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Title: 2013-14 N13 Cylinder Pack - Update for Excessive Lubrication Oil Consumption

Applies To: 2013-14 N13 ESN: 4300000-4315712

CHANGE LOG

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

04/24/2017 - Added parts notes for turbo oil line and exh manifold bolts in head kit.
 04/10/2017 - Removed turbo oil supply line from parts list - included in kit.
 02/27/2017 - Tooling Part Number Correction
 02/20/2017 - Added additional caution information on torquing rods.
 02/13/2017 - Changed Noun to 192
 01/30/2017 - Parts List Corrections

DESCRIPTION

On certain N13A engines serial numbers ranging from **4300000 - 4315712**. Carbon can build up on the top lands of the pistons and cause the piston rings to stick leading to loss of oil control in the power cylinders and increased oil consumption.

An updated cylinder kit is now available to address this condition. The updated liner integrates a removable "anti-polish" carbon scraping ring which sits in a machined counterbore. This anti-polish ring (APR) has a smaller internal diameter than the rest of the liner that allows it to scrape carbon off of the top land of the piston during normal operation. This action of continuously removing carbon buildup from the top land of the piston prevents the rings from carbon packing and losing oil control in the power cylinders.

CAUTION:

Before beginning this procedure, please check warranty repair history in Service Portal. If APR cylinder kits have already been installed, do not proceed through this article without contacting Tech Services.

NOTE:

APR liners cannot be mismatched with standard liners. If for any reason the APR liner needs to be installed in an engine equipped with standard liners, all 6 will need to be updated.

SYMPTOM(s)

Excessive Lubrication Oil Consumption (as defined by the Diagnostic Manual)

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number
Tool, Piston Cope	12-146-01
Cylinder Sleeve Puller	ZTSE2536
Socket, Head Bolt (E24 Torx)	ZTSE4787
Socket, External Torx (E18)	ZTSE4835
Tap, M18x2 Bottoming (Head)	ZTSE4855
Bracket, Cylinder Head Lifting	12-342-03
Set MaxxForce 11&13 Cap & Plug	ZTSE4891

SERVICE PARTS INFORMATION

CAUTION:

The following component inspections and/or replacements are not covered under warranty for this repair:

- Oil Pump
- Main Bearing
- Turbo
- Fuel Injector
- Oil Cooler
- Engine Oil (Recommended to repair at time of maintenance interval)

NOTE:

The parts listed in the table below are to be replaced under warranty during the warranty period. This is an update to correct the symptom of oil consumption on 2013 +N13 Engines and is not considered a mileage overhaul.

CAUTION:

The N13 Engine has two different cylinder liners available in the Parts Catalog. It is important to verify that the most up to date liner is being installed. Follow the parts listed below.

Kit Description	Part Number	Quantity Required	Notes
KIT, CYLINDER HEAD REMOVAL	3007651C99*	1	Includes new turbo oil supply line and thin flange exh manifold bolt kit.
KIT, GASKET 13L CYLINDER HEAD	62039010402*	1	
GASKET, OIL PAN	3003425C2*	1	
KIT, OIL FILTER	3007498C94*	1	
KIT, PSTN SLV & RING (718 13L)	2514508C91*	6	
BEARING KIT, CONNECTING ROD NORMAL	3004714C91*	6	*SEE CAUTION NOTE BELOW*
SCREW	62904900079*	12	
SEAL O-RING 32 X 5	06569361612*	1	
KIT, EXHAUST MANIFOLD BOLTS	2512877C91	1	For use with thick flange exhaust manifold if equipped. See IK1201253 for manifold ID
KIT, TURBOCHARGER SUPPLY LINE FITTINGS	2512772C91	1	Only needed if the turbo line has NOT been updated previously.
GASKET	2601233C1	2	Only needed if aftertreatment is being serviced - DOC/DPF Gaskets
GASKET 4" EXH PIPE FLANGE	3846392C1	1	

Only needed if aftertreatment is being serviced - DOC Outlet Pipe Gasket

NOTE: Items marked with an asterisk (*) are required

DIAGNOSTIC STEP(s)

Follow: [2013 N13 Engine Diagnostic Manual](#) for oil consumption diagnostics.

REPAIR STEP(s)

Follow: [2013 N13 Engine Service Manual](#) for base engine repairs.

CAUTION:

13L connecting rod bolt torque is CRITICAL. Lightly lubricate the underside of the new rod bolt head and threads with clean 30W engine oil. Follow the torquing procedure EXACTLY as written in the latest Service Manual using a calibrated torque wrench

WARRANTY INFORMATION

Warranty Claim Coding:

Group:	12000 - ENGINES
Noun:	192 - Sleeve, Cylinder

Standard Repair Time(s):

Description	Chassis	Engine	SRT	Notes
12 - PISTON AND/OR SLEEVE (I-6), REPLACE	Models, ALL	N13	A12-1192US	ONE
			A12-1192US-11	EACH ADDITIONAL
12 - CYLINDER HEAD OR REPLACE GASKET (13L), R & R AND/OR REPLACE	Models, ALL	N13	A12-1342US	

OTHER RESOURCES

[Master Service Information Site](#)

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