

# ***dodson***<sup>®</sup>

## **INSTALLATION INSTRUCTIONS**

### **MCLAREN 4<sup>TH</sup> SELECTOR FORK UPGRADE**

**DMS-00-0072 REV 002**

**12 JUNE 2023**

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DATE: 09JUN2023**

**RELEASED BY: J.PISL  
DATE: 12JUN2023**

*AFD*

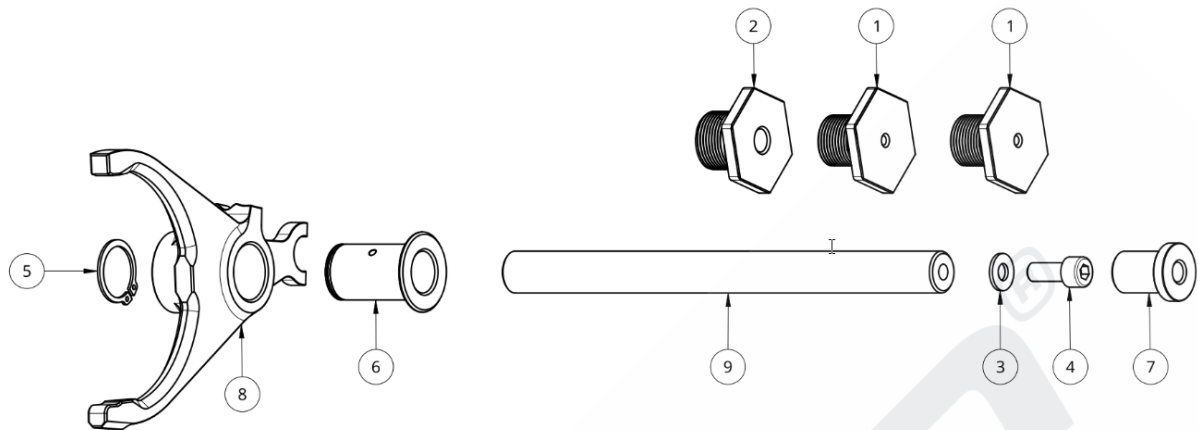
## **REVISION UPDATE NOTES:**

The following table indicates the changes made in this document since the previous revision. All changes will be indicated by a revision bar in the margin.

If you have any questions email us at [technical@dodsonmotorsport.com](mailto:technical@dodsonmotorsport.com)

<b>Revision</b>	<b>Date</b>	<b>Description</b>
REV.002	12JUN2023	- Updated to new format - Updated BOM
REV.001	06SEP2021	- Initial release.

## MCLAREN SELECTOR UPGRADE KIT CONTENTS (DMS-7194)



Item Number	Part Name	DMS Code	Qty
1	Gearset nut small (LH Thread)	DMS-0108	2
2	Gearset nut Large (RH Thread)	DMS-0109	1
3	M8 Copper crush washer	DMS-0131	1
4	M8 x 20mm socket head cap screw	DMS-0132	1
5	IKO External 24mm circlip	DMS-1004	1
6	4th Shift fork bushing	DMS-1476	1
7	4th Shift fork drill guide	DMS-2440	1
8	4th Shift fork (Body only)	DMS-5719	1
9	4th Shift fork selector shaft	DMS-5720	1

## MCLAREN 4<sup>TH</sup> SELECTOR FORK UPGRADE INSTRUCTIONS DISASSEMBLY

### STEP 1

Unless drained prior, with the transmission in the upright position, drain the fluids using the drain plug on the underside of the case.



### STEP 2

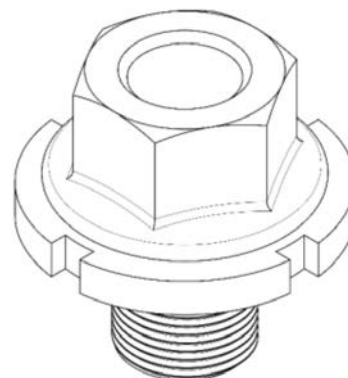
Next, remove the three shaft-end covers as shown to expose the three gearset bolts.

**Please note the thread direction on these bolts – two left-hand threaded bolts (yellow) and one right-hand threaded bolt (red).**

Remove these to free the shafts from the main cover bearings.

These bolts are difficult to remove without damaging the drive notches on the bolt heads. For this reason, upgraded hex head bolts have been included in the kit as OEM replacements.

For ease of removal we recommend welding a hex nut to the head of the bolt as shown below.



**NOTE:** the shafts can be prevented from rotating by selecting two gears at once by manually moving the shift forks.

## **STEP 3**

Having removed the gearset bolts proceed to remove the bolts securing the main cover to the rest of the transmission casing. The cover can then be removed completely, as shown below.



## **STEP 4**

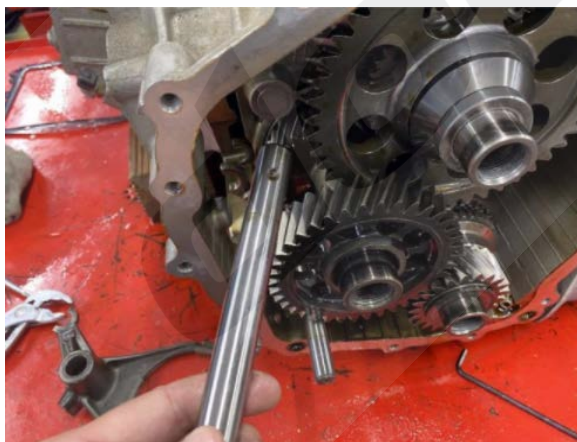
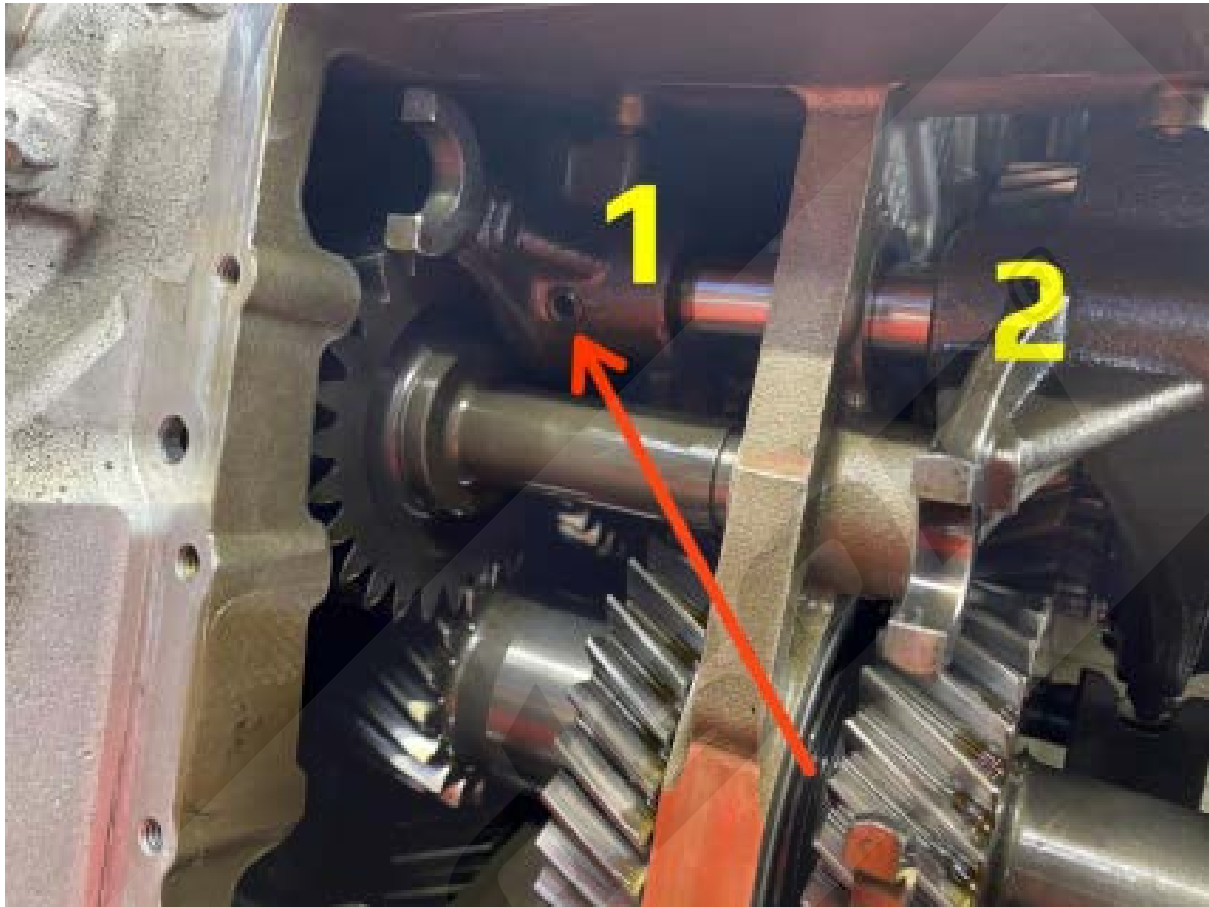
Next, remove the gear selector valve body as well as the four shift fork detents completely, as shown below.

Two are located on the top side, and two located on the bottom side of the housing.



## **STEP 5**

Remove the grub screw securing the 4<sup>th</sup> gear shift fork (1) to the selector shaft. This allows for the removal of the selector shaft and shift fork (2) as pictured.



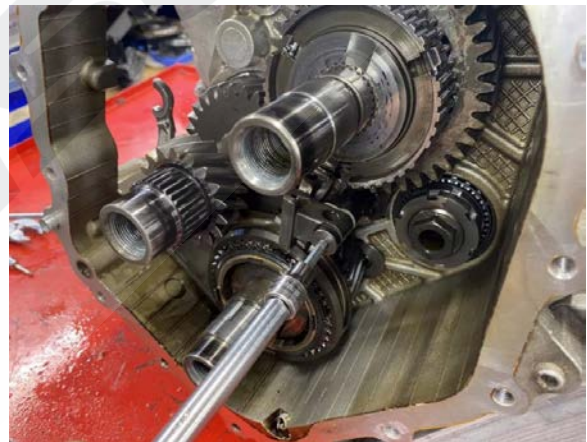
## STEP 6

Remove the speed sensors.



## STEP 7

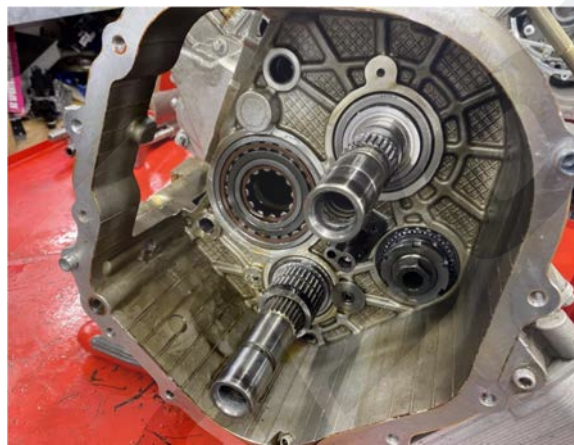
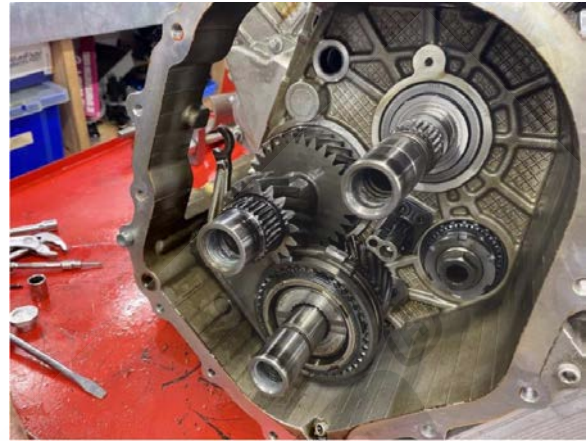
The gears, synchros, and selector rings can now be freely disassembled to the point shown in the first image below. To continue disassembly, carefully remove the shift for interlock as shown in the second image below.



**NOTE:** Take special care when disassembling the gearbox to note the position and orientation of all the components, and to ensure that no components are misplaced.

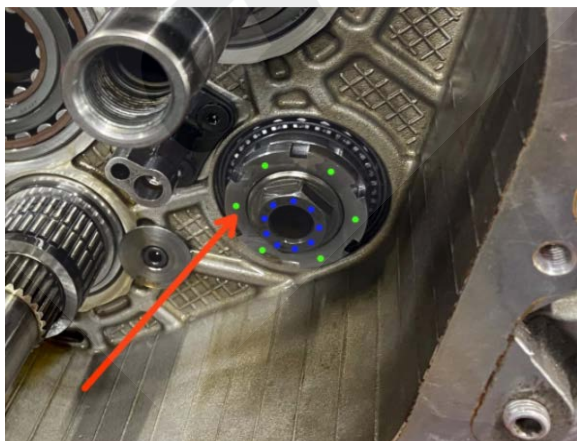
## STEP 8

Continue to remove all the remaining components from the first section of the transmission.



## STEP 9

Next, remove the locking nuts from the end of the output shaft pictured below. This is achieved by holding the central shaft (Blue) stationary while turning the first locking nut (Green) counter-clockwise, followed by the second locking nut.





## **STEP 10**

Remove the bolts holding the case to the rest of the transmission and remove this section of the housing entirely.



## **STEP 11**

The 4<sup>th</sup> Selector Fork (Highlighted Blue) can now be removed and replaced with the upgraded fork.



## **MODIFICATION**

In the original design, the shaft itself is allowed to move axially with respect to the transmission housing. The improved design fastens the upgraded selector shaft to the main cover (Pictured in step 3 of the previous section).

This requires an 8.4mm hole to be drilled in the cover in the location outlined below:



Using the included drill guide to ensure the hole is central to the sleeve, use an 8.4mm drill bit to create a hole through the end of the cover as shown.



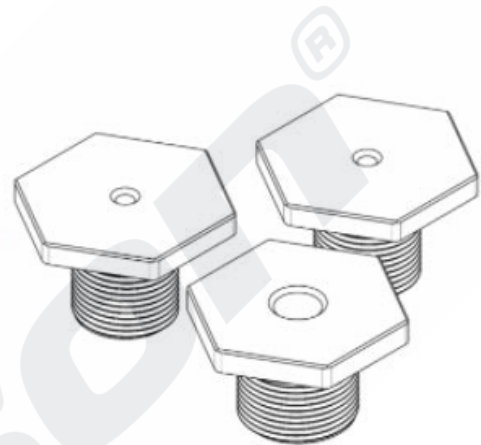
## REASSEMBLY

Reversing the steps shown in the disassembly process, reassemble the transmission. Ensure that the Dodson upgraded selector fork and selector shaft are used instead of the OEM components.

When installing the selector shaft, ensure the threaded hole in the shaft is oriented towards the back of the transmission, adjacent to the hole drilled in the cover in the previous step.

### IMPORTANT

When installing the DMS replacement gear set bolts apply Loctite (or similar threadlocker) and torque to **80 Nm**.



## FINAL STEP

Once the transmission is reassembled you will need to fasten the selector shaft to the cover, using the included fastener and copper washer.

Use Loctite (or similar threadlocker) on the fastener to prevent it from loosening and any leakage from the transmission.



If you have any questions email us at [technical@dodsonmotorsport.com](mailto:technical@dodsonmotorsport.com)