

## **Ford Ranger/Explorer Clutch Master Cylinder Installation**

**IMPORTANT:** The Clutch Master Cylinder (M/C) on your vehicle is mounted at an angle on the firewall and bleeding **MUST** be done before installation!

**Consult vehicle service manual for further detail.**

1. Carefully clean off the hydraulic tube coupling. Disconnect coupling at the transmission with a hydraulic line Quick Disconnect (QD) tool by sliding the white plastic sleeve toward the slave cylinder.
2. Remove the clutch M/C from the firewall after disconnecting pedal linkage (1995/up - rotate cylinder 45 degrees clockwise). Remove reservoir and clutch tube. Transfer or replace the reservoir, clutch pedal position switch, and clutch tube to the new M/C, allowing old fluid to drain into a waste container.
3. Support the reservoir in an appropriate fixture or tool such as a vise, allowing the M/C and tube to hang down from the reservoir in the position illustrated below (push rod facing down and M/C angled up toward the reservoir). Care must be taken not to damage the reservoir.
4. Fill reservoir with an approved DOT 3 or 4 brake fluid. With a blunt tool, depress the small valve in the middle of the QD coupling located at the end of the clutch tube. Keep the end of the tube and coupling pointed down into a waste container, allowing fluid to escape from QD valve.
5. With QD valve depressed, fully depress and hold the M/C push rod. Remove the tool and allow the QD valve to close, and then slowly release the push rod. Maintain fluid level in reservoir at all times to prevent air from being introduced.
6. Repeat Step (5) four more times.
7. With the QD valve closed, slowly depress the push rod using  $\frac{3}{4}$ " – 1" strokes. Observe the reservoir for air bubbles. Repeat this until the push rod can only be pushed in 4mm or less.
8. Top off the reservoir with fluid. Replace the diaphragm and cap onto the reservoir.
9. Check to be sure the "O" Ring on the outside of the coupling is present, clean and undamaged. Replace if necessary and lubricate with DOT 3 or 4 brake fluid.
10. Reinstall the reservoir, clutch M/C and clutch tube as one unit on the vehicle. (1995/up - rotate M/C counterclockwise 45 degrees to install onto firewall.)
11. Reconnect the clutch tube by inserting QD coupling onto the coupling of the concentric slave cylinder. Make sure the line is secure.
12. Follow steps 13 - 16 from the enclosed instructions for bleeding concentric slave cylinders.
13. If air is re-introduced into the system, the M/C assembly (complete with reservoir and clutch tube) will need to be removed again, repeating steps 3 through 12.

**Air cannot be purged from the M/C while mounted on the firewall.**

