Type CR HCV

INSTALLATION INSTRUCTIONS

NOTE: Prior to installation, rotate control arm 3-5 times 360 degrees in both the intake and exhaust directions to remove and adverse effects of storage.

1. Prepare the vehicle for installation. The vehicle should be in an unloaded condition before starting installation procedures. Be certain all dump switches are off. Park the vehicle making sure all vehicle wheels are on a hard level surface. Raise and properly support all auxiliary axles. Do not set the parking brakes, instead use safety wheel chocks to secure the vehicle.

   WARNING: Failure to support auxiliary axles could allow axle to drop causing death or serious personal injury. Failure to use wheel chocks could allow vehicle to roll resulting in death or serious personal injury.

2. Determine the location of the linkage end mounted to the vehicle axle so that when the linkage is connected to the control arm of HCV proper ride height can be achieved. +

3. Install fittings in valve before mounting to vehicle if possible. It recommends applying pre-applied sealing compound to the fittings. If they are not available use a drop of oil or thread locker. DO NOT use Teflon tape or pipe sealing compound.

4. Mount the Type CR HVC to the vehicle frame or a mounting bracket.

5. a)Connect air line from air springs to the center port (Figure 2)

   b) Connect air line from the air supply to the bottom port (Figure 2)

   c) The top port is ALWAYS the exhaust port. Install the supplied exhaust fitting to the top port and slip the exhaust hose over the exhaust fitting. (Figure 2)

6. Air up the vehicle and check all fittings for leaks.

7. Raise the suspension by moving the control arm of the Height Control valve up. Either place spacer blocks between the frame and axle or jack stands between the vehicle frame and ground. (Figure 3 and 4)

INSTALLATION INSTRUCTIONS (CONTINUED)

NOTE: The spacer blocks or jack stands should be at a height which will allow the vehicle to come to rest on them at the correct ride height of the suspension.

With space blocks or jack stands in position, lower the vehicle by moving the control arm of the valve down and deflate all air form the air springs and system. Recheck for proper ride height.

NOTE: It may be necessary to shim space blocks or jack stands to achieve the proper ride height.

8. Once proper ride height has been achieved, move control arm on Height Control Valve to a 45' down" position for 10-15 seconds. Return the control arm slowly to the center position. The insert the wood locating pin into the adjusting block and bracket on valve.

9. Loosen the ¼" adjusting lock nut on the adjusting block of Height Control Valve. With the suspension at ride height and HCV control arm at the center position, install a linkage from the control arm to the pre-determined location (Step 2) for the linkage connection to the vehicles axle.

10. Retighten the ¼" adjusting lock nut at the adjusting block to 24-48" in. LBS

11. Remove the wood locating pin that was installed in Step 7. To remove the spacer blocks or jack stands disconnect the linkage at the vehicle's axle and move the control arm up. Then remove the spacer blocks or jack stands and reconnect the linkage. The suspension will return to and maintain the proper ride height.

12. If proper ride height is not obtained or air springs do not inflate properly, check air pressure, check for proper piping and/or repeat Steps 6-10. As a final check, soap spray test all air line connections for air leaks and verify that all fasteners are tight. If unit is still not functioning properly, contact Technical Services.

PERIODIC AIR CONTROL MAINTENANCE

Drain all moisture form air reservoir at regular intervals. Normal air system maintenance should be practiced. The air filter in the Pressure Protection Valve is removable and can be cleaned or replaced, if necessary.

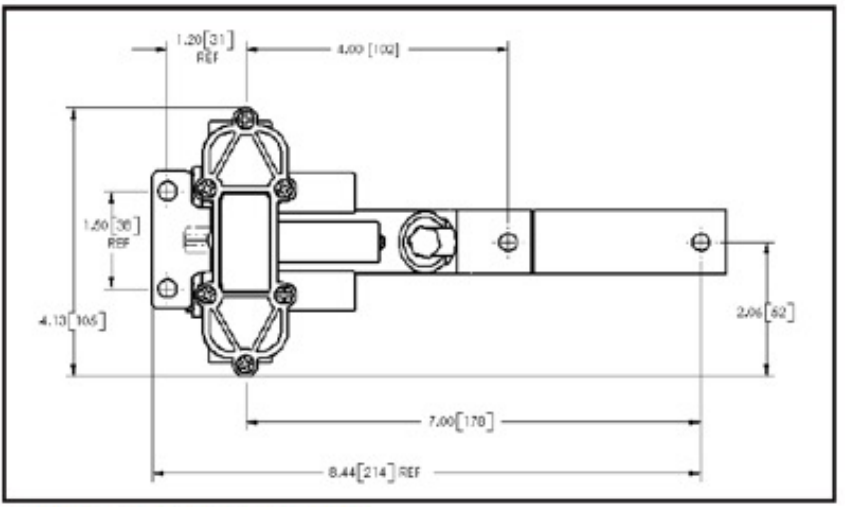


Figure 1. Specification Diagram

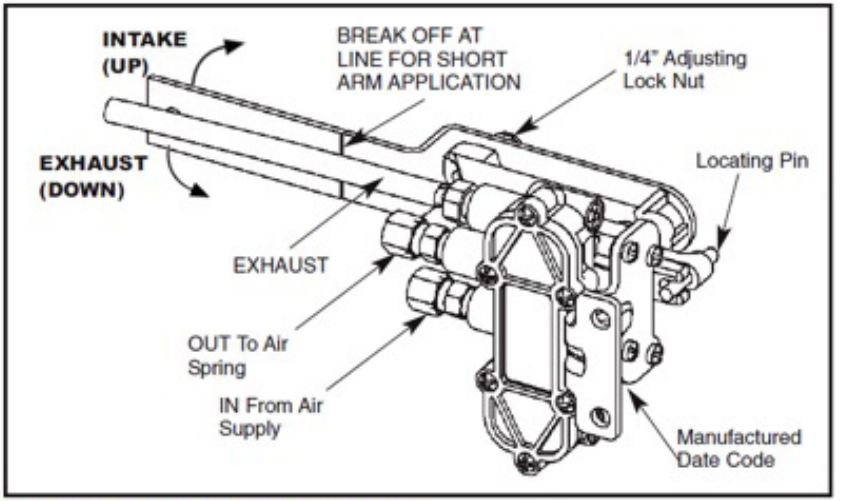


Figure 2. Features of Type CR HCV

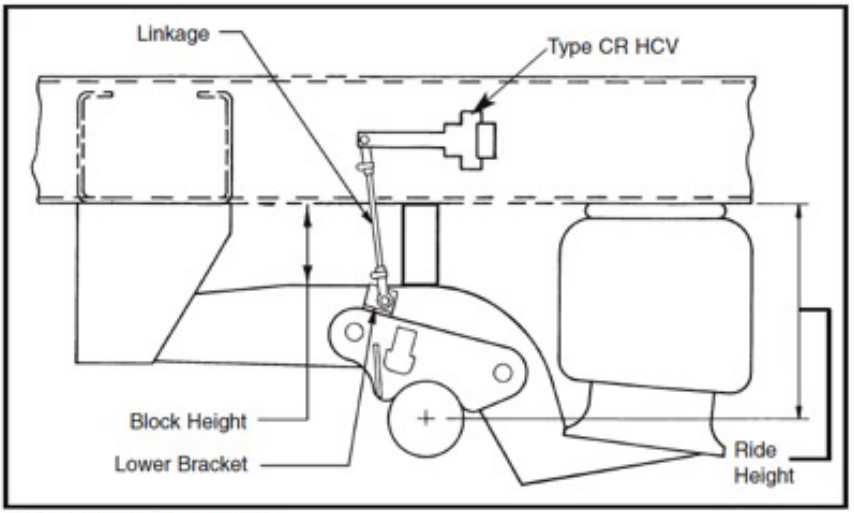


Figure 3. Block Height

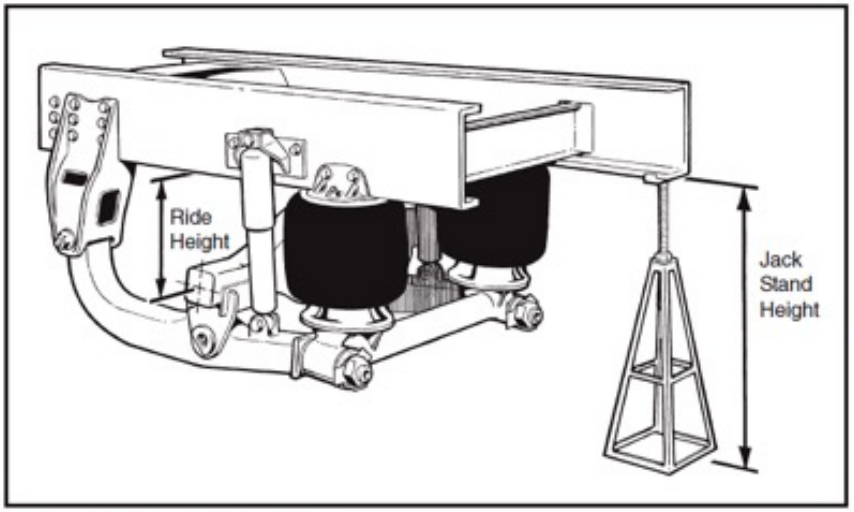


Figure 4. Jack Stand Height

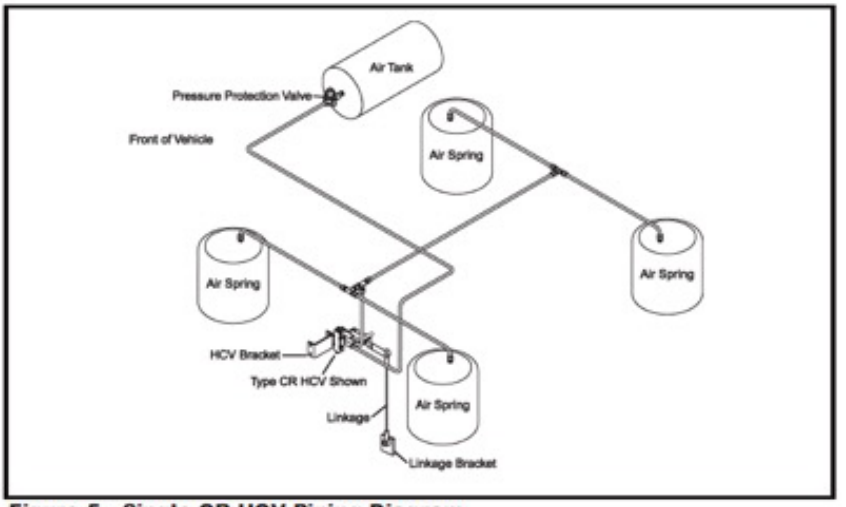


Figure 5. Single CR HCV Piping Diagram

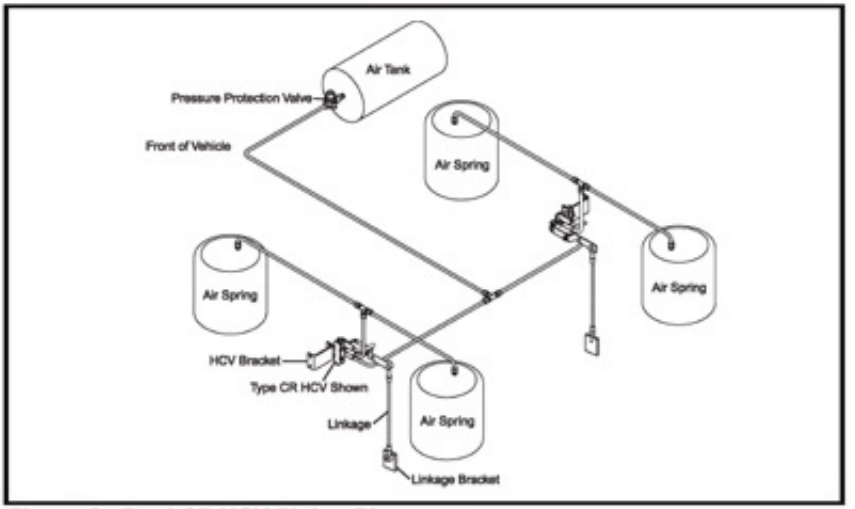


Figure 6. Dual CR HCV Piping Diagram