

29/09/11



FITTING INSTRUCTIONS FOR

MFK1045C168, MFK1045CD, MFK1045HT

HOLDEN and CHEVY V8 PETROL and CHEVY V8 DIESEL

TO

LAND CRUISER 4.5 PETROL - 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.

Note 1: Standard block hugger headers cannot be used with the bolt in engine mounts.

Note 2: When fitting a Holden V8 or a Chevy V8 Diesel engine you will need to move the engine/transmission forward 20mm and panel beat the firewall behind the right hand cylinder head. A rear drive shaft spacer kit should then be fitted, part number MFK1421.

This kit has been designed to directly replace the original Land Cruiser, 4.5 Litre petrol engine.

Engine Removal

1. Remove the bonnet from vehicle.
2. Disconnect and label all the hoses and wiring attached to the old engine.
3. Remove air-conditioning compressor and power steering (if fitted).
4. Remove the complete exhaust system from vehicle.
5. Drain radiator and engine of all fluids.
6. Remove the radiator from the vehicle.
7. Support the transmission with a jack and remove the bellhousing to engine bolts.
8. Undo and remove the front engine mounting rubbers and remove the engine assembly from the vehicle using suitable engine lifting equipment. Do not discard the old engine, as some parts are required for the conversion.
9. Remove the original Land Cruiser clutch and pressure plate.

10. Remove the oil pressure and water temperature senders from the Toyota engine.

Adaptor Kit Preparation

1. Fit the two M8 x 20 dowels (MFC197) to the gearbox side of the new adaptor housing.
2. Fit the adaptor housing assembly to the rear of the GM engine using the 6 SHCS (MFC200B) supplied. Make sure that the engine is fitted with the 2 locating dowels.
3. Fit the flywheel cover plate using the 3 bolts (MFC432), 3 spring washers (MFC435) and 3 flat washers (MFC436).
4. Fit the starter motor to the engine using the GM bolts. Seal the plate around starter motor using silastic.

NOTE: Due to various Chevy petrol starter motor offsets, a small portion may have to be ground off the starter locating hole in the flywheel cover plate. If the hole in the cover plate supplied is in a totally different position, then you have ordered the incorrect kit. Chevy engines have two different size flywheels and therefore have two different offsets on the starter motor. Marks 4WD Adaptors only manufacture kits to suit the 168-tooth flywheel.

5. Fit the GM flex plate to the rear of the new flywheel (MFC1046###) using the 6 bolts (MFC904) and 6 spacers (MFC076). Use loctite on these bolts.

NOTE: Some of the holes in the flex plate will require re-drilling or filling out to allow the bolts to be fitted. Holden flex plates only have 3 holes for attaching the torque converter, these three holes are used to attach the flywheel to the flex plate.

6. Fit the flywheel assembly to the engine and secure it with the 6 bolts (MFC428B). Use loctite on these bolts.

7. Fit the spigot bearing into the flywheel using a suitable drift.

8. Make sure the 2 x M10 dowels (MFC197) are fitted to the flywheel, they are required for correct clutch location.

9. Fit the Toyota clutch and pressure plate to the new flywheel, use a suitable clutch-aligning tool, secure it using the original Toyota bolts.

NOTE 1: If the clutch is worn, replace it along with the thrust bearing. **NOTE 2:** When fitting a Holden V8 it may be easier to fit the clutch after the engine chassis brackets have been welded to the chassis.

Chevy Engine and Engine Mount Set Up

NOTE :Fitting 6.2 and 6.5 Lt Diesel and Big Block Chev Motors will require modification of the firewall behind the right hand cylinder head .

1. Lift the engine into the engine bay using suitable lifting gear. Align the gearbox input shaft spline with the clutch spline by jacking one of the rear wheels off the ground. Put the gearbox in 4th gear and the transfer case in HI range. Rock the wheel backward and forward while pushing the engine back to the bellhousing face.

2. Secure the adaptor to the bellhousing using the original Toyota bolts.
3. While the rear wheel is in the air, check the clutch operation. If all is well proceed, if not rectify the problem.

Chevy Engine Mountings.

MFK1062

1. Fit the left-hand engine bracket (MFC1062, the smaller of the two) to the engine mount rubber and fit the original washer and nut. Do not tighten the nut at this stage.
2. Fit the right hand engine bracket (MFC1063, the larger of the two) to the engine mount rubber and fit the original washer and nut. Do not tighten the nut at this stage.
3. Lift the engine as high as it will go and locate the left hand mounting rubber stud through the chassis bracket.
4. Locate the right hand mounting rubber stud through the chassis bracket.
5. Lower the engine slightly and fit the bolts (MFC1101), flat washers (MFC052) and spring washers (MFC196) through the engine brackets and into the engine block.

When you have all of the 3/8"UNC bolts fitted, lower the engine down onto the chassis brackets and tighten all of the engine bracket to block bolts.

6. Tighten the top engine mounting rubber nuts.
7. Fit the bottom engine mounting rubber washers and nuts and tighten them.

Holden Engine and Engine Mount Set Up

1. Lift the engine into the engine bay using suitable lifting gear.
2. Secure the adaptor to the bellhousing using 2 of the original Toyota bolts located roughly central on the left and right of the bellhousing.

Holden Engine Mountings.

MFK671CK

1. Fit the original Holden left and right engine block brackets.
2. Fit the new engine mounting rubbers to the block brackets, use the nuts and washers supplied.
3. Fit the new chassis brackets to the engine mounting rubbers using the bolts washers and nuts supplied. **NOTE:** The longer bracket (MFC672) to the RHS and the (MFC671) to the LHS.
4. Lower the engine so that the top flange plate sits on top of the chassis rails. **NOTE:** The top flange will not sit flat on the chassis.
5. Tack weld the brackets to the side of the chassis and remove the engine.

6. Complete the welding of the bracket to the side of the chassis.
7. Using an oxy acetylene torch heat the top flange plate until its cherry red. Then shape it to the chassis rail using a hammer.
8. Complete the welding and allow them to cool.
9. Paint the chassis and brackets.

Holden Engine

1. Fit the Toyota clutch and pressure plate to the new flywheel, use a suitable clutch-aligning tool, secure it using the original Toyota bolts.

NOTE: If the clutch is worn, replace it along with the thrust bearing

2. Lift the engine into the engine bay using suitable lifting gear. Align the gearbox input shaft spline with the clutch spline by jacking one of the rear wheels off the ground. Put the gearbox in 4th gear and the transfer case in HI range. Rock the wheel backward and forward while pushing the engine back to the bellhousing face.

3. Secure the adaptor to the bellhousing using the original Toyota bolts.

4. While the rear wheel is in the air, check the clutch operation. If all is well proceed, if not rectify the problem.

5. Fit the engine mountings and secure them with the bolts supplied.

Engine completion.

1. Fit the Toyota oil pressure sender using the adaptor supplied.

2. Fit the water temperature sender using the adaptor supplied. **NOTE 1:** Use Teflon tape or liquid Teflon. **NOTE 2:** Holden VT V8 engines do not have a separate water temp sender for the Commodore gauge, you will need to drill and tap a 1/8" NPSF 27tpi hole into the water jacket of the intake manifold. Then the adaptor supplied can be fitted.

3. Fit heater and radiator hoses.

3. Fit the Toyota power steering pump, air-conditioning compressor, and alternator with the appropriate mount and drive kit.

4. Complete the wiring.

5. Fit the tachometer interface (MFK1165) as per instructions.

6. Complete the exhaust system.

7. Check all fluid levels.

8. Double check, all of the mounting bolts are tight.

9. Start the engine and check for-

Fuel leaks.

Oil leaks.

Water leaks.

Exhaust leaks.

Allow the engine to warm up and recheck the above.

10. Refit the bonnet.

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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