

Replacing the Ghibli Clutch

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This was the first time I have EVER replaced a clutch on any car, so normally I was a little apprehensive of tackling a Maserati Ghibli as my first victim. In the end, the job was not as bad as many people had led me to believe but in the process I learned several tricks that may make your job easier. Below is a step by step description on how to remove the transmission and replace the clutch. Where appropriate the Table and Figure references are listed as per the Ghibli parts manual. The Ghibli is a 1972 model; earlier cars had a different clutch and the removal of the interior may vary a little. Where bolt and nut sizes are given, they refer to the wrench size to use and not to the thread diameter.

1. Remove both seats, you may be able to get away removing just one seat but I recommend to take the extra time and remove the other seat as the extra work room will come in handy.
2. Remove the center console (T37, F16) by removing the slotted screws along the base of the console. Also, remove the two Phillips head screws near the radio. Unscrew the gear shift knob and lift the console. Note, there is no need to remove the ashtray.
3. Remove two side console panels (T37, F17 & 18)
4. Remove two Phillips head screws that hold radio panel (T37, F38) to transmission cover. Next remove the two A/C vents by simply pulling them out. Remove the two vent rings by removing the three slotted screws in each ring. Two Phillips head screws are now visible once the vent rings have been removed. Remove the two Phillips head screws, which hold the radio panel to the dash (T37, F39). Remove three 10mm nuts on top of the radio panel. Disconnect all radio electrical wires and antenna, remove radio panel complete with radio.
5. Remove any screws and clips holding electrical wires to the transmission cover.
6. Pull the insulation pads from the transmission cover. The insulation pad near the bulkhead also needs to be removed. An X-ACTO knife may be helpful in cutting the pad around the A/C hoses. You want to cut as little material as possible but still be able to remove the pad. All twenty 10mm bolts which hold the transmission cover should be accessible.
7. Remove the twenty 10mm bolts on the transmission cover and remove the cover.
8. Your car may have another insulation pad in the upper part of the bell housing which needs to be removed to access the upper bolts in the bell housing.
9. Disconnect the reverse light electrical connection.

10. Remove the 10mm nut and bolt holding the speedo cable and pull back the cable
11. Remove the four 17mm nuts holding the drive axle.
12. Remove the two 17mm bolts on the transmission mount (T17, F8)
13. Raise the car both on the front and rear and place four jack stands, you will need plenty of access under the transmission as well as the differential.
14. Remove the transmission oil check tube (T13, F40) with an 1 1/16" open wrench.
15. Remove the two 10mm nuts holding the clutch slave cylinder. There is no need to disconnect the hydraulic line from the slave cylinder.
16. Drain the transmission oil. I neglected to do this and got some oil on my carpeting. Luckily my carpeting is black. If you have a light colored interior, remove as much carpeting as possible and place old towels where appropriate.
17. Remove the four nuts holding the drive axle near the differential.
18. Place a floor jack under the differential and lift the unit until the car barely lifts from the rear jack stands. The drive axle will now clear under the differential, pull it back at least 12 inches. There is no need to completely remove the axle from the car but it may be a good time to check and grease the U-joints.
19. Place the floor jack under the transmission and lift so that there is no weight on the transmission mount.
20. Remove the four bolts that hold the transmission mount bracket (T19, F9). The bracket and mount can be removed around the mufflers. Note, there is no need to remove mufflers.
21. Remove the six 10mm nuts holding the bell housing to the engine. There are four on the top and two on the bottom. Make SURE a floor jack is under the transmission holding the unit's weight.
22. Using the floor jack as a rolling dolly, separate the transmission from the engine. If you experience problems, make sure the floor jack is not exerting upward pressure. With a little rocking and tugging the transmission unit WILL separate from the engine.
23. Once the shaft has cleared the clutch, lift the transmission as much as possible with the floor jack. This will facilitate the removal of the unit from the transmission tunnel.
24. Remove the transmission from the car and give it a good cleaning.

25. Remove the six bolts holding the clutch pressure plate to the flywheel. Spray WD-40 on the three dowels and make sure they are clean. Use a rubber mallet and wiggle the pressure plate loose. The clutch disk will now be loose, hold it so it does not drop to the floor.
26. Examine the flywheel for signs of deep scratching or blue "burn" marks. If required, remove the flywheel and have it resurfaced. The bolts in my flywheel were impossible to remove, even with an air tool, and since it did not look too bad I opted not to risk breaking one of the bolts. If a bolt breaks, you should remove and replace it as the flywheel would be out of balance. If the flywheel is not to be removed, use lacquer thinner and emery cloth to clean the surface.
27. Look at the pressure plate, clutch disk and release bearing. Even though these parts will be repeated, they may indicate abnormal wear.
28. Ghiblis built after Aug, 1968 use a 10.5" Borg and Beck clutch which is similar to a Jaguar V-12 Series 3 E-type. The difference is in the spring pressure of the pressure plate. Stick to the original Maserati replacement whenever possible.
29. Get a clutch alignment tool. My parts place had one for a Ford that worked great. NAPA Balkamp part number 675-1172.
30. Use lacquer thinner to clean the protective oil that is placed on the pressure plate. Make sure not to get oil on the mating surfaces with your hands.
31. Place the clutch disk inside the pressure plate and place the assembly on the flywheel. Note that the clutch disk is stamped with the side that goes towards the flywheel.
32. Place the six bolts holding the pressure plate to the flywheel finger tight. Insert clutch alignment tool and make sure clutch disk is centered.
33. Tighten clutch bolts in a triangular pattern. Tighten each bolt a few turns at a time, this is not where you want to rush it! Bolts should be torqued to 20 ft-lb. Remove clutch alignment tool.
34. Clean area where release bearing rides on clutch with lacquer thinner.
35. Put the new release bearing on the fork making sure the two retaining springs are in good condition. Clean the release bearing with lacquer thinner.

36. Place the transmission inside the tunnel over the floor jack which should be in the fully raised position.
37. Lower the jack so that the shaft is perfectly aligned with the clutch disk spines.
38. Put the transmission in Sth gear and push the unit forward while slowly turning the rear shaft (Tl4, F42). With any luck, the shaft will engage in the splines and the transmission will slide all the way forward.

That's it !!! Put it all back together and adjust the free play in the clutch slave cylinder.

It looks difficult, but it took me about two hours to remove the interior and transmission cover. Three hours to remove the transmission and clutch and about two hours to put the transmission back in the car. I don't think that it was that bad considering I was working alone (that transmission is HEAVY !!) and had never done a clutch in my life,

Good luck!!