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Coding Information

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Title: Using the SnoDepot Stainless Rear Sump Oil Pan on N13 Engines in New York State DOT (NYSDOT) Trucks.

Applies To: N13 Engines

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

2/7/2017 - Added detail for oil pan heater installation. Revised drain plug detail.
 1/18/2017 - Added Oil Pan ID Information
 12/06/2016 - Initial Article Release

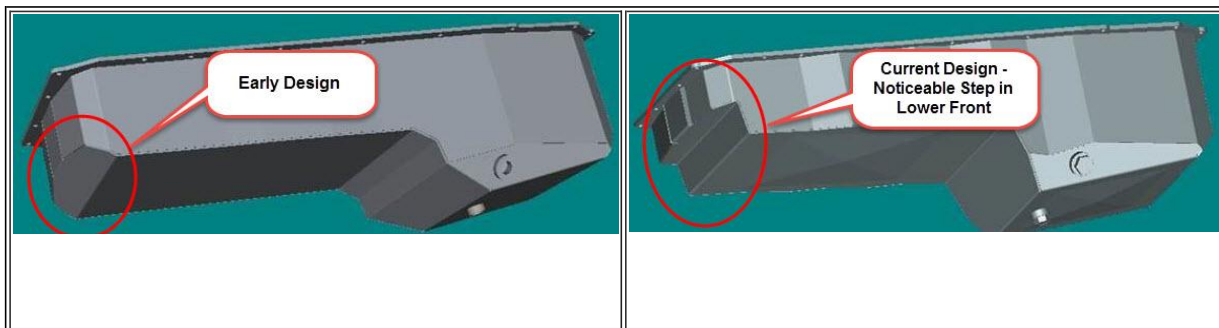
DESCRIPTION

This document will guide the user through the installation of the SnoDepot Stainless Steel rear sump oil pan on the N13 engines used in the NYSDOT fleet.

OIL PAN IDENTIFICATION

CAUTION:

PLEASE NOTE that there are two versions of the Stainless Steel oil pan that may be present. Each pan has very different installation instructions that need to be followed depending on what you have. Please see below for identification.



<p>Figure #1: If you are servicing the pan shown above, please continue through this article.</p>	<p>Figure #2: If you are servicing or installing the pan shown above, DO NOT continue through this article. Please reference IK1201357</p>
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SERVICE PARTS INFORMATION

Description	Part Number	Quantity Required	Source	Notes
Navistar N13 Stainless Rear Sump Oil Pan	OILPAN/NAV-N13 (Includes Bolt Kit)	1	Order From SnoDepot	Replaces the Navistar 3005821C91 Rear Sump Oil Pan
Gasket_Liquid	1830858C1	As Needed	Order From Navistar	

REPAIR STEP(s)

WARNING! To prevent property damage, personal injury, and / or death, park vehicle on a hard, flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.

WARNING! To prevent property damage, personal injury, and / or death, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.

WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

WARNING! To prevent property damage, personal injury, and / or death, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle’s batteries. Batteries expel explosive gases.

WARNING! To prevent property damage, personal injury, and / or death, remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last.

1. Bring vehicle into shop and park on a flat surface
2. Shift transmission into park or neutral, set parking brake, and install wheel chocks.



**WARNING:**

To prevent personal injury or death, make sure the engine has cooled before draining the oil and removing components.

REMOVAL PROCEDURE:

3. Drain the engine oil into a suitable container, and remove the oil pan per the standard procedure outlined in the [Service Manual](#).

NOTE: The original bolts and clamps will NOT be used for installation of the new pan.

4. Clean the oil pan mating surface on the cylinder block making sure it is dry and free of any debris.

5. Clean the new oil pan mating surface (Figure #1) making sure it is also dry and free of debris.



Figure #1: SnoDepot Stainless Rear Sump Oil Pan

INSTALLATION PROCEDURE:

6. If you are installing a new oil pan and a gasket is supplied with the pan, please discard the gasket and only use the sealing instructions below.

7. Apply a bead of RTV sealant around the sealing surface of the pan. Run the bead between and around each bolt hole all the way around the oil pan.

8. Install the oil pan to the bottom of the block. If clearance allows, it would help to use a couple long M8 guide studs to aid in guiding the pan against the block without damaging the bead of sealant. Install the four corner bolts by hand to hold the pan in place while starting the other bolts.

NOTE:

Please use **EXTREME** care installing the pan to the block ensuring the fresh bead of RTV is not disturbed. If the bead is broken or damaged, an oil leak will occur.

9. Using the new bolts supplied with the pan (Figure 2), begin threading the new bolts in by hand. **Please note that the supplied oil pan bolts are one time use only.**



Figure #2: New Pan Bolts

NOTE: When tightening the mounting bolts, resistance may occur when threads are engaged in the thread lock section of the bolt. Continue to tighten until the bolt heads are flush with the oil pan flange.

10. Certain locations will require a spacer be used (supplied with the oil pan) between the L bracket hangers and the oil pan flange.
11. Install the spacers at locations 5,6,7,8, and 10 (See Figure #3).
12. Location 4 only, will get the L bracket, spacer, and stud (3814208C2).
13. Using a 1/4" digital torque wrench, apply an initial torque in sequence (Figure #3) of 10 Nm (7 ft-lbs).
14. Apply a second torque in sequence (Figure #3) of 18 Nm (13 ft-lbs).
15. Apply the final torque in sequence (Figure #3) once more to 18 Nm (13 ft-lbs).

NOTE:

It is Recommended to allow the truck to sit for 24 hours to allow the RTV to cure properly. This will help reduce the chance of an oil leak occurring.

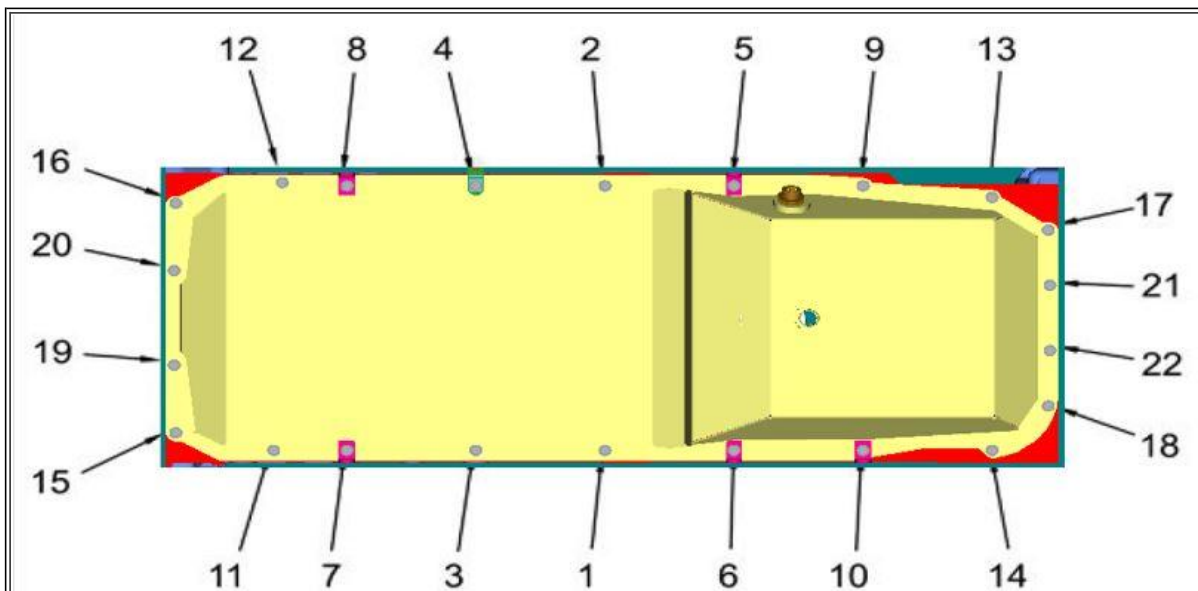


Figure #3: Tightening Sequence

16. On a new oil pan installation the oil drain plug (Figure #4 Item 1), and heater port plug (Figure #4 item 2), will already be installed in the pan.

17. For installation of a NEW plug, apply a light amount of Loctite LB 771 Nickel Anti-Seize to the threads of the plug. Install the plug (Figure #4) and tighten by hand to the specifications below.

18. For installation of the plugs (Figure #4) during routine maintenance and the plug is being reused, apply a light coat of oil on the threads and tighten by hand to the specifications below.

- Oil Drain Plug - 64 Nm (47 ft-lbs.).
- Heater Port Plug - 68 Nm (50 ft-lbs.).



Figure #4: Oil Pan Plugs

Item 1: Oil Drain Plug
Item 2: Oil Pan Heater Port Plug

NOTE:

The oil drain and heater port plugs are NOT the same thread size. To prevent galling of the threads, use hand tools only to tighten the plugs.

19. If equipped with an optional oil pan heater (3526823C1), install the heater using the guidelines below:

- New heater installation - Lubricate the threads with a light coat of Loctite LB 771 Nickel Anti-Seize.
- Reusing the existing heater - Lubricate the threads with a light coat of oil.
- Thread the heater into the port, and torque to 75 +/- 7 Nm (55 +/- 5.5 ft-lbs.).

20. Fill the crankcase to the full mark on the dipstick using the recommended oil per the Operation and Maintenance Manual.

21. Run the engine and check for any leaks.

REMOVAL OF THE SNODEPOT STAINLESS OIL PAN:

If the oil pan needs to be removed, it is recommended to run a M8x1.25 tap carefully **BY HAND** in the 22 holes in the bottom of the block to remove any residual Loctite from the threads. This will insure proper bolt torque during assembly.

WARRANTY INFORMATION

Claiming Instructions	Notes
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NYSDOT UNITS ONLY - File with TSC	See WPL2800004
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Warranty Claim Coding:


Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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