



GROUP

MODEL

ENG

2011-2024MY~
Multiple Models

NUMBER

DATE

222 (Rev 8, 04/03/2025)

December 2020

TECHNICAL SERVICE BULLETIN

SUBJECT:

EXCESSIVE OIL CONSUMPTION NU/GAMMA/THETA/KAPPA ENGINES

NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides information on diagnosing and/or repairing some 2011-2024MY vehicles (refer to the table on pages 9 and 10 for applicable models and engine), which may exhibit a symptom of excessive oil consumption. Follow the flowchart on page 2 in this procedure to repair a vehicle exhibiting excessive oil consumption.

Engine Oil Maintenance:

- Engine oil is responsible for lubrication, cooling, and operation of hydraulic components of the engine. Engine oil is expected to be consumed in normally operating engines. Therefore, regularly checking oil level and regular oil changes are required as part of the factory maintenance schedule.
- The purpose of oil changes is to prevent oil deterioration. A separate requirement is to maintain the oil level, independent of the oil change interval. It is necessary to check the oil level at every fueling stop and replenish the oil, if necessary. This is one of several check items that the owner's manual recommends at every fueling stop.
- Operation with deteriorated or low engine oil causes reduced lubrication and cooling, as well as impaired operation of hydraulic components. This leads to abnormal wear of engine parts, oversaturation of carbon, and deposits of oil sludge. These can result in damage to multiple areas of the engine, ultimately requiring a costly, lengthy, and preventable repair.



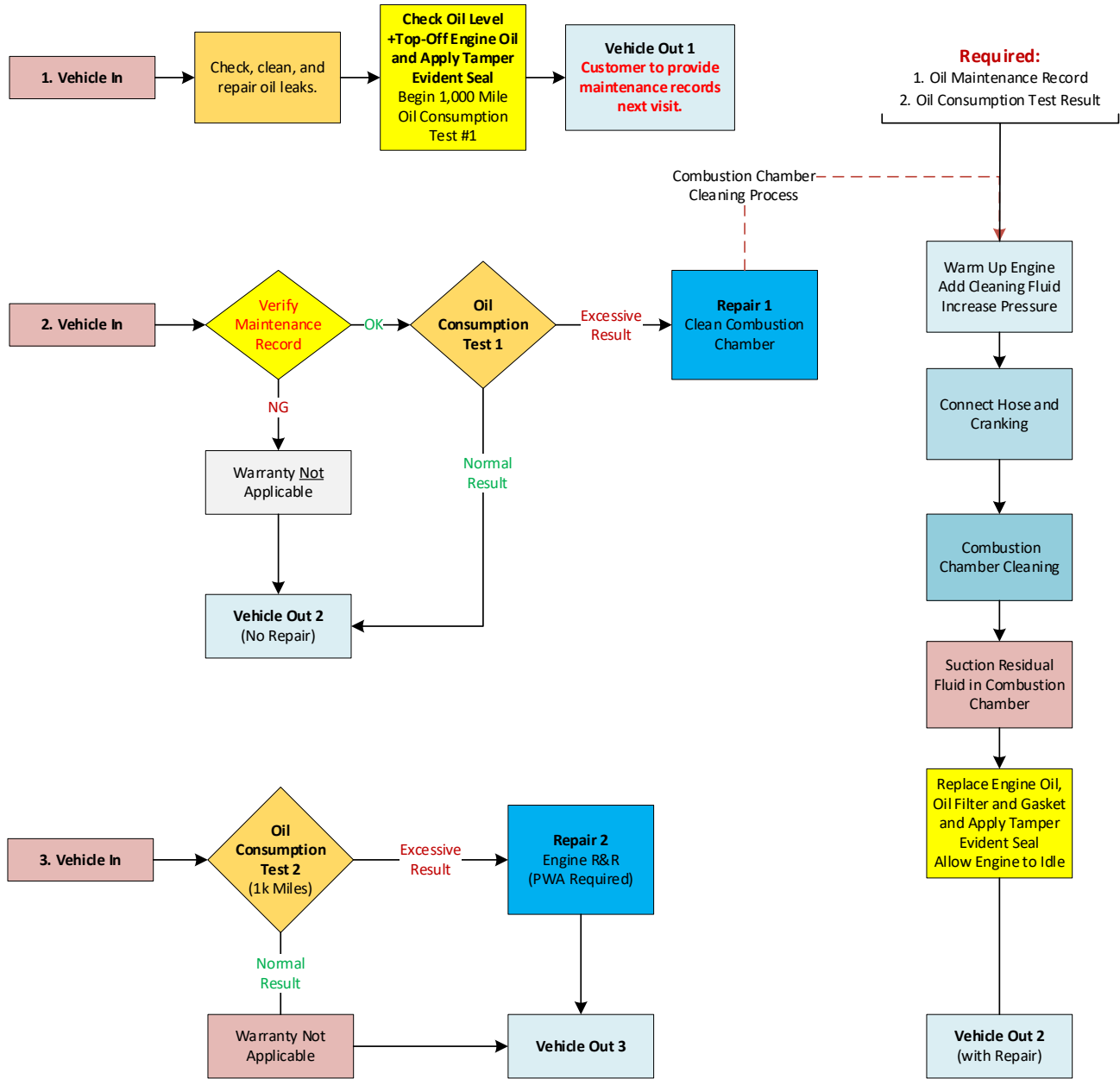
NOTICE

A Technical Service Bulletin is a field fix repair program without customer notification that may be performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSP approval.

Flowchart:

Verify Oil Maintenance Records (2nd visit)...

Refer to page 3 for additional information and instructions & updated cleaning procedure on page 4.



Note: Engine replacement requires TL PWA with Oil Consumption results.

ⓘ IMPORTANT

Following an oil and filter change, always set the next recommended service interval reminder per the owner’s manual. Refer to [TSB ENG219](#) for the applicable Service Reminder feature found on some 2014~ model vehicles.



Oil Consumption Test:**Engine Oil Inspection (Preparation for Test 1)**

1. Check if there is an oil leak. (**Note:** If an oil leak is confirmed, the oil leak source needs to be repaired prior to performing the outlined procedure in this publication).
2. Turn the engine 'ON' for about 10-15 minutes until the engine reaches normal operating temperature. Ensure the temperature gauge reads at the 1/2 mark.
3. Turn the engine 'OFF' and open the oil filler cap. (**Note:** Wait for the engine oil to drop to the oil pan for about 15 minutes).
4. Check the oil level using the oil level gauge/dipstick and document the reading in the RO.
5. If engine oil top off is required, fill the engine oil to the 'F' (Full) line on the level gauge/dipstick. Refer to [page 6, step 10](#) for required oil type and viscosity.
6. Re-install the engine oil filler cap and oil level gauge and apply a tamper evident silicone seal to the drain plug, oil filter, dipstick and oil cap. **Vehicle Out 1.**

B) Engine Oil Inspection (After 1K Miles of Driving) - 'Verify proper maintenance before continuing'

1. Repeat steps from section A. 1-4. Refill the engine oil up to the 'F' (Full) line of the oil level gauge/dipstick.
2. Refer to [page 7, step 11](#) for required oil type and viscosity.
3. Calculate the oil consumption amount as follows (Result = Refer to [Flowchart on page 2](#)):

$$\text{Oil Consumption amounts (Mile/qt)} = \frac{\text{Driving Distance (Mile)}}{\text{Oil Replenishment amounts after driving (qt)}}$$

- If the oil consumption amount is less than 1qt/1,000 miles, **Normal** consumption, **No Repair**.
 - If the oil consumption amount is over 1qt/1,000 miles, **Excessive** perform **Repair 1** (Clean Combustion Chamber, [pages 4-7](#)).
 - Replace the engine oil, oil filter and gasket and apply a tamper evident silicone seal to the drain plug, oil filter, dipstick and oil cap.
4. Top-off the engine oil to the 'F' (Full) line of the oil level gauge/dipstick. [Refer to page 7, step 11](#) for required oil type and viscosity.
 5. Re-install the engine oil filler cap and oil level gauge/dipstick. **Vehicle Out 2.**

C) Engine Oil Inspection (After Repair 1 and 1,000 Miles of Driving)

1. Repeat steps from section B. 1-2.
 - If the oil consumption amount is less than 1qt/1,000 miles, **Normal** consumption, **No Repair**
 - If the oil consumption amount is over 1qt/1,000 miles, **Excessive** perform **Repair 2** ([Engine R&R, page 8](#)).
2. Top-off the engine oil to the 'F' (Full) fill line of the oil level gauge/dipstick. Refer to [page 7, step 11](#) for required oil type and viscosity.
3. Re-install the engine oil filler cap and oil level gauge/dipstick. **Vehicle Out 3.**



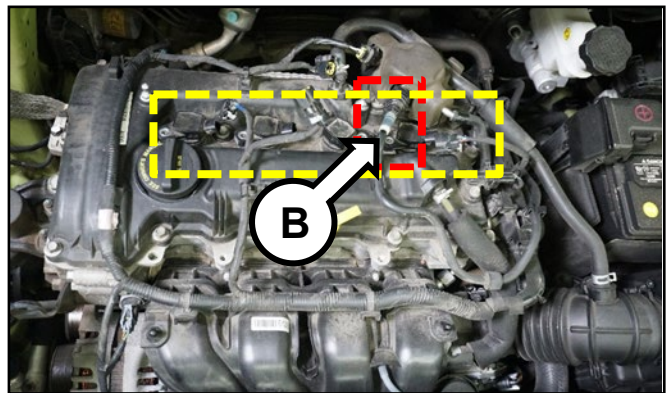
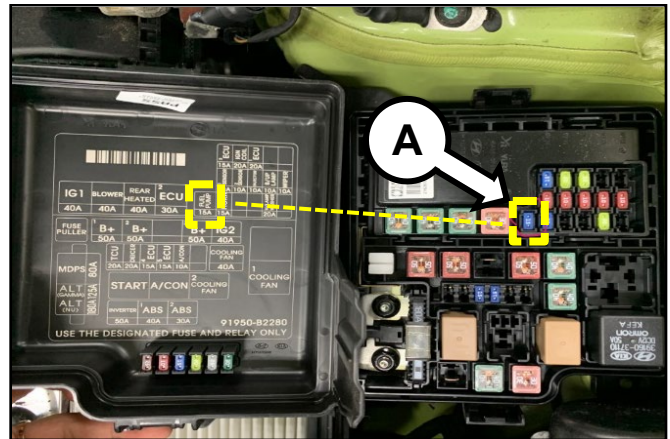
Cleaning Procedure (Combustion Chamber):

NOTICE

The following procedure requires cleaning a 2 hour soaking (2X -twice).

- 1st Cleaning → 1st Soaking for 2 hours → 2nd cleaning → 2nd Soaking for 2 hours.
Place vehicle in an area with adequate space.

- 1a. Start the engine and allow it to reach operating temperature.
- 1b. Turn the engine 'OFF'.
- 1c. Remove the engine junction box cover and remove the fuel pump fuse (A).
- 1d. Start the engine and allow it to stall.
- 1e. Remove the engine cover and disconnect the battery negative (-) terminal.
- 2a. Disconnect the fuel control connector (B).
- 2b. Disconnect the four (4) ignition coil connectors.
- 2c. Remove the four (4) spark plugs.



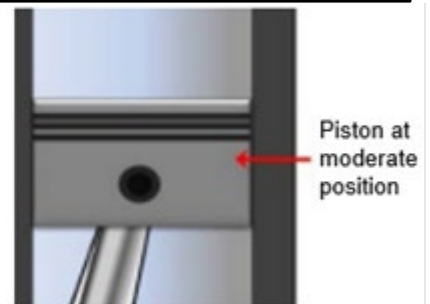
*The Nu engine shown is for reference only.

WARNING

Fuel vapors are flammable. Death or serious injury can result if they are ignited. Make sure there are no open flames or smoking in the area of the repair. Adequate ventilation is necessary to prevent a build-up of fumes which could ignite, causing fire or explosion.

3. Position the crankshaft so that all pistons are midway between top and bottom of the cylinders.

Note: Set TDC for Cylinder #1, then rotate the crankshaft 90°.



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- 4a. Inject the cleaning fluid into the cylinders through the spark plug holes.
- 4b. Using the supplied syringe add at least 1.7oz (50cc) to each cylinder.

Specification: Min. 1.7oz (50cc) / Max 2.2oz (66.5cc)



5. Using SST 09580 3D100 pressurize each cylinder under pneumatic pressure (2~3 bar) for three (3) minutes.

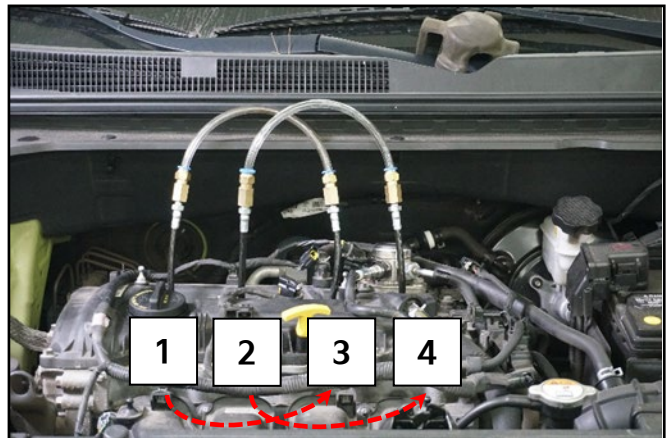
Note: Before pressurizing, set the associated cylinder to TDC.



- 6a. Connect the four (4) hoses & adaptors to each cylinder as shown.

Note: Connect Cyl. #1 to #3 and #2 to #4.

- 6b. Reconnect battery negative (-) terminal.
- 6c. Crank the engine for 3 seconds / 3 times.



- 7a. Disconnect the hose and inject 1.7oz (50cc) min. of the cleaning fluid to each cylinder (1-4).

Specification: Min. 1.7oz (50cc) / Max 2.2oz (66.5cc)

- 7b. Disconnect the battery negative (-) terminal.



- 8a. Allow the vehicle to sit for two (2) hours.

! CAUTION

Do Not turn the engine 'ON' until the cleaning procedure is complete.



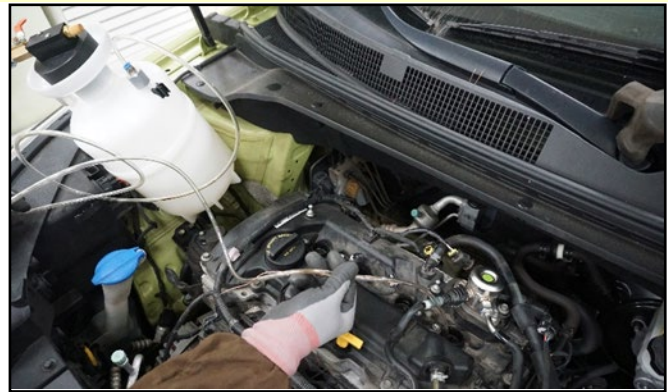
- 8b. Repeat steps 3-8 **after** 2 hour soaking for a second final time.

CONTINUED AFTER (2X) TIMES CLEANING & SOAKING:

- 9a. Remove the residual washing liquid in the combustion chamber using the syringe or the suction tool.

Note: For best results, a pneumatic suction tool is recommended.

- 9b. Reconnect battery negative (-) terminal.



10. Place a clean towel/shop rag over the spark holes. Crank the engine for 3-5 seconds, 3 times.

! CAUTION

If spark plug holes are not sufficiently covered, fluid may spray into the air, potentially causing injury. An assistant may be needed. Wear safety glasses while performing this step.



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11. Replace the engine oil and filter and apply a tamper evident silicone seal to the drain plug, oil filter dipstick and oil filler cap.

Engine Crankcase Oil Specification and Fill Capacity: 5W-30 or 0W-20 engine oil (as applicable)

Note: Refer to KGIS for oil level type and capacity.



Refer to KGIS for oil level capacity.

12. Reinstall all removed parts in the reverse order of removal.
13. Reconnect the fuel pump relay in the fuse box.
14. Allow the engine to remain idle for 10 minutes and accelerate the engine to 3,000rpm, 3 times.

Required Product: QUARTZ 9000 FUTURE FGC Full Synthetic SN PLUS, QUARTZ 9000 FUTURE XT Full Synthetic SN PLUS, Mobil Super Synthetic 5W30 above – Note: 0W20 (for Hybrid Applications).

If not available, use other brand 0W20 or 5W30 and Full Synthetic type with API SN/SN+/SP, ILSAC GF4/GF5 or higher service grade.

Engine Replacement Procedure: (2.0L Nu GDI / 1.6L GDI Gamma / 2.0L T-GDI and 2.4L GDI Theta Engines)

1. Replace the engine by referring to the “Engine Mechanical System → Engine and Transaxle Assembly → Engine and Transaxle Assembly → Repair procedures” chapter in the applicable Shop Manual on KGIS.

Replace the engine oil, oil filter and oil plug gasket.

Engine Crankcase Oil Specification and fill capacity: 5W-30 engine oil

Note: Refer to KGIS for oil level capacity.

Required Product: QUARTZ 0W-20 Full Synthetic API/SN PLUS, Latest (ILSAC Latest) GF-6 or ACEA C5

If not available, use other brand 5W30 and Full synthetic type with API SN/SN+/SP, ILSAC GF4/GF5 or higher service grade.

Note : **For Hybrid Applications**
(1.6L Gamma and 1.6L Kappa Engines)

Required Product: QUARTZ 0W-20 Full Synthetic API/SN PLUS, Latest (ILSAC Latest) GF-6 or ACEA C5




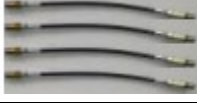




If not available, use other brand 0W20 or 5W30 and Full Synthetic type with API SN/SN+/SP, ILSAC GF4/GF5 or higher service grade.

SUBJECT: EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

AFFECTED VEHICLE RANGE:

Model	Model Year
Forte (YD, YDm, BDm)	2014-2024
Niro (DE HEV)	2017-2020
Soul (AM, PS, SK3)	2012 to 2024
Sportage (SL, QL)	2011 to 2020
Optima (TF, QF, JF, JFa)	2011 to 2020
Sorento (XMa, UMa)	2012 to 2020
Rio (UB, SC)	2012-2021
Stinger (CK)	2018-2021
Seltos (SP2), Sorento (MQ4 P/HEV)	2021
K5 (DL3a)	2022

REQUIRED TOOL:

Tool Name	Part Number	Figure	Qty.	Comments
Engine Combustion Chamber Cleaner ECF-1	UM024 CH280 UM021 CH267*		1	UM024 CH280 (27.05 oz) Sold in case of 4 Additional chemical can be ordered through Kia Chemicals.
Cleaning Kit	KQ234 C6200FFF		1	All Components For replacement kits and/or components, contact Snap-On Business Solutions
M12 GDI Adaptor	KQ234 C6101FFF		4	N/A
M14 MPI Adaptor	KQ234 C6201FFF		4	N/A
Hose	KQ234 C6102FFF		2	N/A
Syringe and hose	KQ234 C6103FFF		2	N/A
Pressurization Adapter	KQ234 C6104FFF		1	N/A
Kit Case	KQ234 C6105FFF		1	N/A

***Note: Engine Combustion Cleaner PN: UM021 CH267 has been discontinued. Use PN: UM024 CH280 instead by referring to the repair procedure outlined in this publication.**

SUBJECT: EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

'LONG BLOCK' REPLACEMENT MODELS:

MY	Model	Engine
2012-2016	Soul (AM/PS)	Gamma 1.6L GDI
2014-2019	Soul (PS), Forte (YD, YDm), Optima HEV (JF HEV)	Nu 2.0L GDI
2011-2020	Optima (QF, TF, JF, JFa), Sportage (SL, QL), Sorento (XMa, UMa)	Theta 2.0L T-GDI and 2.4L GDI
2011-2016	Optima HEV (TF HEV), Sorento (XMa), Sportage (SL), Forte (TD)	Theta 2.4 MPI

>>> **ALL OTHER model vehicles not listed above are 'SHORT BLOCK' replacement.**

REQUIRED PARTS:**REQUIRED PART: (NU 2.0L GDI ENGINE)**

Part Name	Part Number (Non-ISG)	Part Number (ISG)	Figure	Qty.
Engine Long Block (PS 14-16MY)	21101 2EG01FFFR	21101 2EG02FFFR		1
Engine Long Block (PS 17-19MY)	21101 2EG03FFFR	21101 2EG04FFFR		
Engine Long Block (YD)	14MY: 21101 2EG10FFF/FFFR/FFFR 15-16MY: 21101 2EG11FFF/FFFR/FFFR 17-18MY: 21101 2EG12FFF/FFFR/FFFR			
Engine Long Block (YDm 17-18MY)	17-18MY: 21101 2EG17FFFR			
Engine Long Block (JF HEV)	16-19MY: 21101 2EG20FFF			
Fuel Tube	35305 2E510FFF			1
Part Name	Kit Part Number	Part Number	Description	Qty.
Engine Service Kit	 21111 2EG01FFF	26611 2E022	Rod Assy - Oil Level	1
		28521 2E000	Gasket - Exhaust Manifold	1
		28313 2E000	Gasket - Intake Manifold	1
		35312 2G750	Injector O-ring Kit (Combustion Seal Ring) 35312 2B110 (Support Disc) 35312 2B111 (O-Ring) 35312 2B112	4
		35309 2B110	Injector Clip	4
		35313 2B110	Injector Washer	4
		35322 2G700	High-Press. Pump O-ring	1
		11405 06206K	High-Press. Pump Bolt	2
		28751 2B300	Gasket - Front Muffler	1
		13183 12000	Nut - Front Muffler	2
		39250 2E000	Knock Sensor	1
		11403 08306K	Bolt - Flange	1
		25460 2E006	Pipe Assembly - Heater	1
		25480 2E000	Hose Assembly - Heater	1
25456 2E100	Bolt - Washer Assembly	2		

**FFF part may be shipped if FFFR is not available.*

SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES****REQUIRED PART: (NU 2.0L MPI - ATK ENGINE)**

Part Name	Part Number	Figure	Qty.
Engine Long Block (SK3)	19-24MY: 21101 122ZRQQKR (M/T) 19-24MY: 21101 123ZRQQKR (CVT)		1
Engine Long Block (SP2)	20~24MY: 21101 126ZRQQKR		
Engine Service Kit (SK3, SP2)	21102 N20AKQQK		1

**FFF part may be shipped if FFFR is not available.*

**QQK part may be shipped if QQKR is not available.*

REQUIRED PART: (THETA 2.4L MPI ENGINE)

Part Name	Part Number	Figure	Qty.
Engine Long Block (TF HEV)	11-12MY: 21101 2G406FFF 13-16MY: 21101 2G407FFF		1
Engine Long Block (XMa)	11-13MY: 21101 2G404FFF		
Engine Long Block (SL)	11-13MY: 21101 2G401FFF		
Engine Long Block (TD)	10-13MY: 21101 2G402FFF		
Fuel Tube	35305 2B000FFF		1
Engine Service KIT (TF HEV)	21111 2G4S3FFF		1
Engine Service KIT (XMa)	21111 2G4S2FFF		1
Engine Service KIT (SL)	ULEV: 21111 2G4S2FFF SULEV: 21111 2G4S1FFF		1
Engine Service KIT (TD)	21111 2G4S2FFF		1

SUBJECT:






EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**REQUIRED PART: (GAMMA 1.6L GDI ENGINE)**

Part Name	Part Number (Non-ISG)	Part Number (ISG)	Figure	Qty.
Engine Long Block (12-13MY)	21101 2BK01FFFR	21101 2BK02FFFR		1
Engine Long Block (14-16MY)	21101 2BK03FFFR			
Fuel Tube	35305 2B000FFF			1
Part Name	Kit Part Number	Part Number	Description	Qty.
Engine Service Kit 1	 21111 2BS01FFF	26611 2B611	Rod Assy - Oil Level	1
		26612 2G601	Guide Assy - Oil Level	
		28521 2B400	Gasket - Exhaust Manifold	1
		28411 2B600	Gasket - Intake Manifold	1
		35312 2G750	Injector O-ring Kit (Combustion Seal Ring) 35312 2B110 (Support Disc) 35312 2B111 (O-Ring) 35312 2B112	4
		23124 2B020	Pulley - Damper	1
		23127 2B700	Bolt - Crank Pulley	1
		35313 2B110	Injector Washer	4
		35322 2G700	High-Press. Pump O-ring	1
		11405 06206K	High-Press. Pump Bolt	2
		26614 2B000	O-RING (OIL LEVEL GUIDE)	1
Engine Service Kit 2	 21112 2BS01FFF	25452 2B000	Gasket - Heater Pipe	1
		25457 2B000	Pipe - Heater	1
		11403 08126K	Bolt - Flange	1
		13396 06007K	Nut - Flange	2
		21516 35010	Bolt - Flange (6X12)	1
		25500 2B000	Thermostat Assy	1
		25600 2B600	Control Assy - Water Temp	1
		25631 2B051	Fitting Assy - Water Inlet	1
		11403 06207S	Bolt - Flange	3
		13386 08007C	Nut - Flange	2
		26300 35505	Filter Assy - Oil	1
		39250 2B000	Knock Sensor	1
		11403 08306K	Bolt - Flange	1
		28751 2B200	Gasket - Front Muffler	1
		13183 12000	Nut - Front Muffler	2

***FFF part may be shipped if FFFR is not available.**




SUBJECT: EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

REQUIRED PART: **(THETA GDI ENGINES)**

Model	Description	Part Number	Figure	Qty.
ALL	Engine Long Block (see below)	Applicable P/N (see below)		1
Model	Production Year	Part Number		Qty.
		2.0L T-GDI	2.4L GDI	
SL	11-13MY	21101 2GK07QQKR*	N/A	1
TF QF		21101 2GK07QQKR*	21101 2GK05QQKR*	
XMa	12-13MY	N/A	21101 2GK09QQKR*	
	14MY (ULEV)		21101 2GK11QQKR*	
	14MY (SULEV)			
UMa	15-17MY	21101 2GK32QQKR*	21101 2GK31QQKR*	
	18-20MY		21101 2GK33QQKR*	
QF	14-15MY	21101 2GK08QQKR*	21101 2GK06QQKR*	
TF	14-15MY	N/A		
SL	14-16MY	21101 2GK37QQKR*	21101 2GK36QQKR*	
JF/JFa	16-20MY	21101 2GK32QQKR*	21101 2GK34QQKR*	
QL	17-20MY	21101 2GK39QQKR*	21101 2GK35QQKR*	
Models	Description	Part Number	Figure	Qty.
ALL	Oil Cooler Tube Assembly	25470 2G050QQK**		1
AT	Drive Plate Bolts	23311 25050		7
ALL	Service Kit I			One (1) per engine.
MY / Model	Description	Service Kits		Qty.
		2.4 GDI	2.0 T-GDI	
14-16MY (SL) 14-15MY (TF) 15MY (QF)	Service Kit I	21111 2GK50QQK	21111 2GK60QQK	1
12-15MY XMa		21111 2GK50QQK	N/A	
16-20MY JF JFa		21111 2GK51QQK	21111 2GK52QQK	
15-20MY UMa		21111 2GK51QQK	21111 2GK52QQK	
17-20MY QL		21111 2GK51QQK	21111 2GK52QQK	



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**

ALL	Service Kit II			One (1) per engine.	
MY / Model	Description	Service Kits		Qty.	
		2.4 GDI	2.0 T-GDI		
14-16MY SL 14-15MY TF 15MY QF	Service Kit II	21111 2GK70QQK		1	
12-15MY XMa		21111 2GK70QQK	N/A		
15-20MY UMa		21111 2GK71QQK	21111 2GK72QQK		
17-20MY QL					
16-20MY JF JFa					
ALL	Drive Plate Bolts			Req. Qty. 7 per vehicle	
		23311 25050 (AT) 23231 25200 (M/T)			
ALL	Oil Cooler Tube Assembly			Replacement is conditional	
		25470 2G050QQK	25470 2G650QQK		

****QQK part may be shipped if QQKR is not available.***

*****Oil Cooler Tube assembly replacement is conditional.***



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**WARRANTY INFORMATION: **NU 2.0L GDI (PS, YD, YDM, JF HEV)****N Code: L21 C Code: ZZ1**

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
W	ALL	Valve Stem Seal (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21101F71	0.6 M/H	*Engine Oil Allowance	0	
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21101F73	0.6 M/H	N/A	0	
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) + Combustion Chamber Cleaning + Vehicle In (2) Engine Oil Replacement (Request Svc Record)	21101F72	2.7 M/H	*UM024 CH280	1	
						*Engine Oil Allowance	0		
		Piston Ring (Refer to EPC)		21101F73	0.6 M/H	N/A	0		
	PS	Piston Ring (Refer to EPC)	Vehicle In (3) Oil Consumption Test #2 + Engine R&R (14-16MY)	0		21101F74	7.2 M/H	21101 2EG01FFFR <u>or</u> 21101 2EG02FFFR	1
								35305 2E510FFF	
			21111 2EG01FFF						
			21101 2EG03FFF <u>or</u> 21101 2EG04FFF						
			35305 2E510FFF						
21111 2EG01FFF									
26300 35505									
21513 23001									

*Continued on page 16.***FFF part may be shipped if FFFR is not available.*

SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	YD	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R (14MY)	21000F66	6.9 M/H	21101 2EG10FFFR*	1
							35305 2E510FFF	1
							21111 2EG01FFF	1
							21101 2EG11FFFR*	1
							35305 2E510FFF	1
							21111 2EG01FFF	1
	YDm			Vehicle In (3) Oil Consumption Test #2 + Engine R&R (17-18MY)	21000F67	6.9 M/H	21101 2EG17FFFR*	1
							35305 2E510FFF	1
							21111 2EG01FFF	1
	JF HEV			Vehicle In (3) Oil Consumption Test #2 + Engine R&R (15-16MY)	21000F68	8.7 M/H	21101 2EG20FFFR*	1
							35305 2E510FFF	1
							21111 2EGA3FFF	1

**FFF part may be shipped if FFFR is not available.*



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**WARRANTY INFORMATION: **NU 2.0L MPI - ATKINSON (SK3, SP2)**

N Code: L21 C Code: ZZ1

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.			
W	ALL	Valve Stem Seal (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21101F71	0.6 M/H	*Engine Oil Allowance	0			
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21101F73	0.6 M/H	N/A	0			
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning + Vehicle In (2) Engine Oil Replacement (Request Svc Record)	21101F72	2.7 M/H	* UMO24 CH280	1			
							*Engine Oil Allowance	0			
	Vehicle In (3) Oil Consumption Test #2 (Normal Consumption)	21101F73	0.6 M/H	N/A	0						
	SK3	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F71	7.5	21101 122ZRQQKR* (M/T) 21101 123ZRQQKR* (CVT)	1			
	21102 N20AKQQK										
	SP2 (FWD)						Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F72	6.8	21101 126ZRQQKR*	1
										21102 N20AKQQK	
	(AWD)	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F73	7.1	21101 126ZRQQKR*	1					
	21102 N20AKQQK										
	ALL	SCC Calibration (Add-On)	21000F03	0.5	N/A	0					



SUBJECT: EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

WARRANTY INFORMATION: **GAMMA 1.6L GDI (AM)**

N Code: L21 C Code: ZZ1

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	Valve Stem Seal (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21101F75	0.6 M/H	*Engine Oil Allowance	0
			Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21101F77	0.6 M/H	N/A	0
			Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning + Vehicle In (2) Engine Oil Replacement (Request Svc Record)	21101F76	2.5 M/H	*UM024 CH280	1
						*Engine Oil Allowance	0
			Vehicle In (3) Oil Consumption Test #2 (Normal Consumption) (AM) 12-13MY	21101F77	0.6 M/H	N/A	0
	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R (AM) 12-13MY	21101F78	6.9 M/H	21101 2BK01FFFR or 21101 2BK02FFFR	1
						35305 2B000FFF	
21111 2BS01FFF							
21112 2BS01FFF							
26300 35505							
21513 23001							

**FFF part may be shipped if FFFR is not available.*



SUBJECT: EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES
WARRANTY INFORMATION: GAMMA 1.6L GDI (PS)
N Code: L21 C Code: ZZ1

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	Valve Stem Seal (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21101F79	0.6 M/H	*Engine Oil Allowance	0
			Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21101F81	0.6 M/H	N/A	0
			Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning	21101F80	2.5 M/H	*UM024 CH280	1
						*Engine Oil Allowance	0
			Vehicle In (3) Oil Consumption Test #2 (Normal Consumption) (PS) 12-13MY	21101F81	0.6 M/H	N/A	0
	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R (PS) 12-13MY	21101F82	7.2 M/H	21101 2BK03FFFR	1
						35305 2B000FFF	
21111 2BS01FFF							
21112 2BS01FFF							
26300 35505							
21513 23001							

****FFF part may be shipped if FFFR is not available.***

Note: For fluids and other expenses refer to [page 27](#).



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**

WARRANTY INFORMATION: **THETA 2.0L T-GDI (TF, QF, JF, JFA, SL, QL, UMA)**

N Code: L21 C Code: ZZ1

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
W	ALL	Valve Stem Seal (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21000F00	0.6 M/H	*Engine Oil Allowance	0
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21000F02	0.6 M/H	N/A	0
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning	21000F01	2.5 M/H	*UM024 CH280	1
							*Engine Oil Allowance	0
			Vehicle In (3) Oil Consumption Test #2 (Normal Consumption)	21000F02	0.6 M/H	N/A	0	
	TF	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F05	6.3 M/H	21101 2GK07QQKR 21101 2GK07QQKR*** 21111 2GK60QQK 21111 2GK70QQK 23311 25050* (Qty. 7) 25470 2G650QQK**	1
	21000F07				(2011-2013MY) 21101 2GK07QQKR*** (2014MY) 21101 2GK08QQKR*** 21111 2GK60QQK 21111 2GK70QQK 23311 25050* (Qty. 7) 25470 2G650QQK**			
	21000F09				6.8 M/H	21101 2GK32QQKR*** 21111 2GK52QQK 21111 2GK72QQK 23311 25050* (Qty. 7) 25470 2G650QQK**		
	21000F11							
	21000F13				6.2 M/H	21101 2GK37QQKR*** 21111 2GK60QQK 21111 2GK70QQK		
	21000F15				6.6 M/H	23311 25050* (Qty. 7) 25470 2G650QQK**		
	21000F17				6.7 M/H	21101 2GK39QQKR 21111 2GK52QQK 21111 2GK72QQK 23311		
	21000F19				7.1 M/H	25050* (Qty. 7) 25470 2G650QQK**		
21000F23	6.6 M/H				21101 2GK32QQKR*** 21111 2GK52QQK 21111 2GK72QQK			
21000F25	7.0 M/H				23311 25050* (Qty. 7) 25470 2G650QQK**			
W	ALL	Piston Ring (Refer to EPC)	0	SCC Calibration (Add-On)	21000F03	0.5 M/H	N/A	0

***FFF part may be shipped if FFFR is not available.**

Printed TSB copy is for reference only; information may be updated at any time. Always refer to KGIS for the latest information.



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**WARRANTY INFORMATION: **THETA 2.4L GDI (TF, QF, JF, JFA, SL, QL, XMA, UMA)**

N Code: L21 C Code: ZZ1

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
	ALL	Valve Stem Seal (Refer to EPC)		Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21000F00	0.6 M/H	*Engine Oil Allowance	0
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21000F02	0.6 M/H	N/A	0
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning	21000F01	2.5 M/H	*UM024 CH280	1
							*Engine Oil Allowance	0
				Vehicle In (3) Oil Consumption Test #2 (Normal Consumption)	21000F02	0.6 M/H	N/A	0
W	TF	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F04	5.8 M/H	(2011-2013MY) 21101 2GK05QQKR*** (2014MY) 21101 2GK06QQKR*** 21111 2GK50QQK 21111 2GK70QQK 23311 25050* (AT) Qty.7 23231 25200* (MT) Qty.7 25470 2G050QQK**	1
	QF						21000F06	



SUBJECT:

EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty	
W	JF	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F08	5.9 M/H	21101 2GK34QQKR*** 21111 2GK51QQK 21111 2GK71QQK 23311 25050* (Qty. 7) 25470 2G050QQK**	1	
	JFa				21000F10				
	SL (FWD)				21000F12	5.7 M/H	21101 2GK36QQKR*** 21111 2GK50QQK 21111 2GK70QQK 23311 25050* (Qty. 7) 25470 2G050QQK**		
	SL (AWD)				21000F14	6.2 M/H			
	QL (FWD)				21000F16	5.6 M/H	21101 2GK35QQKR*** 21111 2GK51QQK 21111 2GK71QQK 23311 25050* (Qty. 7) 25470 2G050QQK**		
	QL (AWD)				21000F18	6.0 M/H			
	XMa (FWD)				21000F20	5.6 M/H	21101 2GK11QQKR 21111 2GK50QQK 21111 2GK70QQK 23311 25050* (Qty. 7) 25470 2G050QQK**		1
	XMa (AWD)				21000F21	6.0 M/H			
	UMa (FWD)				21000F22	5.8 M/H	(2016-2017MY) 21101 2GK31QQKR (2018MY)		1
	UMa (AWD)				21000F24	6.2 M/H	21101 2GK33QQKR 21111 2GK51QQK 21111 2GK71QQK 23311 25050* (Qty.7) 25470 2G050QQK		
ALL	Piston Ring (Refer to EPC)		SCC Calibration (Add-On)	21000F03	0.5 M/H	N/A	0		

***QQK part may be shipped if QQKR is not available.**

Note: For fluids and other expenses refer to [page 27](#).



SUBJECT:

EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINESWARRANTY INFORMATION: **THETA 2.4L MPI (TF HEV, XMA, SL, TD)**

N Code: L21 C Code: ZZ1

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty		
W	ALL	Piston Ring (Refer to EPC)	0	Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21000F00	0.6 M/H	*Engine Oil Allowance	0		
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21000F02	0.6 M/H	N/A	0		
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) +Combustion Chamber Cleaning	21000F01	2.5 M/H	*UM024 CH280	1		
							*Engine Oil Allowance	0		
	Vehicle In (3) Oil Consumption Test #2 (Normal Consumption)			21000F02	0.6 M/H	N/A	0			
	TF HEV			Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F75	8.2 M/H	(11-12MY) 21101 2G406 FFF	1
									(13-16MY) 21101 2G407 FFF	
	XMa (FWD)						21000F76	5.4 M/H	(11-13MY) 21101 2G404FFF	
									21111 2G4S2FFF	
	XMa (AWD)						21000F77	5.8 M/H	(11-13MY) 21101 2G404FFF	
									21111 2G4S2FFF	
	SL (FWD)						21000F78	5.3 M/H	(11-13MY) 21101 2G401FFF	
									(ULEV) 21111 2G4S2FFF (SULEV) 21111 2G4S1FFF	
	SL (AWD)						21000F79	5.7 M/H	(11-13M) 21101 2G401FFF	
(ULEV) 21111 2G4S2FFF (SULEV) 21111 2G4S1FFF										
TD	21000F80	6.4 M/H	(10-13MY) 21101 2G402FFF							
			21111 2G4S2FFF							



SUBJECT:

EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**'SHORT BLOCK' REPLACEMENT ONLY:**

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
W	ALL	Piston Ring (Refer to EPC)		Vehicle In (1) Engine Oil Top-Off (Request Svc Record)	21000F26	0.6 M/H	*Engine Oil Allowance	0
				Vehicle In (2) Oil Consumption Test #1 (Normal Consumption)	21000F27	0.6 M/H	N/A	
				Vehicle In (2) Oil Consumption Test #1 (Excessive Consumption) + Combustion Chamber Cleaning + Vehicle In (2) Engine Oil Replacement (Request Svc record)	21000F28	2.5 M/H	*UM024 CH280	1
					21000F29		*Engine Oil Allowance	0
				Vehicle In (3) Oil Consumption Test #2 (Normal Consumption)	21000F30	0.6 M/H	N/A	0
W	BDm (20-24MY)	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F34	10.7 M/H	Refer to EPC (Gamma) Short Block 1.6L MPI/GDI 1.6L T-GDI	1
	DL3a (21MY) FWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F35	10.3 M/H		
	DL3a (21MY) AWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F59	10.6 M/H		
	JFa (16-20MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F36	10.3 M/H		
	MQ4 PHEV (21MY) FWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F37	11.5 M/H		
	MQ4 PHEV (21MY) AWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F60	11.9 M/H		
	SC (18-21MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F38	10.4 M/H		



SUBJECT:

EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
W	SP2 (21MY) FWD	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F40	10.6 M/H	Refer to EPC (Gamma) Short Block 1.6L MPI/GDI 1.6L T-GDI	1
	SP2 (21MY) AWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F61	10.9 M/H		
	UB (12-17MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F41	9.7 M/H		
	YD (14-17MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F42	10.6 M/H		
	YDm (17-18MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F43	10.6 M/H		
	PS (17-19MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F65	10.2 M/H		
	AM (12-13MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F44	9.9 M/H	Refer to EPC (Nu) Short Block Assy 2.0L MPI	
	BDm (19-24MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F46	9.7 M/H		
	JF HEV (16-20MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F47	11.5 M/H		
	YD (14-18MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F50	9.8 M/H		
YDm (17-18MY)	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F51	9.8 M/H					



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES**

Claim Type	Model	Causal P/N	Qty	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
W	CK (18-21MY) RWD	Piston Ring (Refer to EPC)	0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F52	11.6 M/H	Refer to EPC (Theta) Short Block 2.0L/2.4L 2.0L T-GDI	1
	CK (18-21MY) AWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F63	11.9 M/H		
	MQ4a (21MY) FWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F54	10.8 M/H		
	MQ4a (21MY) AWD			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F64	11.2 M/H		
	TD (10-13MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F55	10.2 M/H		
	TF HEV (11-16MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F56	12.3 M/H		
	UN (09-10MY)			Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F57	10.1 M/H		
	DE HEV (17-20MY)		0	Vehicle In (3) Oil Consumption Test #2 + Engine R&R	21000F58	11.3 M/H	Refer to EPC (Kappa) Short Block 1.6L GDI	1



SUBJECT: **EXCESSIVE OIL CONSUMPTION - NU/GAMMA/THETA/KAPPA ENGINES****WARRANTY CLAIM INFORMATION APPENDIX**

Expense Description	Sublet code / Part Number	Expense policies and requirements	Sublet Limit/Quantity
Engine Oil	Refer to Kia chemicals program for synthetic oil part numbers provided by Kia.	Refer to page 7-8 of TSB for recommended TOTAL engine oil products. Charge quantity needed for "Oil Top-Off" or Oil change for engine replacement according to technician repair comments.	5 QT max.
Combustion Cleaning Fluid	PN: UM024 CH280	Refer to page 9 of TSB	Sold in case of 4 Max 1 bottle per vehicle claim
Engine Oil Reimbursement	Sublet Code "X1"	Refer to page 7-8 of TSB. If recommended product is not used charge for other brand up to maximum allowance. For "Oil Top-Off", charge up to \$7.50 per quart.	\$50.00 for engine R&R \$7.50 p/QT. for engine oil top-off
Substitute Transportation	Sublet Code "RX"	If necessary, for combustion cleaning and engine R&R, follow normal service procedures according to WCPM section 2.2.12 for rental/rideshare expense reimbursement.	Refer to section 6.11 of SPPM

Note: Attach a copy of the entire RO using attachment type "XX-Other".

IMPORTANT: Claim Submission Information

- Confirm Warranty Coverage Validation (KDealer+).
- Engine replacement requires TL PWA with Oil Consumption results.
- Dealer repair order documentation must support the repair sequence per flowchart
- First visit
- Second visit
- Third visit
- Manually enter all warranty claim entries and expenses into each claim
- Provide clear and concise notes i.e. customer concern, cause, correction
- A copy of the entire RO is necessary for claim submission. Use attachment code "XX-Other".
- Confirm claim totals prior to claim submission

For any questions pertaining to claim entry, please create a warranty web case for assistance prior to claim submission.

