INSTALLATION INSTRUCTIONS

DQ500 SPORTSMAN'S 7/8 CLUTCH

DMS-00-0019 REV 004

04 DECEMBER 2023

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DATE: 14NOV2023

RELEASED BY:
DATE: 04DEC2023

REVISION UPDATE NOTES:

The following table indicates the changes we have made in either the disassembly or assembly of the product you have received. All changes are indicated by a revision bar in the margin.

If you have any questions email us at **technical@dodsonmotorsport.com**

Revision	Date	Description
REV.004	04DEC2023	- PAGE 9: Rewrote Step 6 for clarity.
REV.003	10JUL2023	- Added Trans tune recommendation. - Renamed file (Formerly DQ500 7-8 PLATE) and re-numbered assembly steps for clarity. - PAGE 10: Added important note.
REV 002	03MAY2022	- Updated DQ500 7/8 Contents table. - Updated Step 3 large and small stack clearance numbers. - Updated overall format. - Added missing photos and an extra photo in Step 5.
REV 001	03SEP2021	- Updated to new format

READ FIRST

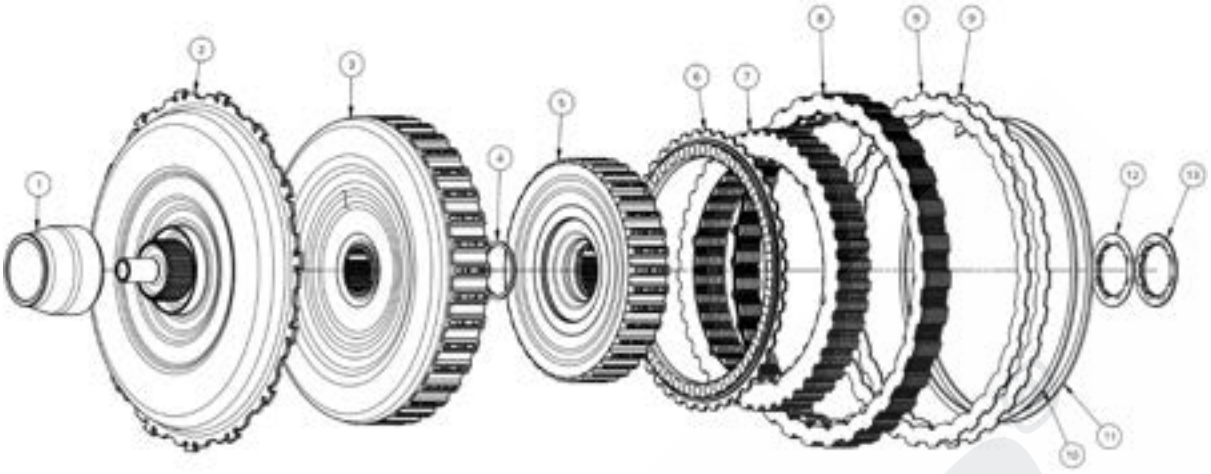
A TRANSMISSION TUNE IS RECOMMENDED TO PREVENT DAMAGE TO THE CLUTCH AND TO GET THE BEST BENEFITS FROM IT.

We have seen great results when using our clutch kits with a suitable transmission tune. When choosing an aftermarket tune, the important aspects that need to be considered are:

- Increasing clutch pressure to ensure that the clutch is fully clamped when power is applied.
- Modifying the torque tables, as a modified car will be applying far more torque at lower RPM than the TCU is tuned for. The TCU may also intentionally slip the clutch at low RPM for a more comfortable drive, but with engine and transmission modifications, this can burn the clutch.
- Since the "comfort mode" allows the clutch to slip, it is important to make sure this isn't a default setting on start up, if possible.
- Moving the shift points so the car doesn't hold 2nd gear at low RPM (or even at a stop). Heavy torque applied in 2nd gear at low RPM can burn the small stack.
- Not every off-the-shelf transmission tune will resolve this, and so it's important that the aspects mentioned above have been considered and that they have been discussed with your tuner.

For best results, we recommend only using **Manual (M)** or **Sport (S)** transmission modes. In some cases manually shifting into 1st gear before coming to a stop may be required to prevent "bumping". (which can be caused by the larger clutch and its increased coefficient of friction)

DQ500 SPORTSMAN'S 7/8 CONTENTS (DMS-8076)



Item Number	Part Name	DMS Code	Qty
1	Seal Guide	DMS-2412	1
2	Clutch Basket Lid Assembled *	DMS-3024 *	1
3	Clutch Basket Large Sportsman	DMS-3226	1
4	Small Basket Internal Circlip AR34	DMS-0900	1
5	Clutch Basket Small Sportsman	DMS-3227	1
6	Small Endplate - 1.6mm	DMS-4424	1
7	Small Sportsman 7/8 Clutch Stack	DMS-8136	1
8	Large Sportsman 7/8 Clutch Stack **	DMS-8172 **	1
9	Clutch Pack Steel Large - 1.2mm	DMS-4420	2
10	Small Basket Circlip - 1.6mm	DMS-1009	1
11	Small Basket Circlip - 1.8mm	DMS-1010	1
12	Bronze Thrust Bearing - 2.73mm	DMS-1468	1
13	Bronze Thrust Bearing - 3.13mm *	DMS-1482 *	1

* Basket Lid and 3.13mm Bronze Thrust Bearing only included in kits "WITH LID"

** Large stack for clutch kit **without** Dodson Clutch Basket Lid - DMS-8137

DQ500 SPORTSMAN'S 7/8 INSTALLATION INSTRUCTIONS

DISASSEMBLY

STEP 1

To remove the clutch from the car you must remove the large circlip retaining the lid. You must then remove the lid and small circlip holding the large basket. Once complete the clutch can now be taken from the transmission.

STEP 2

Under the small circlip that held the large basket, there is a small shim. Ensure to put this aside. It will **NOT BE** used in the assembly of the Dodson clutch.

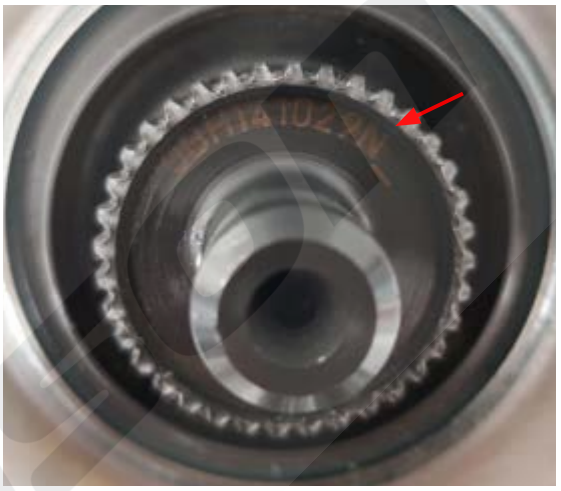
STEP 3

Continue to disassemble the clutch. Both baskets need to be removed along with both stacks.

ASSEMBLY

IMPORTANT NOTES FOR KITS WITH CLUTCH BASKET LID ONLY:

- **It is best to mock build the clutch without stacks in the gearbox to ensure there is proper endfloat and baskets spin freely.**
- **There are 2 known versions of the OEM core that vary in height. The variance comes from cores produced 2012 and prior (8P cars) and 2013 onwards (8V onwards).**
- **When installing in an 8P core there will be more endfloat than in an 8V core. To manage this you will need to swap the brass washer to the thicker version when installing in the 8P core. The thicker washer measures 3.13mm. The thinner washer for the 8V core measures 2.73mm. (It doesn't matter which core goes in which car, an 8V core can go in an 8P car and vice versa)**



8V Onwards Lid Part Number - OBH141029Q_(Left) 8P Lid Part number - OBH141029N_ (Right)

- **It is then best to mock build the clutch with stacks on the bench and measure the clearances before properly installing in the gearbox.**

- **When installing in an 8P core you will need to add 2 x 1.2mm steels and remove 2 x 1.0mm steels (from the large stack))to tighten the clearance back to the specification.**

STEP 1

Start the assembly by installing the clutch stacks.

NOTE: The frictions have a specific direction, ensuring the grooves have the same orientation as the photo when installed. SOAK THE FRICTIONS IN OIL BEFORE FINAL ASSEMBLY.

STEP 2

After the last plate in the small clutch. Install the **billet top plate** and the OEM Circlip for now.

STEP 3

Check the clearance of the small clutch by measuring the distance between the top plate and the bottom of the circlip. **This value should be 3.2 +/- 0.2mm.**

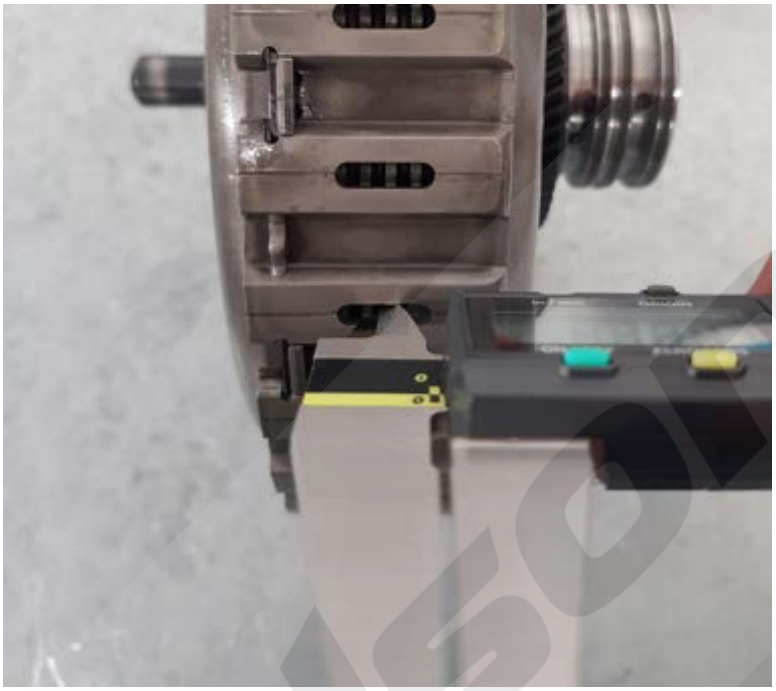
If it is not within tolerance, swap out the OEM circlip for the appropriate circlip to reach this clearance. There is a range of circlips supplied in the Dodson clutch kit.

If reaching this clearance is not possible, please contact us at **technical@dodsonmotosport.com**

STEP 4

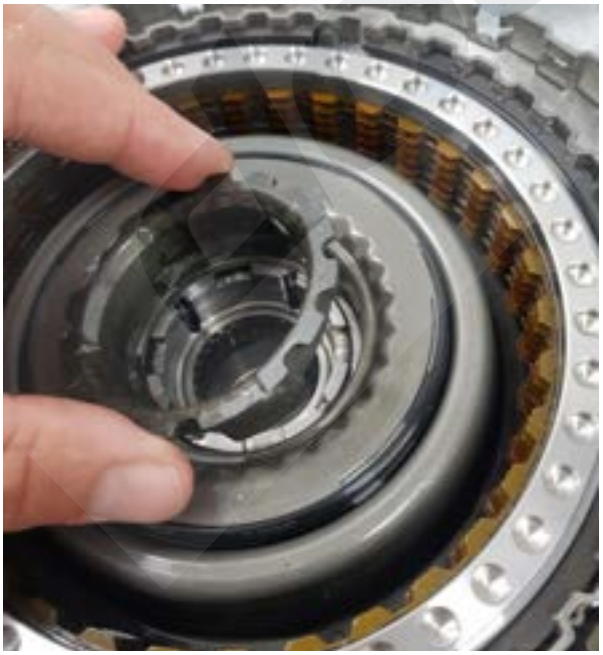
Check the clearance of the large clutch by measuring in between the oiling holes on the exterior of the clutch core. (The clutch lid and circlip has to be installed)

Take the measurement between 2 x steel plates and subtract 1.35mm (the thickness of the friction). **This value should be 2.9 +/- 0.2mm.**



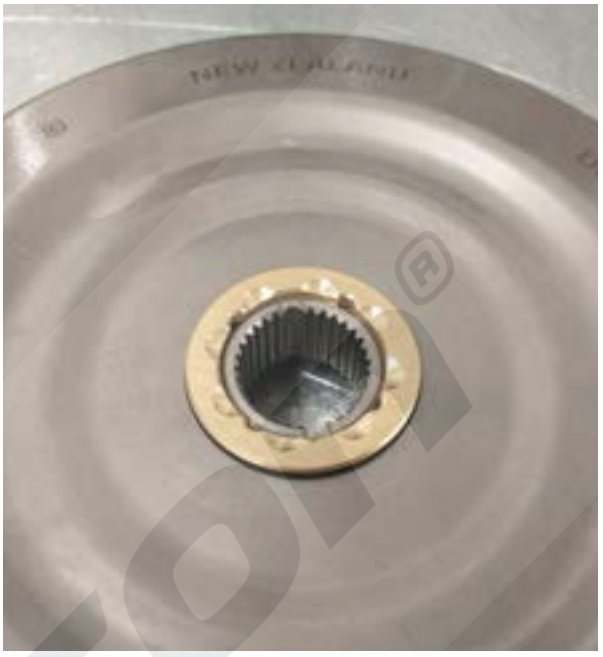
STEP 5

Make sure the **plastic thrust insert** is seated all the way down. If this is sitting up the clutch will not be able to be installed correctly. It has little locating lugs on the bottom and these can sometimes be sitting out of their dedicated grooves.



STEP 6

Use a small pick or screwdriver to align the friction teeth to help with assembly. Insert the **Dodson small basket** in place, confirm that the **Torrington bearing** is located correctly on top of the basket. Then fit the **Dodson large basket** and clip in the selected **brass thrust washer** on top of the basket.



STEP 7

The clutch can now be installed in the gearbox. Retain the large basket with the **OEM circlip** on the input shaft. Ensure the bottom friction of the large clutch stack doesn't fall off the bottom of the basket.

Remember to **NOT** use the OEM shim under the circlip retaining the large basket.

STEP 8

Install the lid and OEM large retaining circlip. The lid will be tight and may need a tap with a soft hammer to install. **Do Not use a hydraulic press!**

Please note that the clutch core may need to be lifted up to be able to fit the lid, if it's not possible, the bottom most friction on either clutch may have become misaligned with the basket.

STEP 9

Fit the clutch cover. It is helpful to use the provided Dodson seal guide. Once seated correctly fit the OEM clutch cover circlip.

IMPORTANT NOTE

PLEASE MAKE SURE THAT THE BASIC SETTING AND ADAPTION DRIVE PROCEDURES ARE SUCCESSFULLY COMPLETED BEFORE USING THE FULL POWER OF THE VEHICLE.

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