INSTALLATION INSTRUCTIONS

C8 PROMAX 9/10 CLUTCH

DMS-00-0050 REV 002

22 MARCH 2024

PREPARED BY: JAN PISL
DATE: 22MAR2024

RELEASED BY
DATE: 22MAR2024

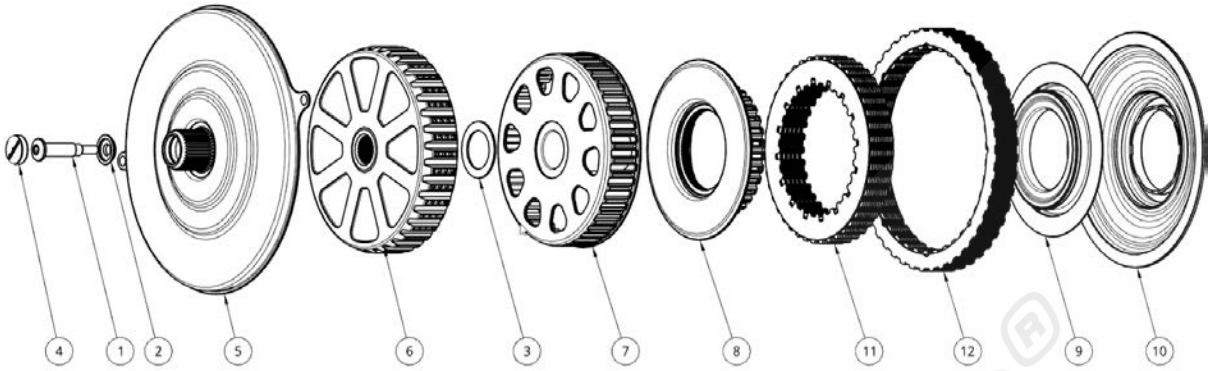
REVISION UPDATE NOTES:

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.002	22MAR2024	- Updated formatting. - Page 28: Updated the referenced steel thickness to match current clutch stack.
REV.001	22MAR2023	- Original Issue

C8 PROMAX 9/10 CLUTCH KIT CONTENTS (DMS-8074)



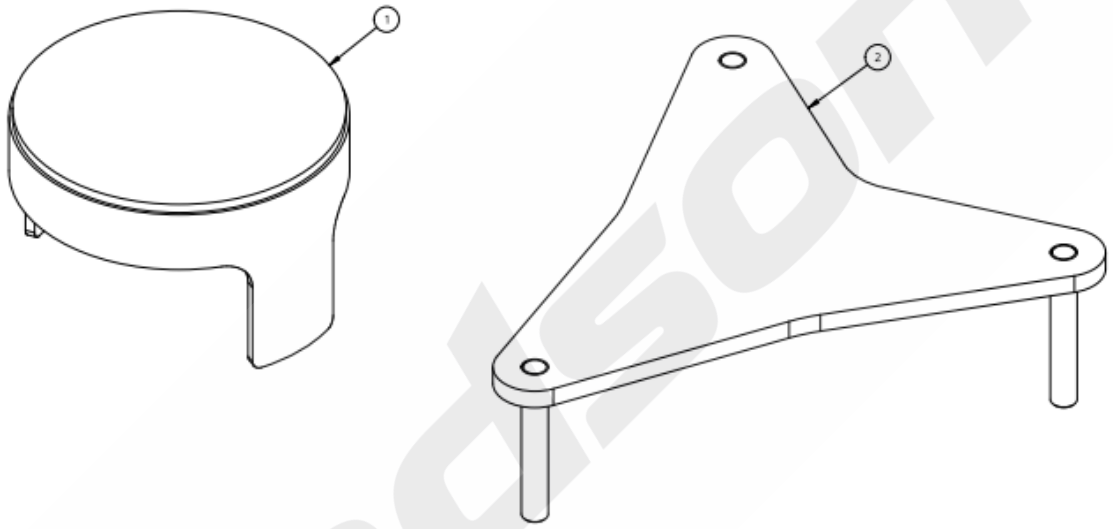
Item Number	Part Name	DMS Code	Qty
1	Pre-load Bolt	DMS-0144	1
2	Pre-load Washer	DMS-0145	1
3	Thrust Bearing	DMS-1479	1
4	Clutch Rubber Bung	DMS-1998	1
5	Clutch Cover & Lid Kit	DMS-3038	1
6	Large Clutch Basket	DMS-3240	1
7	Small Clutch Basket	DMS-3241	1
8	Inner Drive Basket	DMS-3244	1
9	Small Piston Kit	DMS-3528	1
10	Large Piston Kit	DMS-3529	1
11	Small Clutch Stack	DMS-8516	1
12	Large Clutch Stack	DMS-8517	1

WARNING:

- Please ensure that the small clutch stack and spring orientation remain the same as delivered when installing.
- This clutch was preassembled before shipping to ensure the correct combination of springs, steels, and frictions will perform as desired.

NOTE:

To assist with the disassembly and installation of the clutch, a Dodson toolkit is available (**DMS-2445**). Please contact **sales@dodsonmotorsport** if you would like to purchase one of these.



DISASSEMBLY INSTRUCTIONS

STEP 1

This set of instructions assumes that you have already removed the clutch from the transmission. If you require guidance on how to remove the transmission and clutch from the car feel free to get in contact with **technical@dodsonmotorsport.com.**

STEP 2

To remove the first retaining circlip you will need to place the clutch in a press and use the pressing tool as shown below.

Note: Ensure when loading the clutch it is done from the outer edge and not near the edge of the cutouts, otherwise the lid can be damaged.

STEP 3

With the help of a flat head screwdriver, carefully remove the circlip and then remove the clutch lid.

STEP 4

Once the lid is removed there is a smaller circlip retaining the large clutch. This can also be removed with a screwdriver or pick.

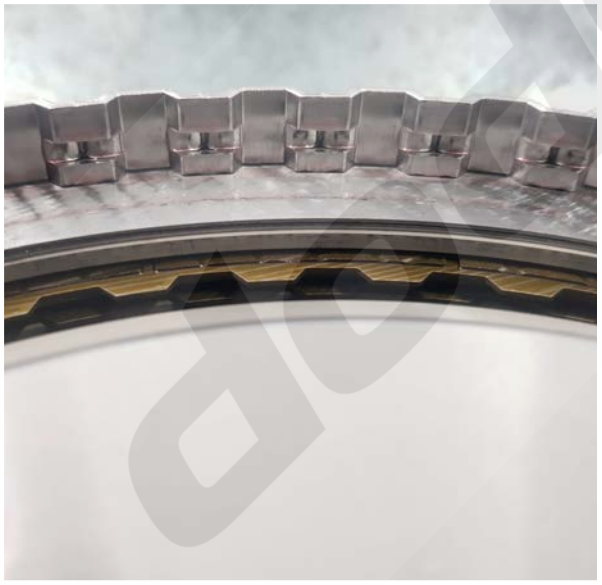
Note: The large clutch is loaded with springs and will pop out.

STEP 5

Remove both baskets. Ensure both bearings and the spring washer are removed too.

STEP 6

To remove the large stack, the top shims are quite tight and need to be carefully levered with a screwdriver. Caution: The shims can become stuck in the circlip groove.

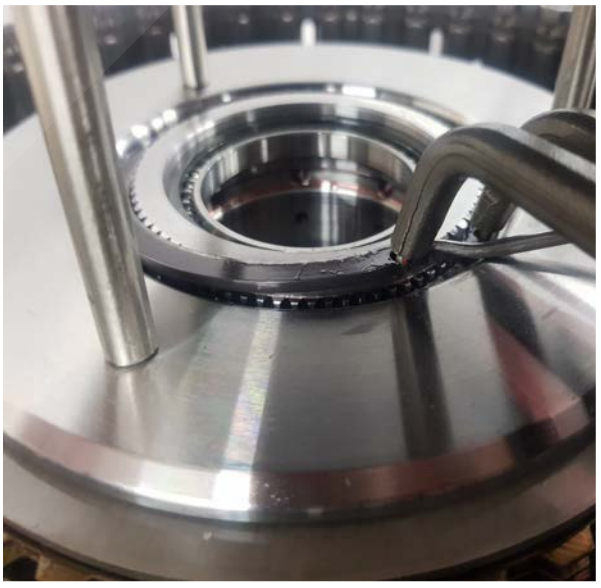


Once the shims are removed, you can tip the assembly upside down to help with removing the rest of the large clutch stack.

STEP 7

To remove the small clutch stack, a pressing tool with access to the clip is required. Press down gently, enough to remove the circlip. If excess force is applied the small piston can be damaged.

The circlip can be difficult to remove, a pick or small screwdriver can be used to assist.



STEP 8

The small clutch can now be removed.

Note: Don't lose or damage the thin shims underneath the circlip.

STEP 9

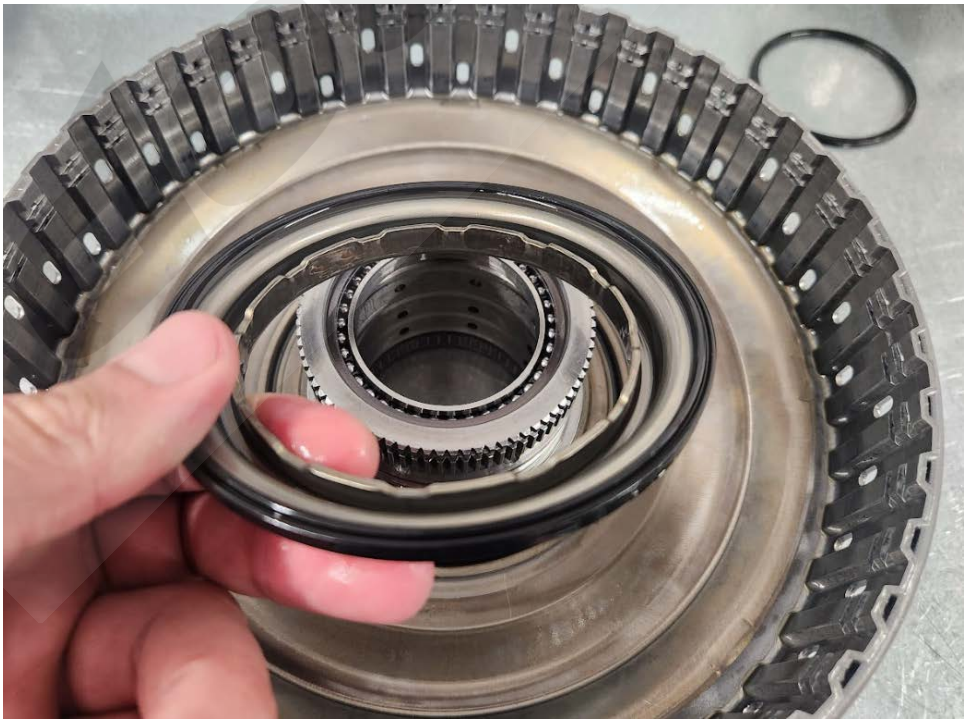
The small clutch piston can also be removed.

STEP 10

Remove the clutch core lip seal. Pinch the seal on both sides with 2 fingers, wedge a clean pick behind the seal and work it off the core. Be careful to avoid damage to the seal from the sharp edges, it will be reused. Inspect the seal for any damage. Running increased clutch pressure may cause this seal to extrude or tear.

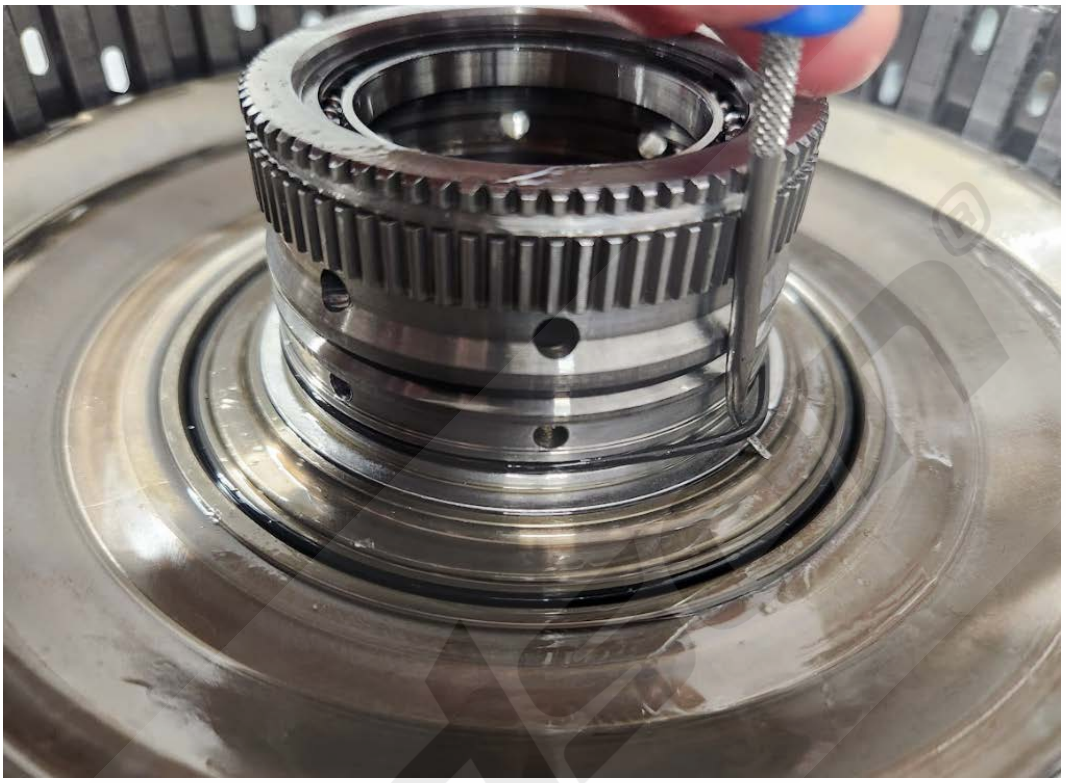
STEP 11

Remove the small clutch piston seal. Inspect the seal for any damage. Running increased clutch pressure may also cause this seal to extrude or tear.



STEP 12

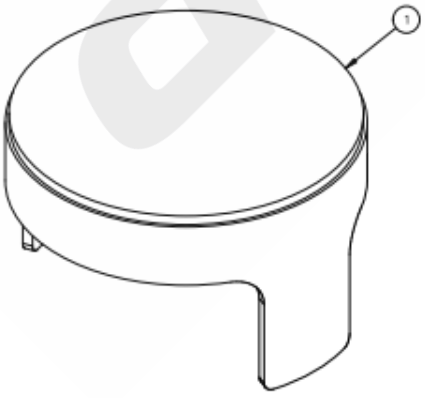
Remove the small clutch piston seal o-ring. Pinch the o-ring on both sides with 2 fingers, and wedge a clean pick behind the seal and work it off the core. Be careful to avoid damage to the o-ring on the sharp edges, it will be reused. Inspect the o-ring for any damage. It is common for these to have tears from multiple disassemblies and re-assemblies. The part number for the o-ring is: **DMS-2034**.

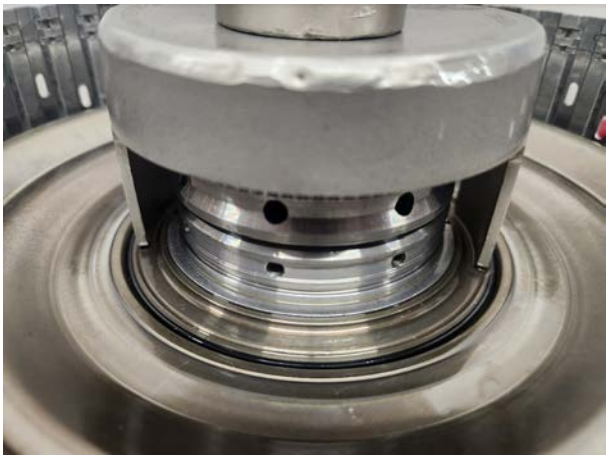


STEP 13

Place the clutch in the press with the Dodson Toolkit (**DMS-2445**), Tool #1.

Before loading, ensure the 2x half moon circlip pieces will be able to be removed from inside the tool.





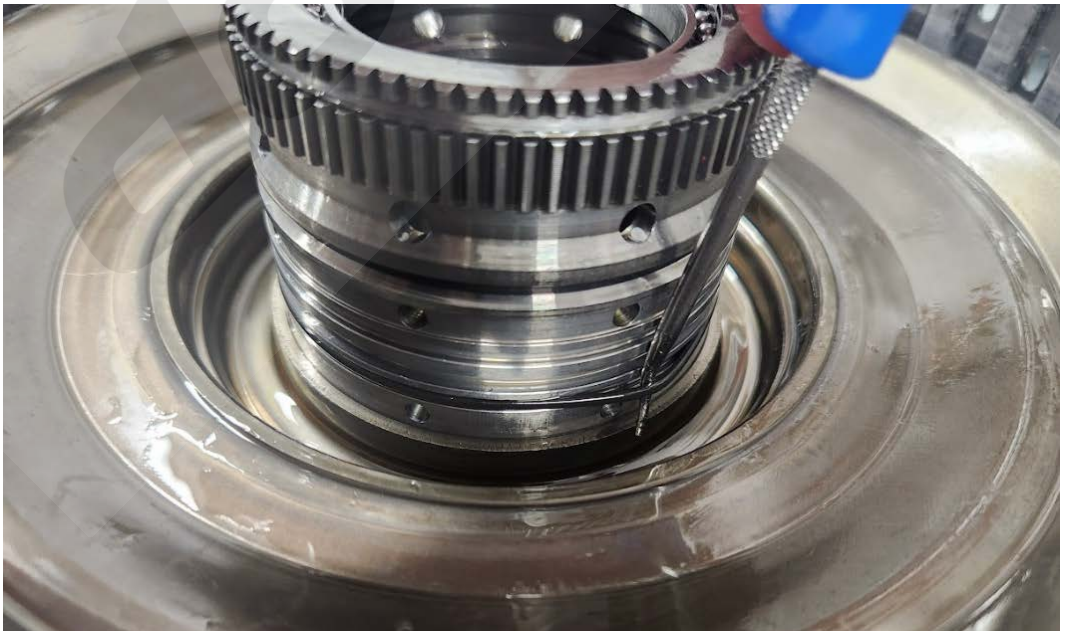
STEP 14

Load the press and remove the 2x circlip pieces with a pick.

Remove the large piston retainer and the large piston return spring.

STEP 15

Remove the large clutch piston seal o-ring. Pinch the o-ring on both sides with 2 fingers, wedge a clean pick behind the seal and work it off the core. Be careful so as to not damage the o-ring on the sharp edges, it will be reused. Inspect the o-ring for any damage. It is common for these to have tears from multiple disassemblies and re-assemblies. The part number for the o-ring is: **DMS-2034**.



STEP 16

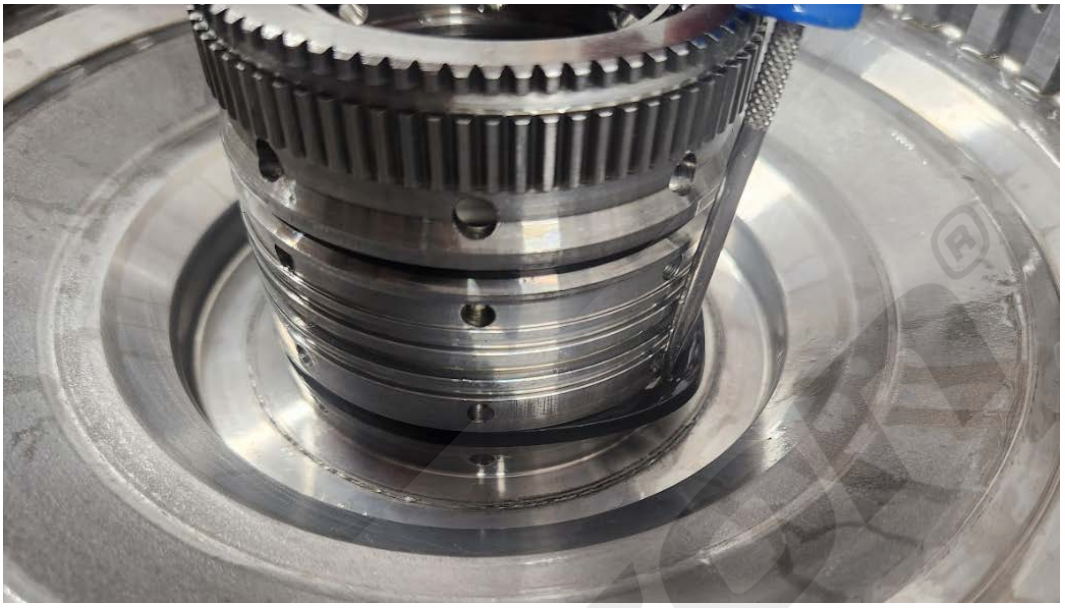
Remove the large clutch piston. This can be done by inserting 2 picks or small screwdrivers, through the slots in the outer basket and wedging underneath the piston.

Inspect the large piston seal for any damage.

Running increased clutch pressure may also cause this seal to extrude or tear. (As pictured below).

STEP 17

Remove the clutch core lip seal. Pinch the seal on both sides with 2 fingers, wedge a clean pick behind the seal and work it off the core. Be careful so as to not damage the seal on the sharp edges, it will be reused. Inspect the seal for any damage. Running increased clutch pressure may cause this seal to extrude or tear.



STEP 18

Disassembly of the clutch is now complete. Complete a general check of the clutch to see if anything has excessive wear. Things to check:

- Splines of baskets
- Bearings and bearing surfaces
- Seal surfaces
- Debris
- Frictions and steels removed from the clutch for damage or hot spots

INSTALLATION INSTRUCTIONS

WARNING:

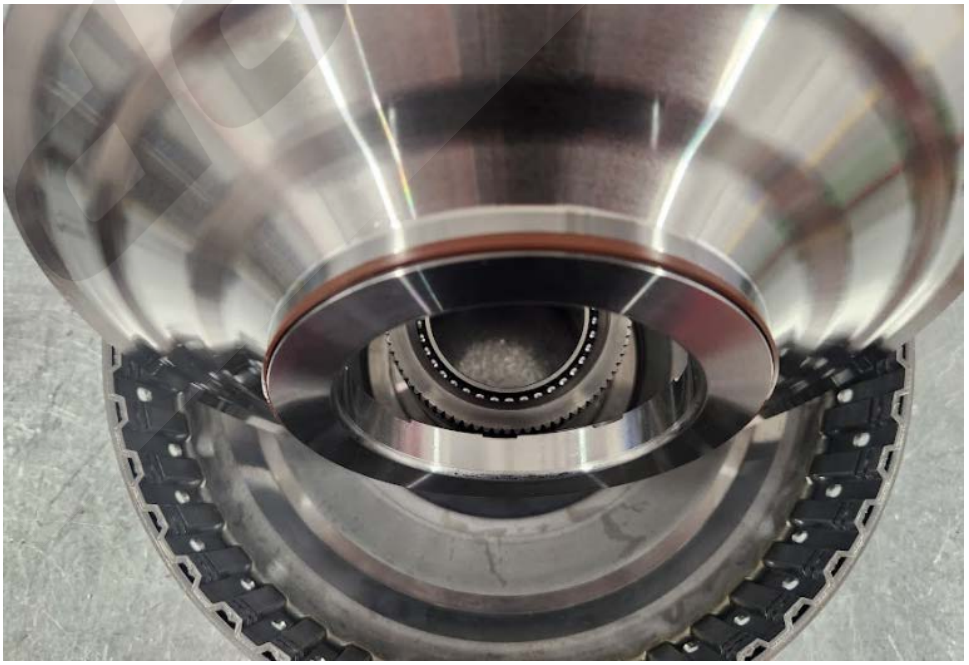
- Please ensure that the small clutch stack and spring orientation remain the same as delivered when installing.
- This clutch was preassembled before shipping to ensure the correct combination of springs, steels and frictions would perform as desired.

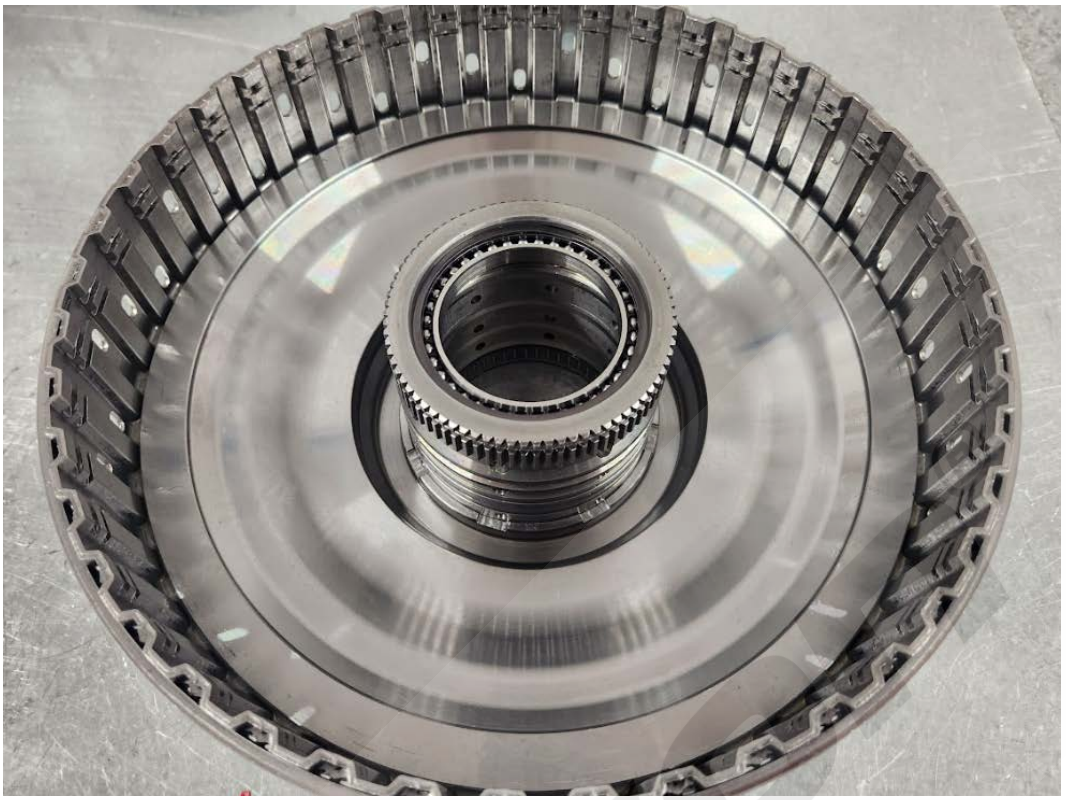
STEP 1

Once checking the clutch core lip seal for any damage, reinstall it in its groove.

STEP 2

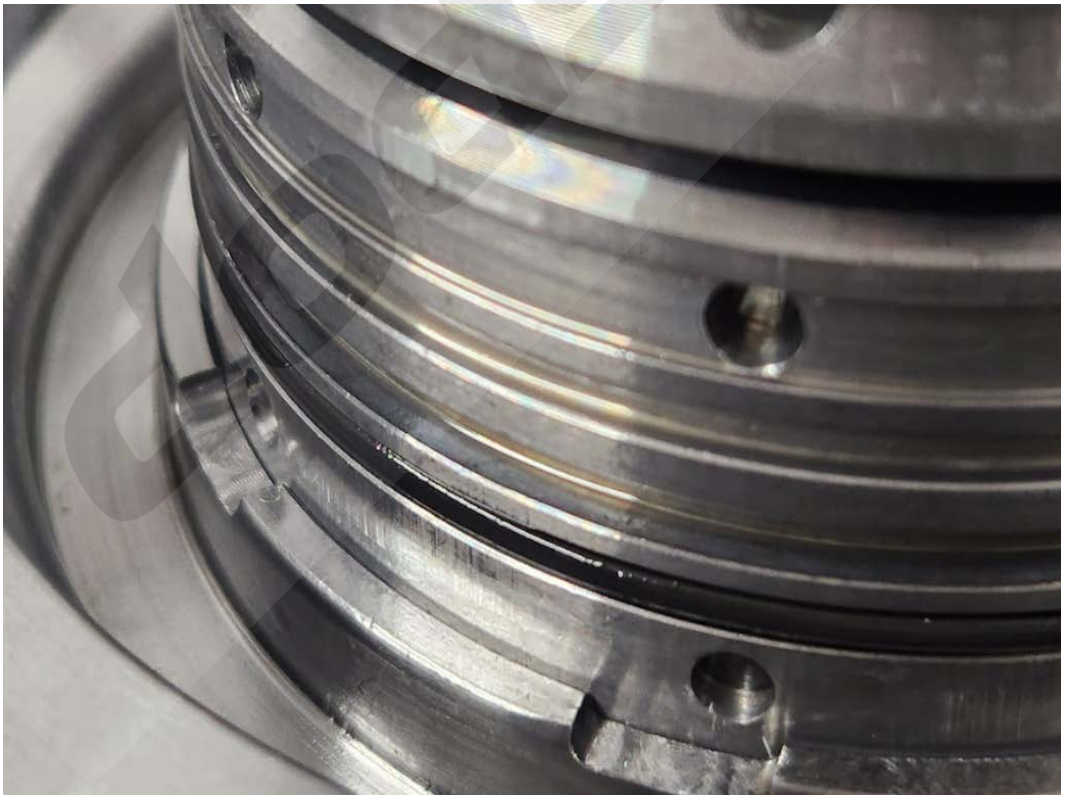
Ensure there is no debris present on the large piston seal. Wipe a little bit of trans oil on both seals to help with the installation. Install the large piston by pressing evenly on the top face. Do not scratch the sealing surface on the spline teeth of the clutch core.





STEP 3

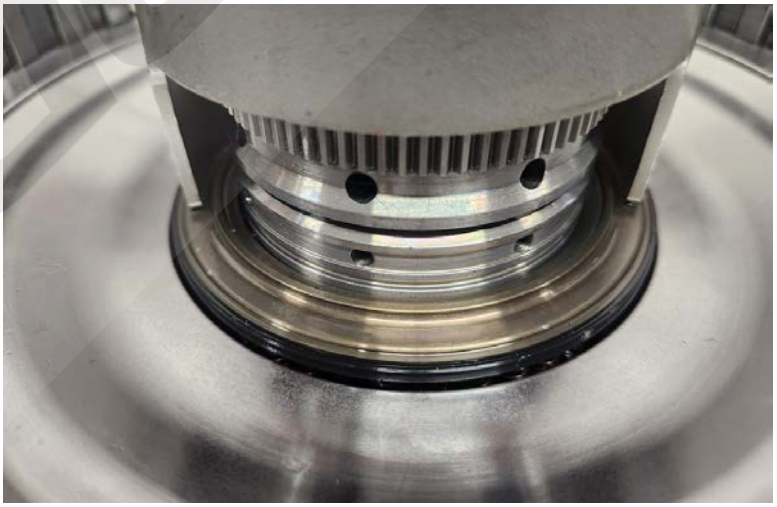
Once checking the large clutch piston seal o-ring for any damage, reinstall it in its groove.



STEP 4

Place the large piston retainer and the large piston return spring back on top of the piston.

Place the clutch in the press with the Dodson Toolkit (**DMS-2445**), Tool #1. Before loading, ensure the 2x half moon circlip pieces will be able to be installed.

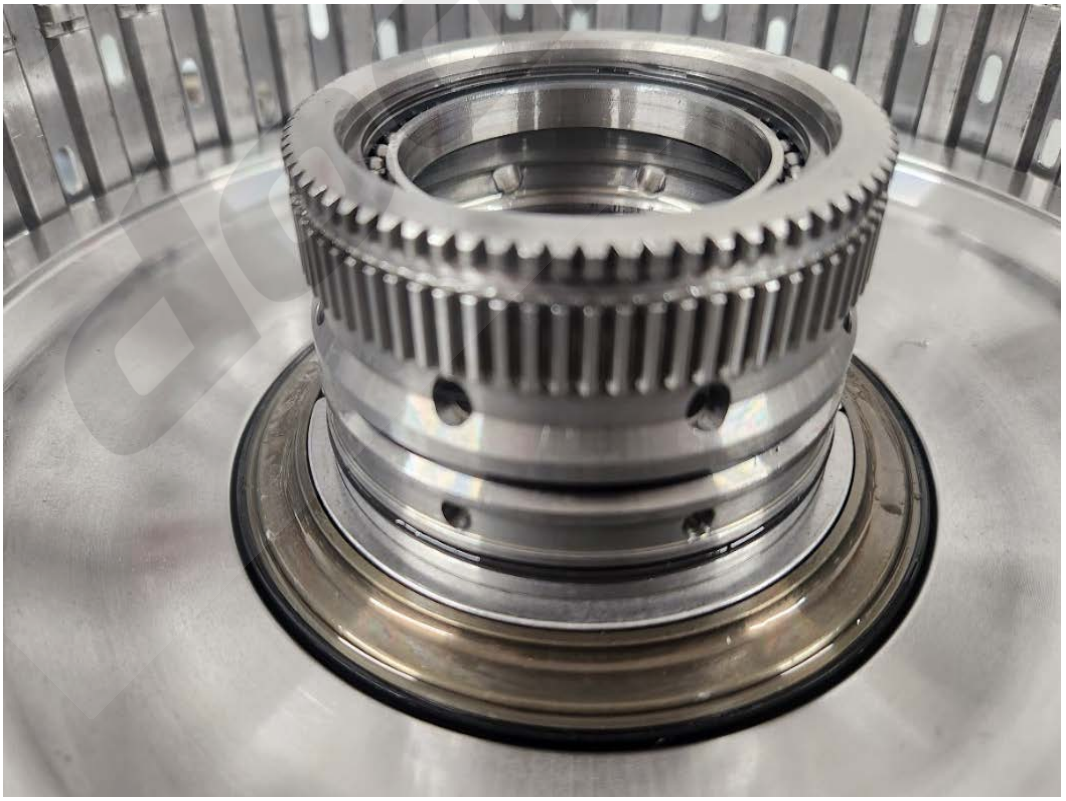


STEP 5

Reinstall the 2 half-moon circlip pieces and remove the clutch from the press.

STEP 6

After checking the small clutch piston seal o-ring for any damage, reinstall it in its groove.



STEP 7

After checking the small clutch piston seal for any damage, reinstall it on the clutch core.

STEP 8

Install the small clutch.

The clutch should be pre-assembled in the packaging and therefore ready to skip to **Step 16**.

If the clutch stack got disassembled, follow the next steps carefully to correctly reassemble it.

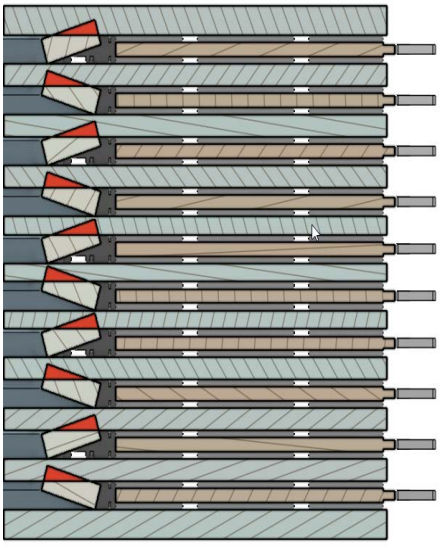
STEP 9

Place a **1.6mm** steel onto the inner drive core first.

STEP 10

Place the first conical spring onto the steel. Please ensure the correct orientation. This will be the same orientation as when the clutch was shipped.

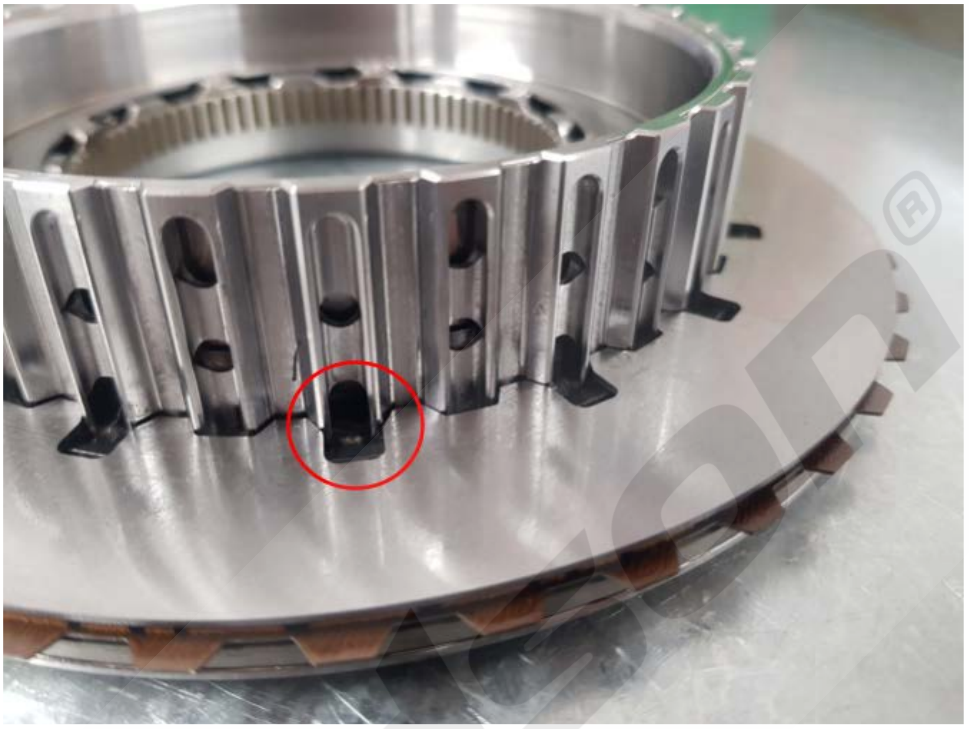
Note: This is different to the assembly of the Superstock / Sportsman.



STEP 11

Fit the first friction.

The next steel is 1.2mm from the stack provided which can be placed on top, followed by the next spring. Ensure the slot in the steel is over an oil hole on the core. Ensure the correct orientation of the spring.



STEP 12

When placing the steels, ensure the slots in the steels are offset.

STEP 13

Continue this process until the stack is complete. The order of the steels from top to DMS billet drive basket should be:

- DMS 1.6mm
- 3x DMS 1.2mm
- 3x DMS 1.0mm
- 3x DMS 1.2mm
- DMS 1.6mm
- DMS Billet Drive Basket

STEP 14

Ensure the splines of the top plate line up with the inner drive core, place the small clutch piston on. (Careful not to move the top clutch plate).

STEP 15

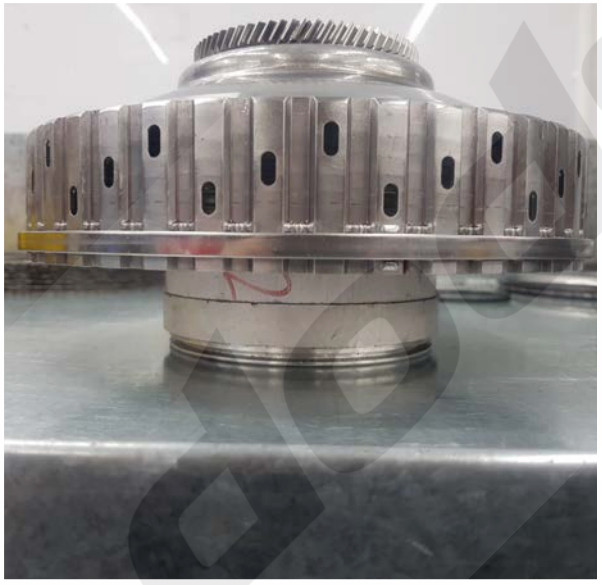
Load the stack in the press to a height of **31.6mm**. (35.6mm including the drive basket)

Note: It is best to press this by hand with no pneumatic assist. If the load on the press becomes hard early in the stroke before reaching the 31.6mm the top plate might not be aligned with the core.

Once loaded to height, check the friction plates spin freely (low drag). If some plates are clamped or have high amounts of drag, try unloading and reloading the clutch or re-assembling the stack to ensure all springs are concentric and not touching the frictions. If the friction plates still have excessive drag, please contact **technical@dodsonmotorsport.com.**

STEP 16

Place the stack upside down on a block of material, high enough for the core to fit over the top. Carefully place the core into the small clutch ensuring the top steel does not move. Once completed, flip the assembly back up whilst holding tightly on the small clutch so the bottom steel doesn't move.

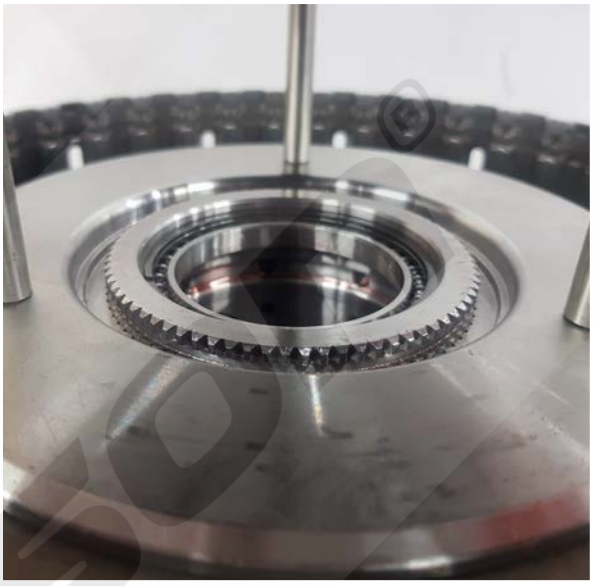


STEP 17

Place the clutch assembly in the press and load the inner drive core to insert the circlip.

Note: It is best to press this by hand with no pneumatic assist.

If the load on the press becomes hard early in the stroke before reaching the circlip groove, the top plate might not be aligned with the core. You will need to repeat step 16 until you can smoothly load the small clutch and insert the circlip.

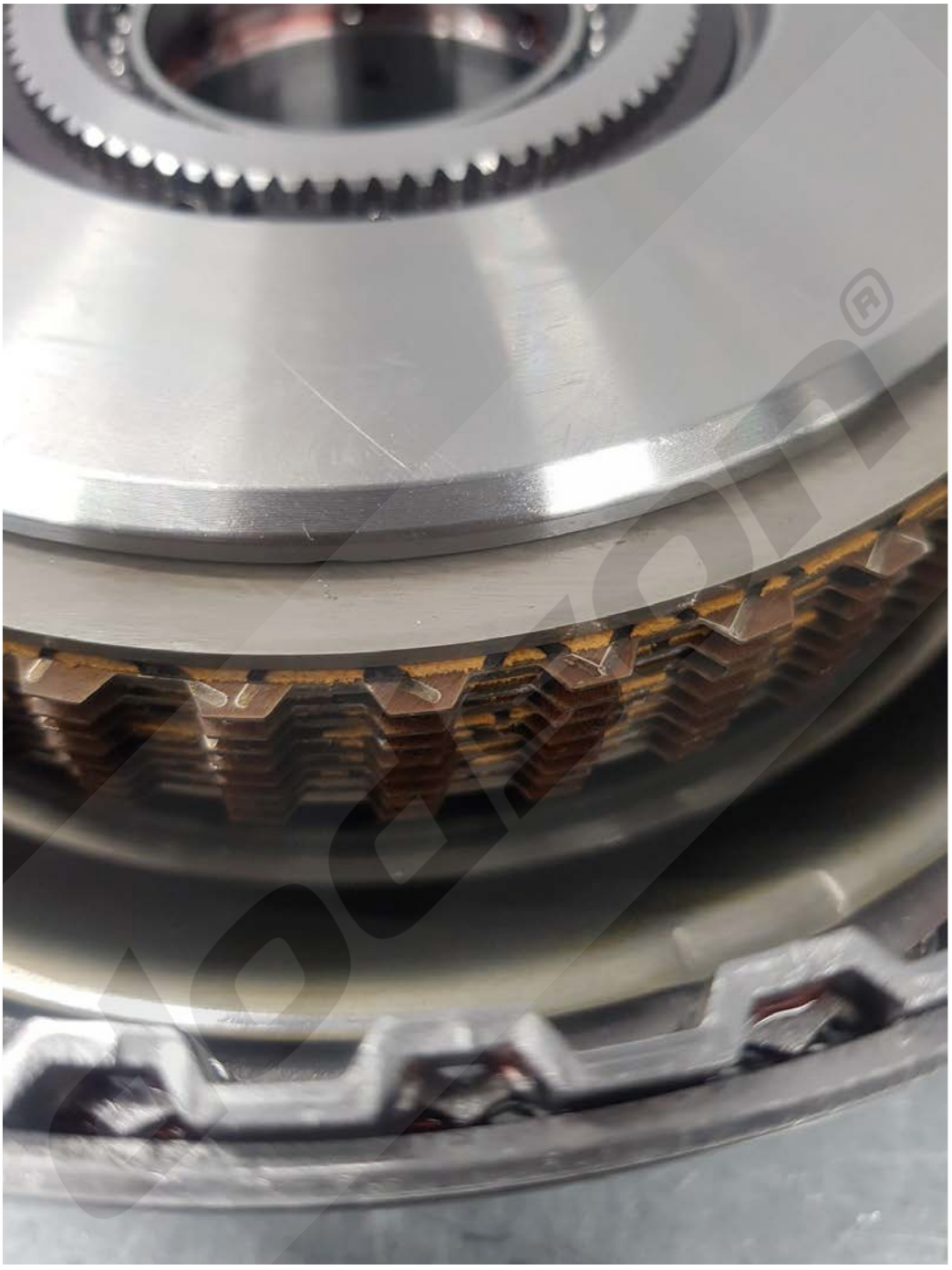


Left, became tight before being able to install the circlip. *Right, loaded freely and able to insert the circlip.*

Reminder: Don't forget to install the thin shims underneath the circlip.

STEP 18

Line up the small clutch frictions with a pick. This will make the small basket installation easier.



STEP 19

Extract the thrust bearing from the OEM small basket using a pick. Install the small thrust bearing into the Dodson basket. A small amount of grease on the bottom side will help it stick to the underside of the basket while assembling. **Ensure the correct orientation.**

STEP 20

Insert the Dodson provided special small thrust bearing (DMS-1479) into the basket as shown below.

STEP 21

Insert the large basket and the clutch preload spring washer.

STEP 22

Start assembling the large clutch stack into the clutch. The 1.2mm steels are located near the centre of the stack.

Note: Place a wave spring on the outer of each friction.

Note: Do not install the original shims that came in the outer clutch.

STEP 23

The conical circlip **does not** get reused when using the Promax lid and so the lid can now be fitted to the clutch. NOTE: the lower circlip groove does not get used.

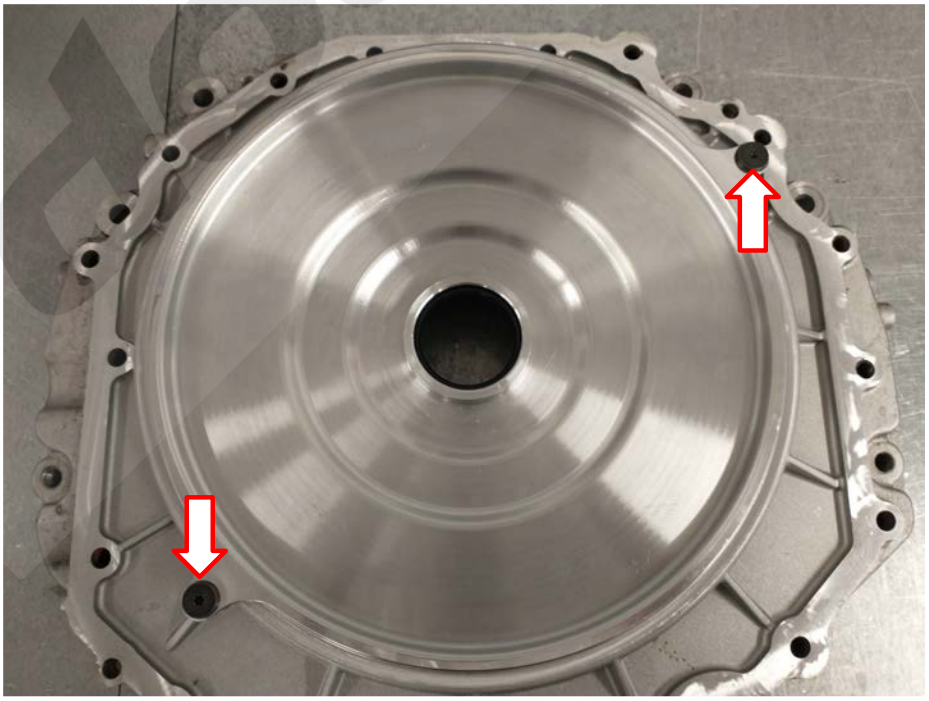
STEP 24

To install the retaining circlip, pressing down on the lid, a second technician may be required.

Note: Ensure to use the upper of the 2 circlip grooves.

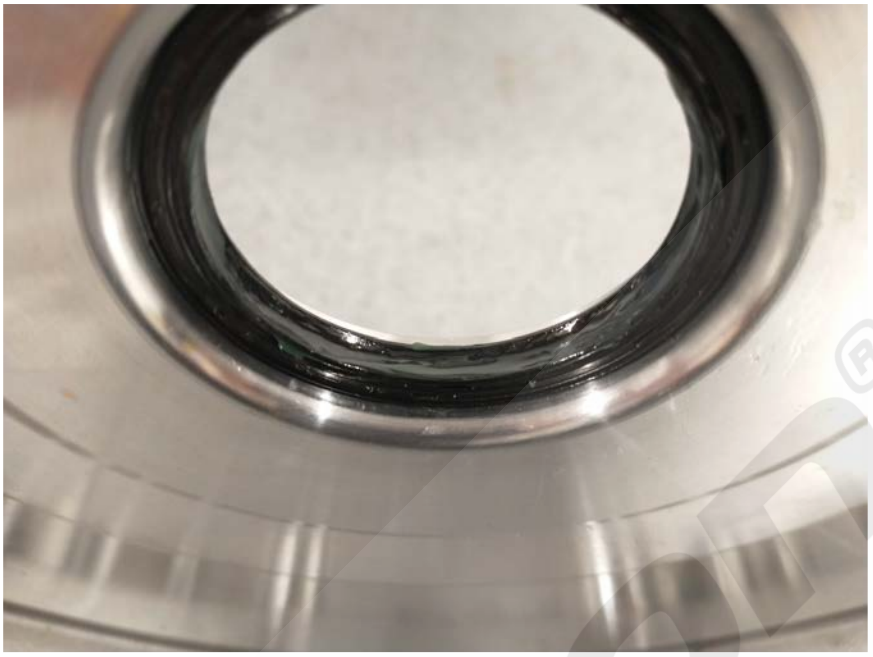
STEP 25

Remove the 2 bolts on the back of the front clutch cover and pop the inner section out. Then fit the Dodson cover and secure using the same bolts. Rubber grease on the outer o-ring will help with installation.



STEP 26

Apply suitable grease to the input shaft seal.



CLUTCH INSTALLATION

STEP 1

Fit the clutch into the transmission housing, making sure that both baskets and oil pump drive gear engage properly.

STEP 2

Carefully fit the front cover, making sure it lines up with the dowel pins, and the seal and the metal gasket don't get damaged. Bolt down with the OE bolts. We recommend using some flange sealant on the shoulder of the bolts to prevent any leaks.

STEP 3

When bolting the clutch into the transmission, the retaining bolt needs to be torqued to **25Nm**. After torquing up the bolt, put a small amount of flange sealant on the bung and push it into the end of the clutch so it sits flush.

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