



TSB-211

Applicable to VE/ VF V8 Commodores When Fitting Braided Clutch Lines

Removal and fitment of concentric slave cylinder and braided lines

STEPS

- 1) Remove all fluid from the master cylinder reservoir or on applications with a common brake/clutch reservoir the supply line to the clutch master cylinder can be crimped with a hose clamping tool.
- 2) Remove the exhaust, tail shaft, transmission mount and pins supporting the shifter mechanism. Unclip all sensor wires to the transmission.
- 3) Using a flat blade screwdriver remove the wire clip from the hard clutch line on the side of the transmission and remove the flexible hose.



Rubber line meets hard line

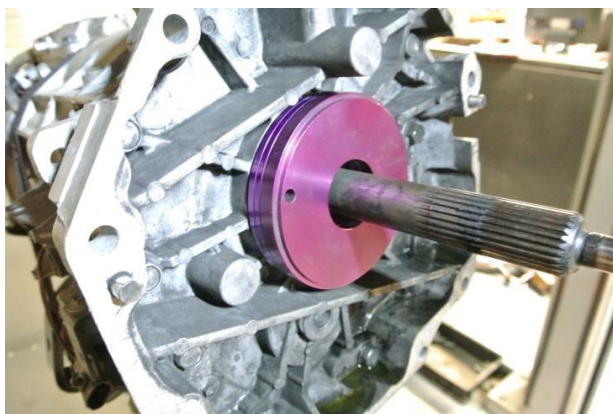


Wire clip popped up



Rubber line separated

- 4) Undo the bolts from the transmission to the bellhousing and carefully remove the transmission using a gearbox stand.
- 5) Undo the two bolts holding the old concentric slave cylinder on and remove the unit.
- 6) Clean the face of the transmission and make sure it is free of dirt and burs.
- 7) Mount any spacers that came in the kit. Note that some kits come with multiple spacers to make up a certain thickness and some kits will not require any spacers at all. If your kit comes with two spacers they will both need to be mounted for correct fitment.



Spacers located on transmission



Concentric slave mounts on spacers

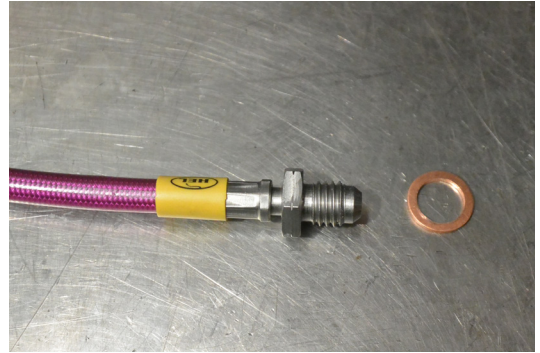
- 8) Fit the concentric slave and torque the two mounting bolts up to 11ft.lbs/ 15N.m using the new bolts supplied.



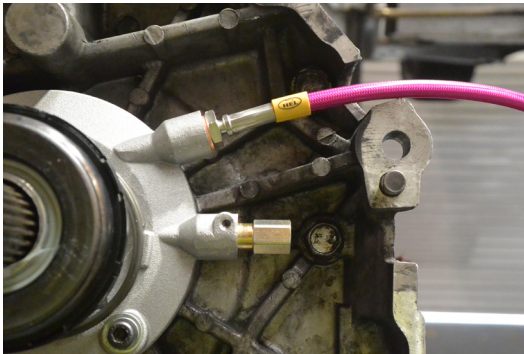
- 9) Remove the original bleeder adapter from the slave (not required). Fit the short braided line with the bleeder nipple on to the bleeder port using the copper washer and tighten to seal.



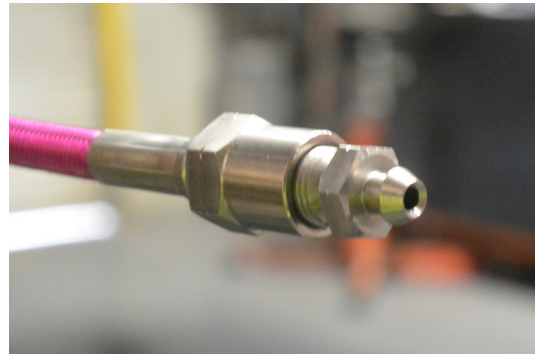
Remove bleeder adapter



Copper washer must be installed



Braided bleeder line fitted



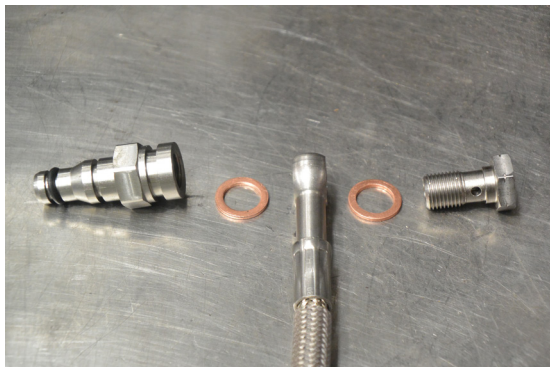
Bleeder nipple installed in bleeder line

- 10) Using a flat blade screwdriver pop the wire clip out from the master cylinder and remove the original clutch line. Make sure that the rubber o-ring is also removed on the line or is removed from the master cylinder separately. If this is not removed the new push fitting will not seat correctly.



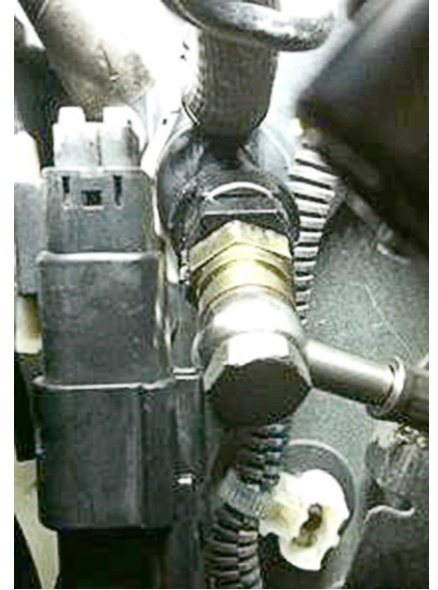
Push fitting removed from Master Cylinder

- 11) Install the new push fitting in the straight banjo fitting as demonstrated.



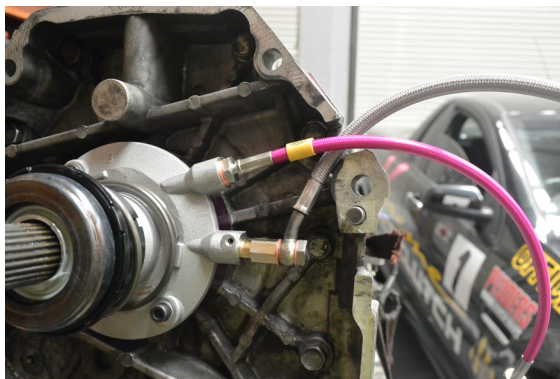
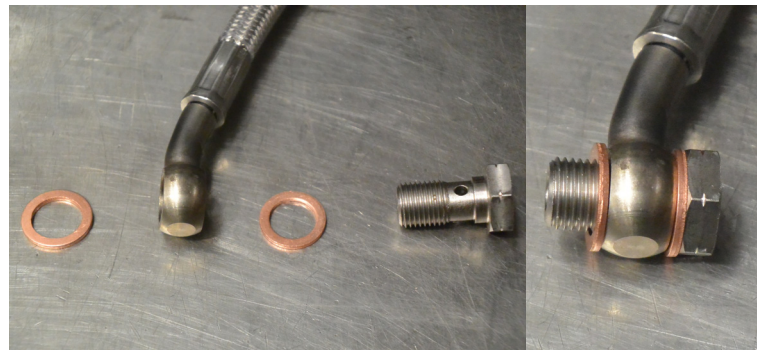


- 12) Make sure the banjo bolt is tight in the push fitting and feed the clutch line around the back of the engine. Push the new fitting in the master cylinder and push the retaining clip in.

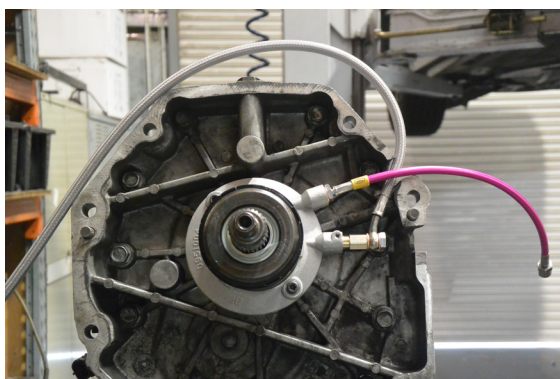


New push fitting with braided line clipped in

- 13) Ensure the clutch line runs over the top of the bellhousing to the left hand side of the vehicle. Bring the transmission up close to the engine so the braided line reaches the slave.
- 14) Install the clutch line to the slave ensuring the copper washers are installed as illustrated.



Banjo fitting line position



Clutch line must run over bellhousing when transmission is installed



On late model VE II and VF TR6060 transmissions there may be a requirement to remove a small amount of the webbing for a neater route of the line out of the bellhousing hole as illustrated.



- 15) Slowly guide the input shaft through the clutch discs and ensure no lines are caught between the transmission and bellhousing
- 16) Bolt the transmission up to the bellhousing and re-mount the shifter, gearbox cross-member, tailshaft and exhaust.

BLEEDING THE SYSTEM STEPS

- 1) Fill the reservoir with the applicable Dot 3, Dot 4 or Dot 5.1 fluid depending on the requirements of the vehicle.
- 2) Open the bleeder nipple on the braided bleeder line and have someone in the vehicle depress the pedal to the floor by hand. Close the nipple and return the pedal to the top. Repeat the process of passing the fluid through 4-5 times.
- 3) Change the process to depressing the pedal to $\frac{3}{4}$ stroke by hand before opening the bleed nipple. Lock the bleed nipple and return the pedal to the top. Repeat this 4-5 times checking the fluid level in the reservoir.
- 4) Check that the clutch has full release and the pedal is not spongy. If the pedal is still not satisfactory repeat step 3 using a full pedal travel.

Notes: Never rapidly pump the pedal when bleeding. This can induce air in the system. Slow steady pumps of the pedal are much more effective. Extra caution should be taken when bleeding the clutch when installing a self-adjusting pressure plate.



youtube.com/watch?v=ML36wtX_nuo



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