



FITTING INSTRUCTIONS FOR

**MFK 371C/C4, MFK371C/C5, MFK371C/C5HZ, & MFK
371CD5**

CHEVY V8 6.2 AND 6.5ltr DIESEL TO LANDCRUISER 4 & 5 SPEED TRANSMISSIONS

Thank you for purchasing a product manufactured by Marks 4WD Adaptors. The following instructions are intended as a guide. We recommend that you purchase a service manual pertaining to your vehicle for specific torque values, wiring diagrams and other related information.

The bellhousing supplied in this kit has been designed to accept all the standard 2F petrol components. To fit this kit to a Landcruiser previously equipped with a F155 petrol, H or 2H diesel engine some extra parts need to be acquired, second hand or new. The Landcruiser clutch is used with this kit.

You will also require the Chevy diesel flex plate and the starter motor to suit. The flex plate ring gear has 139 teeth.

NOTE: The FJ and HJ series Landcruiser 08/80 on with a single transmission mount may require the early model driver side bellhousing mounting to fit the slave cylinder.

When replacing the pre 1980 H 3.6 litre 6-cylinder, diesel engine the following parts are required:

1. 2F petrol thrust bearing, carrier, and clips.
2. 2F petrol clutch fork and pivot.

NOTE: If a cast iron fork is used, the pivot length is 27.5mm. If a pressed metal fork is used the pivot length is 37.5mm.

3. Clutch fork boot to suit the fork you have purchased.
4. 2F-bellhousing breather plug (fitted to the opposite side of clutch fork boot).
5. 2F Slave cylinder and push rod to suit the clutch fork you have purchased.
6. Landcruiser 2F or 3F pressure plate.
7. 2F left and right bellhousing mounts including rubbers, chassis brackets and bolts as well as bolts to fasten them to the chassis rails.

When replacing the F155 3.9 litre 6-cylinder, petrol engine the following parts are required:

1. 2F or 3F clutch pressure plate.

When replacing the 2H 4 litre 6-cylinder diesel engine the following parts may be required:

1. 2F petrol clutch fork and pivot.

NOTE: The 2H fork is different to the 2F fork. The distance between the pivot centre and the gearbox centre is slightly shorter on the 2H. Although this difference exists, the 2H fork can be used without any problems.

Starter Motor

Due to various Chevy starter motor sizes, a small portion may have to be ground out of the starter motor pocket in the bellhousing and the locating hole in the clutch cover plate.

Engine Removal

1. Remove the bonnet from vehicle and tie back hinges.
2. Disconnect and label all the hoses and wiring attached to the old engine.
3. If you are not using the Toyota air-conditioning compressor and power steering pump remove them and disconnect the hoses (if fitted).
4. Remove the complete exhaust system from the vehicle.
5. Drain the radiator and engine of all fluids.
6. Remove the radiator from the vehicle.
7. If you plan to use a different grade fuel, drain the fuel tank and fuel lines.
9. Unbolt the slave cylinder from the original bellhousing.
10. Support the transmission using jack stands or remove it completely.
11. Undo the four bolts holding the gearbox to the bellhousing.
12. Undo the engine mounting bolts and lift the engine to remove the rubbers.
13. Undo the bolts holding the bellhousing side mounts if fitted.
14. Remove the complete engine assembly. Do not discard the old engine, as some parts are required for the conversion.
11. Remove the oil pressure and water temperature senders from the Toyota engine.
12. Remove the engine chassis mounts from the chassis by drilling or grinding the heads off the rivets, then drill, or drift the remainder of the rivets through the chassis rails. **NOTE:** Some models have the engine mountings welded to the chassis, remove them by grinding the welds off.

Transmission and Bellhousing Preparation

NOTE: The following order of operations will vary with different models.

1. Remove the flywheel cover plate.

2. Remove the thrust bearing and clutch fork.
3. Remove the clutch.
4. Remove the flywheel.
5. Remove the bellhousing from the transmission.
6. Remove the clutch fork pivot from the bellhousing.
7. Remove the two 12-mm dowels between the bellhousing and gearbox.
8. Remove the clutch fork boot and breather boot from the bellhousing.

SETTING UP THE NEW BELLHOUSING

9. Fit the clutch fork pivot to the new bellhousing.
10. Fit the two 12-mm dowels to the rear of the new bellhousing.

WARNING

11. Failing to fit the dowels will result in transmission damage and or incorrect clutch operation.
12. Fit the new bellhousing to the transmission using the original bellhousing bolts.

Vehicles previously equipped with an F155 petrol or H diesel

The 2F-bellhousing side mounts you have purchased will need to be set up on your chassis.

This is done as follows:

13. Cut the front lug off both bellhousing mounts to fit them into the recesses at the side of the bellhousing. **NOTE:** The right hand mount supports the slave cylinder, loose fit the slave cylinder as you tighten the mounting bolts, alignment of the slave cylinder bolts will be much easier.
14. Bolt the bellhousing mounts to the new bellhousing.
15. Fit the right hand bellhousing chassis bracket to the chassis. There should be some holes already drilled to accept them.
16. Use high tensile bolts to secure the bracket to the chassis. **NOTE:** If you are unsure of the mounting position on the chassis, fit the complete engine and transmission assembly into the vehicle. Set the position using the front and rear drive shafts along with the gear lever position to find the correct position and then mark the chassis.
17. Mark the left-hand chassis for the new mounting position.
18. Remove the engine.
19. Drill the right hand chassis rail and secure the bracket with high tensile bolts.
20. Drill the left-hand chassis rail. **NOTE:** The left hand mounting sits on top of the chassis, to drill the hole you may need to cut a large hole in the floor pan to gain access, this could be plugged

with a rubber grommet.

21. Make sure that the bellhousing mounting rubbers you have are in good condition.
22. Fit the clutch fork, and thrust bearing to the bellhousing. **NOTE:** Apply some fresh grease to the grease groove inside the thrust-bearing carrier.
23. Fit the clutch fork boot, and bellhousing breather boot.
24. Fit the thrust carrier retaining clips.
25. **Early 4-Speed models.** Fit the slave cylinder and push rod to the bellhousing side-mounting bracket and bellhousing, using the original Toyota bolts.
26. **Late 4-Speed Split T/Case and Early 5-Speed Models.** Fit the slave cylinder and push rod to the bellhousing. Use the original Toyota front bolt, with the 28.5-mm spacer (MFC1169), the M10x1.25x80 bolt (MFC1196) and spring washer (MFC475) in the rear.

Engine Mounting installation

The most accurate way of determining the position of the new engine chassis mounts is to trial fit the engine.

27. Fit the new engine mounting rubbers to the engine block. Secure them using the bolts, and washers supplied in the kit.
28. Loosely fit the new chassis brackets to the engine rubbers using the bolts, nuts and washers supplied in the kit.
29. The smaller bracket is fitted to the left hand, (passengers side) of the vehicle and the larger bracket to the right hand, (drivers side).
30. Make sure that the two dowels are fitted to the rear of the GM engine.
31. Guide the engine into place and secure it using only 2 of the side bolts supplied in the kit.
32. Lower the engine so that the top flange on the chassis bracket sits on top of the chassis rail.
NOTE: Some models may require a new section to be cut out of the top flange to fit around the chassis rivet.
33. When satisfied with the engines positioning tack weld or bolt the brackets to the chassis.

NOTE: Some chassis rails are not perfectly flat under the top flange. For these installations, the top flange may need to be heated with an oxy torch and flattened down to the chassis before welding is completed.
34. Remove the engine and complete the welding or bolting of the chassis brackets.
35. Paint the chassis brackets and welded area.

Final Engine Preparation

36. Fit the new spigot bearing (part No. 6202) into the flywheel. Use a drift and hammer to drive the bearing in until it sits flush in the bore. **NOTE:** The bearing is pre packed with grease, and fitted with rubber seals, the rubber seals should not be removed.
37. Fit the flex plate to the back of the new flywheel. Fit the 6 spacers (MFC076) between the flex plate and the flywheel and secure them to the flywheel using the 6 M12x1.75x80 bolts (MFC904) supplied in the kit. Use loctite on the bolts. **NOTE:** Some of the flex plate bolt holes will need to need drilled or filled out to accept the M12 bolts.

WARNING.

The flex plate supplied with your engine must have a counter weight fitted to it. If a counter weight is not fitted, don't use it. The counter weight is used to balance the engine.

38. Fit the new flywheel assembly to the engine, and secure it using the new bolts supplied. **NOTE:** Torque the bolts to Chevy specification and use loctite on bolts.
39. Fit the clutch assembly to the flywheel and secure it using the original Toyota bolts. Align the clutch plate using a suitable clutch aligning tool. **NOTE:** The original bolts should fit without modification but it is a good idea to double check them in the new flywheel prior to fitting the clutch.

Engine Installation

1. Put the transmission into 4th gear and the transfer case into high range.
2. Raise one of the rear wheels off the ground.
3. Guide the engine into place and at the same time rock the back wheel backward and forward to help align the clutch spline.
4. When aligned secure the engine using the bolts, spring washers and flat washers supplied in the kit.
5. Guide the engine rubbers over the chassis brackets and secure them with the bolts, nuts, and washers supplied in the kit.
6. Fit the clutch hydraulic pipe.
7. Bleed the clutch hydraulics and check the clutch operation. **NOTE:** This can easily be done while the back wheel is off the ground. Make sure the transmission is still in gear, depress the clutch pedal, the rear wheel should turn, release the pedal, and the wheel should stop. If all is well proceed if not rectify the problem.
8. Fit the new flywheel cover plate to the bellhousing using the original bolts and washers. **NOTE:** Check the clearance around the starter motor in some cases the cover may need to be filed or ground to fit. Seal around the cover plate using silastic.
7. Fit the water temperature sender using the adaptor supplied in the kit.
8. Fit the oil pressure sender using the adaptor supplied.
9. Fit the heater hoses.

10. Fit the top radiator hose as per mount and drive kit.

11. Fit the bottom radiator hose as per mount and drive kit.

12. Fit the power steering pump, air-conditioning compressor, and the alternator using the instructions supplied with the mount and drive kit.

13. Turbo charged engines require the use of an electric fuel pump.

14. The glow plugs draw a lot of current. They draw somewhere between 20 and 30 amps each for this reason we recommend using a starter solenoid to switch them. **NOTE:** The glow plugs are fast heating. They must not be operated any longer than 10 seconds.

13. Complete the wiring.

14. Complete the exhaust system. **NOTE:** Heat shields must be fitted to the exhaust system to prevent excessive heating of the engine mounting rubbers. Failure to do so will cause premature engine mounting failure.

15. Check all fluid levels and fill fuel tank with required grade of fuel.

16. Double check all mounting bolts are tight.

17. Start the engine and check for-

Fuel leaks.

Oil leaks.

Water leaks.

Exhaust leaks.

Allow the engine to warm up and recheck above.

18. Refit the bonnet.

19. Road test the vehicle for 3 to 5 kms.

20. Check for leaks.

The components supplied in the kit are designed for specific type conversions. Modifications to any components without the written consent from Marks 4WD Adaptors will void any possible warranty or return privileges. Should you have any further questions that are not covered in the instruction sheet, please contact our sales department for assistance.

Remember an inexpensive phone call can save a costly mistake!

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