



MFK1210/80HD & MFK1210/100HD
PART TIME 4WD CONVERSION
TO SUIT
80 & 100 SERIES LANDCRUISER



Thank you for purchasing a product manufactured by Marks 4WD Adaptors.
The following instructions are intended as a guide. It is recommended that you purchase a workshop manual to suit the 80 / 100 series LandCruiser. The Toyota publication number for the 80 series transfer case is RM184E, the following instructions refer in part to this manual.

NOTE: Vehicles fitted with ABS will have the ABS fault light showing when the freewheeling hubs are disengaged. This means that the braking system will revert back to standard (no ABS). Should ABS be required such as when driving in icy conditions the free wheel hubs must be engaged.

NOTE: Viscous coupled transfer cases can be fitted with the part time conversion. The rear extension housing contains the viscous coupling which is removed and discarded for the installation of the part time kit. An original Toyota centre diff lock switch is required to allow 4WD to be engaged in HIGH range. Please see Toyota part numbers on the following page

Early model (pre 1995) switch part number is 84725-60010 as seen below.



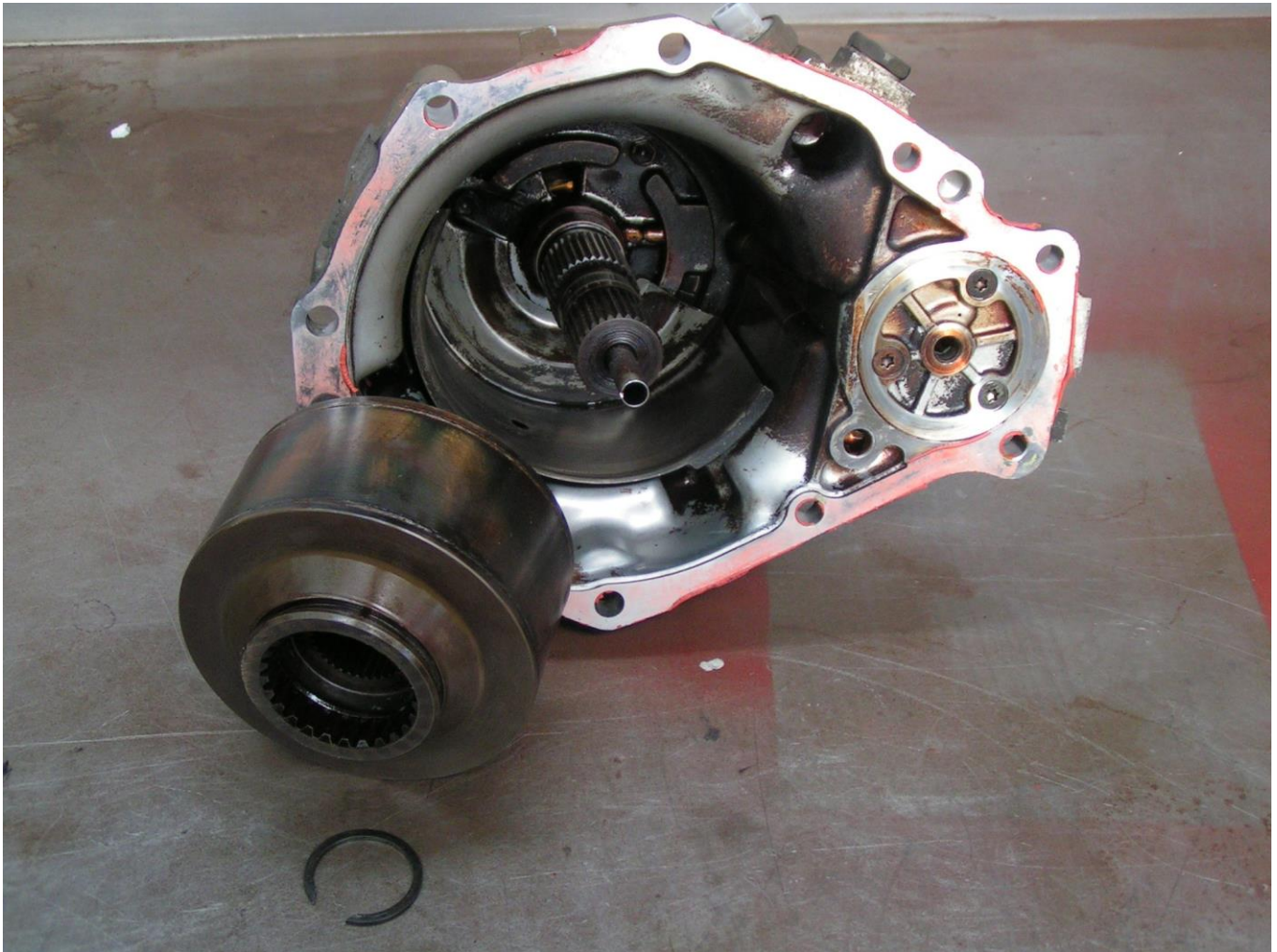
Late model switch (post 1995) switch part number is 84724-60040 or 84725-60040 as seen below.



NOTE: You will find the plug in the Toyota dash loom, the plug may already be fitted with another plug and bridging wire, the plug and bridging wire must be removed and discarded to accept the new switch.



The photo below shows the viscous coupling removed from the extension housing.

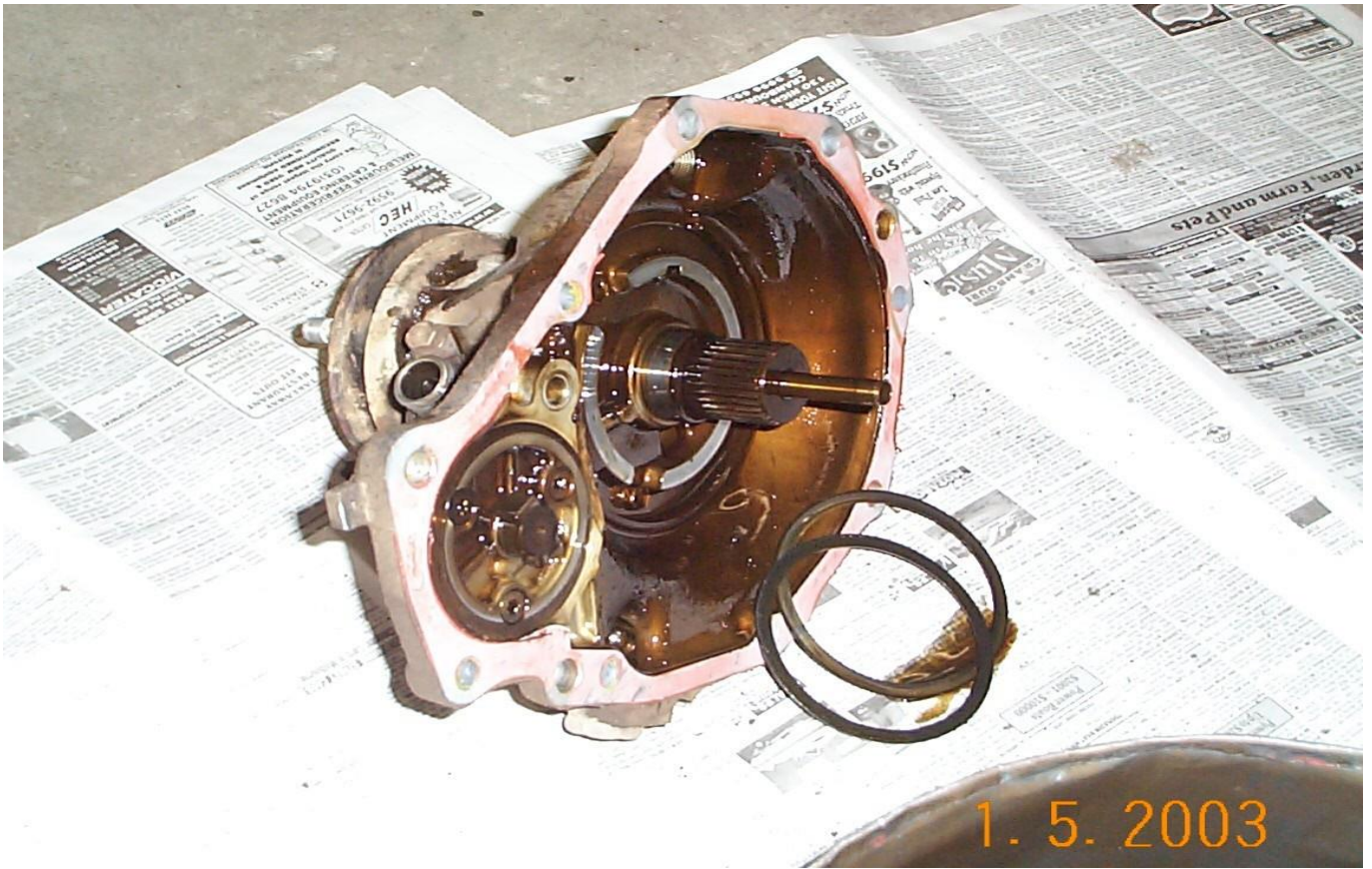


1. Drain the transfer case oil.
2. Remove the rear drive shaft.
3. Remove the speedo cable or speed sensor wiring.
4. Remove the rear extension housing from the transfer case by undoing the 9 bolts as per page TF-7 instruction 11 in the Toyota manual.

NOTE: The bolt lengths vary so take note of which holes the bolts came from. See the following photos.

For viscous coupled transfer cases only

- To remove the coupling; remove the circlip and then slide the coupling off the output shaft as seen in the photos above.



5. Remove the 5 bolt, top case cover, as per instruction 13 in the Toyota manual.
6. Remove the large snap ring from the outside of the transfer case input shaft rear bearing.
7. Remove the 8 bolts holding the centre housing to the front housing. Separate the two housings as per instruction 14a, b, and c in the Toyota manual.

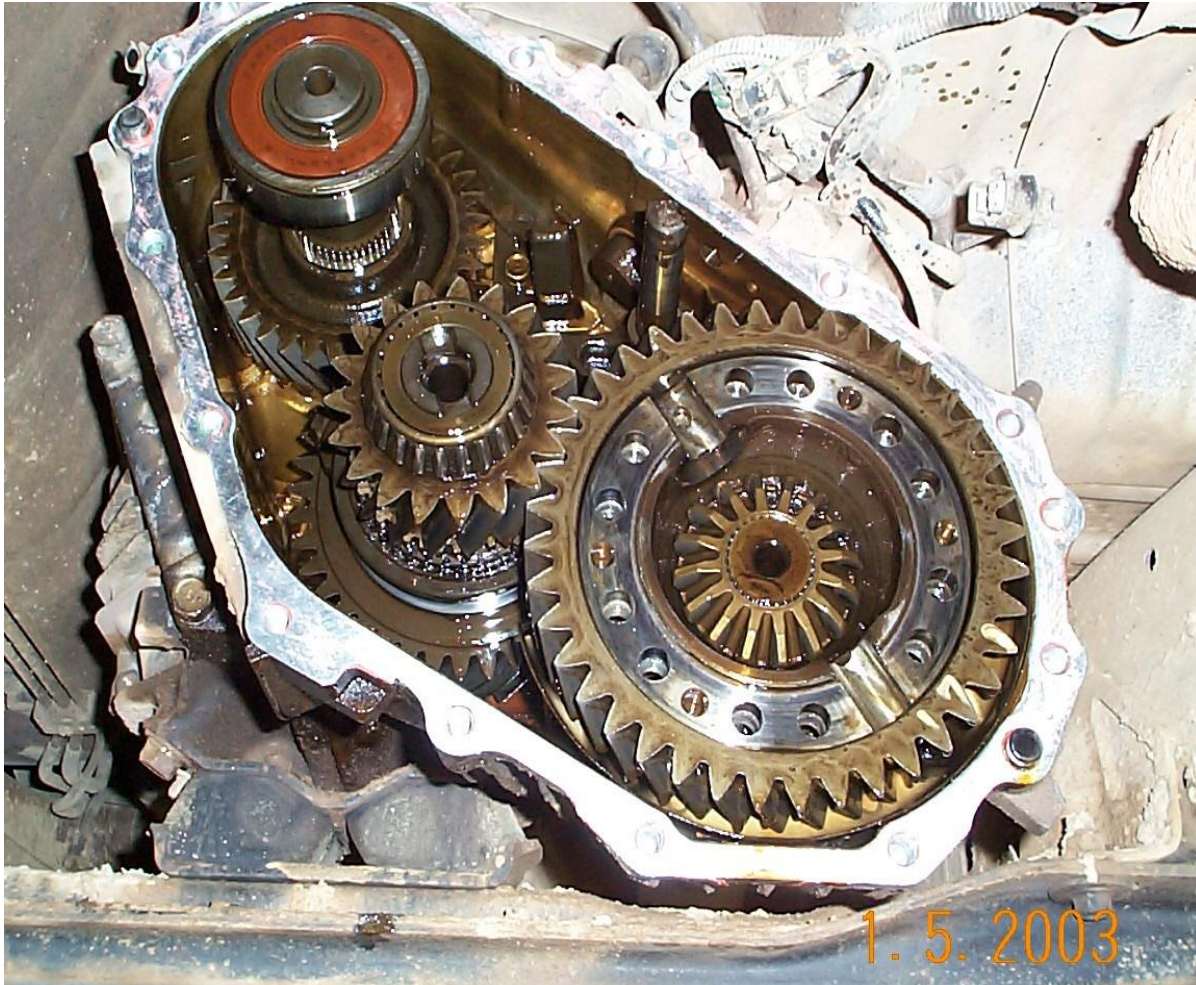
NOTE: Gently tap forward the back of the transfer case input bearing using a soft hammer. If the input shaft assembly comes out of the casing you will need to replace the input seal.



8. Remove the centre differential rear case (spool) as per page TF-23 instruction 10 in the Toyota manual. 12 bolts hold the rear case to the front.
NOTE: Do not remove the differential from the transfer case.
9. Remove the pinion shaft, locating pin, pinion gears, rear side gear and 3 thrust washers. These parts including the spool are no longer required. See following photos.



10. Leave the front side gear and thrust washer in place, they are required to support the front output shaft. See the following photo.



11. Remove the tapered roller bearing from the old spool. The Toyota part number for this bearing is 90366 60008.
12. Clean all parts thoroughly.
13. Press the tapered roller bearing onto the new spool.
14. Apply some grease to the face of the side gear thrust bush.



15. Install the differential rear spool (as shown below) to the front case and torque the 12 bolts to 65ft-lb, 88 NM as per page TF-25 instruction 4 and 5a in the Toyota manual.

NOTE: Use loctite on all bolts.

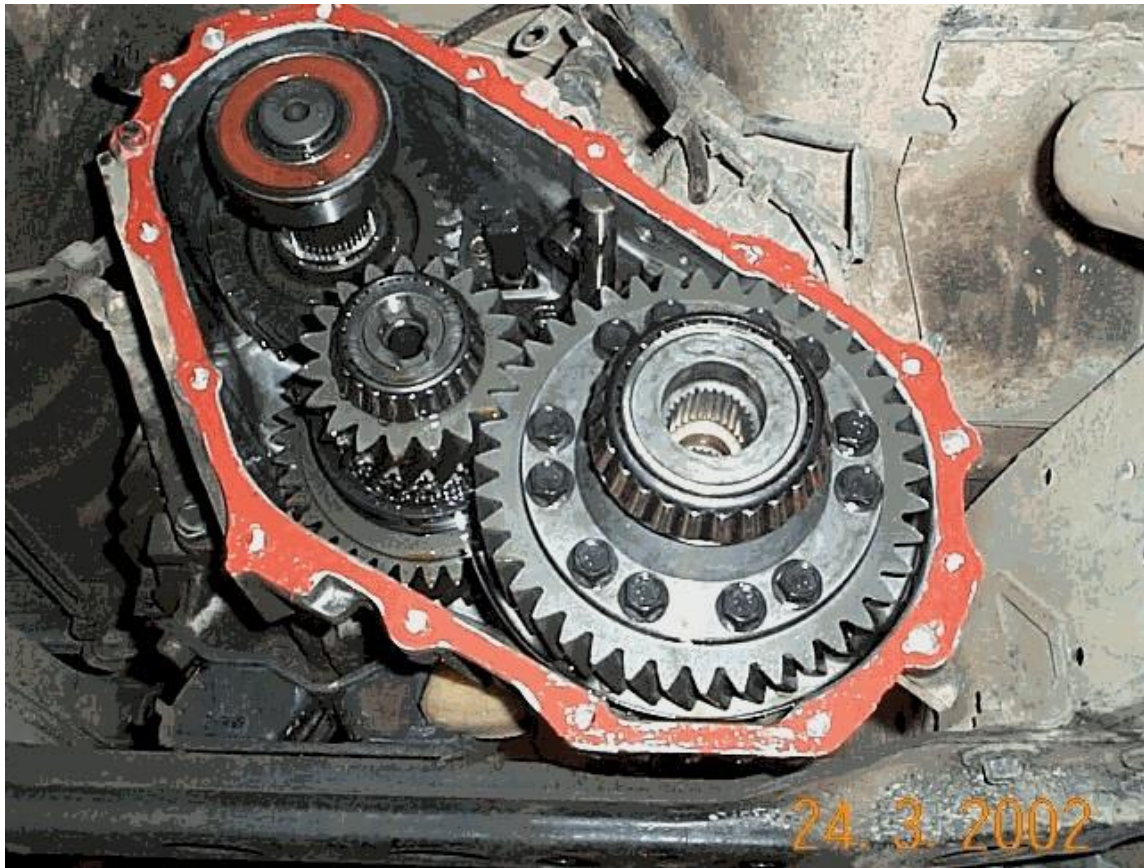
16. Then loosen the 12 bolts as per instruction 5b in the Toyota manual.

17. Re-torque the 12 bolts to 72ft-lb 98 n-m as per instruction 5c in the Toyota manual.

The following instructions 17 through to 21 refer to pages TF42 and TF43 in the Toyota Manual.

18. Fit the centre housing to the front housing using a suitable sealer as per instruction 9a, b, and c in the Toyota manual.

19. Apply liquid thread sealer to all 8 bolts and torque them to 27ft-lb 37 NM as per instruction 9d and e in the Toyota manual.



The photo above shows the new spool fitted and ready for the rest of the transfer case to be assembled.

20. Re-install the snap ring on the input shaft rear bearing as per instruction 9f in the Toyota manual.
21. Install the 5 bolt rear case cover. Apply sealer to the cover as per instruction 10a and b in the Toyota manual.
22. Apply sealer to the 5 cover bolts and torque them to 27ft-lb 37 n-m as per instruction 10c, d and e in the Toyota manual.
23. The output shaft shims should not require adjustment as the rear differential case has been machined to a tolerance of .02mm but the end float should be checked as per page TF-44 in the Toyota manual.
24. Install the rear extension housing using sealer on the housing and the 9 bolts as per page TF-45 instruction 14a, b, c, d and e in the Toyota manual.
25. Torque the bolts to 27ft-lb 37 n-m.
26. Fill the transfer case with 75w-90 oil. It should take approximately 1.3ltrs (1.4US qts)
27. Fit the rear drive shaft.
28. Fit the speedometer cable or speed sensor wiring.

FREE WHEELING HUBS

29. Fit the free wheel hubs as per the instructions provided.

NOTE: Freewheeling hubs should be lightly oiled prior to installation. This is to stop the internals from rusting due to condensation.

FREE WHEELING HUB SPACERS

Post 1992 - 80 series models are fitted with longer splined CV shafts. Before fitting the circlip to the axle; check axle end float and fit the appropriate spacer (MFC1210S or MFC1210SS) supplied in the kit.

105 series live axle and 100 series IFS models do not require any spacers.

FREE WHEELING HUB MAINTENANCE

30. **Cleaning.** The freewheeling hubs are fitted with a single lip seal on the outside diameter of the engaging knob. This seal is designed to prevent any leakage from the hub; the seal will not prevent water under pressure from entering the hub especially from a pressure washer. The hubs should be cleaned using a soapy rag.

Servicing. The freewheeling hubs should be dismantled, cleaned and re-oiled after being submerged in water or mud.

WARNING - Do not pack grease in the selector side of the free wheel hub.

WARNING!

When the **Free Wheeling Hubs** are **NOT ENGAGED** - Do not engage the centre differential lock while the vehicle is moving. This action could damage the front output clutch hub or the centre differential front drive.

WARNING! **Do Not Pack The Hubs With Grease**

If you pack the hubs with grease, the engaging knob will be punched out of the end of the hub due to hydraulic action. **No Warranty Will Be Given**
See the following photos of what not to do.



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.

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