INSTALLATION INSTRUCTIONS

DCT470 SPORTSMAN'S CLUTCH

DMS-00-0044 REVISION 002

28 JULY 2022

PREPARED BY: JAN PISL
DATE: 21JUL2022

RELEASED BY:
DATE: 28JUL2022

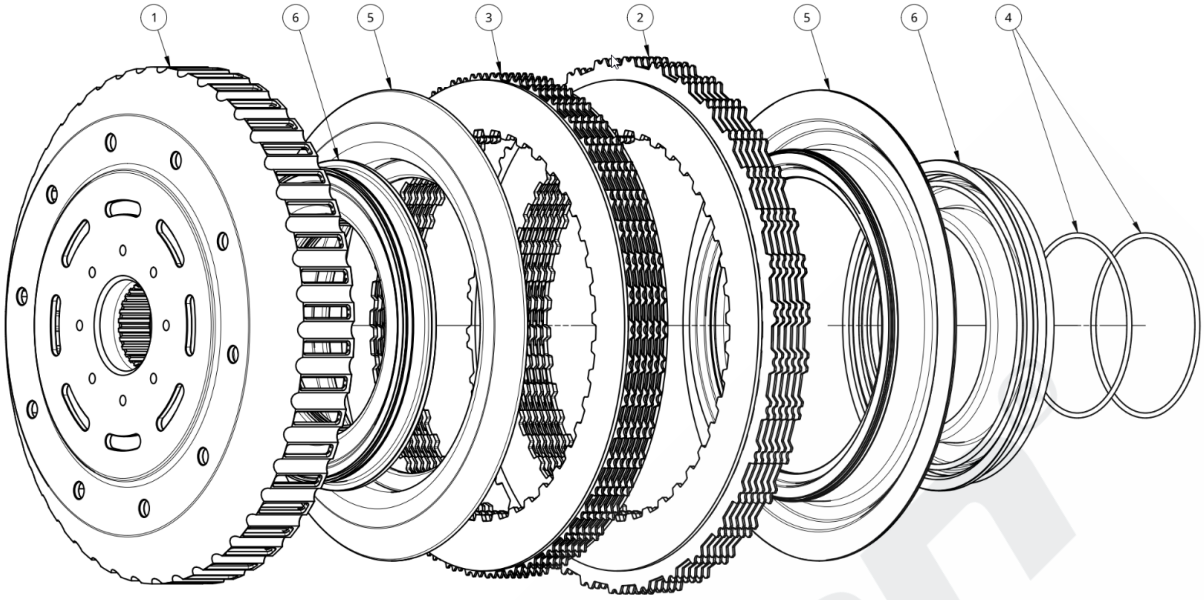
REVISION UPDATE NOTES:

The following table indicates the changes 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 002	28JUL2022	- Revised formatting. - Updated contents to cover Sportsman's 5 and Sportsman's 6 and Sportsman's 6/7 versions. - Added an important note about the core mod needed for the Sportsman's 6 & 6/7.
REV 001	13SEP2021	- Converted to a new format.

EVO X (DCT 470) SPORTSMAN'S KIT CONTENTS



Item Number	Part Name	DMS Code	Qty
1	Clutch Basket	DMS-3237	1
2	Large Clutch Stack	DMS-*	1
3	Small Clutch Stack	DMS-*	1
4	Piston Shaft Seal (pair)	DMS-1918	1
5	Clutch Clamp Plate	DMS-8012	2
6	Clutch Piston	DMS-8013	2

* Stack DMS codes are as follows:

DMS-8008 Kit Sportsman's 5	Large Clutch Stack - DMS-8133 Small Clutch Stack - DMS-8132
DMS-8117 Kit Sportsman's 6	Large Clutch Stack - DMS-8135 Small Clutch Stack - DMS-8134
DMS-8009 Kit Sportsman's 6/7	Large Clutch Stack - DMS-8139 Small Clutch Stack - DMS-8138

READ FIRST:

These instructions must be followed exactly. New fluid and filters must be used when installing a Dodson clutch. Once the clutch is installed and the teach-in procedure is successful, take the car for a quick test drive and ensure the correct operation of the transmission. After 5km, perform the teach-in procedure again. It is strongly recommended to drive the next 50-100kms in a number of trips. **Do not constantly use light throttle. Do not use full power during this drive.** A moderate amount of throttle is recommended. After these kilometers have been logged, it is recommended to perform the teach-in procedure again.

Disabling the traction control system or engaging the launch control system will accelerate wear or potentially damage the clutch and transmission. These functions are to be altered at the user's own risk.

Conditions for clutch set-up

1. Installation must be carried out by a Dodson Motorsport trained Dealer.
2. **Dodson Motorsport fluid must be used and changed as per OEM service intervals.**
3. **Primary and secondary filters must be clean.**
4. ECU parameters for transmission torque tables to be set correctly.
5. Transmission temp must be up to 74℃ before racing.
6. Teach in procedure to be completed successfully with MUT III or equivalent.

FAILURE TO COMPLY WITH THESE CONDITIONS WILL RESULT IN WARRANTY LOSS.

FOR SPORTSMAN'S 6 (DMS-8117) & 6/7 (DMS-8009) KITS THE CLUTCH CORE NEEDS TO BE MODIFIED

PLEASE FOLLOW THE DODSON MACHINING INSTRUCTIONS (DMS-00-0010 EVO CORE MOD)

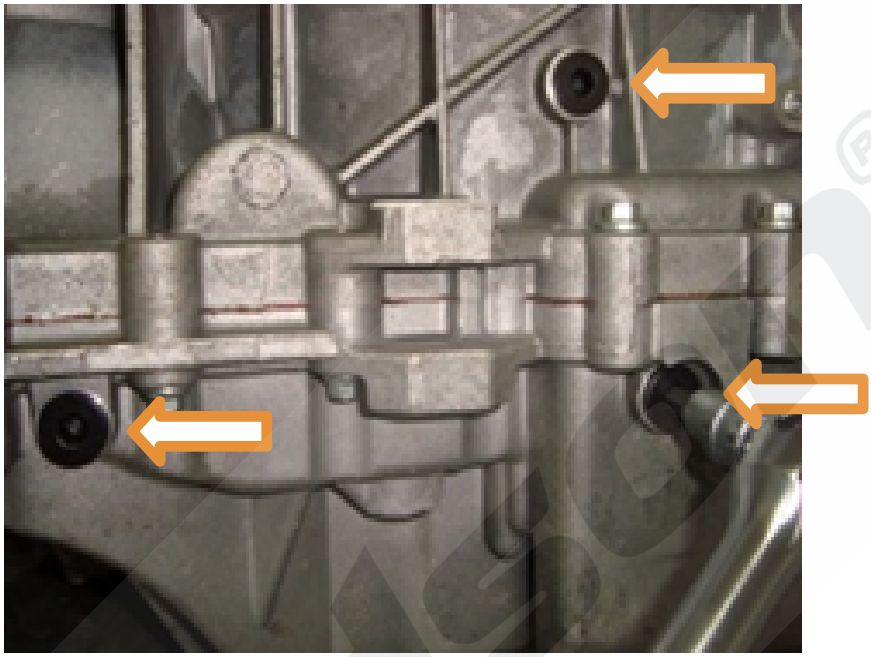
EVO SPORTSMAN'S CLUTCH INSTALLATION INSTRUCTIONS

CLUTCH REMOVAL

STEP 1

If not performed during transmission removal, drain transmission oil from 3 drain plugs.

NOTE: The transmission cooler should also be fully drained if replacing fluid.



STEP 2

Position the transmission so the clutch lid is facing upwards. Remove 3 x T30 Torx bolts and brackets.

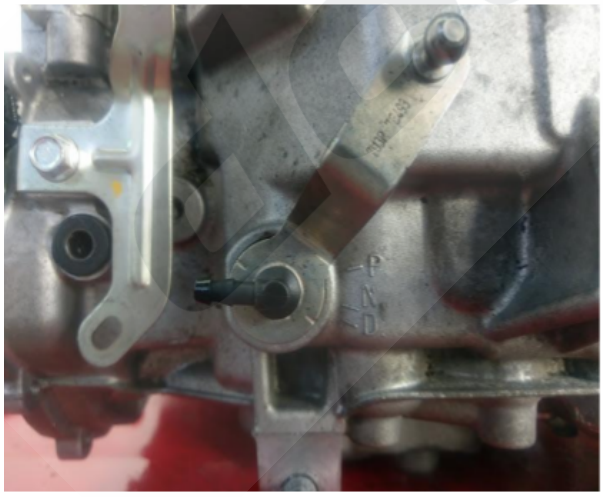
STEP 3

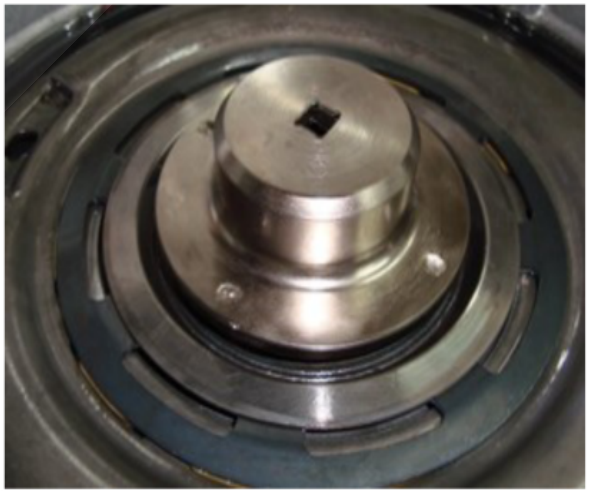
Use a blunt lever such as a large flat blade screwdriver to pop out and remove the clutch lid and seal.

NOTE: Be careful not to dent the lid.

STEP 4

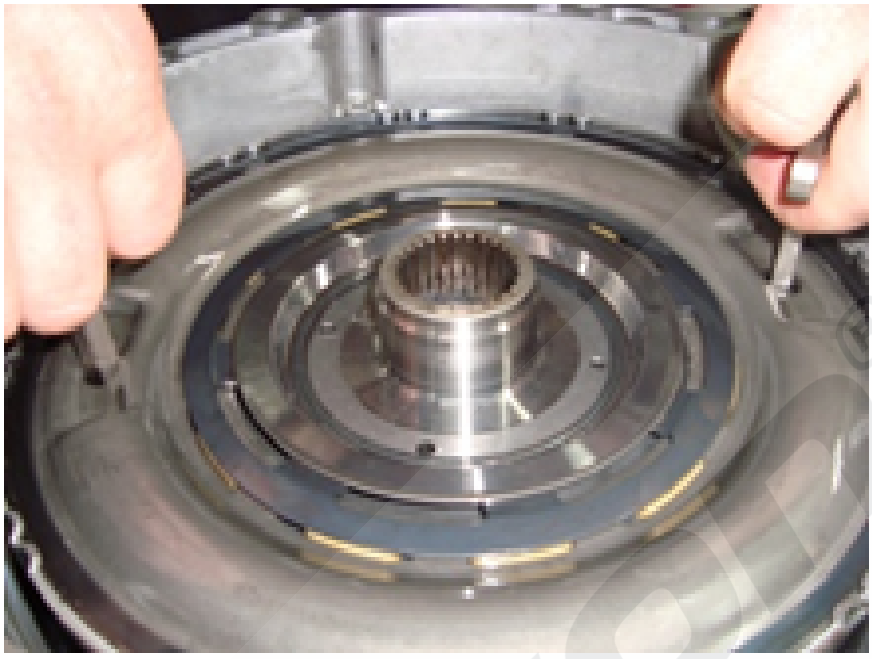
Turn the shift lever clockwise to the final position. Fit the Dodson lock nut tool into slots. Ensure the tool is flush with the dual mass plate. Insert T-handle tools and turn the clutch assembly anti-clockwise until loose. You may have to give it a hard turn initially to undo.





STEP 5

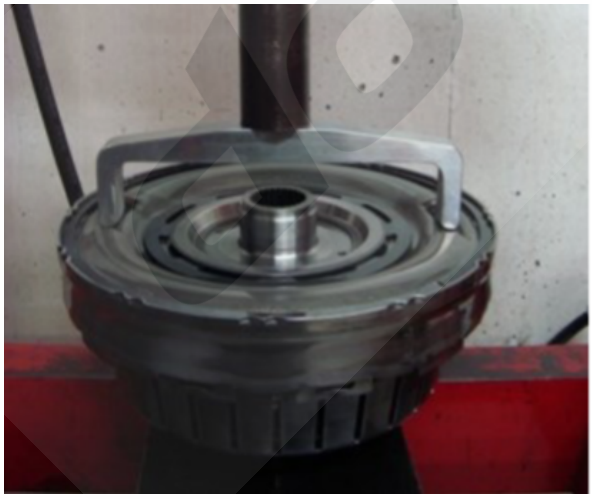
Turn T-handles 90 degrees to lock in and lift out the clutch assembly.



CLUTCH DISASSEMBLY

STEP 1

Place clutch housing in a press and position the “bridge tool” over slots. Press the dual-mass damper down until the large circlip is exposed. Remove the circlip using a thin flathead screwdriver.

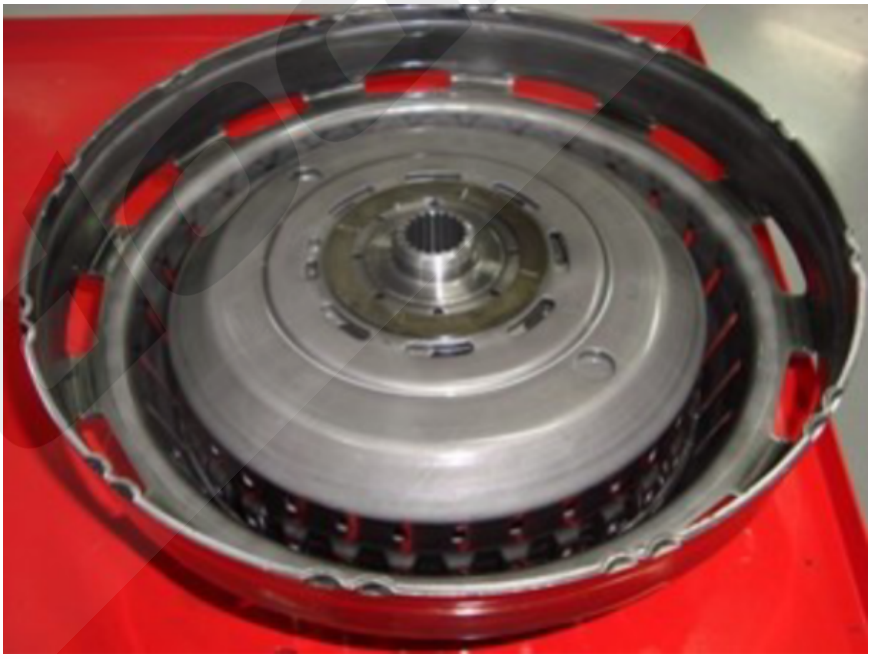


STEP 2

Insert T-handle tools back into slots and lift the dual mass damper out of the clutch housing.

STEP 3

Remove the large and small clutch baskets and the clutch lock nut/thrust washer.



STEP 4

Place the unit back into the press upside down on top of a suitable spacer. Using the Dodson clutch pressing tool, press the outer housing down (as per photo) enough to be able to remove the circlip and then remove the outer housing.

The clamping plate, return spring, and the large clutch pack can now be removed also.

STEP 5

Flip the clutch core and repeat the procedure on the small clutch side to complete disassembly.

CLUTCH ASSEMBLY

ENSURE THAT ALL FRICTIONS ARE PRE-SOAKED IN TRANSMISSION OIL.

STEP 1

Clean the clutch core and replace piston shaft o-ring seals ***(DMS-1918)*** on both sides of the core.

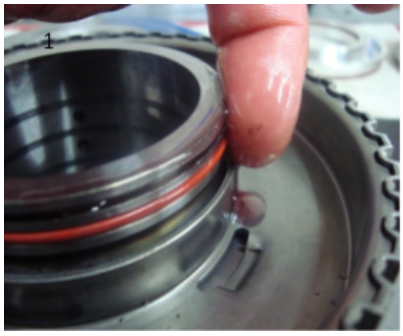
STEP 2

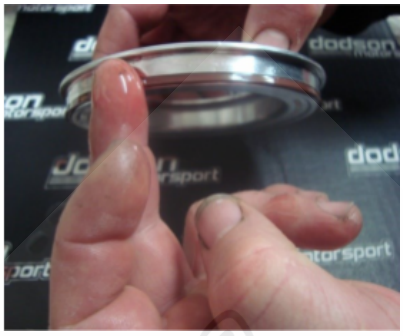
Starting with the clutch core with the splined side facing down, install the small clutch pack exactly as it arrives in the pack.

Note: The direction of the frictions is as per the photo.

STEP 3

Apply transmission fluid to all seals on clutch core, clamping plate and piston before assembly.





STEP 4

Insert the return spring into the clutch core, then insert the clamping plate using a turning motion to avoid rolling the seal, then fit the o-ring over the protruding return spring.


STEP 5

Insert the piston into the retainer using a turning motion to avoid rolling the seal.


STEP 6

Fit the piston with retainer onto the clutch core using a turning motion to avoid rolling the seal, then place the core in the press and press the piston retainer down enough to reinstall the circlip.

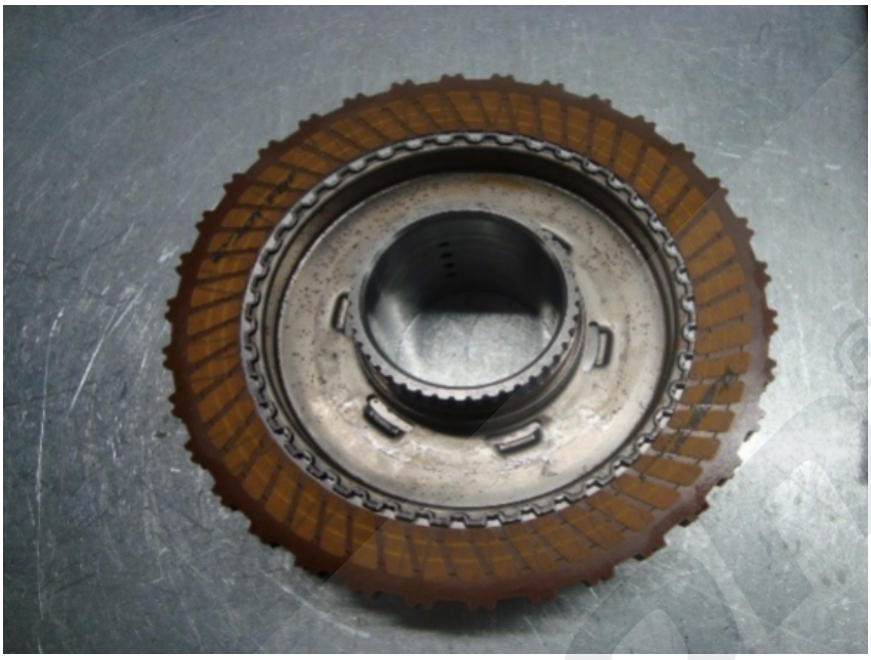
STEP 7

Check small clutch pack clearance using Dodson tools or feeler gauge by inserting the tools between the clamping plate and top steel. Record the measurement.

NOTE: On the small clutch, the clearance should be 2.4mm +/-0.2mm.
For the 6/7 kit (DMS-8009) the clearance should be 2.6mm +/-0.2mm.

STEP 8

Instal the large clutch pack exactly as it arrives in the pack.



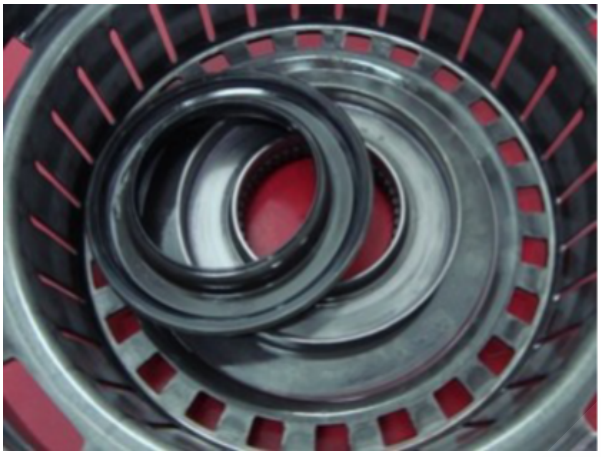
Note: The direction of the frictions is as per the photo.

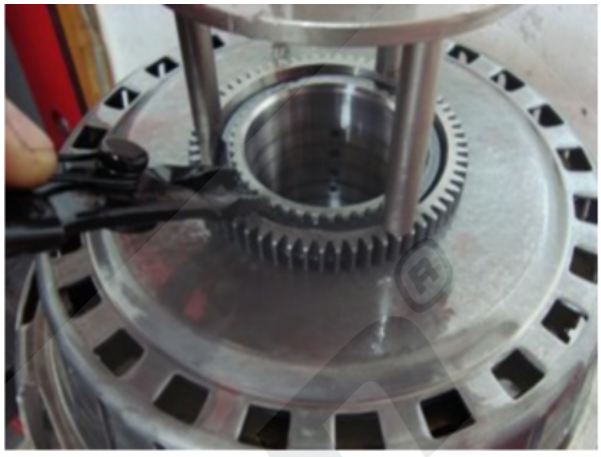
STEP 9

Insert the return spring into the clutch core, then insert the clamping plate using a turning motion to avoid rolling the seal, and then fit the o-ring over the protruding return spring.

STEP 10

Insert the piston into the retainer in the outer clutch housing using a turning motion to avoid rolling the seal. Then fit housing over the clutch core again using turning motion, place in the press and press down enough to fit the circlip. (OE piston pictured below)

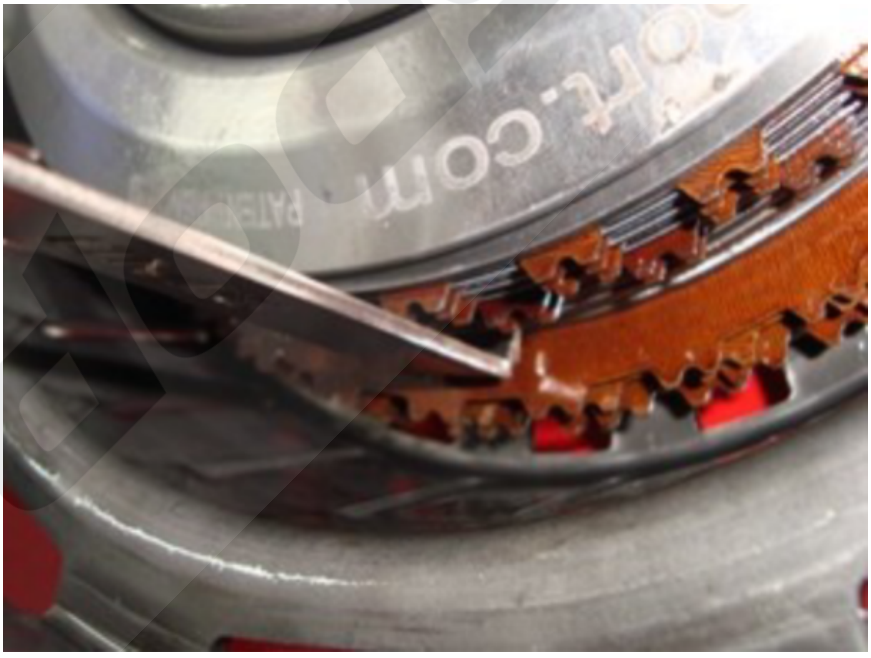




STEP 11

Check the large clutch pack clearance using Dodson tools or feeler gauge by inserting the tools between the clamping plate and top steel. Record the measurement.

The core center hub has ridges, therefore on the large clutch, the clearance must be checked between the hub ridges and top steel, so move the feeler gauge around to feel the high points. Please note this is not the case if the core has been machined for the SPORTSMAN'S 6 & 6/7 kits.



NOTE: On the large clutch, the clearance should be 2.4mm +/-0.2mm.
For the 6/7 kit (DMS-8009) the clearance should be 2.6mm +/-0.2mm.

STEP 12

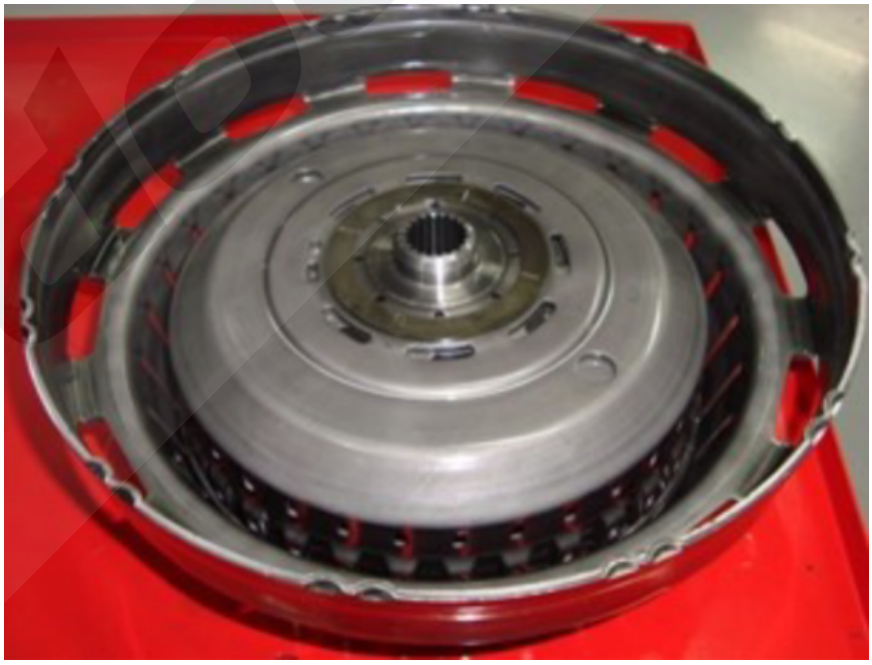
Check clutch lock nut/thrust washer thickness, **should be 4.2 and 4.6mm.**

A replacement part is available from Dodson ***(DMS-0002)*** if the thickness is below specification. Please contact **sales@dodsonmotorsport.com** if you require a replacement.

Fit clutch lock nut onto the clutch core.

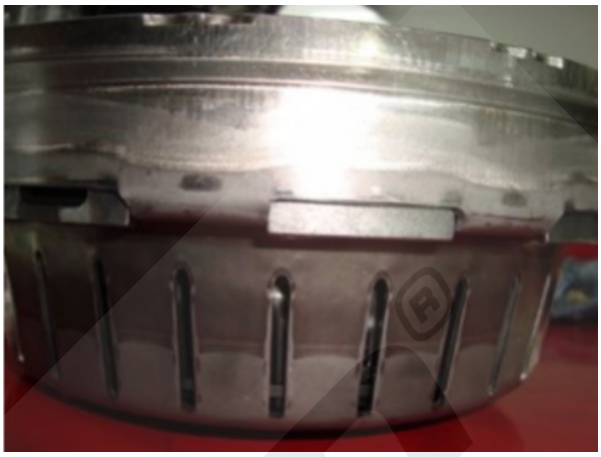
STEP 13

Using a suitable tool, line up the teeth on all the frictions and carefully slide the small and then the large basket over, making sure friction teeth line up with the slots and that the baskets are all the way home.



STEP 14

Using the T-handles, place the dual mass damper back into the clutch housing, making sure the slots line up with the outer housing.



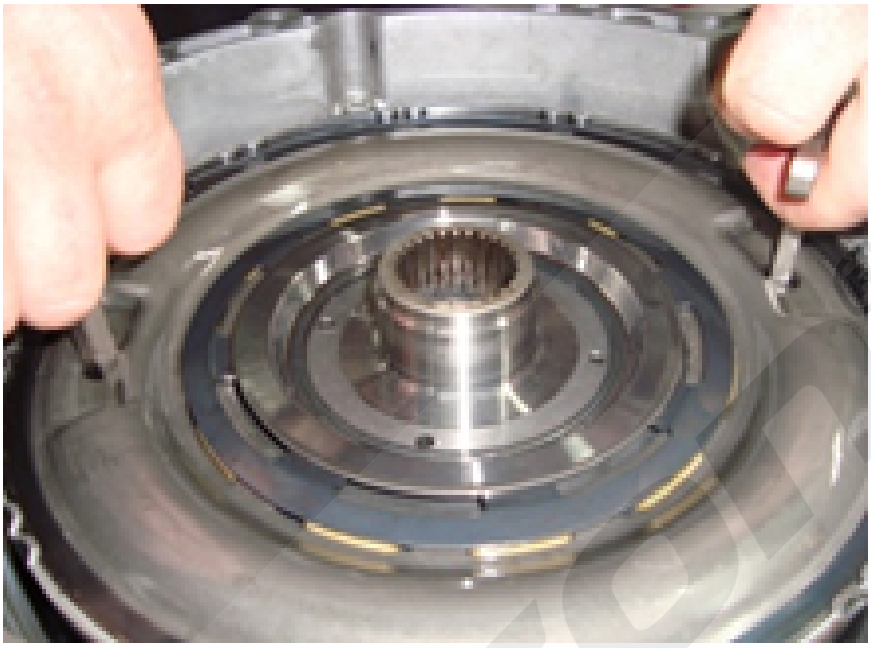
STEP 15

Place the whole assembly back in the press. Using the bridge tool press the damper down enough to refit the large circlip. Make sure the circlip lines up with the slots on the housing.

CLUTCH INSTAL

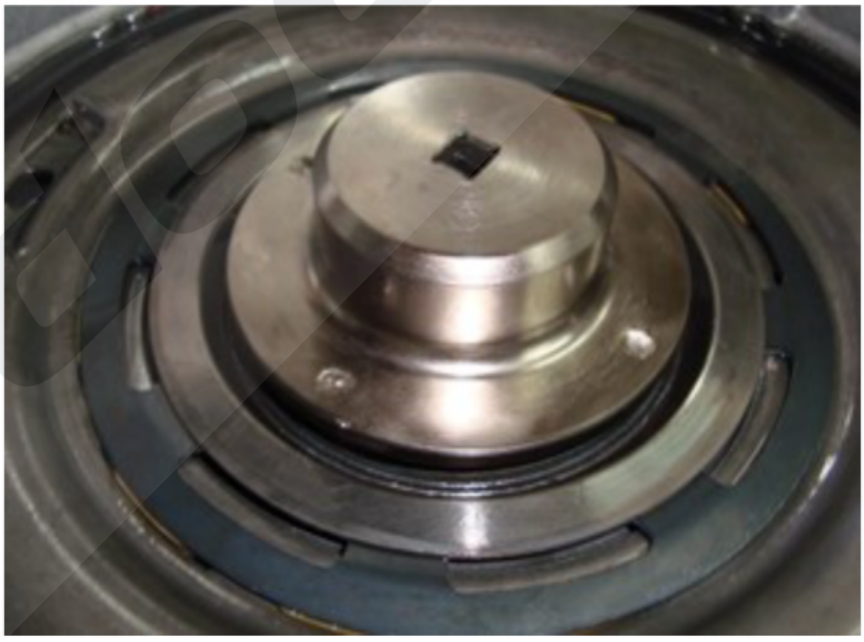
STEP 1

Using T-handles gently lower the clutch assembly into the transmission.



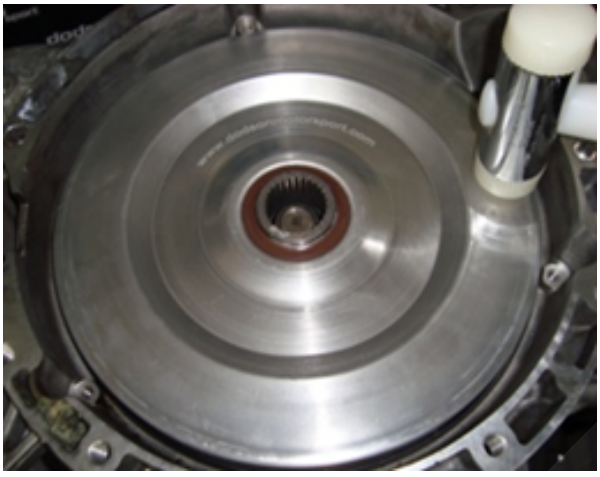
STEP 2

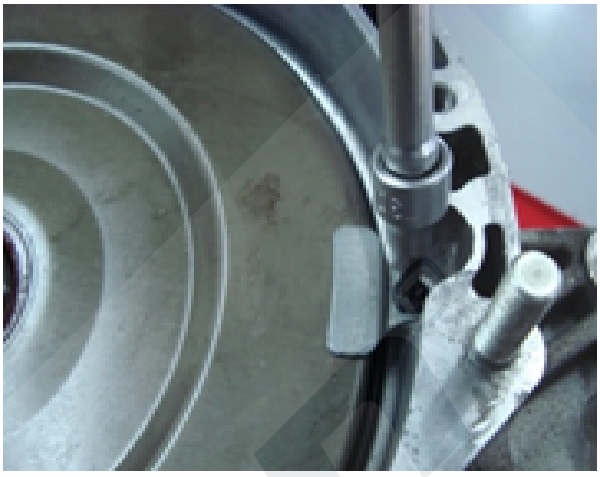
Insert lock nut tool into slots. Ensure the tool is flush with the dual mass plate. Spin the clutch clockwise using the T-handles to tighten the clutch into the transmission.



STEP 3

Reinstall clutch housing cover using a soft hammer, then reinstall the three torx bolts with brackets and tighten to 10Nm. **NOTE: Lubricate clutch housing cover seal prior to installation.**





STEP 4

Once the transmission is back in the vehicle, ensure the inline filter is replaced or if using Dodson reusable filter *(DMS-2802/DMS-2803)* ensure it has been cleaned. Fill the transmission using the fill plug on top of the transmission with 7.5 litres of Dodson Motorsport transmission fluid using a suitable funnel.

STEP 5

Carry out the clutch learning procedure as per **Dodson EVO X MUT-III Teach-in instructions**.

(DMS-00-0045 DCT470 MUT-III TEACH-IN)

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