INSTALLATION INSTRUCTIONS

DL800 DIFF COVER

DMS-00-0038 REVISION 002

21 JUNE 2022

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DATE: 20MAY2022

RELEASED BY:
DATE: 21JUN22

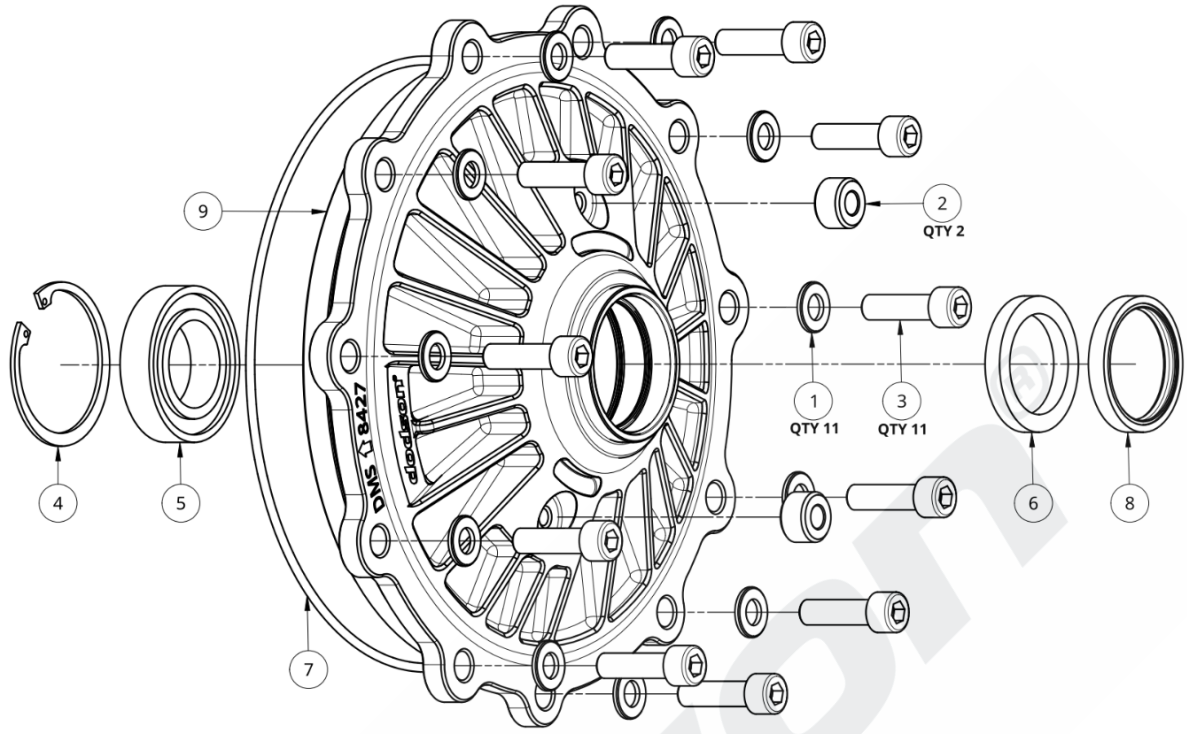
REVISION UPDATE NOTES:

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	21JUN2022	- Revised formatting. - Rewrote instructions so they can be used with OE half shafts as well, updated contents list to suit. - Updated torque setting. - Updated photos.
REV.001	02SEP2021	- Revised on new template format with current parts.

DL800 DIFF COVER UPGRADE KIT CONTENTS (DMS-8427)



Item Number	Part Name	DMS Code	Qty
1	M10x20 Washer	DMS-0125	11
2	Diff Cover Bracket Spacer	DMS-0126	2
3	M10x35 High Tensile Bolts	DMS-0133	11
4	Internal Circlip	DMS-1000	1
5	Half Shaft Bearing	DMS-1461	1
6	Shaft Seal - **OE HALF SHAFT ONLY**	DMS-1960	1
7	Diff Cover O-ring	DMS-1987	1
8	Shaft Seal - **DMS HALF SHAFT ONLY**	DMS-1988	1
9	Billet Diff Cover	DMS-3016	1

IMPORTANT:

- **ITEMS #6 AND #8 ARE HALF SHAFT SPECIFIC (OE vs. DMS)**

Please contact **technical@dodsonmotorsport.com** for more information.

IMPORTANT NOTE

The following instructions are made for when the **Dodson diff cover is being used together with the Dodson half shaft upgrade kit.** For use with **OE half shafts, the "Long Half Shaft" section can be ignored (skip to Page 11)**.

DL800 DIFF COVER INSTALLATION INSTRUCTIONS

DISASSEMBLY OF LONG HALF SHAFT

STEP 1

Remove the long half shaft with its locating housing by removing the bolts.

Be careful not to damage the O-ring on the housing.

STEP 2

Remove the long half shaft circlip.

STEP 3

Press the shaft through.

STEP 4

Remove the OE bearing and seal from the long half shaft locating housing.

ASSEMBLY OF LONG HALF SHAFT

STEP 1

Remove the LH thread nut on the shaft.

(Please note the red plastic spacer pictured below is no longer used when the part is shipped.)

STEP 2

Press the Dodson bearing (DMS-1461) in the long half shaft locating housing

STEP 3

Press the Dodson long half shaft seal (DMS-1961) in the long half shaft locating housing.

Be careful not to damage the seal during this process. It's recommended to have the pressing tool diameter around 59 mm.

STEP 4

Fit Dodson long half shaft (DMS-7928) from the seal side.

Be careful not to damage the seal. Keep rotating the housing while assembling the long half shaft housing to install the seal smoothly over the long half shaft.

STEP 5

Hold the half shaft on the vice by using two bolts in the threaded holes in the long half shaft.

Use Dodson half shaft tool to tighten the nut.

STEP 6

Tighten the nut on the long half shaft to **60 Nm**. **Please note that the nut is LH thread.**

STEP 7

Stake the nut into the groove on the half shaft as shown.

Apply grease over the O-ring on the long half shaft locating housing.

STEP 8

Fit the long half shaft in the transmission housing and keep rotating the half shaft for engagement with the splines in differential.

STEP 9

Fit the M8 bolts with a washer on the shaft locating housing and torque to **40Nm**.

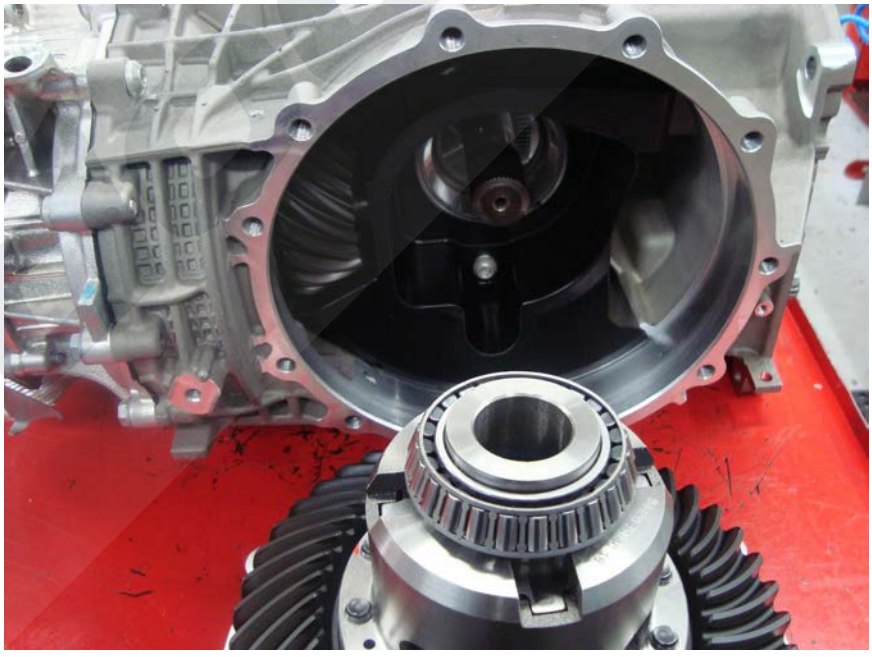
DISASSEMBLY OF SMALL HALF SHAFT

STEP 1

Remove the bolts from the diff cover.

STEP 2

Take the diff cover with differential out of the transmission housing.



STEP 3

Remove the differential from top of the diff cover and remove the circlip on the short half shaft.

STEP 4

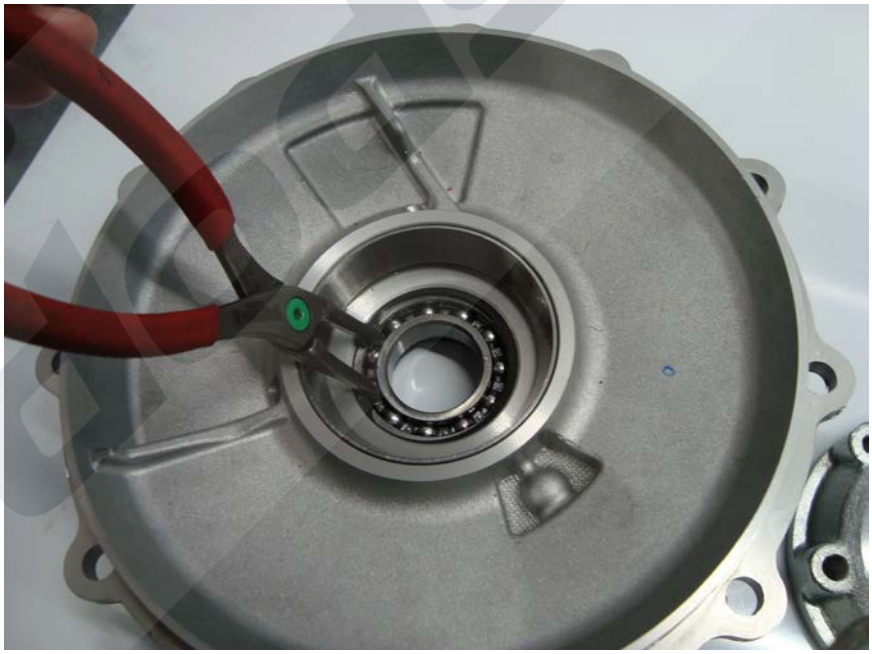
Place the diff cover in the press as shown in the picture to remove the short half shaft.

STEP 5

Press the short half shaft out of the cover.

STEP 6

Remove the circlip to remove the OE ball bearing.



STEP 7

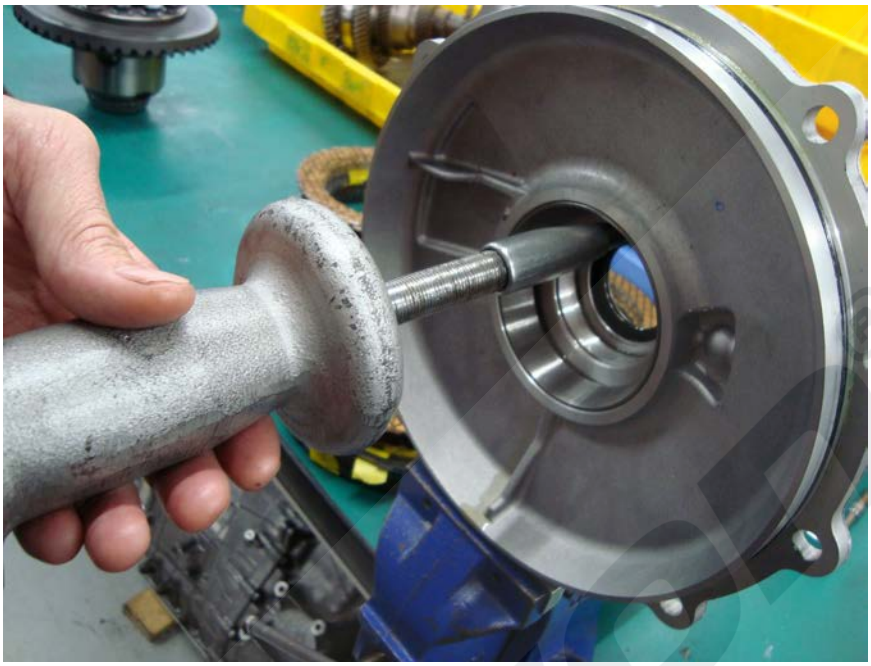
Remove the shaft seal and then remove the bearing from the diff cover using a press.

STEP 8

Hold the diff cover in a bench vise. Warm the OE diff cover with a heat gun near the bearing area for ease of removal of the sleeve.

STEP 9

Remove the taper roller bearing sleeve using a sliding hammer.

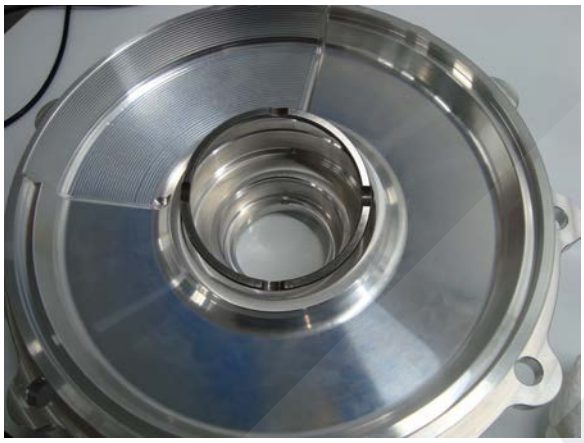


Make sure to take out the spacer below the taper roller bearing sleeve.

ASSEMBLY OF SHORT HALF SHAFT

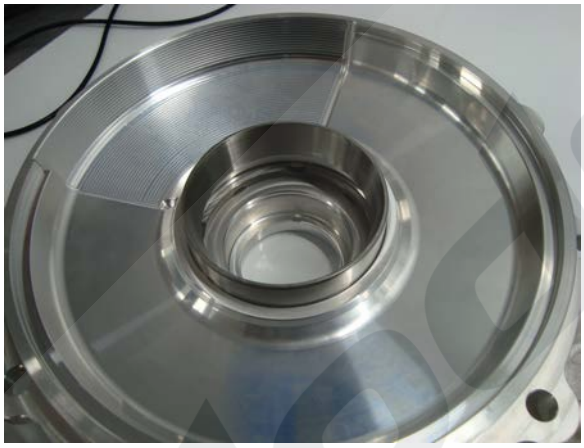
STEP 1

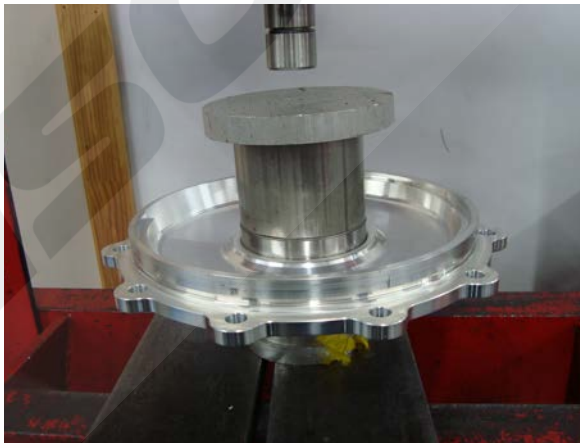
Fit the OE spacer below taper roller bearing in the Dodson diff cover (DMS-3016).

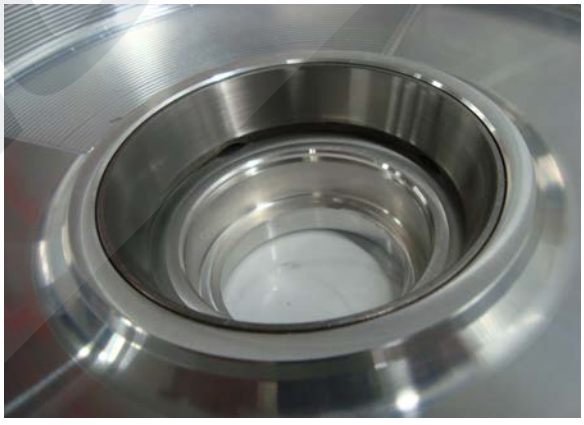


STEP 2

Press the OE taper roller sleeve in the Dodson diff cover.



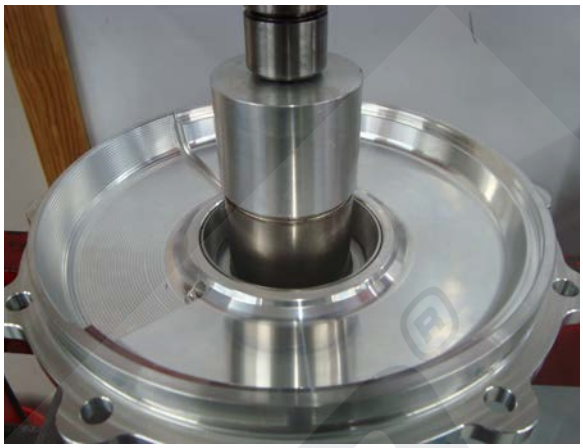




Make sure the spacer below the taper roller sleeve stops turning after installation.

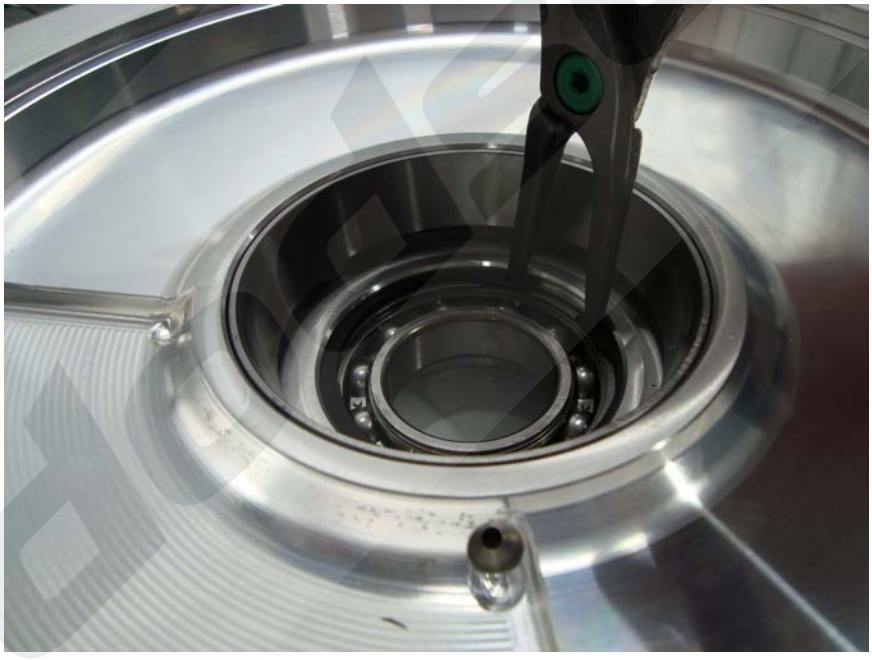
STEP 3

Fit the Dodson half shaft bearing (DMS-1461) in the diff cover.



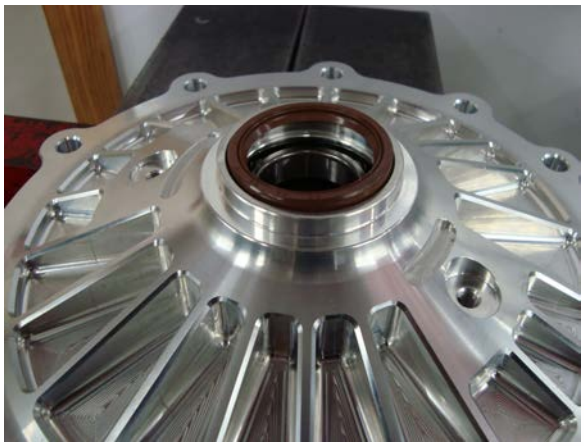
STEP 4

Assemble the short half shaft circlip (DMS-1000) to hold the ball bearing in its place.



STEP 5

Fit the Dodson short half shaft seal **(DMS-1960 for OE, DMS-1988 for Dodson Half Shaft)** into the diff cover.



Use a pressing tool around 53 mm diameter to make sure the seal gets pressed evenly. If a smaller diameter is used then it will damage the seal.

NOTE

If fitting OE half shafts, assembly is reverse of disassembly, then skip to STEP 13 - PAGE 22.

STEP 6

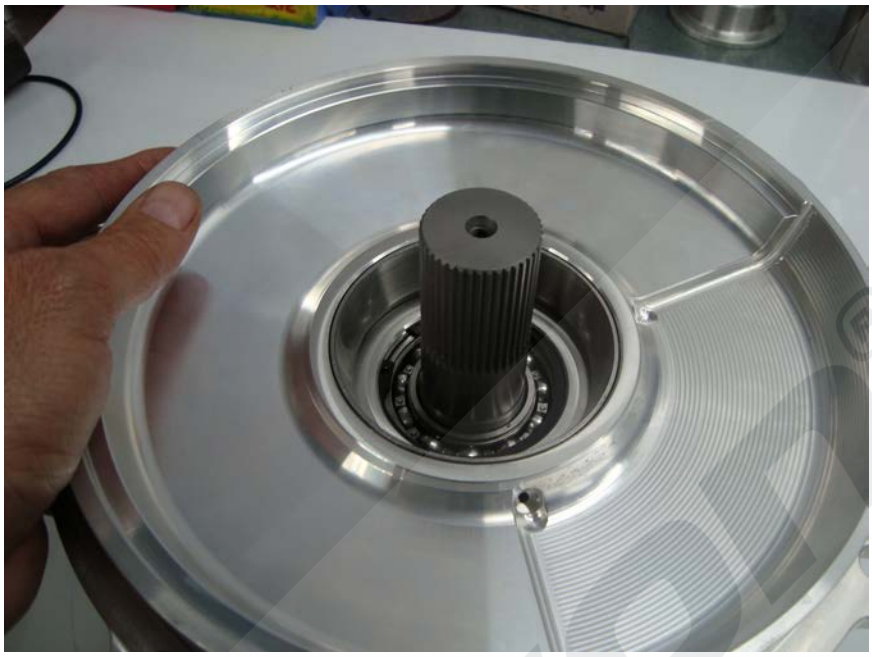
Remove the nut from Dodson short half shaft (DMS-7980).

(Please note the green plastic spacer pictured below is no longer used when the part is shipped.)

The nut is RH thread.

STEP 7

Fit Dodson short half shaft in the diff cover.



Be careful not to damage the seal during this process. Keep rotating the diff cover while assembling the long half shaft housing to install the seal smoothly over the long half shaft.

STEP 8

Make sure the threaded part comes out from the other side.

STEP 9

Fit the Dodson short half shaft nut (DMS-0083) over the bearing.

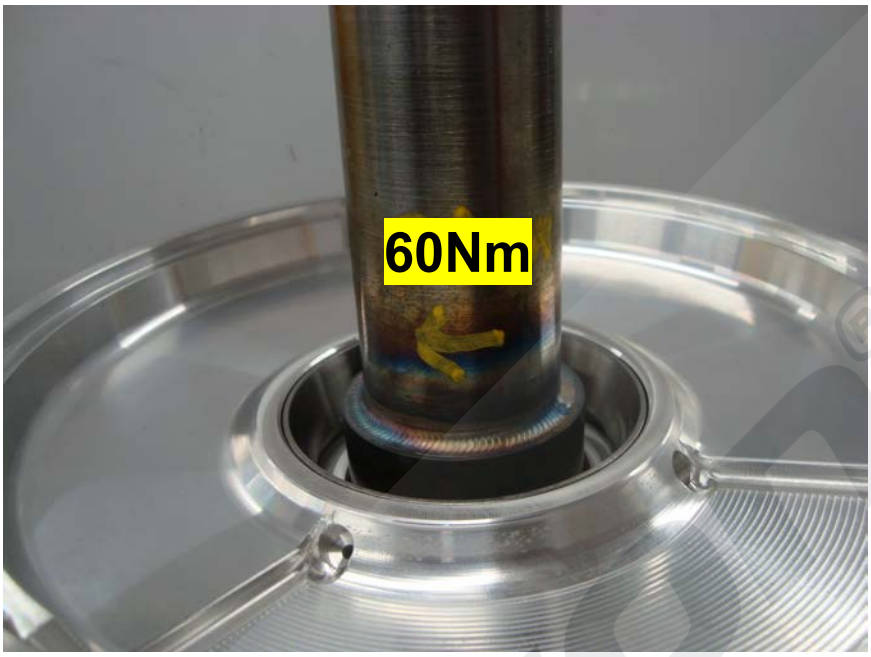
Please note that the nut is RH thread.

STEP 10

Hold the half shaft on the vice by using two bolts in the threaded holes in the short half shaft flange.

STEP 11

Tighten the nut to **60Nm** using the Dodson tool.



Please note that the nut is RH thread.

STEP 12

Stake the nut.

STEP 13

Fit the differential in the transmission housing. Make sure the diff doesn't fall out.

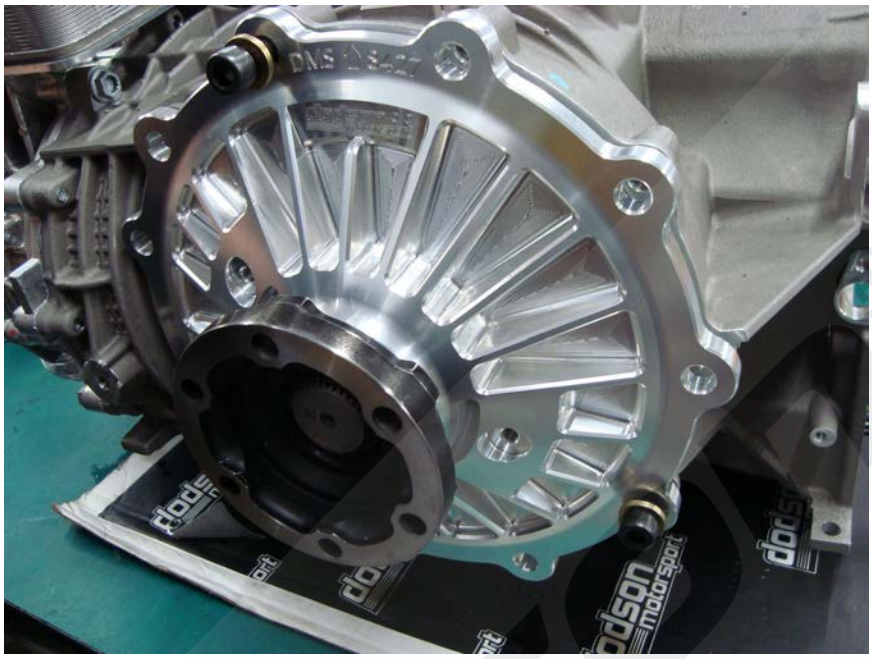
The Dodson diff cover is compatible with Wavetrac diff units, not just OE.

STEP 14

Fit the diff cover in transmission housing. Keep rotating the half shaft for engagement with the splines in differential. Make sure the arrow on the diff cover is facing upward when transmission housing is sitting on the sump pan.

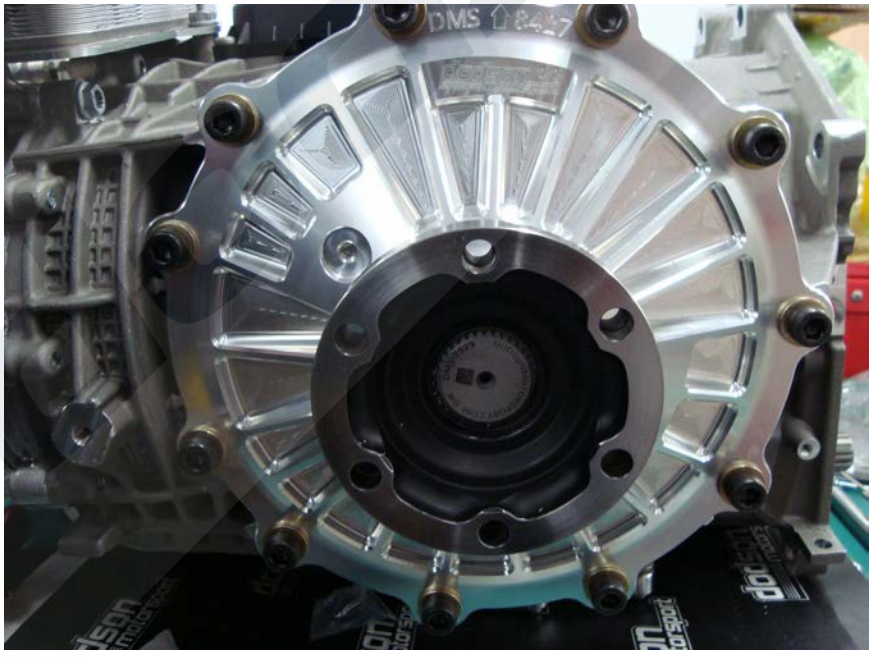
STEP 15

Use three bolts a few holes apart to keep the alignment and tighten each bolt one by one to push the diff cover flush against the transmission housing.



STEP 16

Fit all the other bolts and torque them to **40 Nm.**



STEP 17

The spacers given with the Dodson diff cover kit are for a half shaft shield. Push the spacers in the location shown in the image below before attaching the half shaft shield.

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