



## Fitting Instruction for MFK20040

### Handbrake Relocation Kit Toyota VDJ7# LandCruisers

#### Important Information

This instruction booklet can be used standalone for the above stated conversion but we would also recommend having a workshop manual for your vehicle to cover any factory Toyota torque / installation requirements to complete the transmission handbrake install on the Toyota VDJ LandCruisers.

The instruction booklet describes the required modifications (if any) and installation process in order for our kit to fit and work properly.

Marks 4WD Adaptors cannot and will not take responsibility for knowing everything that may impact on your conversion. Before beginning any work, thoroughly work through the sequence of changes, work and potential impact of your conversion. You must ensure you completely understand all the factors that may impact on achieving your desired results.

**Note:** This handbrake kit moves the driveshaft mounting face back 11mm. Drive shaft length needs to be checked. Some cases with after-market suspension the drive shaft may need to be shortened.



## **Step 1 Prepare Vehicle**

Undo the 14mm head bolts & nuts from the tail shaft flange at both ends. Remove factory tail shaft



**Image 1.1** Remove tail shaft

Drain the transfer case oil by removing the drain plug. You will also need to remove the fill plug., both these plugs will be reused.



**Image 1.2** Drain transfer case oil

Unplug sensor/s from loom. Remove the plugs and sensors circled below.

These parts are required to be refitted to the new adaptor housing.



**Image 1.3** Remove sensors

Remove the blanking cover (circled below) or speedo sensor if your vehicle is non ABS. This part needs to be refitted to the new adaptor housing.



**Image 1.4** Remove blanking cover/ speedo sensor

Undo output flange nut—use pin punch to straighten out punched in sides.

30mm hex head nut—a rattle gun makes removing this easy. Use a soft hammer to remove flange.

MFK20040 non ABS kits, remove speedo drive and rubber O-ring these are to be reused

MFK20045 ABS kits, only the rubber O-ring is reused



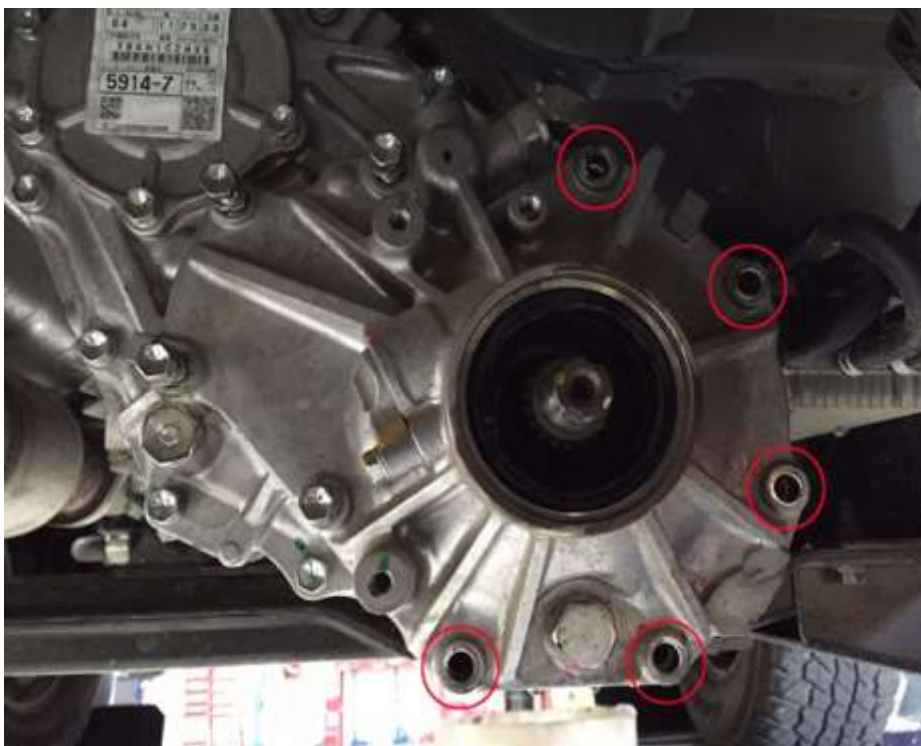
**Image 1.5** Remove tail shaft flange

Undo the 9 x 14mm headed bolts that secure the rear cover to the transfer case.

There are 2 different bolt lengths, 5 at 75mm and 4 at 35mm

The bolt holes circled in the photo are the 75mm long ones.

Remove the rear cover carefully—there are bearing shims that will fall out, one lot of shims is on the top left of the case and the others are on the main output shaft bearing



Take note of them as they need to be reused. Remove spacer and two shims from output shaft and discard.

**Image 1.6** Remove rear cover

## **Step 2 Prepare Handbrake Components**

Fit the supplied oil seal, plugs, sensors and blanking cover to the rear of the new adaptor housing.



**Image 2.2** Fit oil seal

Clean the mounting surface ready for the adaptor housing to be fitted.



**Image 2.3** Clean the mounting surface

Apply three bond to the rear of the adaptor housing. Use some grease to stick the shims to the bearings that came out in step 1.6. Fit the adaptor housing to the transfer case.



**Image 2.4** Apply three bond to adaptor plate move speedo sensor

### **Step 3 Fitting Handbrake**

Bolt the adaptor to the transfer case using the 5 x 75mm bolts and 3 of the 35mm bolts. Use the supplied M10 x 1.25 x 25mm bolt in the position circled in the photo below.



**Image 3.1** Bolt adaptor plate to transfer

Loctite needs to be used on 3 of the 4 handbrake mounting socket headed cap screws, on the 4th screw (this screw is 15mm long) three bond needs to be used, this is because the hole is through drilled and oil will leak if bolt isn't well sealed. The position of this bolt is circled in Image 3.3 on following page



**Image 3.2** Bolts to secure handbrake

Using the supplied screws and spring washers bolt the handbrake assembly to the transfer case adaptor plate.



Make sure the short 15mm long screw is fitted in the top left position —if you need to fit a vehicle speed sensor (2007-08/2014) it will not fit if a long bolt is used.

**Image 3.3** Bolt adaptor plate to transfer



**Image 3.4** Reference pictures

Fit supplied spacer over output shaft and speedo drive gear over new handbrake drum. Fit handbrake drum to the transfer case and fit rubber O-ring and flange nut to the transfer case output shaft. Tighten to factory specifications and knock in the locators as per Image 3.5



**Image 3.5** Fit handbrake drum



Fit the transfer case drain plug and fill with the oil recommended in your owners manual. Fill until oil runs from the fill plug hole and fit plug, tighten according to your workshop manual.



**Image 3.6** Fill transfer case with oil

Re-install drive shaft using factory flange nuts. Fit to handbrake drum end first and check length at diff end if drive shaft fouls on diff flange drive shaft will need to be shortened. Note: this needs to be checked with suspension on full droop. Torque nuts and bolts as per factory specifications.



**Image 3.7** Fit drive shaft

#### **Step 4 Fit Handbrake Cable**

Remove existing handbrake cable from the lever inside the vehicle, take note of how it was fitted as the new cable mounts in the same way.

Fit conduit over the handbrake cable, loosely fit the cable to the handbrake lever in the cab and then secure using supplied P clips to route along chassis and up to the handbrake in the cab.



**Image 4.1** Fill transfer case with oil



#### **Step 5 Removal of original handbrake components**

All handbrake parts from the rear diff setup can be removed if desired. This is at the customer's discretion as it will not interfere or harm the vehicle if not removed.

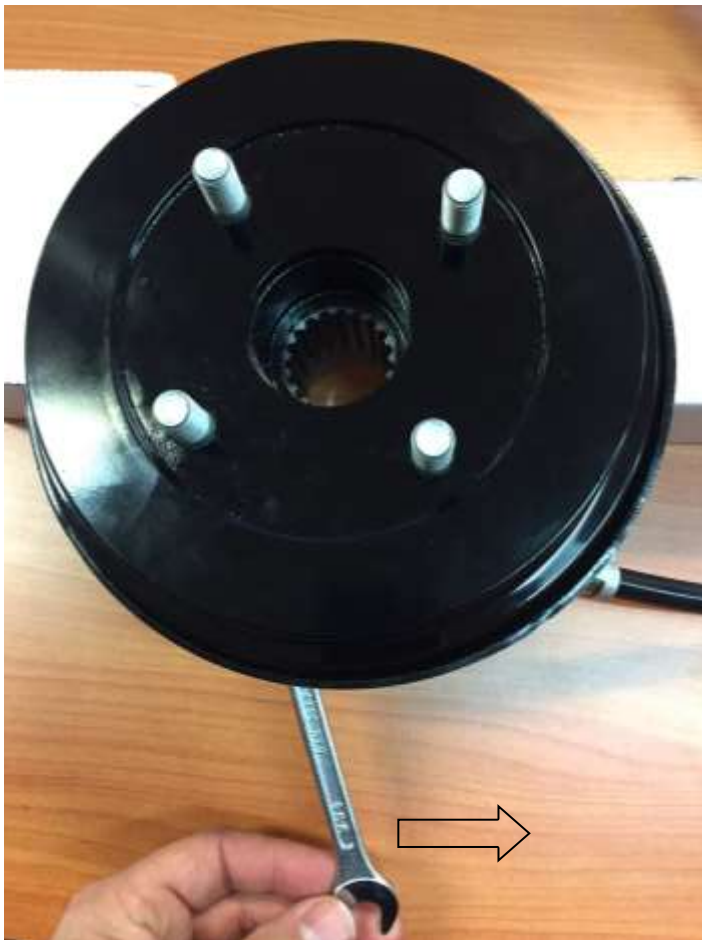
## Step 6 Adjusting the handbrake

You will need the rear wheels off the ground, if using a jack please also use jack stands.



On the rear of the backing plate at the bottom is a 10mm hex which is used to adjust the handbrake

**Image 3.6** Handbrake adjuster



Use a 10mm ring spanner or socket. The handbrake is shipped fully backed off which you can check by moving the spanner anti clockwise—it should feel spongy. (Pic above left)

If you move the spanner clockwise you will feel a small notch/click, keep moving clockwise until it stops (pic above right), try and rotate the tail shaft it should be solid. Rotate the spanner anti clockwise one notch—this will free up the tail shaft.

Adjust cable lock nuts inside on the lever to remove cable slack.

Remove the jack/stands, lower vehicle and test handbrake operation - re adjust if necessary.

## Terms and Conditions

Thank you for purchasing this product manufactured by Marks 4WD Adaptors. Components supplied in this kit are designed and machined for a specific conversion only as outlined in this guide. Modifications to or substitution for any of the components without the written consent of Marks 4WD Adaptors will void any possible warranty or return privileges.

The following instructions are intended as a guide and only for Marks 4WD Adaptors kits. If you do not fully understand the steps, modifications or changes required to complete the conversion, contact our sales department for more information. We recommend that you purchase a service manual pertaining to your vehicle for specific torque values, wiring diagrams and other related information.

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