

# IMPORTANT

**The enclosed Hydraulic clutch actuation system *MUST* be used in conjunction with your new Centerforce clutch.**

## Dodge RAM Hydraulic Clutch system removal/installation:

**NOTE: DO NOT** disassemble the clutch master cylinder, hydraulic line and/or the slave cylinder system. The entire hydraulic clutch system will be removed and re-installed as a complete assembly.

- 1) From under the dashboard; pull UP (hard) on the clutch pedal to release the clutch rod from the clutch master cylinder. With force, the clutch rod will "POP" out of the clutch master cylinder.
- 2) Remove clutch rod and clip from the clutch pedal (save clip for re-installation).
- 3) Take note of the clutch safety switch position as located on the clutch rod. Lift the white safety switch retention clip and slide the safety switch off the clutch rod and set aside for re-installation (no need to disconnect the safety switch from the wire harness).
- 4) From under truck; Remove clutch slave from Bellhousing and save the mounting hardware for re-installation.
- 5) Remove two plastic line retention clips from the underbody. Take note of the hydraulic line routing for re-installation.
- 6) From under dash; Remove 2 nuts from the clutch master cylinder bracket (save the nuts for re-installation) and remove the clutch master cylinder from under hood.
- 7) If possible, drop the master cylinder down to the drivers side wheel well opening. Feed the entire hydraulic assembly out of the wheel well. Having a second person available for this step is helpful.
- 8) Reverse this procedure for installation of the new hydraulic clutch system.
- 9) Important note: DO NOT cut the white plastic retention straps on the new slave cylinder push-rod. These straps will automatically "POP" off once installation is complete and the clutch pedal is depressed for the first time. DO NOT depress the clutch pedal or otherwise "cycle" the hydraulic release system until the transmission has been installed and the hydraulic slave cylinder attached to the bellhousing.
- 10) Cycle the clutch pedal several times and then check the clutch master cylinder reservoir. The clutch fluid should be at normal level as marked. If needed, add a small amount of high quality DOT 3 fluid.
- 11) Once the hydraulic clutch system installation procedure is complete, the clutch should engage and start to move the truck at approximately half of the clutch pedal travel up from the floor. NOTE: there is no conventional hydraulic bleeder within this system. It SHOULD NOT be necessary to bleed this sealed system. However, should any air be introduced into the clutch hydraulic system, you will need to vacuum bleed the system from the clutch reservoir.



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## Hydraulic clutch system vacuum bleed procedure

**NOTE:** You will need a hand held vacuum pump and fresh high quality DOT 3 or 4 brake fluid for this procedure.

- 1) Remove clutch fluid reservoir cap. Be sure the fluid level is at normal as marked.
- 2) Use the enclosed round rubber reservoir gasket to create a temporary seal against the clutch master cylinder reservoir.
- 3) Using the enclosed vacuum line cup, attach the vacuum hand pump to the rubber gasket and introduce 10 to 15 in/Hg negative pressure to the clutch hydraulic system. **IMPORTANT:** you will be drawing a vacuum from the air gap above the fluid within the reservoir... **DO NOT** draw any fluid into the vacuum pump! If the system is sealed and done correctly, the negative pressure should hold for several minutes. This procedure will draw out any air contained within the hydraulic system. **DO NOT** depress the clutch pedal while there is a vacuum applied to the hydraulic clutch system.
- 4) Release vacuum pressure from the system and top off fluid as needed. Repeat step 3 several times. Then remove the vacuum pump and rubber reservoir gasket.
- 5) Top off the fluid reservoir as needed and check the hydraulic system for leaks.
- 6) Replace the reservoir cap.
- 7) Once the clutch hydraulic vacuum bleed procedure is complete, the clutch should engage and start to move the vehicle at approximately half of the clutch pedal travel up from the floor.



**Note:** It's common for small air bubbles to remain aerated within the clutch fluid for several hours. The clutch vacuum bleed procedure may need to be repeated after the vehicle sits overnight.