



*Steering, Brake & Suspension Specialists*

# #CP3013, #CP3013 MCPV-C & #CP3013 MCPV and #CP3014, #CP3014 MCPV-C & #CP3014 MCPV Hydraulic Brake Assist System Instructions for 1964-72 GM "A" Body

## Note:

This system is intended for "off road use only"

## Instructions:

1. Please carefully inspect the entire braking system thoroughly and replace any marginal items. Installation of braided steel, high performance brake lines is highly recommended, though not mandatory.
2. Please carefully inspect the entire power steering system thoroughly and replace any marginal items. This system will not function properly unless the power steering system operations are 100%
3. Disconnect the battery, then remove the driver's seat for improved under dash access.
4. Remove the existing high side power steering line and allow the system to drain into a suitable container.
5. Remove the brake pedal rod clevis pin and clip carefully, along with the factory installed brake light striker plate located on the brake pedal (if equipped as such).
6. Remove the master cylinder attachment nuts, and then carefully secure the master cylinder approximately 3-6 inches forward of existing mounting, if brake line routing / integrity permits. (9/16 wrench needed)
7. Inspect the master cylinder at this time for any signs of brake fluid seepage at the rear seal, and also check for any sludge accumulation in fluid reservoirs. Replace the master cylinder if necessary.
8. If equipped, remove the power brake booster to firewall attachment nuts, then carefully remove the power brake booster from vehicle. (9/16 wrench)
9. Transfer the brake pedal rod clevis (from pushrod on the manual brake pedal rod, or vacuum booster), to the hydraulic brake assist unit (insuring proper thread engagement – 8 thread minimum).
10. Install the hydraulic brake booster carefully into the firewall, with the hydraulic fittings facing downward, while aligning the brake pedal to clevis interface simultaneously.
11. Using the 4 supplied replacement attachment nuts and washers, securely fasten the hydraulic brake assist unit to the firewall mounting studs. (1/2 wrench needed)
12. Connect the master cylinder to the hydraulic brake assist unit firmly, using supplied replacement nuts. (17mm wrench)
13. Lubricate and install the brake pedal rod clevis pin and retaining clip.
14. Adjust the brake pedal height to stock setting, or approximately 1/2 inch lower than prior configuration, or to your liking by spinning the brake pedal rod in / out of the clevis. Double check for sufficient thread engagement at the clevis, then tighten the brake pedal rod jam nut firmly. (7/16 and 9/16 wrench)
15. Adjust the brake pedal switch to match the revised pedal height. Reconnect the brake lamp switch electrical connections.
16. Connect the longer pressure line to the power steering pump, and then to the inlet / driver's side AN fitting of the hydraulic assist unit. (5/8 wrench and 11/16 wrench)
17. Install the AN line adapter into the power steering box inlet port. (3/4 wrench)
18. Connect the shorter pressure line to the outlet / passenger side port of hydraulic assist unit (90 degree direct fit flare style), then connect the remaining end to the power steering box AN adapter. (5/8 and 11/16 wrench needed)
19. Inspect the existing low pressure power steering return line, from the steering box to ps pump, replace if marginal.
20. Cut the existing power steering return line about 3 inches from the power steering reservoir, install the brass "T" STRAIGHT INLINE with the supplied hose clamps.
21. Connect the chromed "hosenuit" end of return line to the brake assist unit hose nipple, then to the brass "T" installed in the ps return line – trim hose to length as necessary.
22. Reconnect the battery, verify for proper brake light operations.
23. Verify that all prior steps have been successfully completed!
24. With engine off, fill power steering reservoir with Valvoline Synpower, Genuine GM, or equivalent high quality power steering fluid only. With front wheels raised off the ground, slowly turn the steering wheel back and forth approximately 20-25 times, while occasionally rechecking the fluid level. \* Never use poor quality ps fluid or ATF because it foams in use causing noisy pump operation and erratic system operation.
25. Disable the ignition system, then crank the engine for five full seconds (to initiate proper system priming).
26. Recheck the fluid level, topping off as necessary, and crank engine for five more seconds. Repeat this procedure as necessary until fluid level remains consistent.

*NOTE: This system is designed to connect to the brake pedal in the uppermost of the two pedal rod connection points usually found on most pedals. This connection point is approximately one inch higher on the brake pedal than the power brake pedal rod connection point. This upper hole is commonly referred to as the manual brake setting hole. If this hole does not exist on your brake pedal, you will have to remove the brake pedal and drill a new 3/8 hole in the*



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## **Hydraulic Brake Assist System Instructions (Continued)**

27. Cap fluid reservoir and restore ignition system operations.
28. Start engine briefly, check for any signs of fluid leakage. Do not depress brake pedal yet.
29. Shut the engine off and recheck the fluid level, topping off as necessary. Pump brake pedal a few times to purge any air trapped in the accumulator bottle. If the power steering fluid appears foamy, and the power steering pump operation was noisy in the prior run sequence, allow the vehicle to sit for 15 – 20 minutes.
30. Recheck the fluid level, then start the engine, allowing to warm up to full operating temperature.
31. With the engine warmed up and idling, check for proper power steering operations, and for any leakage, by steering vehicle from lock to lock approximately 5 – 10 full sweeps.
32. If all prior steps have been performed successfully, apply moderate pressure to brake pedal slowly 5 – 6 times. Shut the engine off and recheck fluid level.
33. Start engine, apply full pedal pressure 2 or 3 times to verify proper systems integrities.
34. Carefully road test the vehicle to verify proper systems operations, and to get accustomed to the brake systems response.
35. Allow the vehicle to sit overnight. Next day, when vehicle is still cold, recheck all connections and lines for proper torque, recheck fluid level and top off as necessary.
36. Congratulations! You are now ready to “Stop on a dime and get two nickels change!” And, as always, please drive carefully!

**IMPORTANT! NEVER APPLY THE BRAKES WHILE THE MASTER CYLINDER IS REMOVED, OR YOU WILL DESTROY THE BRAKE ASSIST UNIT!**

- Perform brake bleeding procedures with the engine off for best results.
- If supplied with the optional slip fit replaceable master cylinder pushrod, simply gently twist and pull the existing master cylinder pushrod out, then slip on the alternate rod by reversing the procedure. The longer rod will accommodate most 1969 and earlier “deep style” master cylinders, the shorter rod supplied standard will accommodate most 1970 and newer “shallow style” master cylinders.
- Please note: The high quality Aeroquip power steering linesets have adjustable end fittings! If the preset angles require adjustment, simply use two 11/16 wrenches to slightly change the fitting angles. The gap between the stationary hose nut on the line and the end fitting itself should not exceed more than the thickness of a penny, or leakage may occur.
- Please allow up to 500 miles of operation for the systems to fully “settle / break in”! Until all the air pockets and “micro bubbles” settle out of the assist unit and power steering system, operations may be initially noisy, accompanied by some “pedal kickback” upon braking, and “stiff / slow pedal return” caused by air in the systems.

**PLEASE REFER TO OUR AEROQUIP LINE ASSEMBLY INSTRUCTIONS WHEN INSTALLING NEW LINE SETS.**

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