

### **Technical Service Bulletin**

GROUP	NUMBER
CAMPAIGN	15-01-031
DATE	MODEL(S)
<b>JULY 2015</b>	3.3L SANTA FE (CM)

SUBJECT:

CYLINDER HEAD COVER OIL LEAK REPAIR (SERVICE CAMPAIGN 936)

#### \* IMPORTANT

#### \*\*\* Retail Vehicles \*\*\*

Dealers must perform this Service Campaign whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the Service Department, access Hyundai Motor America's "Warranty Vehicle Information" screen via WEBDCS to identify open Campaigns.

**Description:** This bulletin outlines the following service procedures.

- Replace the LH (front) cylinder head cover gasket.
- Inspect the alternator for signs of oil contamination.
- > Replace the alternator if any oil contamination is found.

An oil contaminated alternator may result in low or no alternator output, which may cause charging system warning light illumination, no crank, no start, or a loss of power. If the vehicle continues to be driven with the charging system warning light illuminated, the engine may stop running.

Applicable Vehicles: 2007-09MY SANTA FE 3.3L

#### **Parts Information:**

Part Name	Part Number	Qty.
Gasket - Rocker Cover LH	22453-3C120-QQH	1
Generator Assembly	37300-3C250-QQH	* (See below <b>NOTE</b> )

**<sup>\*</sup>NOTE:** Replacement is required only if it does not pass the visual inspection for oil contamination. Denso alternator P/N 37300-3C120 can be replaced with Valeo alternator 37300-3C250-QQH.

#### **Additional Materials:**

Product Name	Part Number
Gray Liquid RTV Gasket	00232-19061 (or equivalent to TB1217H)

**Warranty Information:** 

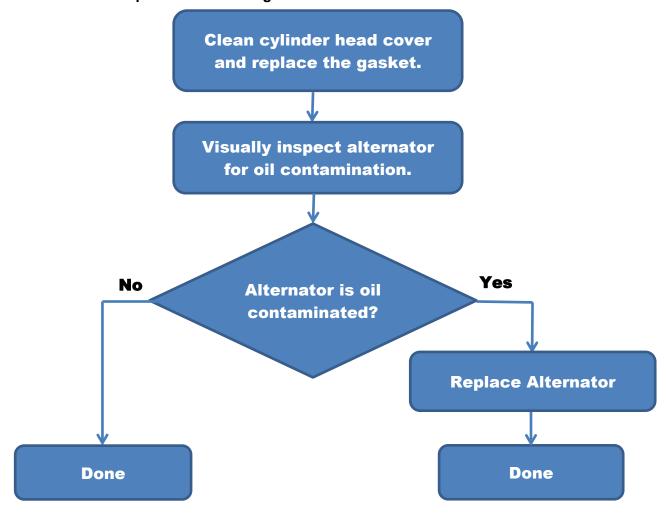
Op Code	Operation	Op. Time
50CA07R0	CYLINDER HEAD COVER GASKET REPLACEMENT AND ALTERNATOR INSPECTION	1.1
50CA07R1	CYLINDER HEAD COVER GASKET REPLACEMENT AND ALTERNATOR REPLACEMENT	2.2

NOTE: Submit Claim on Campaign Claim Entry Screen

Circulate To: General Manager, Service Manager, Parts Manager, Warranty Manager, Service Advisors, Technicians, Body Shop Manager, Fleet Repair

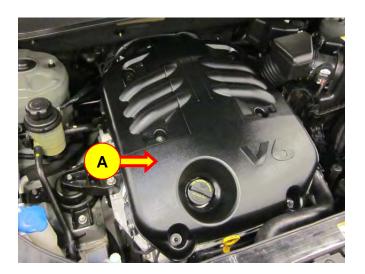
#### **Service Procedure:**

\* Perform the service procedure referring to the flow chart below.



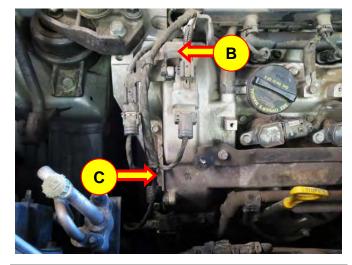
#### **Cylinder Head Cover Gasket Replacement**

1. Remove the engine cover (A).

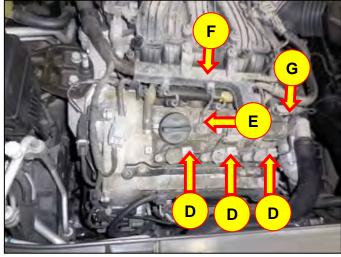


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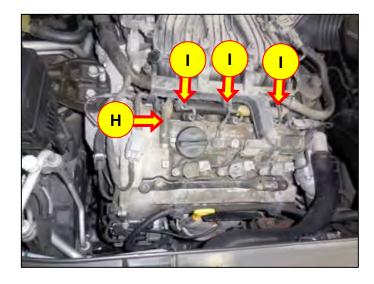
- 2. Remove the upper mounting bracket bolt (B) near the OCV connector.
- 3. Remove the lower mounting bracket bolt (C) near the B2S1 oxygen sensor connector.



- 4. Disconnect the bank 2 ignition coil connectors (D), and remove the ground (E), and then remove the wiring harness protector (F).
- 5. Disconnect the bank 2 Camshaft Position Sensor (CMPS) at (G).

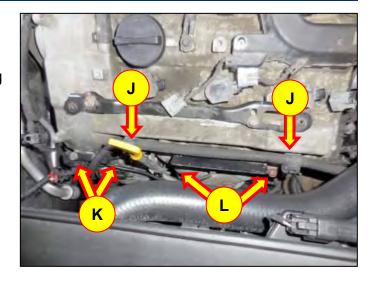


6. Remove the hose (H) and disconnect harness connectors (I) from the bank 2 fuel injectors.

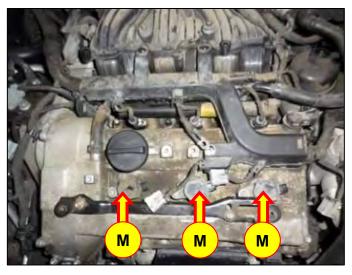


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- 7. Unlock the terminal cable clips (J).
- 8. Remove alternator "B" terminal cable mounting bracket bolts (K) and then remove the wire bracket bolts (L).



9. Remove the bank 2 ignition coils (M).



10. Remove the bank 2 (LH) cylinder head cover (N).

Tightening torque specification: 8.0 lb-ft (96 lb-in, 10.8 Nm)



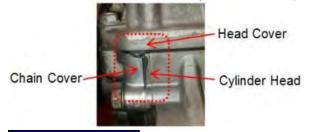
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#### **NOTICE**

Carefully remove the cylinder head cover to avoid any dirt/debris falling into the engine. Debris falling into the cylinder head can result in engine damage.



11. Remove all remaining liquid gasket residue (including outside area of the cylinder head and chain cover as shown in the picture below).



## **NOTICE**

- Be careful not to damage the surface of the cylinder head cover.
- The removed liquid gasket residue should not fall into the engine.
- 12. Clean the cylinder head and cover with a clean lint-free shop towel referring to the picture of the cleaning area below (highlighted in red).



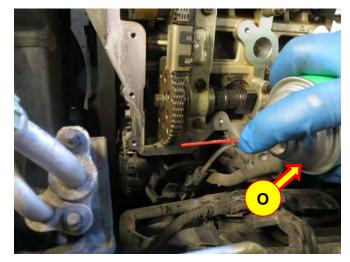




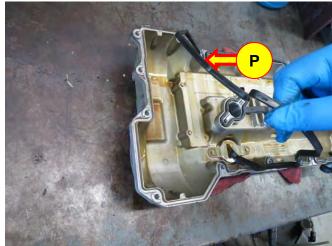


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13. With a degreaser/cleaner (O), clean off any of the remaining dirt and oil from the cylinder head and cover. Then wipe dry with a clean lint-free shop towel.



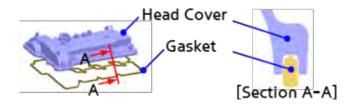
14. Remove the cylinder head cover gasket (P).

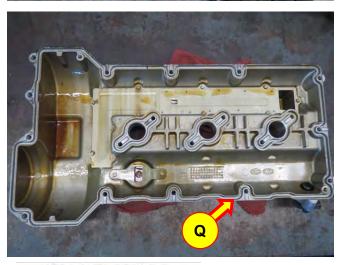


15. Install the new cylinder head cover gasket (Q).

# **NOTICE**

Before installing the new gasket (Q), clean the gasket installing groove with a degreaser/cleaner and a clean lint-free shop towel.





Gasket Installing Groove (Cleaning area)



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16. Apply liquid RTV gasket onto the "T" joints (R), which are the mating points where the front timing chain cover and the cylinder head meet.

# **NOTICE**

When applying the liquid RTV gasket, the applied bead on the surface should be approximately 3/16<sup>th</sup> in (4.5 mm) wide as shown in the picture below.



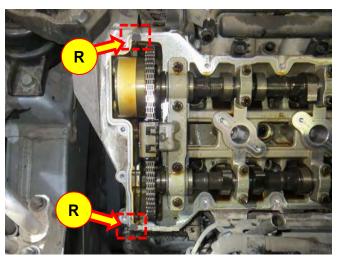
Carefully reinstall the cylinder head cover within the next several minutes before the liquid RTV gasket begins to harden.

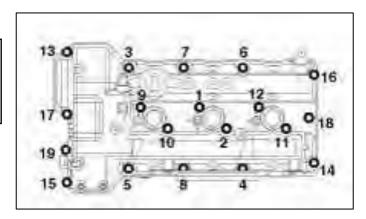
Tightening torque specification: 8.0 lb-ft (96 lb-in, 10.8 Nm



When reinstalling the cylinder head cover, tighten the bolts in the order as shown in the picture at right.

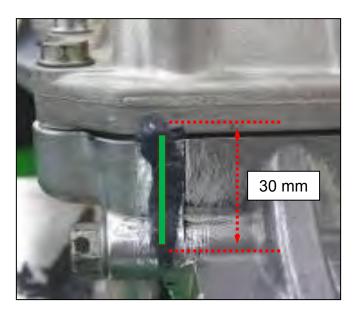




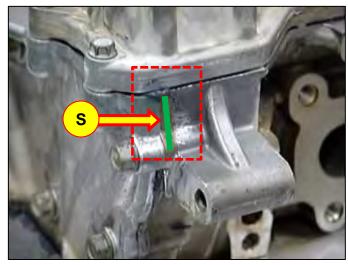


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- 17. Apply liquid RTV gasket onto the outer surface of the "T" joints (S) of the cylinder head and cover.
  - Apply the liquid RTV gasket in a line at least 30 mm long, following the green bold line as shown in the picture on the right and below.



 Within several minutes before the liquid RTV gasket begins to harden, spread the gasket evenly as shown in the picture on the right.





18. Reinstall all the removed parts in the reverse order of removal.

# NOTICE

Allow at least one hour for the liquid RTV gasket to cure before starting the engine.

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#### **ALTERNATOR INSPECTION**

Visually inspect the alternator for presence of any level of oil contamination due to oil leakage that may have occurred from the rocker cover.

Inspect for oil contamination of Alternator

If ANY level of oil contamination is found inside or on the exterior of the alternator, then the alternator must be replaced using the service procedure outlined in the following pages.

# Example: Oil Contamination → Replace Alternator

# **NOTICE**

The example shown has a high level of oil contamination on the alternator, but ANY level of oil contamination found outside or inside the alternator requires replacement of the alternator.

 If NO oil contamination is found anywhere on the exterior or inside the alternator, then the service procedure is complete.

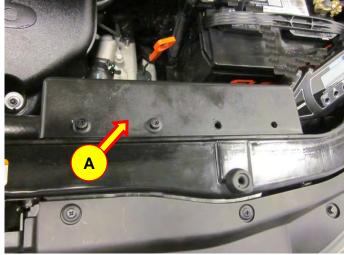




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#### **ALTERNATOR REPLACEMENT**

1. Remove the air duct (A).



2. Record the customer's radio stations.

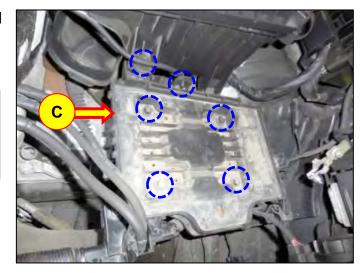
Disconnect the battery (B) and make note of customer radio presets to program back later.



3. Loosen the battery tray mounting fasteners and remove the battery tray (C).

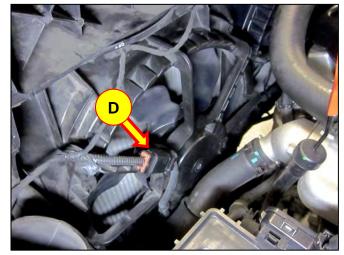
# **NOTICE**

Set aside the removed battery tray (C) to a safe area so that it does not interfere during the alternator removal process.



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4. Disconnect the LH fan motor connector (D).



5. Remove the LH fan shroud bolts (E).

Tightening torque specification: 5.0 lb-ft (60 lb-in, 6.8 Nm)



6. Remove the LH fan shroud (F).

# **NOTICE**

Carefully remove the LH fan shroud (F) so that it does not damage any surrounding parts.



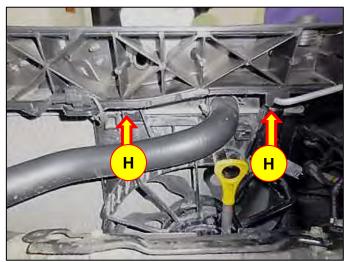
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7. Disconnect the RH fan motor connector (G).

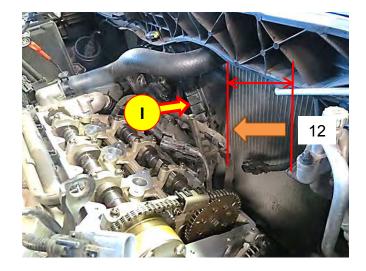


8. Remove the RH fan shroud bolts (H).

Tightening torque specification: 6.5 lb-ft (78 lb-in, 8.8 Nm)



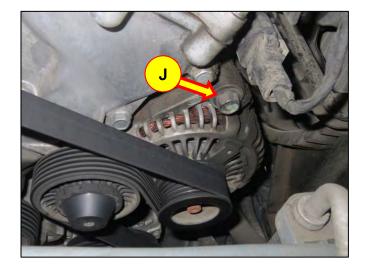
9. Move the RH fan shroud (I) about 12 inches towards the driver's side of the vehicle (as shown by the orange arrow) to provide enough working space to remove and replace the alternator.



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10. Remove the alternator upper mounting bolt (J).

Tightening torque specification: 22 lb-ft (29.8 Nm)



11. Remove the RH front wheel and tire by loosening the 5 wheel nuts (K).

Tightening torque specification: 75 lb-ft (101.7 Nm)



11. Remove the RH engine side cover (L).

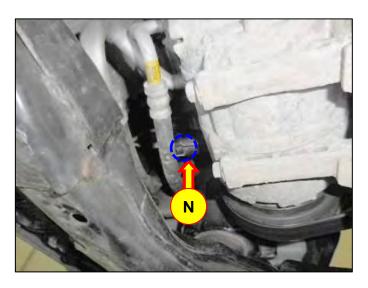


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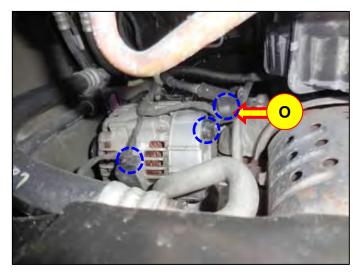
12. Remove the undercover (M).



13. Disconnect the connector (N) from the A/C compressor.



14. Remove the alternator connector and the B+terminal (O).



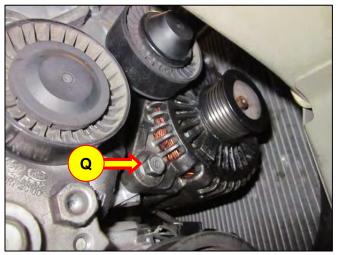
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15. Remove the drive belt after relaxing the belt tension by rotating the tensioner pivot bolt (P).



16. Remove the alternator lower mounting bolt (Q).

Tightening torque specification: 22 lb-ft (29.8 Nm)



17. Remove the alternator (R).



- 18. Install the replacement alternator in the reverse order of removal.
- 19. Verify repair and reset the customer's radio stations.

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TO: Hyundai Dealership General Managers, Sales Managers,

Service Managers, Parts Managers, and Warranty

Administrators

FROM: Hyundai Motor America

DATE: August 27, 2015

SUBJECT: Service Campaign 936: 2007-09 Santa Fe Cylinder Head Cover Oil Leak Repair(TSB# 15-01-031)

Hyundai Motor America is conducting a Service Campaign to inspect for a valve cover oil leak on certain 2007 - 2009 3.3L Santa Fe vehicles.

Technical Service Bulletin #15-01-031 provides the details of the service procedure to replace the valve cover gasket and inspect the alternator for oil contamination (and replace if necessary).

In order to identify only those vehicles affected by Service Campaign 936, it will be necessary to access Hyundai Motor America's "Warranty Vehicle Information" screen via WEBDCS before starting the repair. The "Warranty Vehicle Information" screen will identify affected vehicles with an open Service Campaign 936.

A listing of VEHICLES is also located on <u>WEBDCS</u>, <u>SERVICE</u> tab, select <u>INFORMATION</u>, and select <u>UNCOMPLETED CAMPAIGN VIN LISTING - RETAILED.</u>

TSB #15-01-031 will be available on Hyundai's Service Website on August 27, 20154. It contains instructions on performing the service and submitting the service campaign claim.

An initial shipment of Cylinder Head Gaskets (LH) and Alternators began shipping on August 27, 2015 to dealers in their weekly parts shipment. Additional parts can be ordered following the standard parts ordering procedure.

It is IMPORTANT TO SUBMIT A SERVICE CAMPAIGN CLAIM FOR EACH VEHICLE SERVICED so your dealership can be compensated for your work and Hyundai can maintain accurate records of campaign completions.

LEGAL LIABILITY NOTICE: You are required to keep confidential any and all information and documents provided to you by Hyundai Motor America in the conduct of carrying out work for this recall campaign. Hyundai Motor America dealers may use owner information provided for the campaign only for the purpose of conducting and performing this recall campaign, and for no other purpose.

Hyundai appreciates your cooperation and support. Questions may be directed to your District Parts and Service Manager or Warranty HELPREP line at 1-877-446-2922.

#### HYUNDAI MOTOR AMERICA