

# IMPORTANT

## Clutch Reservoir to Master Cylinder hose upgrade kit

The factory hydraulic clutch hose is known to have issues with sealing properly at the shared Brake/Clutch Fluid Reservoir and at the Clutch Master Cylinder connection on the Firewall. Typically, the factory hose will not leak fluid, but it can allow air to enter the clutch hydraulic system. Once air has been introduced into the hydraulic system, proper clutch release and performance will diminish. Important: Hydraulic Brake/Clutch fluid can damage painted surfaces. During the install procedure, there may be a small amount of fluid loss. Take proper steps to contain and keep fluids away from painted surfaces.

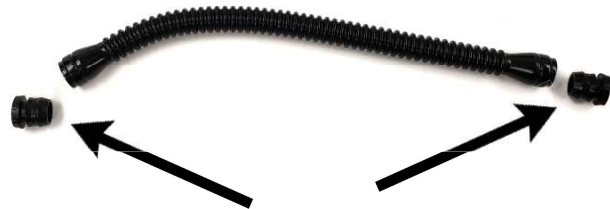
1) Using pliers or a large screwdriver, pull the factory hose from the Fluid Reservoir, It's helpful to first twist the hose on the nipple to help free the connection. The factory connection is a "snap" fit. There is no hose clamp. Removal of the plastic hose requires a hard pull, do not cut or slice the old hose. DO NOT Damage the Reservoir plastic nipple.



2) Using the same method, pull the factory hose from the clutch Master Cylinder connection at the Firewall.



3) Ensure the rubber gasket sleeve is removed from BOTH the Reservoir and Master Cylinder nipple.



See Reverse →

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4) Install the supplied hose clamps on the new hose



5) Install the new hose on the Master Cylinder nipple at the Firewall. Slide the clamp in place and use pliers to lock the clamp on the hose.



6) Route the hose to the Reservoir and trim any excess hose as needed for proper, kink free fit.

7) Install the new hose on the Reservoir nipple. Slide the clamp in place and use pliers to lock the clamp on the hose.



8) If necessary, top off the Brake/Clutch Reservoir using factory approved fluid.

9) After placing the hose, it may be necessary to bleed the clutch hydraulic system. See your factory service manual for the proper procedure, or see the Centerforce Tip Sheet regarding vacuum bleeding to remove any trapped air from within the clutch hydraulic system.

Should you have questions or require further information,  
please contact our Tech Line at: (928) 771-8422



**"NOTE"** Centerforce tip sheets are for general reference only. Please refer to your owners manual for vehicle specifications.

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## Hydraulic Line Bleed Procedure for Jeep JL

During bleed process below, note if any air bubbles are observed in the clear hose.

1. Perform the hydraulic clutch system bleed, using the Mityvac tool.  
**Figures 1 & 2 on Reverse**
2. Assemble the Mightyvac tool using an adequate length of clear hose (Figure 1).
  - a) Install bungee cord or equivalent to hold the clutch pedal up.
  - b) Remove the reservoir cap and fill the brake/clutch fluid reservoir to top of reservoir (Figure 2 - See Reverse).
  - c) Raise and support the vehicle.
  - d) Remove the rubber cap covering the Clutch Slave Cylinder bleed valve.
  - e) Install a length of clear tubing onto the Slave Cylinder bleed valve.
  - f) Connect the other end of the clear tubing to the UNMARKED port on the Mityvac clear bottle (Figure 1).
  - g) Connect the Mityvac pump side hose to the port marked TO PUMP on the Mityvac clear bottle (Figure 1).
  - h) Using the Mityvac system, create and maintain a minimum vacuum of 20 mmHg on the Slave Cylinder bleed valve.
  - i) Fully open the Slave Cylinder bleed valve.
  - j) While maintaining vacuum on the Slave Cylinder bleed valve, continue the process until 60mL of brake fluid is removed.
  - k) Fully close the Slave Cylinder bleed valve.
  - l) Top off the brake/clutch fluid reservoir to the top of the reservoir (above MAX fill) (Figure 2).
  - m) Repeat steps H - l at least five more times or until there are no more air bubbles observed through the clear hose.
  - n) Remove the Mityvac system and reinstall the rubber cap on the Slave Cylinder bleed valve.
  - o) Lower the vehicle.
  - p) Install brake fluid reservoir cap (Note: Align cap tabs to reservoir tabs).
  - q) Remove bungee cord from clutch pedal.
  - r) Actuate the pedal 50 times, making sure the pedal is getting to the top of its return stroke each time (this may require that you lift the pedal to the top of the stroke).
  - s) At the brake/clutch fluid reservoir, top off or remove fluid as necessary to reach the MAX fill line on the reservoir.
  - t) Engage the parking brake, verify the vehicle is in Neutral, start engine and verify clutch operation and pedal feel.
  - u) If the clutch pedal is not returning to the top of its stroke, or does not disengage the clutch, repeat the bleeding procedure.

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## Hydraulic Line Bleed Procedure for Jeep JL

FIGURE 1

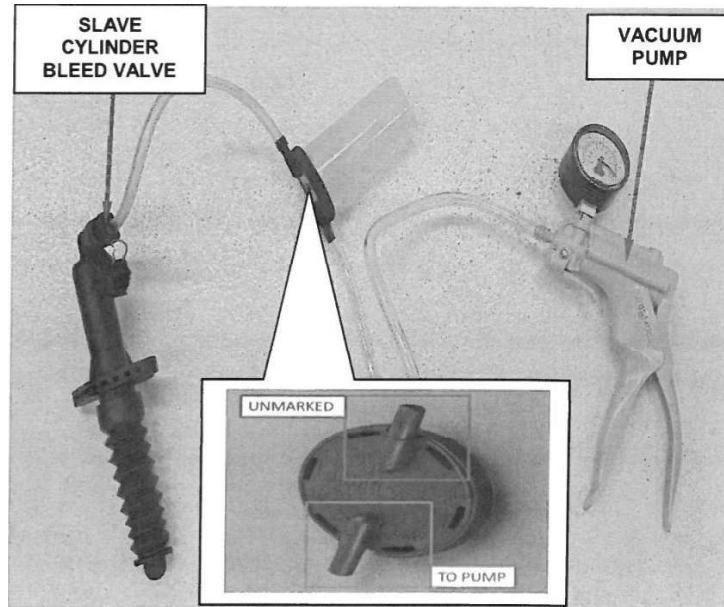
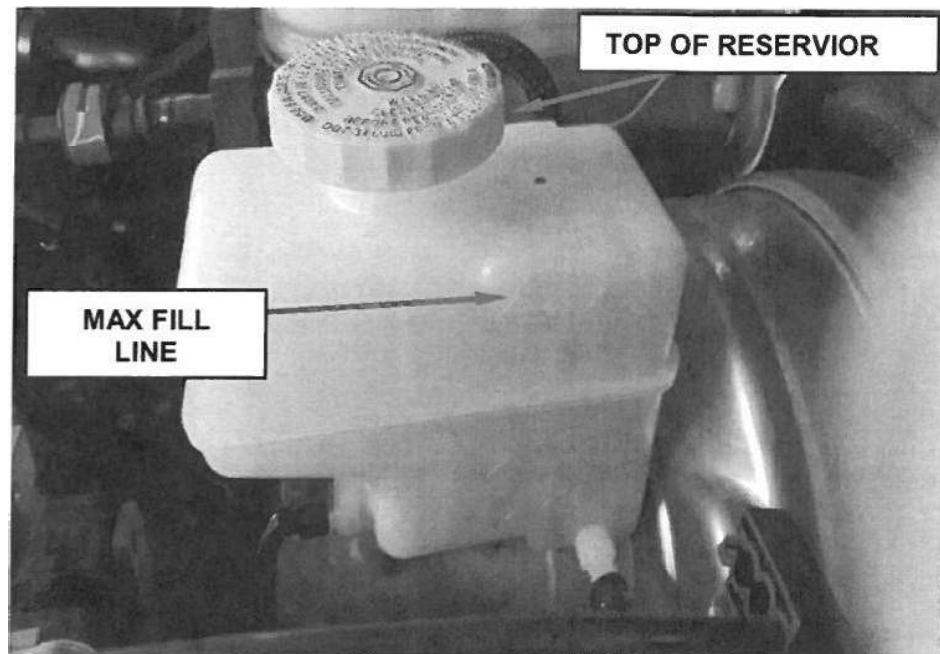


FIGURE 2



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