

Lower Assembly

1. Prepare the car

Begin by securely supporting the car on jack stands. Chock the rear wheels and set the parking brake to be sure vehicle does not roll. Always work on a flat, level surface. Remove the wheels to gain access to the brake system.

2. Disconnect tie rod ends

Remove the cotter pin and castle nut that secures the tie rod to the steering arm. You will reuse the castle nuts later. Use a heavy hammer to remove the tie rod end from the steering arm. A ball joint fork or “pickle fork” may be needed to break things loose.

3. Disconnect front flex hoses

Unscrew the hard line from the flex hose, being careful not to get brake fluid on painted surfaces. Remove the flex hose retaining clip and pull the hose out of the frame mounted bracket.

4. Remove drum brake assemblies

To remove the old drum brake assemblies you need to compress the coil springs or torsion bar. We highly recommend the use of a spring compression tool. If you do not have access to such a tool, an alternative method using the weight of the car to compress the spring is also outlined. We highly encourage you to use a spring compressor! Take your time and be extremely cautious regardless of which method you choose. Failure to handle the spring properly can result in serious injury to you and damage to the vehicle!

Preferred method for coil springs:

- a. Remove the shock absorber
- b. Install the spring compressor following the directions supplied with the tool
- c. Compress the spring until all pressure is released from the control arm
- d. Remove the cotter pin and castle nut from the upper ball joint
- e. Keep the castle nut for reuse later
- f. Use a ball joint fork to release the upper ball joint from the spindle
- g. Raise the upper control arm up out of the way

- h. Repeat steps “d” and “f” to release the lower ball joint and remove the spindle assembly

Preferred method for torsion bar:

- a. Jack up the lower control arm until all weight is lifted off the wheel
- b. Place a jack stand or other support securely under the control arm
- c. Remove the cotter pin and castle nut from the upper ball joint
- d. Use a ball joint fork to release the upper ball joint from the spindle
- e. Raise the upper control arm up out of the way
- f. Repeat steps “c” and “d” to release the lower ball joint and remove the spindle assembly

5. Inspect suspension components

Now is the time to clean up and inspect your suspension components. Check the inner and outer tie rod ends and ball joints for wear and replace if needed. Inspect the rubber boots for cracks or tears. Universal replacements are available at most automotive parts stores.

6. Remove original steering arm / lower ball joint assembly

Remove the dust cap, cotter pin, and washer from the old spindles. Pull off the hub to allow access to the steering arm bolts. Unbolt the Steering arm and prep it for reuse.

Driver's side steering arm / ball joint assembly

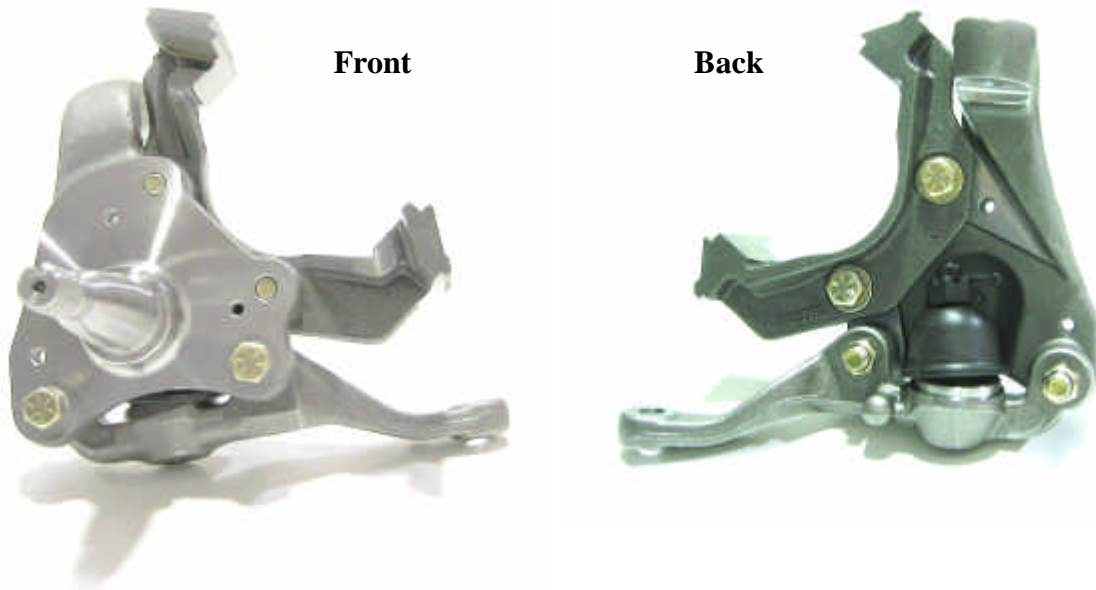


7. Bolt together the new spindle assembly

Attach the new caliper bracket to the spindle with the supplied hardware. The machined side of the bracket should face the spindle as illustrated to the right. Torque the bolts to 95 ft./lbs. Be sure you use the correct bracket and spindle. Both the spindles and the brackets are marked left or right.



Once the brackets are on, you need to determine if you want front or rear mounted calipers. Most applications use rear mounted calipers. If you want to run front mounted calipers, you need to reverse the spindles. (left hands to right and vice versa) Bolt up the old steering arm assembly and torque the hardware to the specifications provided in the assembly manual.



Driver's side spindle assembly (rear mounted calipers)

8. Install the new disc brake spindles

Place the lower ball joint into the lower control arm and attach it with the original castle nut. Torque the nut to the specifications provided in the assembly manual. Fix it in place with the new cotter pin supplied with your kit.

Pull the upper control arm down and insert the upper ball joint into place. Attach the upper ball joint with the original castle nut. Torque the nut to the specifications provided in the assembly manual. Fix it in place with the new cotter pin supplied with your kit. Place the tie rod end back into the steering arm and fasten it with the original castle nut. Torque the nut to the specifications provided in the assembly manual. Fix it in place with the new cotter pin supplied with your kit.



Front mounted caliper installation

9. Release the pressure on the coil spring or torsion bar

You are now ready to release the pressure on the coil spring or torsion bar. If you used a spring compressor, you can release it slowly and reinstall the shock absorber. If you used the other method, you can take the weight back off the lower control arm and place a jack stand or other support under the frame.

10. Install the backing plates

Place the backing plate over the spindle and fasten it with the hardware supplied with your kit.

11. Grease the bearings and install the rotors

You are now ready to install the bearings and rotor. Start by placing the rotor face down. Races come preinstalled in the rotors. If you received additional races with your bearings, they will not be used. Apply a little bearing grease to the bearing race already in the rotor and pack the larger of the two bearings (Inner) with grease. Install the bearing into the rotor and place the grease seal on the rotor. Tap the seal into place being careful not to damage the rubber portion of the seal.



Inner Bearing Assembly

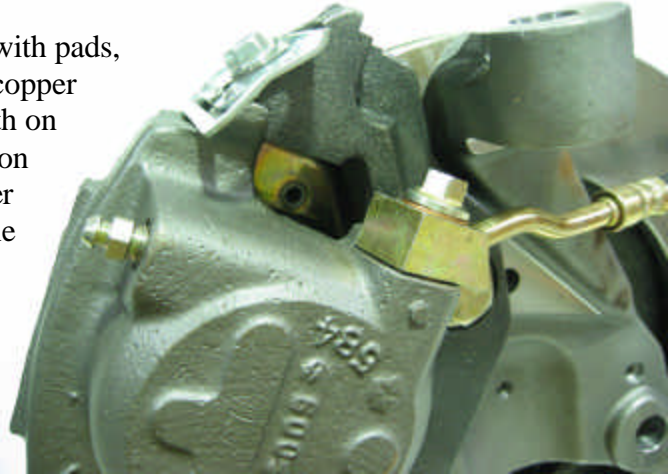
Outer Bearing Assembly

Turn the rotor face up and grease the bearing race. Pack the smaller bearing (Outer) and place it in the rotor. Slide the rotor onto the spindle being careful that the outer bearing does not fall out of place. Install the keyed washer and castle nut and torque to the specifications provided in the assembly manual. Fix it in place with the new cotter pin

supplied with your kit. Install the dust cap with a mallet and a large socket placed over the dust cap. A screwdriver can also be used along the edges.

12. Mount the calipers and flex hose

Your new calipers come fully loaded with pads, mounting hardware, banjo bolts, and copper washers. Start by lubing the slider path on the bracket with silicon grease. Position the caliper in the bracket with the bleeder screw at the 12 o'clock position. If the caliper won't install in the brackets with the bleeder pointed up, you probably have the opposite side caliper. Use the illustration below as a guide to install the caliper retaining clips and bolt the caliper into place.



Note: The bleeder screws must be pointed up. If the bleeders are pointed down, the calipers will trap air and you will not get the system to bleed properly.



Remove the banjo bolt and copper washers from the caliper. Place a copper washer on

top of the flex hose and insert the banjo bolt. Place the second copper washer over the banjo bolt on the bottom of the flex hose and bolt the hose onto the caliper with the specifications provided in the assembly manual.

Insert the other end of the flex hose into your original frame brackets. You may need to file the inside of your original brackets to accommodate the new flex hose. Push on the new flex hose clip supplied with your kit. At this point the hose might seem a little tight when you turn the wheels from lock to lock. This is normal. The suspension is flexed to the absolute limits of its travel. You would have to be airborne while making a sharp turn to recreate these conditions while driving.

This completes the lower assembly installation.



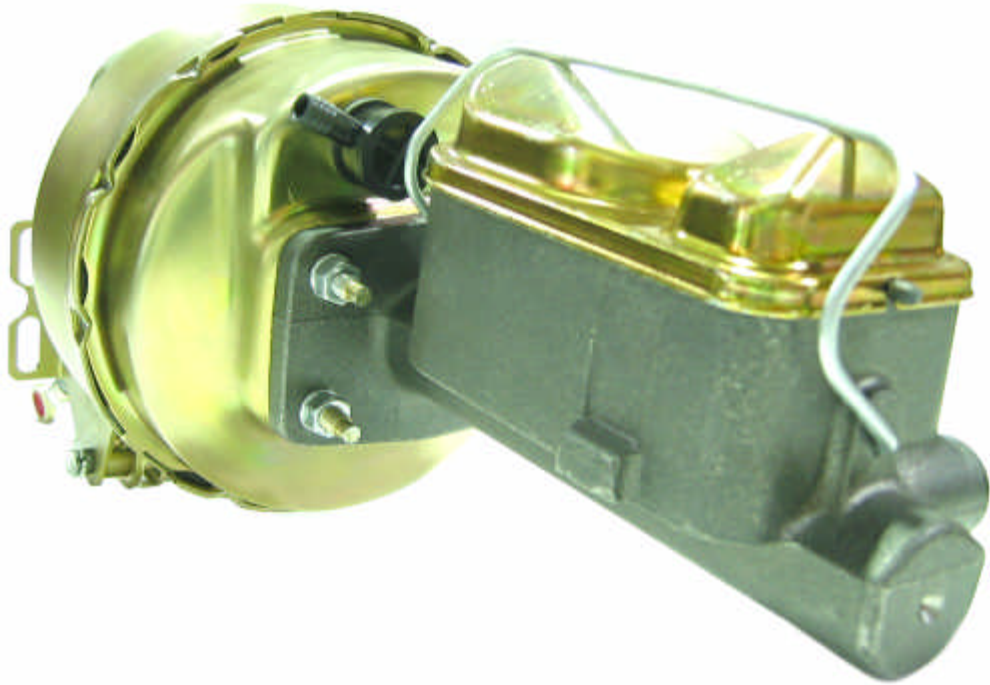
Upper Assembly

1. Remove the old master cylinder assembly

Remove the master cylinder brake lines being careful not to get fluid on any painted surfaces. Remove the clevis from the pedal rod under the dash. If your original system was power, you should be able to remove the booster mounting nuts from the firewall and remove the booster/master assembly. If your original system was not power, simply remove the master cylinder mounting nuts from the firewall and remove the master cylinder.

2. Mount the new master cylinder and booster assembly

- a. Place the master cylinder onto the front of the booster and bolt it in place with the locknuts provided with your kit
- b. Bolt your finished assembly to the four studs on the firewall
- c. Supply vacuum to the booster check valve



3. Install and adjust the pedal rod

Test fit the eyelet from the booster onto the brake pedal. Adjust the pedal rod so there is about $\frac{1}{4}$ " – $\frac{1}{2}$ " of free travel at the top of the pedal. Be sure to tighten all jam nuts on the pedal rod to lock it in place after all your adjustments are made.

Bleeding the system

Working your way forward from the wheel farthest from the master cylinder will help insure a good bleed and a firm pedal. It is important to bleed the system in the following order:

- 1. Right Rear**
- 2. Left Rear**
- 3. Right Front**
- 4. Left Front**

If you have a spongy pedal, be sure the bleeder screws are pointed up and try re-bleeding the system.

Technical Support

We want your conversion project to go smoothly. Double check that you have followed these instructions correctly and those included with any upgrade components you may have purchased. If you need additional help getting your new disc brakes to function properly, we're here for you.

Thank You for Your Business!

PV75 Fixed Combination Valve Supplement

This supplement is for customers who have chosen the “fixed” combination valve with the purchase of our disc brake conversion kits. This diagram shows where each port of the valve routes. If you have any further questions or concerns, please don't hesitate to call our toll free technical support line. Thank you again for your business.

