



Technical Service Bulletin

GROUP RECALL	NUMBER 21-01-047H-1
DATE JULY 2021	MODEL(S) VERACRUZ (EN)

SUBJECT: T-JOINT LEAK INSPECTION AND OIL PROTECTOR INSTALLATION
(RECALL CAMPAIGN 197)

This bulletin is being revised to increase the op time for inspection operation and inspection/replacement operation.

* IMPORTANT

***** Retail Vehicles *****

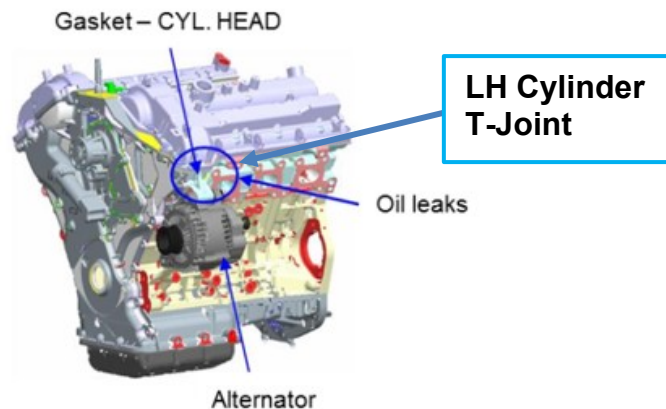
As required by federal law, dealers must perform all open recalls on used vehicles, demo and rental vehicles prior to placing them into customer use and whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the service department, access Hyundai Motor America's "Warranty Vehicle Information screen (VIS)" via WEBDCS to identify open Campaigns.

Description:

Some Veracruz (EN) vehicles may have an engine that potentially leaks oil from the front cylinder bank's valve cover onto the alternator. A sufficient amount of oil could damage the alternator resulting in illumination of the charging system warning lamp and disablement of the charging system. If the vehicle is continually driven without recharging the battery, the engine will eventually shut off, increasing the risk of a crash. This bulletin outlines the procedures to inspect for T-joint leakage and install an oil protector to address this issue.

- If the T-Joint shows no leakage, install oil protector.
- If the T-Joint shows leakage, replace the LH cylinder head cover gasket, alternator, and install the oil protector.



Applicable Vehicles: Certain 2007-2012MY Veracruz (EN) vehicles

SUBJECT:T-JOINT LEAK INSPECTION AND OIL PROTECTOR INSTALLATION
(RECALL CAMPAIGN 197)**Parts Information:**

Part Name	Part Number	Qty.
Service Kit – Protector	22400-3C000QQH	1 Kit
(Service Kit – Protector includes the following 3 parts):		
(Protector –Oil)	(22495-3C000QQH)	
(Bolt - Flange / M8X35mm)	(25124-3C500QQH)	
(Bolt - Flange / M8X45mm)	(11403-08456K)	

NOTE: Replacement of below parts only applies if vehicle **FAILS** the T-joint oil leak inspection:

Gasket - Rocker Cover LH*	22453-3C120QQH	1 ea.
Generator Assembly*	37300-3C125QQH	1 ea.

Supplies:

Part Name	Part Number	Note
Liquid RTV Gasket	00232-19061 (NOTE: Only use Hyundai RTV. Substitute is not allowed)	3 vehicles/bottle
Brake Cleaner	00232-19077	3 vehicles/bottle

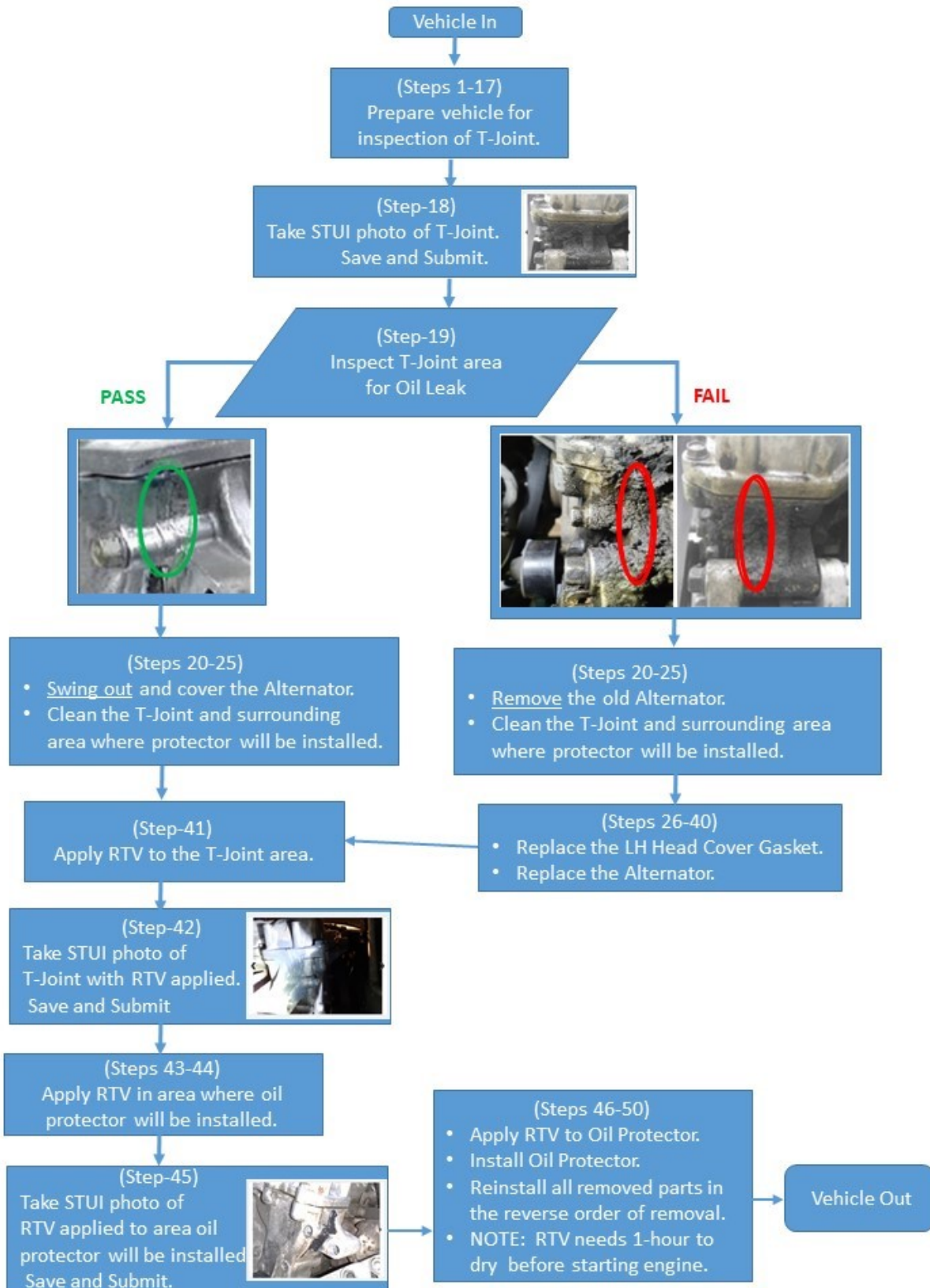
Warranty Information:

Op Code	Operation	Op. Time	Causal Part	Nature	Cause
11D099R0	Oil leak inspection and install oil protector	1.2	22400-3C000QQH	E74	ZZ1
11D099R1	Oil leak inspection and Head cover cleaning, Replace gasket / alternator and Install oil protector	2.4	37300-3C125QQH	E74	ZZ1

NOTE 1: Submit Claim on Campaign Claim Entry Screen.**NOTE 2:** If a part that is not covered under this recall is found in need or replacement while performing this Recall Campaign and the affected part is still under warranty, submit a separate warranty claim using the same Repair Order. If the affected part is out of warranty, submit a Prior Approval Request for goodwill consideration prior to performing the work.**NOTE 3:** The campaign claim submitted under labor operations 11D099R0 and 11D099R1 will include reimbursement of the Liquid RTV Gasket and Brake Cleaner in sublet. Each tube of liquid RTV and bottle of brake cleaner holds enough for 3 vehicles each. Do not submit a separate claim for these items.

SERVICE PROCEDURE:

Summary of Procedure

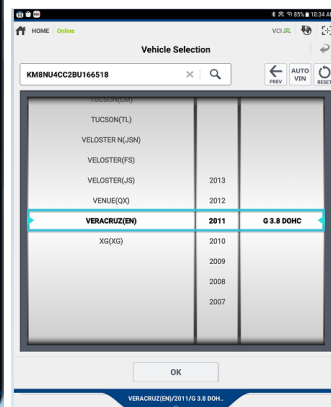


NOTE: In winter, the vehicle should be stored indoors to perform work on parts at room temperature. Start the engine after 1 hour to allow the RTV sealant to harden.

1. To ensure the required GDS tablet STUI camera upload photos can be sent for the correct VIN:

- **Before disconnecting the vehicle's 12V battery and conducting disassembly of the vehicle for this repair:**

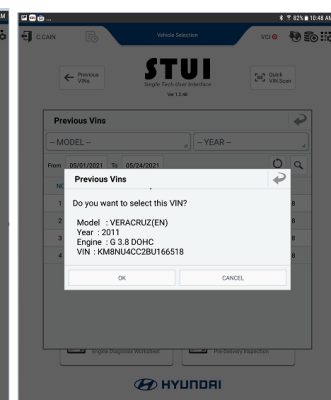
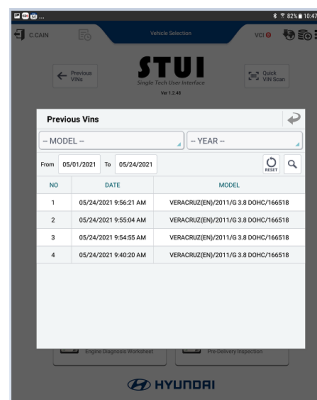
Use a GDS tablet with STUI internet connection and install VCI to the vehicle with ignition On. Perform an **AUTOVIN** to capture and upload the correct VIN to STUI.



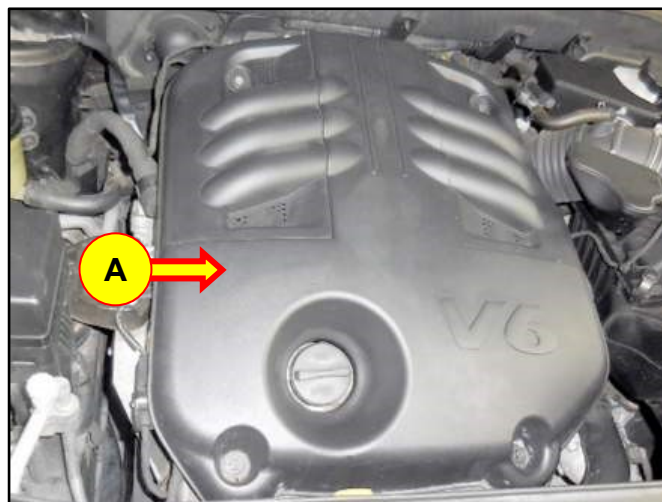
- **Thereafter with 12V battery disconnected:**

Any GDS tablet with STUI internet connection can be used to perform the required STUI camera photo captures and upload as called out at steps 19, 42 and 45.

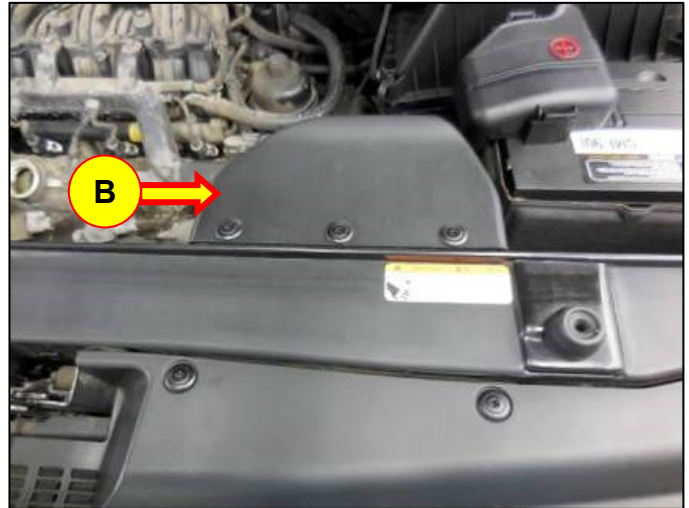
Select the **“Previous VIN”** function at top left of STUI screen each time to ensure the correct VIN will appear when the STUI camera upload occurs.



2. Remove the engine cover (A).



- Remove the air duct (B).



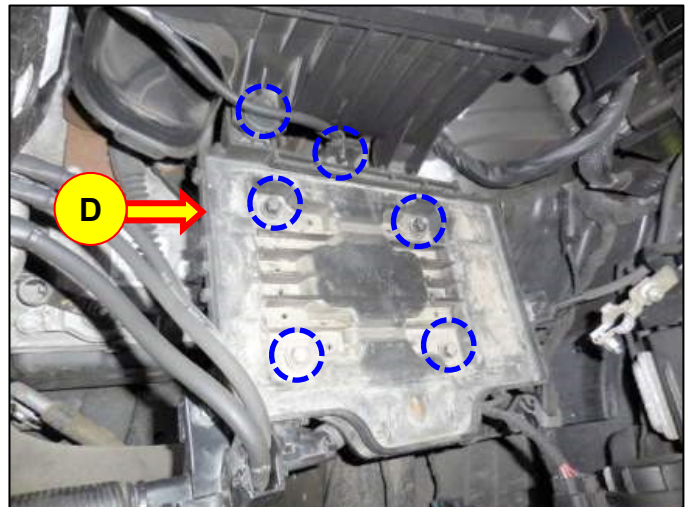
- Disconnect the battery (C) and make note of customer radio presets to program back later.



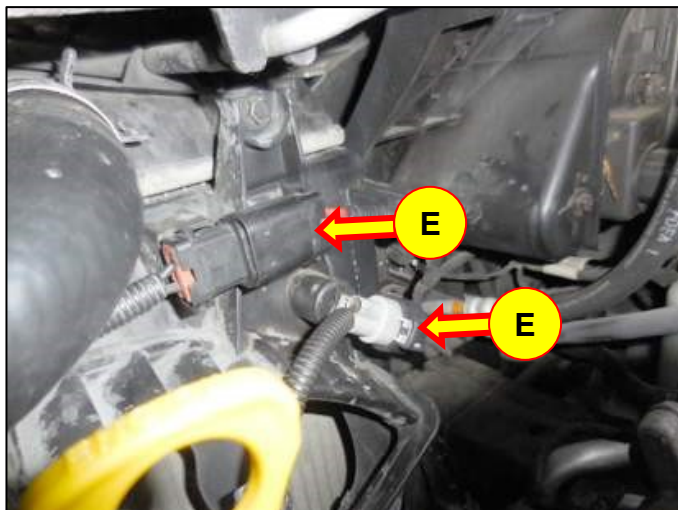
- Loosen the battery tray mounting fasteners and remove the battery tray (D).

NOTICE

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

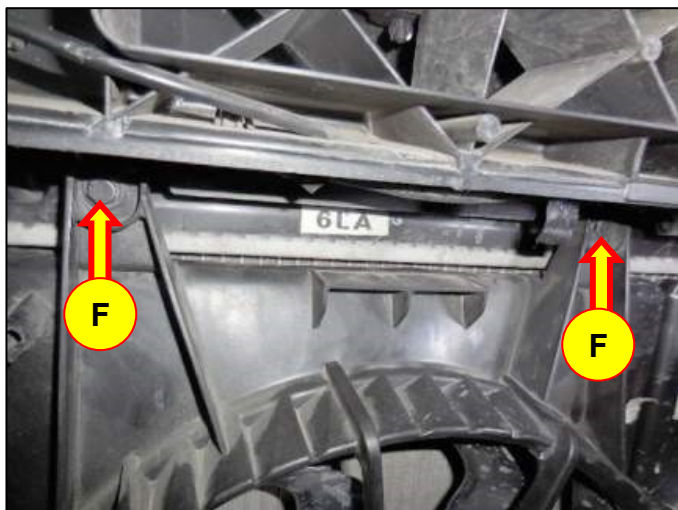


6. Disconnect the fan motor connectors (E).



7. Remove the LH fan shroud bolts (F).

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



8. Remove the LH fan shroud (G).

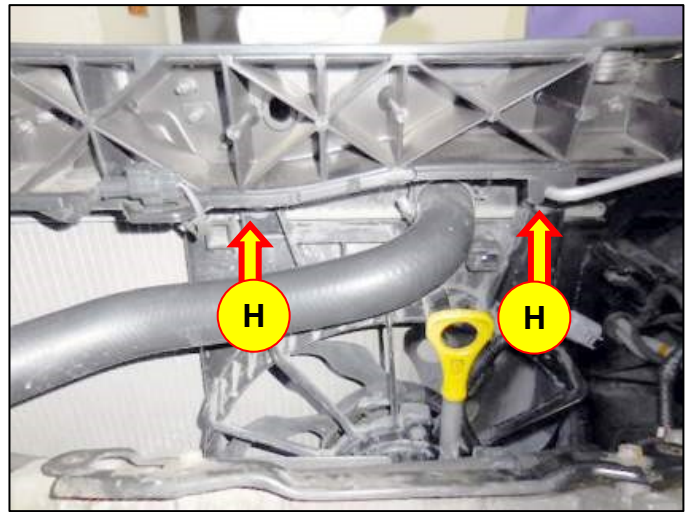
NOTICE

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

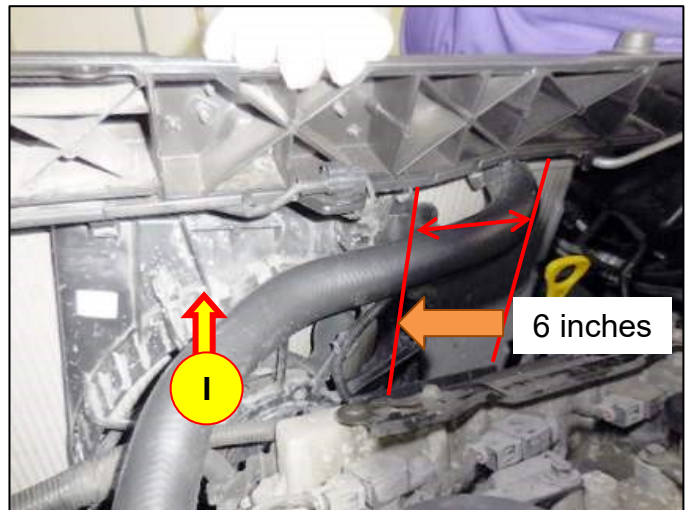


9. Remove the RH fan shroud bolts (H).

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



10. Move the RH fan shroud (I) about 6 inches towards the driver's side of the vehicle (as shown by the orange arrow) to provide enough working space to move and/or replace the alternator.

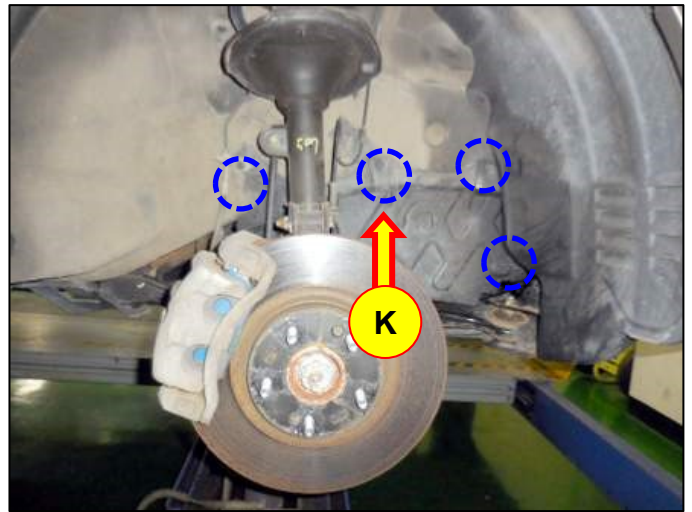


11. Remove the RH wheel and tire by loosening the 5 wheel nuts (J).

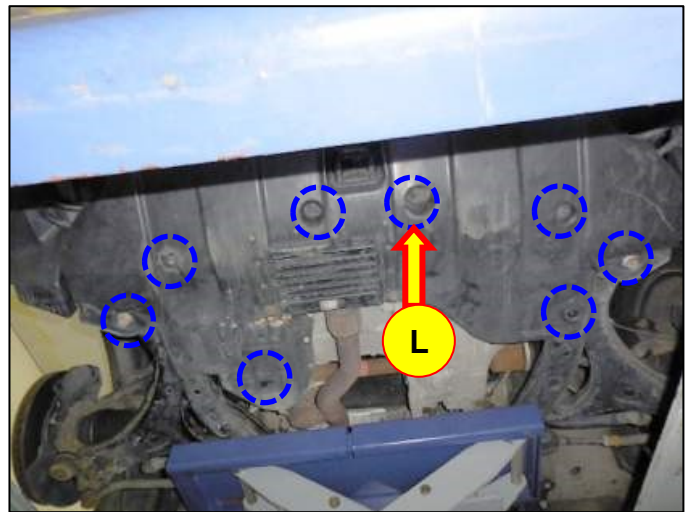
***Tightening torque specification:
75 lb-ft (101.7 Nm)***



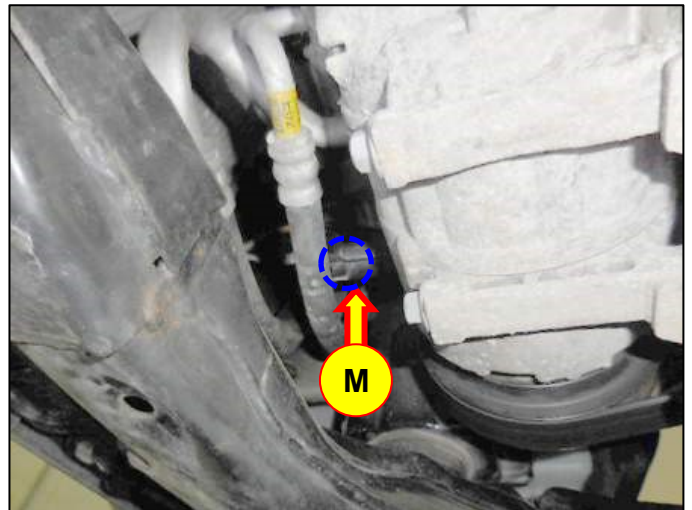
12. Remove the RH engine side cover (K).



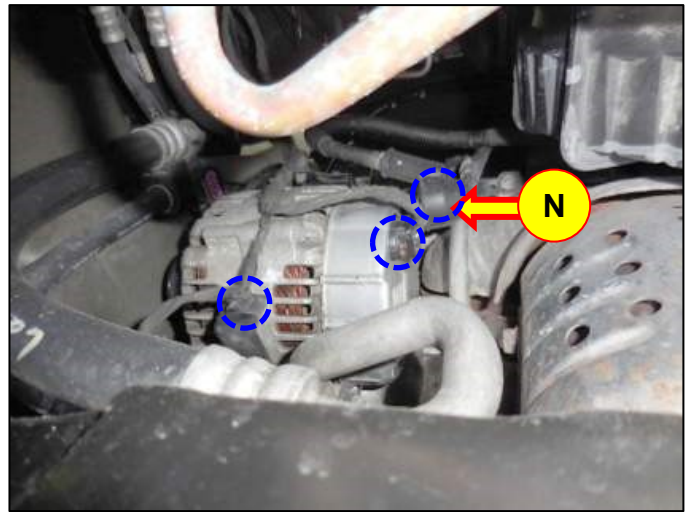
13. Remove the under cover (L).



14. Disconnect the connector (M) from the A/C compressor.



15. Remove the alternator connector and the B+ terminal (N).

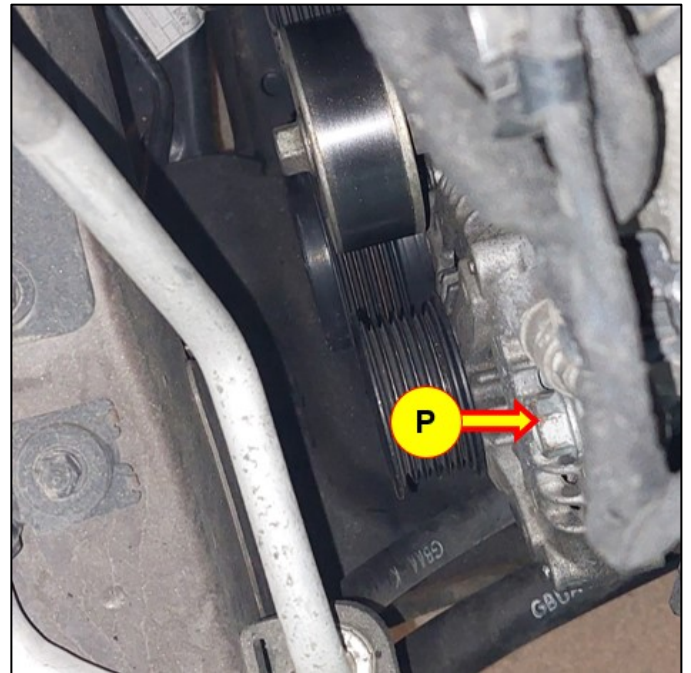


16. Remove the drive belt after relaxing the belt tension by rotating the tensioner pivot bolt (O).



17. Remove the alternator upper mounting bolt (P).

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



- 18. **Take photo of the T-joint area as shown** using GDS tablet STUI camera photo upload function. Save and submit to HMA.

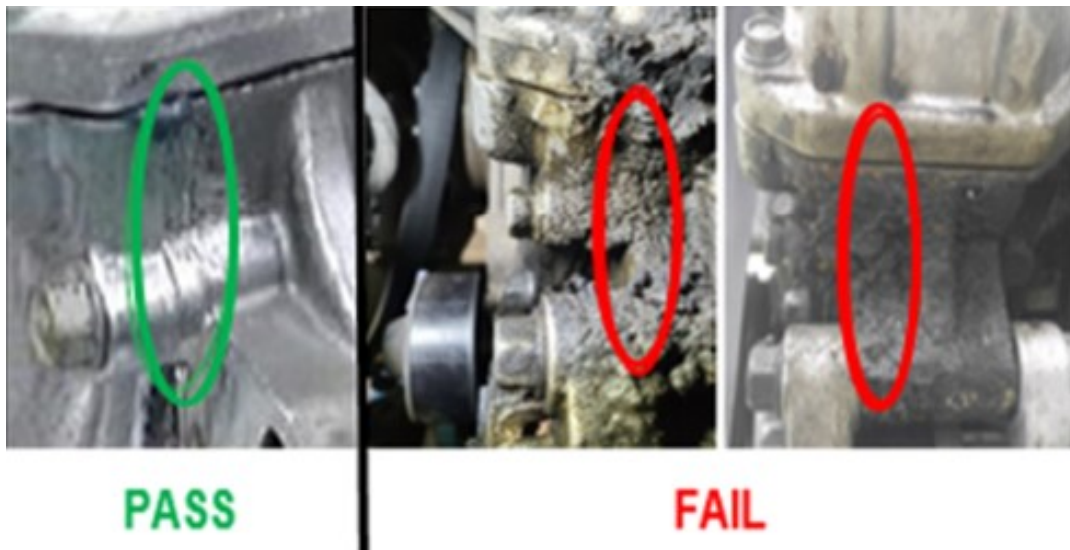
Reverse the tablet camera for front picture taking and orient the tablet as shown to be able to view and take the photo:



Required STUI camera photo:

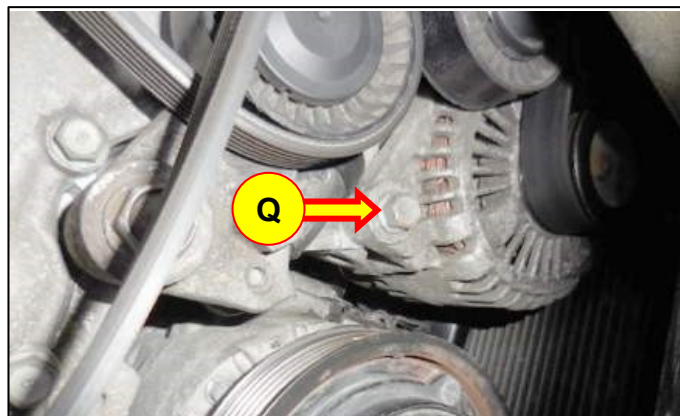


- 19. Inspect T-Joint area for oil leakage:



20. IF T-JOINT HAS NO LEAKAGE (PASS):
(Only the Oil Protector will be installed).

- Loosen the alternator lower mounting bolt (Q).

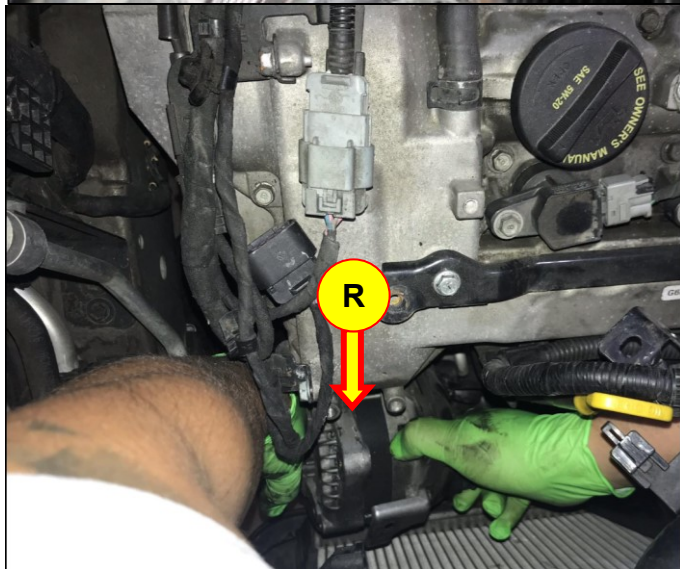


IF T-JOINT HAS LEAKAGE (FAIL):
(Head Cover Gasket and Alternator will be replaced. Oil Protector will be installed).

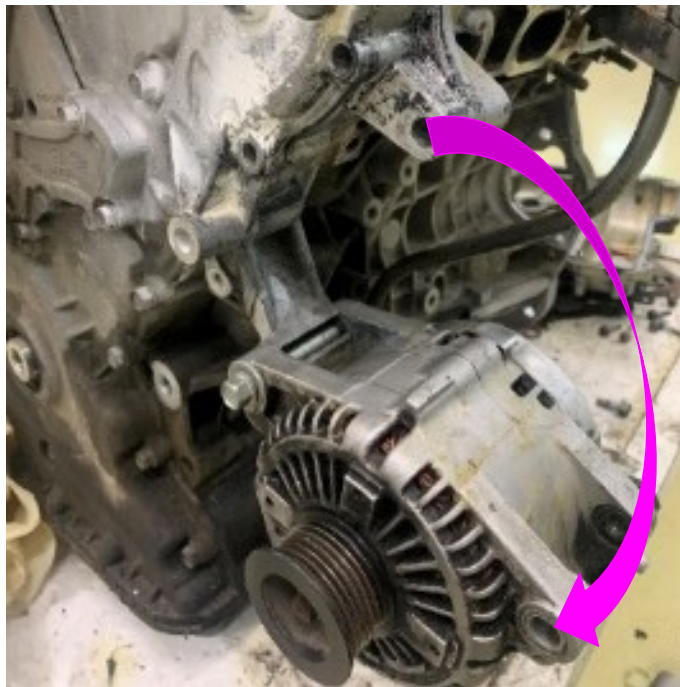
- Remove the alternator lower mounting bolt (Q) and remove alternator (R).

NOTE: Alternator will be replaced.

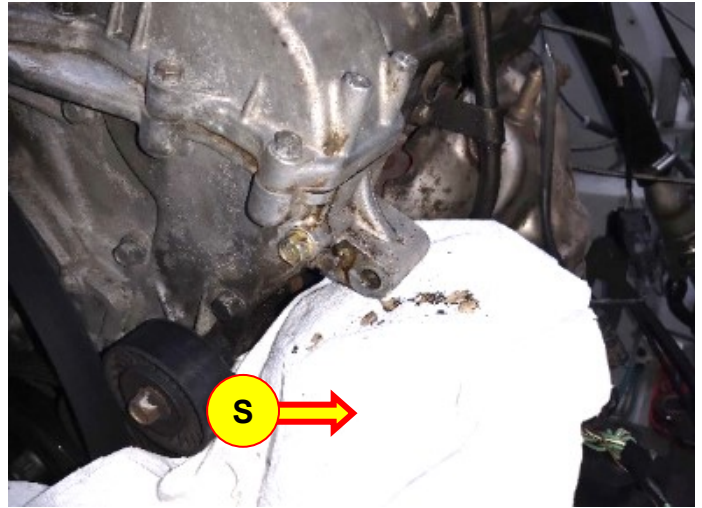
***Tightening torque specification:
22 lb-ft (29.8 Nm)***



21. Rotate the alternator towards the front of the vehicle. (PASS no leakage case only)

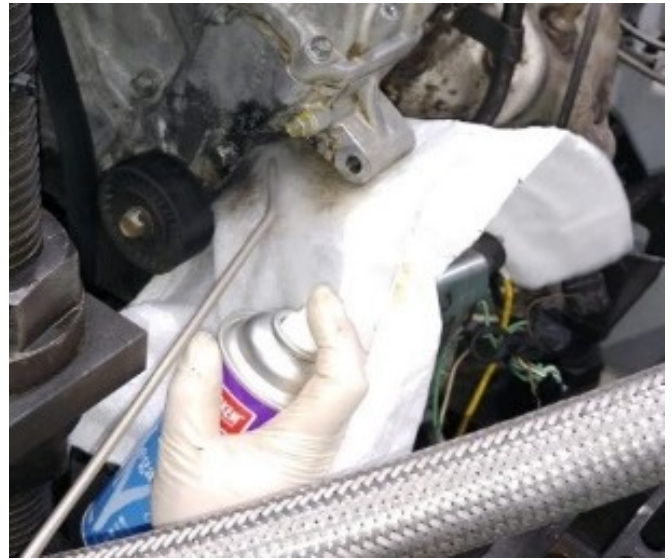


- 22. Protect the alternator using a clean cloth or shop towel (S). Remove any pre-applied sealant and/or contaminants.



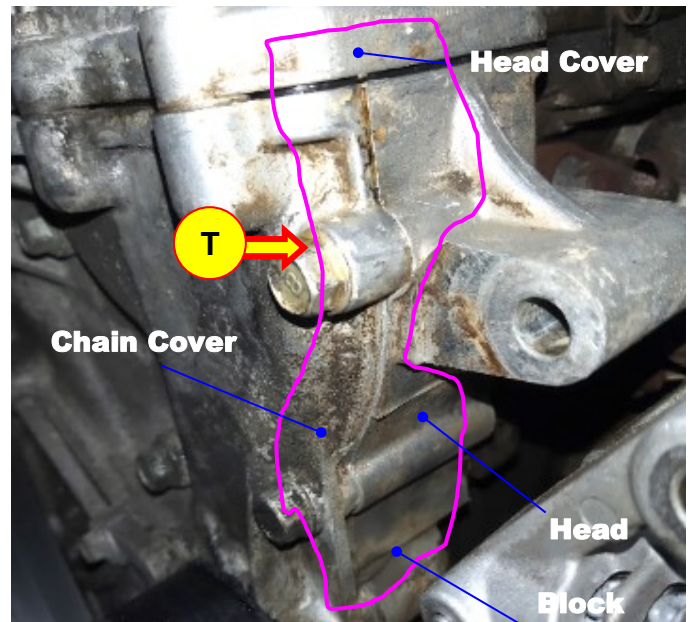
- 23. Spray the area using brake cleaner and an air gun at the same time to remove oil and foreign matter.

Air gun pneumatic pressure: 14-28psi (1-2 bar) Cover exhaust manifold to prevent cleaner from coming in contact.



- 24. The oil protector will be sealed to the engine at this point. **It is crucial that this area is free from oil and contaminates.**

(T) Area: Head, Head Cover, Chain Cover, and Block



25. Remove all liquid gasket residue (including outside area of the cylinder head and chain cover as shown in the picture to the right).

NOTICE

- *The removed liquid gasket residue should not fall into the engine.*



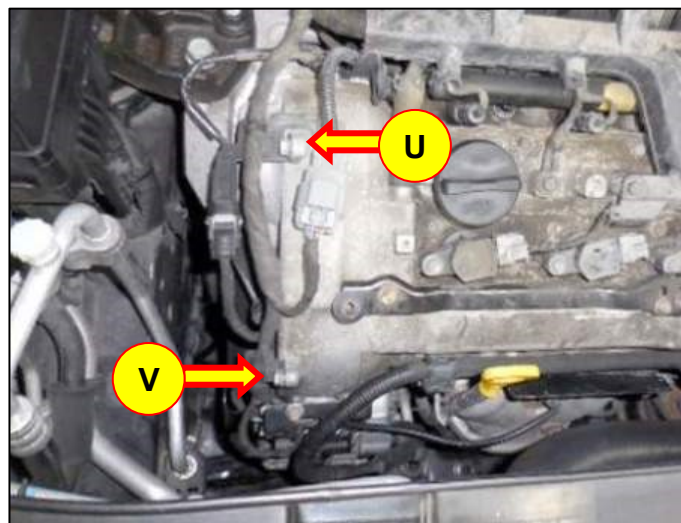
➤ **IF T-JOINT PASSES VISUAL INSPECTION SHOWING NO LEAKAGE, SKIP TO STEP 41.**

➤ **IF T-JOINT FAILS VISUAL INSPECTION SHOWING LEAKAGE,**

- **REPLACE ALTERNATOR**
- **CONTINUE TO NEXT STEP.**

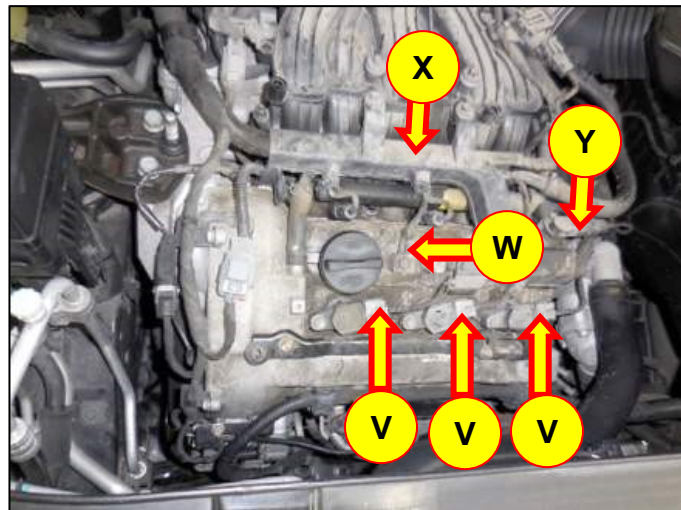
26. **Cylinder Head Cover Gasket Replacement once oil leakage is confirmed:**

Remove the upper mounting bracket bolt (U) near the OCV connector.



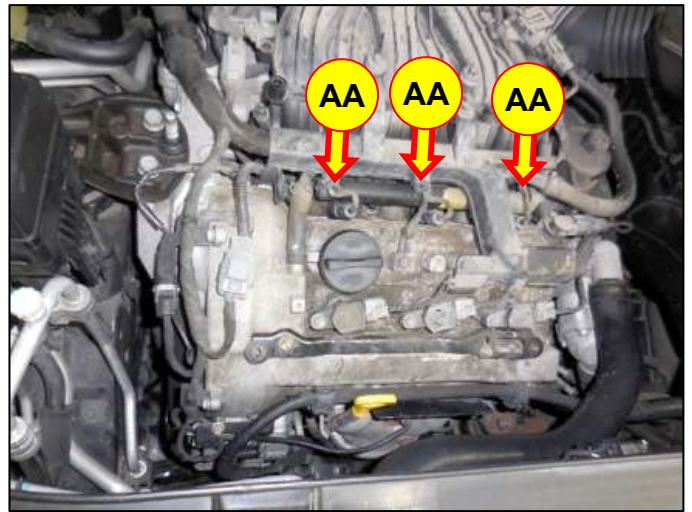
27. Remove the lower mounting bracket bolt (V) near the B2S1 oxygen sensor connector.

28. Disconnect the bank 2 ignition coil connectors (V), and remove the ground (W), and then remove the wiring harness protector (X).

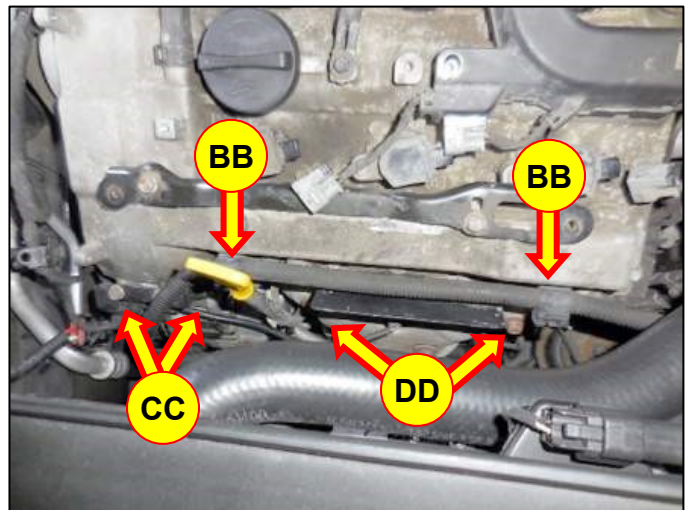


29. Disconnect the bank 2 Camshaft Position Sensor (CMPS) at (Y).

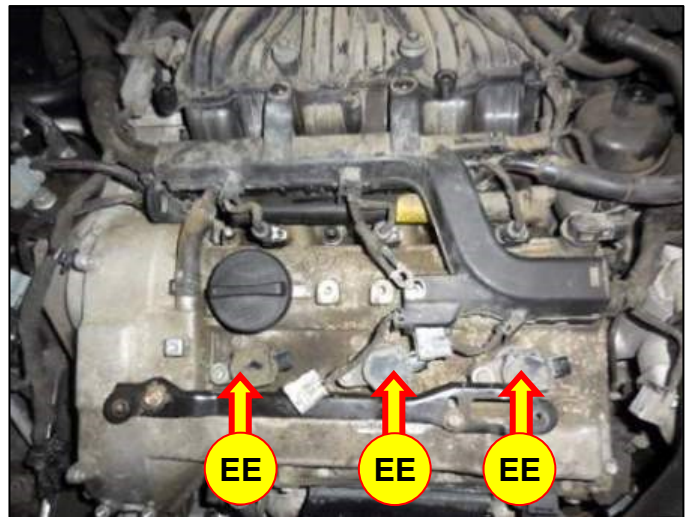
30. Disconnect harness connectors (AA) from the bank 2 fuel injectors.



31. Unlock the terminal cable clips (BB).
32. Remove alternator "B" terminal cable mounting bracket bolts (CC) and then remove the wire bracket bolts (DD).



33. Remove the bank 2 ignition coils (EE).



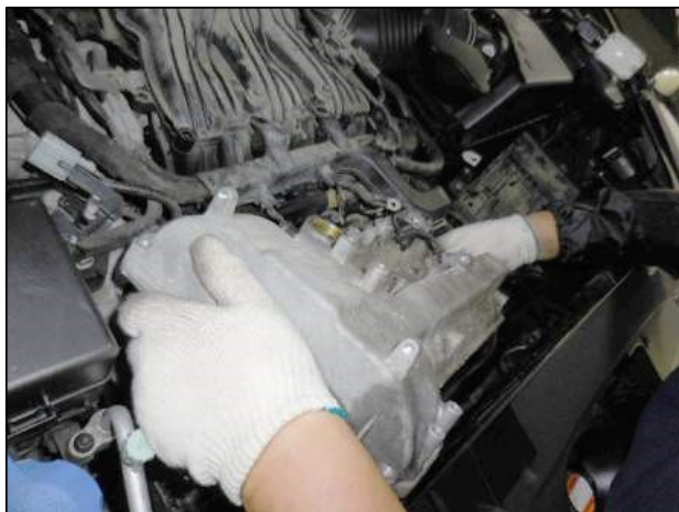
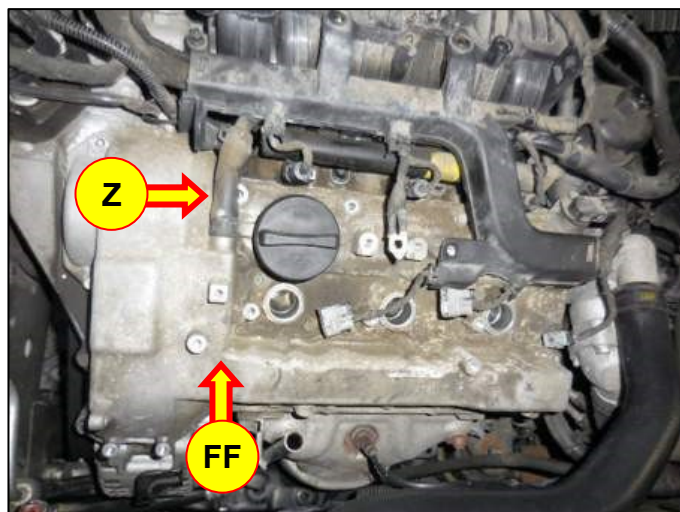
34. Remove the hose (Z).

Remove the bank 2 (LH) cylinder head cover (FF).

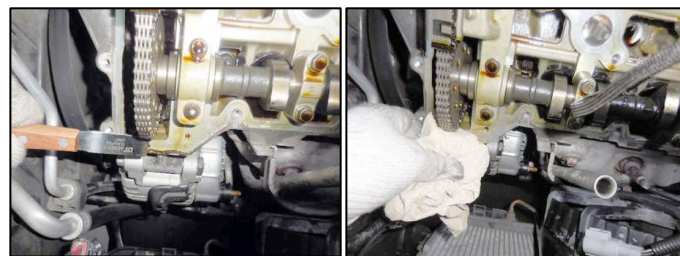
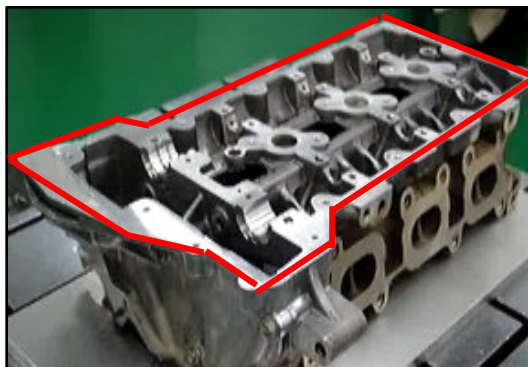
**Tightening torque specification:
8.0 lb-ft (96 lb-in, 10.8 Nm)**

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.

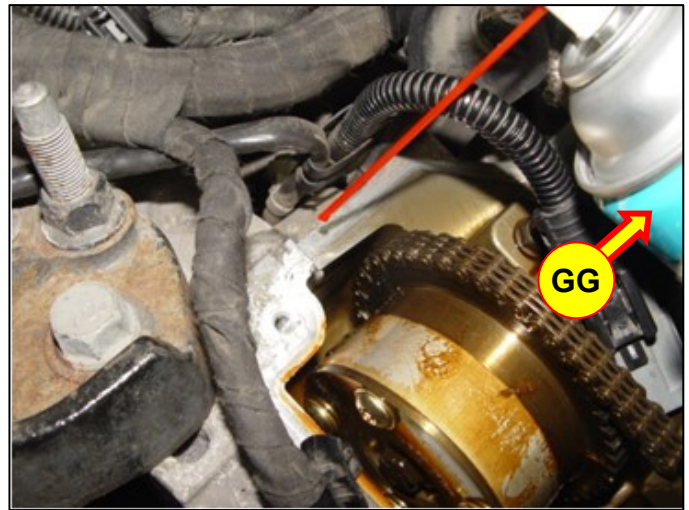


35. Clean the cylinder head and cover with a clean lint-free shop towel, referring to the picture of the cleaning area below (highlighted in red).

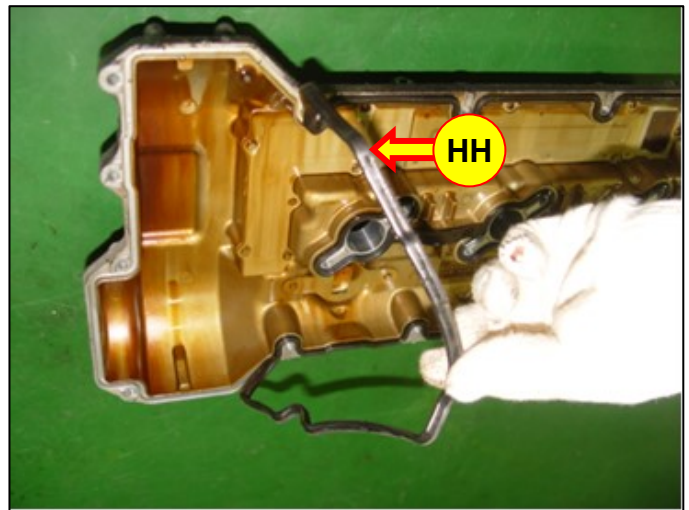
**NOTICE**

- **Be careful not to damage the surface of the cylinder head cover**

- 36. Using brake cleaner (GG), clean off any of the remaining dirt and oil from the cylinder head and cover and then wipe dry with a clean lint-free shop towel.



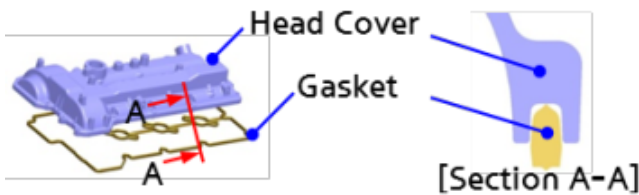
- 37. Remove the cylinder head cover gasket (HH).



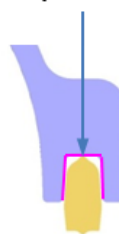
- 38. Install the new cylinder head cover gasket (II).

NOTICE

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



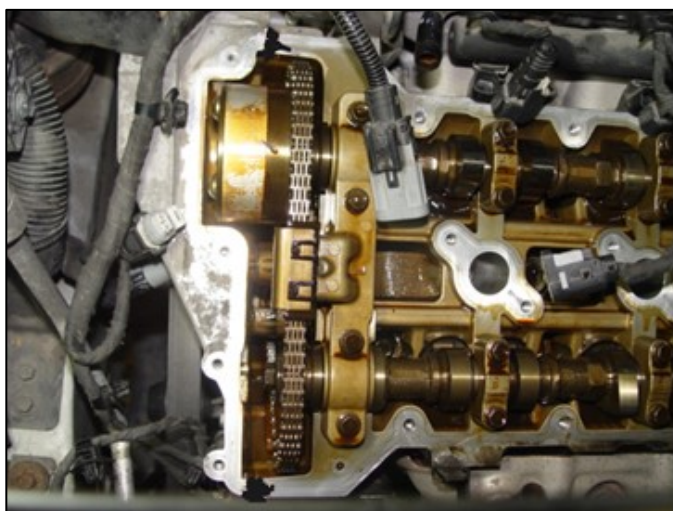
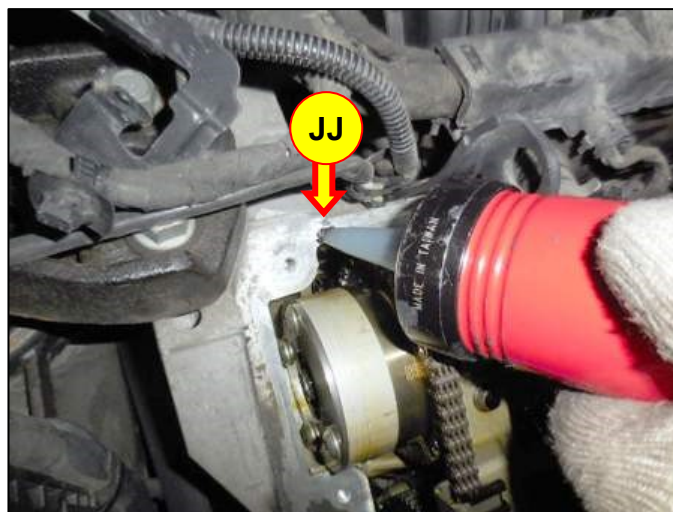
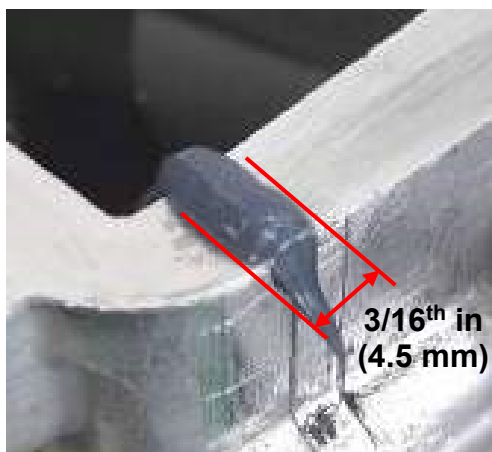
Gasket Installing Groove (Cleaning area)



39. Apply liquid RTV gasket onto the “T” joints (JJ), which are the mating points where the front timing chain cover and the cylinder head meet.

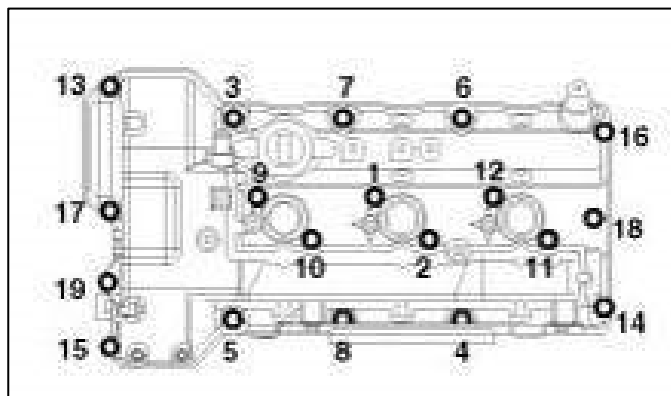
NOTICE

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



40. Carefully reinstall the cylinder head cover within 5 minutes before the liquid RTV gasket begins to harden.

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

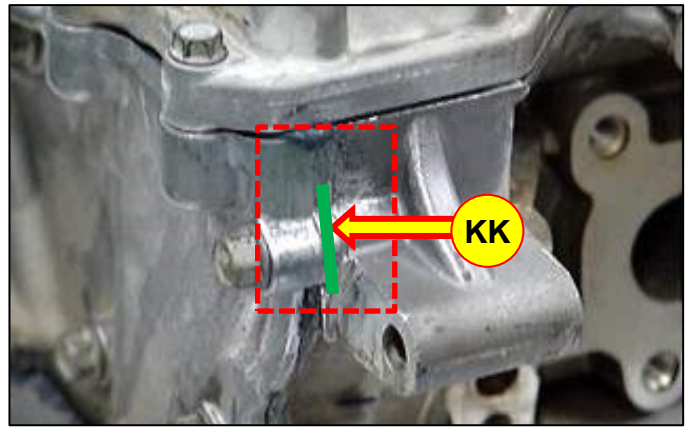
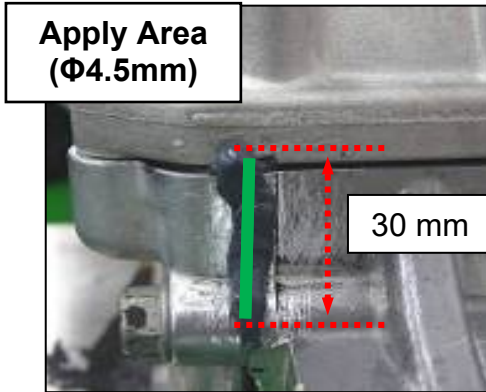


NOTICE

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

41. Apply liquid RTV gasket onto the outer surface of the “T” joints (KK) 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 RTV evenly as shown in the picture on the right.

42. Take photo of your work of applying RTV at the T-joint area as shown using GDS tablet STUI camera photo upload function. Save and submit to HMA.

Required STUI camera photo

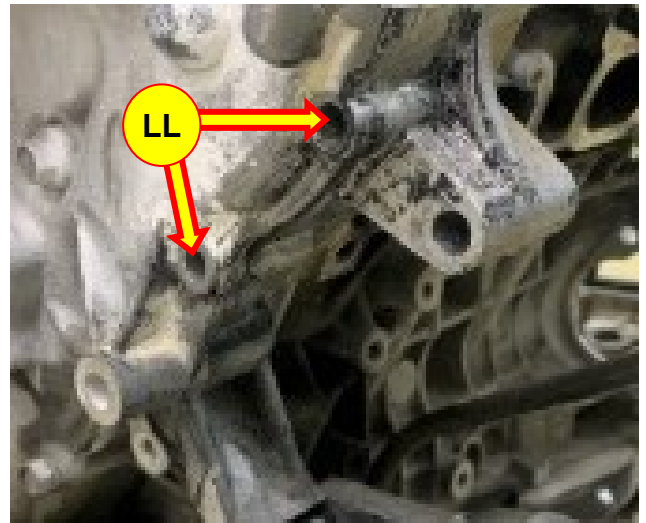


43. OIL PROTECTOR INSTALLATION:

Remove (2) chain cover bolts shown here (LL).

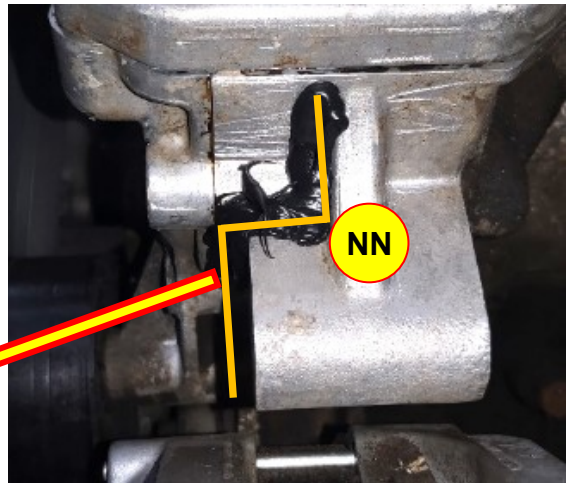
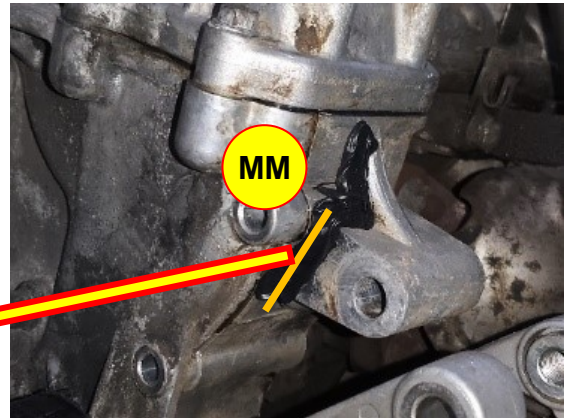
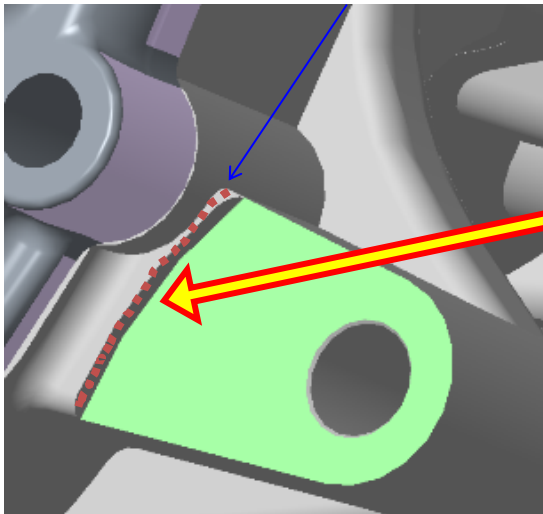
NOTICE

If oil seeps through bolt holes, clean thoroughly with brake cleaner.

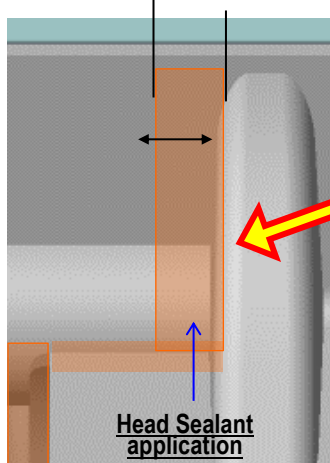


44. Apply RTV sealant onto (MM) and (NN) areas as shown in the photo.

Sealant application along machined edge.



Width: 6mm



- 45. Take photo of your work applying the RTV in this area as shown using GDS tablet STUI camera photo upload function. Save and submit to HMA.

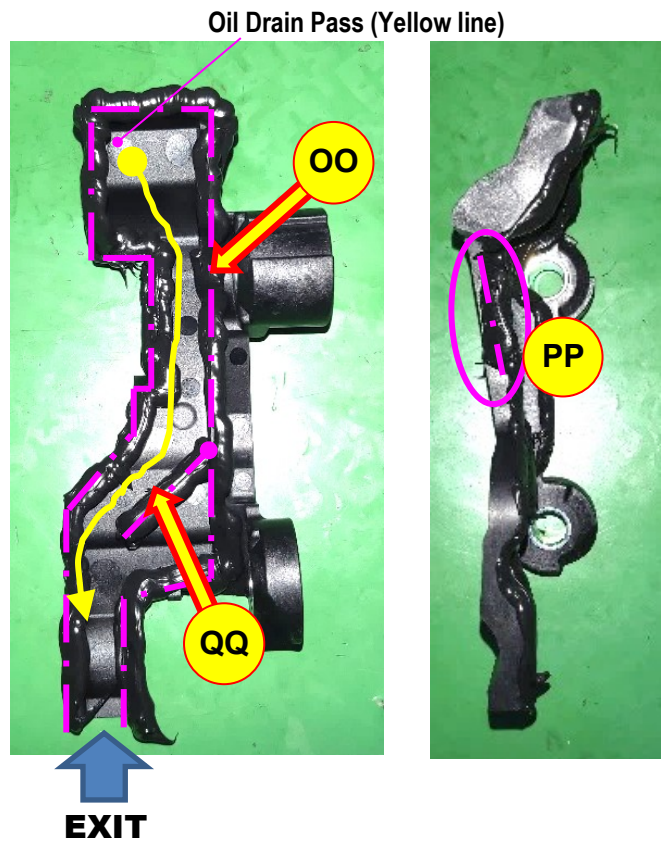
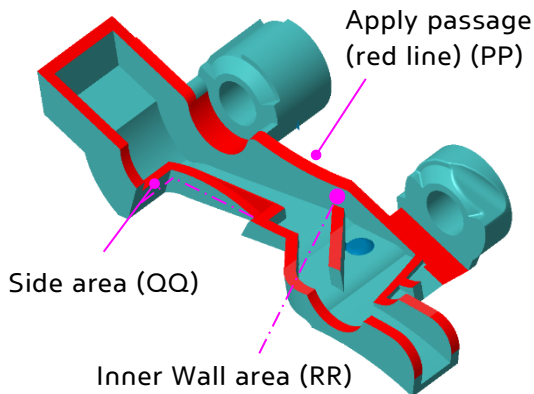
Required STUI camera photo



- 46. Apply Sealant onto the oil protector at the indicated areas pictured (OO, PP, QQ).

NOTICE

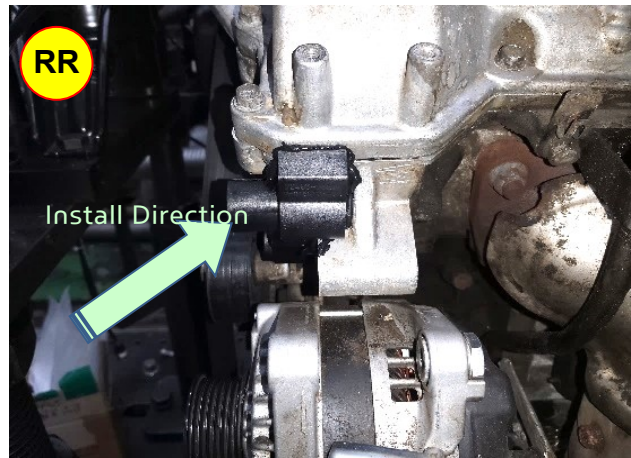
Be careful not to block the exit. If sealant falls inside the bottom of the oil protector, thoroughly remove sealant and reapply. (To prevent clogging of the oil drain passage)



47. Place oil protector in place.
- 1.) Install oil protector to the timing chain cover in the indicated angle pictured in (RR).
 - 2.) Be careful not to contact the surrounding parts.

NOTICE

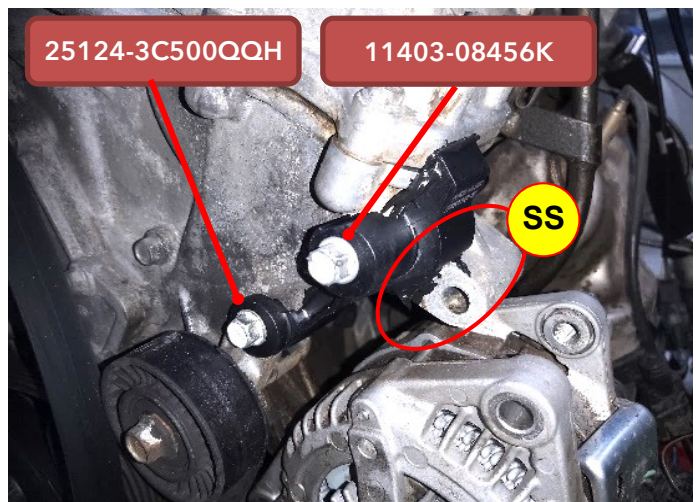
If the sealant is heavily smeared on the surrounding parts, remove the oil protector, thoroughly clean the sealant from surrounding areas and clean oil protector. Go back to step 44 and repeat.



48. Install provided kit bolts into oil protector.
- Bottom bolt: 25124-32C500QQH (M8X35mm)
 - Upper bolt : 11403-08456K (M8X45mm)
 - Check fitment of oil protector.
 - Firmly Press sealing surface by hand.
 - Keep it in loose contact with the engine.

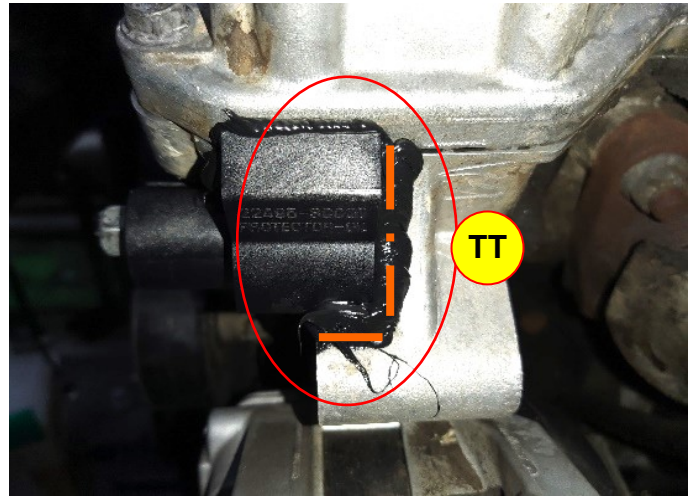
**Tightening torque specification:
15.0 lb-ft (20 Nm)**

NOTE: Do not use original 'chain cover' bolt.



49. Remove sealant from alternator mount (SS).

50. Apply the sealant to the (TT) area to seal oil protector to block.



51. 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.***
- ***Reprogram the radio presets recorded from Service Procedure Step 4.***

52. Once sealant has cured, verify installation.