



Jeep JL/JT Clutch Kit Installation Instructions

Please refer to mcleodracing.com for the most current and up to date instructions.



1. Disconnect both batteries. Remove the 13mm nut for the secondary battery at the main battery NEGATIVE terminal, remove and tape up the end of the cable with electrical tape. Loosen the 10mm nut on the Negative battery terminal, remove and tape up the cable end with electrical tape. Remove the connector from the terminal on the battery. Open the door and verify the power is disconnected and make sure the courtesy light does not come on.



2. Remove the exhaust by removing the 2 bolts on the driver and passenger side connections from the manifold/ header and the exhaust clamp behind the crossmember. To remove the exhaust, you will have to remove the exhaust hanger attached to the top of the crossmember with 2 bolts.



3. Remove the driveshaft front and rear. Be sure to mark the driveshaft orientation to the differentials and transfer case to ensure you can reinstall them the same way. You may choose not to unbolt the front driveshaft from the transfer case and just remove it from the front axle.



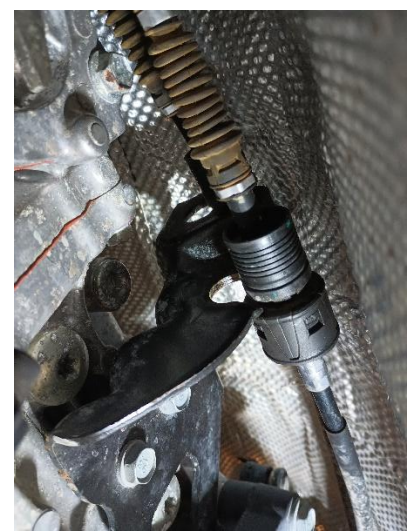
FRONT:



BACK:



4. **DO NOT REMOVE THE SHIFT CABLE BRACKET FROM THE SIDE OF THE TRANSMISSION. If you remove the shift cable bracket you will have to perform the shift cable reset procedure available in the factory service manual.** Remove the two shift cables from the shift cable bracket on the side of the transmission. This will allow enough slack in the cables for the transmission with transfer case to move back and down. The cables can be disconnected from the bracket by pulling on the front side of the cable retainer (spring loaded). Leave the cables connected to the transmission but slide them out of the bracket. **Do not bend or kink the shift cables. Do not allow the transmission to hang on the shift cables. If the transmission needs to be removed from the vehicle you can pop the shift cable end of the lever on the transmission (ball and socket connection).**



5. Remove the 2 bolts holding the fuel line on the right side of the transmission.



6. Disconnect the top transmission sensor connector.
7. Take care to remove the wiring Christmas tree clips on the side of the transmission, to be reinstalled later. These may break, you can cut the cable tie part and insert a new cable tie to attach to the Christmas tree part still in the transmission.
8. Remove the nut and bolt for the fuel line guard on the passenger side of the transmission crossmember and frame.



9. Remove the 6 bolts attached to the skid plate.



10. Remove the 5 bolts holding the crossmember and the 3 nuts for the transmission mount. You may have to loosen the fuel tank guard/case to remove the crossmember.
11. Remove the 13mm (head) bolt holding the hydraulic line for the clutch slave.
12. Remove the 13mm (head) nuts (2) holding the hydraulic slave to the transmission. Leave the slave connected at this time to prevent it from leaking while changing the clutch.

13. Disconnect position sensor electrical connector by the clutch slave.



14. Lower the transmission

15. Remove the cable retention wire nut off the rear of the transmission.



16. Remove the upper shift cable from the bracket. The cable can be disconnected from the bracket by pulling on the front side of the cable retainer (spring loaded). Leave the cable connected to the transmission/transfer case but slide it out of the bracket. **Do not bend or kink the shift cables.**
Do not allow the transmission to hang on the shift cables.



17. Disconnect plug for the sensor in the rear of the transfer case.

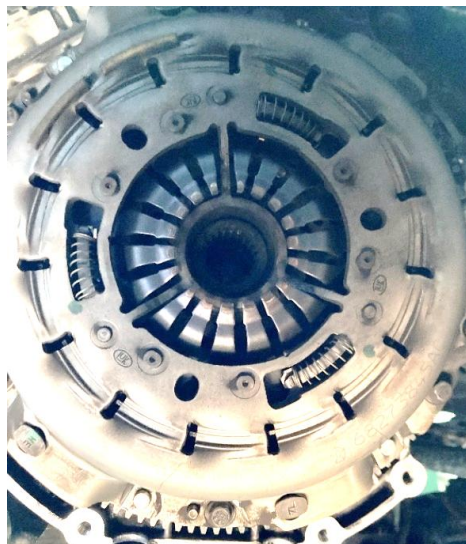


18. Remove the 15mm bellhousing bolts from the transmission. The top bolts have nuts and a bracket with rubber caps which may need to be removed to get to the nuts. At the top of the bellhousing there is a bracket which has a bolt and 2 nuts to hold the wiring. The top nut is 16mm and the one below it is 13mm.
19. Remove the transmission vent from the top of the transmission.
20. Remove the clip on the top of the transmission in the center.
21. Check around the transmission to make sure everything is disconnected, and you have clearance around the transmission and transfer case to slide them back.
22. Slide transmission and transfer case back.

23. Remove clutch fork and bearing by pulling on the fork on the passenger side of the fork.

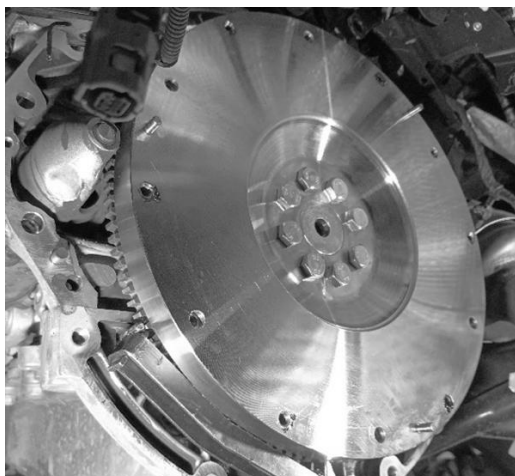


24. Remove the 6 pressure plate bolts and remove pressure plate and clutch disc.



25. Remove the 8 flywheel bolts with a T50 TORX and remove the flywheel.

26. Install new flywheel using the new supplied bolts and torque to 65 ft/lbs. The new bolts already have thread locker on them.

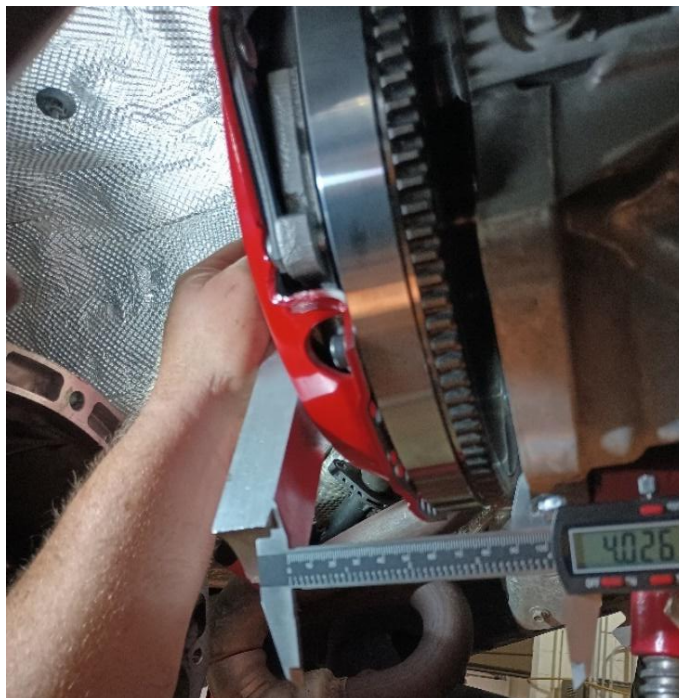


27. Install clutch disc and pressure plate using the alignment tool and the fasteners. Torque to 25 ft/lbs.

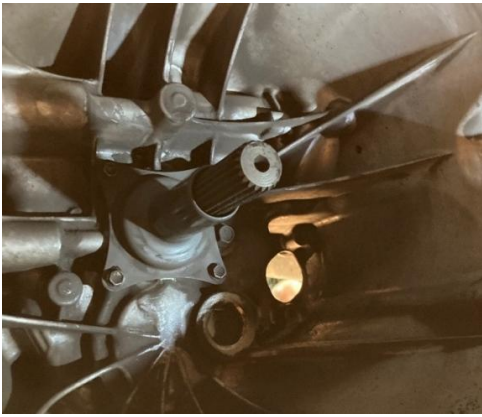


28. Use a straight edge to measure from the clutch fingers to the engine block. Make sure the straight edge is even. Use this measurement and add 0.300".

*For reference, this clutch set up measured 4.026" (see photos below).



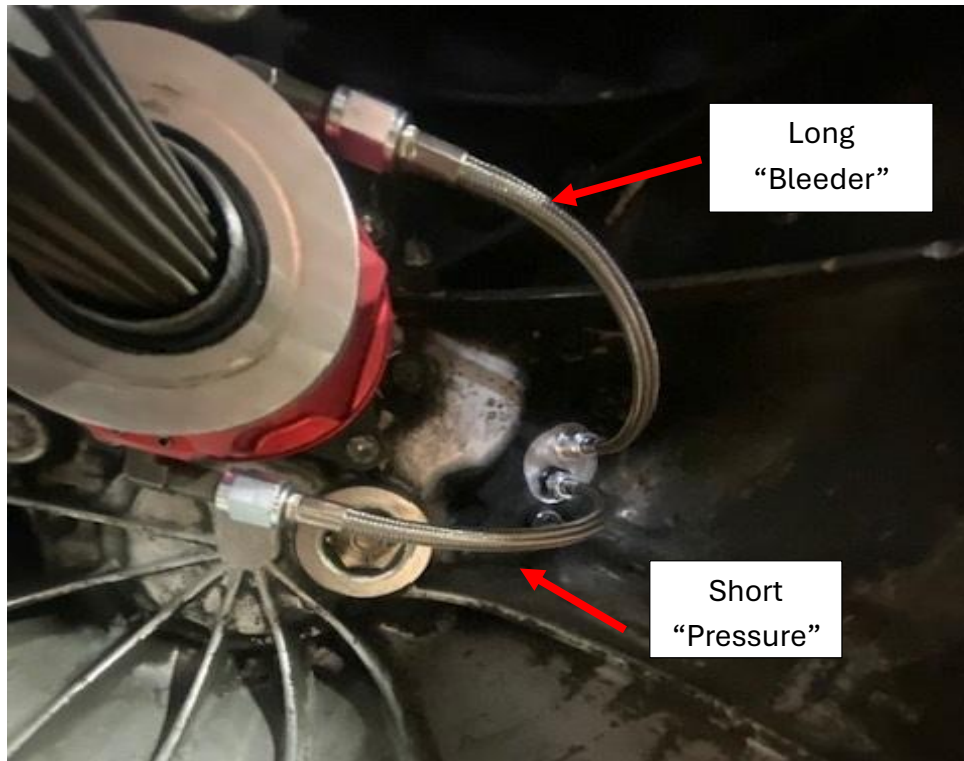
29. Slide the new hydraulic slave bearing onto the transmission bearing retainer (use light grease or lube on the O-rings) and measure from the transmission face to the slave bearing. Adjust the bearing by turning it clockwise to increase the number and counterclockwise to decrease the number, until the measurement from the bearing to the bellhousing face matches the number calculated in the previous step.



30. Install the supplied cover plate with the lines through the slave cylinder opening and reattach it using the nuts from the original clutch slave cylinder.



31. Connect lines to the McLeod bearing. The shorter “Pressure” line connects to the bottom of the bearing and the longer line connects to the top and is the line used to bleed the bearing (See photo below).



32. Push male fitting from OE line into the McLeod billet quick disconnect on the transmission, you should hear a “click” as soon as it is fully connected. At this time, you can push the clear tubing to the end of bleeder screw for bleeding purposes.



33. Install transmission to engine, take care to not pinch any wiring harnesses in between engine and transmission flanges. Take care to reattach any brackets which were removed during disassembly.

34. Reattach transmission vent line.
35. Reattach fuel line to the transmission
36. Reattach the 3 transmission shift cables.
37. Raise transmission and replace crossmember reusing the same 5 bolts to attach to the chassis.
38. Lower transmission onto the crossmember and tighten the 3 nuts for the transmission mount.
39. Reinstall the fuel line cover to the chassis and crossmember.
40. Reinstall driveshafts front and rear.
41. Reinstall exhaust.
42. Reinstall skid plate.
43. Now you are ready to bleed the clutch. The best method we have found is to start by opening the bleeder screw at the new block plate previously installed. Leave the bleeder screw open for a period time to let fluid travel through the system by gravity. The clear tubing should show fluid passing into it. With the tubing submerged into a bottle of brake fluid, depress the clutch pedal to the floor, hold the pedal to the floor, close the bleeder screw, release the clutch pedal, and repeat until you feel the pedal start to work the clutch. Make sure to **ONLY USE DOT 3** (non-silicone based) brake fluid in the system.



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McLeod Racing LLC, products are warranted to be free from defects in material and workmanship for the period of ninety (90) days, from the date of purchase. McLeod does not warrant or make any representations concerning its products when not installed and or used strictly in accordance with the manufacturer's instructions for such; installation and operation, and in accordance with good installation and maintenance practices of the automotive industry. Products purchased used do not carry a warranty. This warranty is to the original purchaser and is non-transferable.

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McLeod Racing LLC reserves the right to examine all parts returned for warranty claim to determine whether any such part has failed because of a defect in material or workmanship. McLeod's obligation under this warranty shall be limited to repairing, replacing or crediting, at its option, any part found to be defective. All products returned to McLeod for warranty inspection must be prepaid by the customer under this warranty.

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