

August 26, 2026

Version 1

Warranty Extension: 2016–17 Civic 1.5T (MT), 2017 Civic Si Cylinder Head Gasket (6 Month) - Expires May 31, 2027

APPLIES TO

Year	Model	Trim Level	VIN Range
2016–17	Civic 1.5L Turbo 6MT	ALL	Check iN VIN status for eligibility
2017	Civic Si	ALL	Check iN VIN status for eligibility

BACKGROUND

Under certain conditions, the cylinder head gasket effectiveness may be reduced which may cause vehicles to experience overheating, coolant loss, misfire, and/or DTCs P0300 thru P0304 stored.

American Honda is extending the warranty coverage on the cylinder head gasket, related to this condition, to **May 31, 2027 or 150,000 miles**, whichever comes first. Any repair orders issued after that date are no longer valid.

OWNER NOTIFICATION

Owners of affected vehicles will be sent a notification of this campaign.

Do an iN VIN status inquiry to make sure the vehicle is shown as eligible.

CORRECTIVE ACTION

Replace the cylinder head gasket if coolant is leaking into the combustion chamber. In addition, if cylinder head or engine block warpage is detected, replace the cylinder head and/or the engine short block as dictated by the inspection process.

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by “do-it-yourselfers,” and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

WARRANTY CLAIM INFORMATION

NOTE: Each warranty claim must include the following documentation from the Head Gasket Inspection Procedure, submitted in PDF format:

- ALL DTC Check printout from step 2.
- Borescope image from Step 9.3 with VIN, Repair Order Number, Date, and Engine Number.

Repair Procedure #1 – Head Gasket Only

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
1105E6	Inspect for coolant leaks. Remove cylinder head and check head and engine block for warpage. Replace head gasket (includes DTC clear)	11.5 hr	6A700	QPP00	A26097A	12251-59B-004

Repair Procedure #2 – Head Gasket and Cylinder Head Replacement

1105E7	Inspect for coolant leaks. Remove cylinder head and check head and engine block for warpage. Replace head gasket and cylinder head (includes DTC clear, completing Job Aid, and contacting the Repair Verification Team)	11.9 hr	6A700	QPP00	A26097B	12251-59B-004
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Repair Procedure #3 – Had Gasket and Short Block Replacement

1105E8	Inspect for coolant leaks. Remove cylinder head and check head and engine block for warpage. Replace head gasket and short block (includes DTC clear, completing Job Aid, contacting the Repair Verification Team, and align)	14.7 hr	6A700	QPP00	A26097C	12251-59B-004
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Repair Procedures #2 & #3 – Head Gasket, Cylinder Head and Short Block Replacement

1105E9	Inspect for coolant leaks. Remove cylinder head and check head and engine block for warpage. Replace head gasket, cylinder head and short block (includes DTC clear, completing Job Aid, contacting the Repair Verification Team, and align)	14.8 hr	6A700	QPP00	A26097D	12251-59B-004
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2016–2021 Civic 1.5 L Manual Transmission

Repair Procedure #1 – Head Gasket Replacement

Part Name	Part Number	Quantity
GASKET, CYLINDER HEAD (NIPPON LEAKLESS)	12251-59B-A01	1
GASKET, HEAD COVER (HEAD COVER GASKET)	12341-59B-013	1
FILTER, OIL	15400-RTA-003	1
FILTER ASSY., TURBOCHARGER OILFEED	15533-59B-003	1
OIL SEAL, CONTROL VALVE	15832-RAA-A01	1
PIPE SET, FUEL JOINT (MSDS)	16012-59B-315	1
GASKET, IN. MANIFOLD	17105-5AA-004	4
GASKET, TURBOCHARGER JOINT IN.	17285-5AA-A01	1
GASKET, TURBOCHARGER JOINT OUTLET	17286-5AA-A01	1
GASKET A, TURBOCHARGER	18233-59B-004	1
GASKET B, TURBOCHARGER	18234-59B-004	1
GASKET, EX. PIPE	18302-SP0-003	1
GASKET, DRAIN (DENSO)	19012-671-300	1
GASKET, THERMOSTAT CASE	19321-59B-004	1
GASKET, TURBOCHARGER PIPE	19524-59B-004	1
NUT, SELF-LOCK (10MM) (CATALYST)	90012-59B-004	4
BOLT, FLANGE (12X40) (SIDE MOUNT BOLT)	90162-T0A-A00	2
BOLT, FLANGE (14X64) (SIDE MOUNT)	90166-TBA-A00	2
NUT, SELF-LOCK (10MM) (EXHAUST)	90212-SA5-003	3
NUT, FLANGE (14MM) (SIDE MOUNT)	90371-SJD-003	1
OIL SEAL (43X58X7) (CRANK SEAL)	91212-59B-003	1
HPFP O-RING	91311-5R1-J01	1
O-RING (31.2X4.1) (NOK) (CONNECTING PIPE)	91314-PH7-003	2
WASHER, DRAIN PLUG	94109-14000	1

Repair Procedure #2 – Cylinder Head Replacement

THERMOSTAT SET	06193-59B-306	1
GENERAL ASSY., CYLINDER HEAD	10003-5AA-A00	1
OIL SEAL, CONTROL VALVE	15832-RAA-A01	1
CLIP, INJECTOR	16451-5R1-J01	4
SEAL SET, INJECTOR	16453-5R1-J00	1

Repair Procedure #3 – Short Block Replacement

NOTE: If the wrong short block is ordered the alternator may not fit.

GENERAL ASSY., CYLINDER BLOCK (2016 all and 2017 thru engine S/N 2072066)	10002-5AA-A01	1
GENERAL ASSY., CYLINDER BLOCK (2017-from engine S/N 2072067)	10002-5AA-A04	1
OIL SEAL, CONTROL VALVE	15832-RAA-A01	1
GASKET, EX, PIPE	18303-T2B-A01	1
O-RING, WATER PASSAGE (OIL)	19411-5AA-A01	1
SET-RING (28X2.0)	44319-S1A-E01	1
PLATE, CHANGE WIRE	54357-SF1-003	2
NUT, FLANGE (10MM) (SWAY BAR LINK)	90002-S10-000	2
BOLT, GEAR BOX MOUNTING	90108-TL1-G00	1
BOLT, FLANGE (14X100) (TORQUE MOUNT)	90161-T5A-000	1
BOLT, FLANGE (14X33) (TORQUE ROD)	90164-T6E-000	5
BOLT, FLANGE (12X50) (TRANSMISSION MOUNT)	90167-TBA-A00	2
BOLT, FLANGE (10X30) (SIDE MOUNT)	90171-TBA-A00	2
NUT, SELF-LOCK (10MM) (EXHAUST)	90212-SA5-003	3
NUT, SELF-LOCK (12MM) (KNUCKLE)	90215-SB0-003	6
NUT, SPINDLE (24MM)	90305-SD4-003	2
NUT, FLANGE (12MM) (TRANSMISSION NUT)	90371-TBA-A00	2
WASHER, SEALING (6MM)	90442-R7G-000	1
GASKET (10MM)	91306-59B-003	1
WASHER, DRAIN PLUG (18MM)	91333-PNC-006	1
O-RING, WATER PASSAGE (WATER)	94109-20000	1
WASHER, SEALING (28MM) (Only needed on vehicles with Honda accessory block heater)	90401-PR4-000	1

Repair Procedure #1 – Head Gasket Replacement

Part Name	Part Number	Quantity
GASKET, CYLINDER HEAD (NIPPON LEAKLESS)	12251-59B-A01	1
GASKET, HEAD COVER	12341-59B-013	1
FILTER, OIL (FRAM)	15400-PLM-A02	1
FILTER ASSY., TURBOCHARGER OILFEED	15533-59B-003	1
WASHER, SEALING (TURBO FEED LINE)	15535-6A0-A00	1
OIL SEAL, CONTROL VALVE	15832-RAA-A01	1
PIPE SET, FUEL JOINT (MSDS)	16012-5PA-315	1
GASKET, IN. MANIFOLD	17105-5AA-004	4
GASKET, TURBOCHARGER JOINT IN.	17285-5AA-A01	1
GASKET, TURBOCHARGER JOINT OUTLET	17286-5AA-A01	1
GASKET A, TURBOCHARGER	18233-59B-004	1
GASKET B, TURBOCHARGER	18234-59B-004	1
GASKET, EX. PIPE	18302-SP0-003	1
GASKET, DRAIN (DENSO)	19012-671-300	1
GASKET, THERMOSTAT CASE	19321-59B-004	1
NUT, SELF-LOCK (10MM) (CATALYST)	90012-59B-004	4
OIL SEAL (43X58X7) (CRANK SEAL)	91212-59B-003	1
NUT, SELF-LOCK (10MM) (EXHAUST)	90212-SA5-003	3
HPFP O-RING	91311-5A2-A01	1
O-RING (31.2X4.1) (NOK) (CONNECTING PIPE)	91314-PH7-003	2
WASHER, DRAIN PLUG	94109-14000	1

Repair Procedure #2 – Cylinder Head Replacement

THERMOSTAT SET	06193-59B-306	1
GENERAL ASSY., CYLINDER HEAD	10003-5PA-A00	1
OIL SEAL, CONTROL VALVE	15832-RAA-A01	1
CLIP, INJECTOR	16451-5R1-J01	4
SEAL SET, INJECTOR	16453-5R1-J00	1

Repair Procedure #3 – Short Block Replacement

GENERAL ASSY., CYLINDER BLOCK	10002-5AM-A04	1
GASKET, EX. PIPE	18303-T2B-A01	1
O-RING, WATER PASSAGE (OIL)	19411-5AA-A01	1
SET-RING (28X2.2)	44319-S1A-E01	1
PLATE, CHANGE WIRE	54357-SF1-003	2
NUT, FLANGE (10MM) (SWAY BAR LINK)	90002-S10-000	2
BOLT, FLANGE (12X35) (TORQUE MOUNT)	90161-T5A-000	1
BOLT, FLANGE (12X40) (SIDE MOUNT BOLT)	90162-T0A-A00	2
BOLT, FLANGE (14X33) (TORQUE ROD)	90164-T6E-000	5
BOLT, FLANGE (14X64) (SIDE MOUNT)	90166-TBA-A00	2
BOLT, FLANGE (12X50) (TRANSMISSION MOUNT)	90167-TBA-A00	2
BOLT, FLANGE (10X30) (SIDE MOUNT)	90171-TBA-A00	2
NUT, SELF-LOCK (10MM) (EXHAUST)	90212-SA5-003	3
NUT, SELF-LOCK (12MM) (KNUCKLE)	90215-SB0-003	6
NUT, SPINDLE	90305-SD4-003	2
NUT, FLANGE (14MM) (SIDE MOUNT)	90371-SJD-003	1
NUT, FLANGE (12MM) (TRANSMISSION NUT)	90371-TBA-A00	2
WASHER, SEALING (6MM)	90442-R7G-000	1
O-RING, WATER PASSAGE (WATER) (ARAI)	91306-59B-003	1
CKP SENSOR O-RING	91333-PNC-006	1
WASHER, DRAIN PLUG (20MM)	94109-20000	1

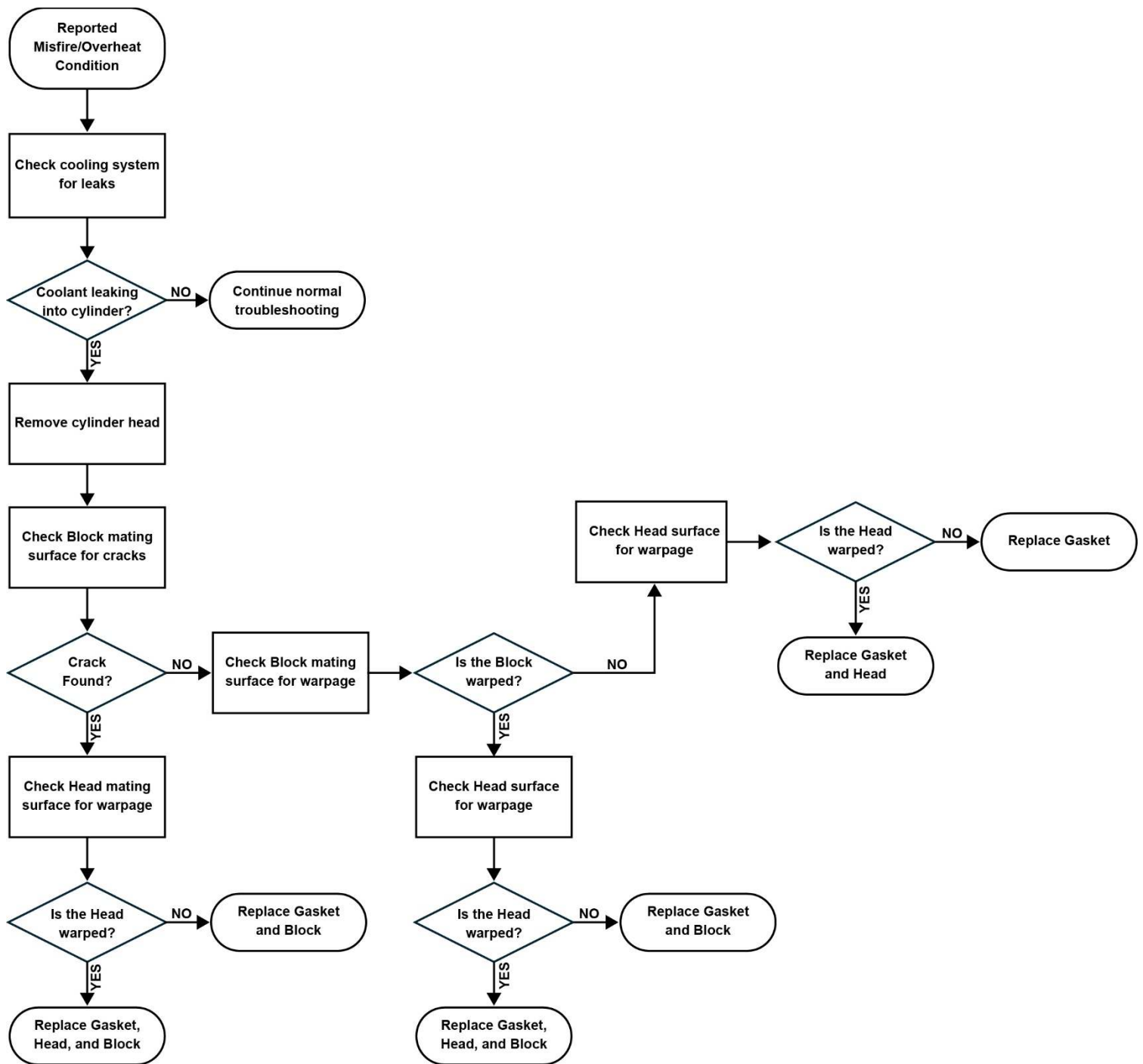
REQUIRED MATERIALS

Part Name	Part Number	Quantity
Hondabond HT	08718-0004	1
Brake Cleaner (Restricted for CA, CO, CT, DE, MD, NH, NY, RI, UT, and NJ)	08700-9200	1
Brake Cleaner 10% VOC	08700-9222	1
Brake Cleaner SCAQMD Compliant	08700-SBPCA	1
Long Life Antifreeze/Coolant Type 2	08CLA-P99-0F0A8	2
Honda Manual Transmission Fluid	08798-9031	2
Honda 0W-20 Motor Oil	08798-9163	3.7 US qt. (4.2 US qt. with short block replacement)
Red Scotch-Brite® or equivalent	Commercially available	1

TOOL INFORMATION

Tool Name	Part Number	Quantity
Cooling System Pressure Tester	SVTS272A	1
Snap-on 5.5 mm Borescope	BK5700	1
Universal Lift Eyelet *	07AAK-SNAA600	1
Support Eyelet *	07AAK-SNAA120	2
Spacer 4X.375 *	07AAB-59BA110	2
Bolt M10x1.25 – 30MM (10.9) *		1
Bolt M10x1.25 – 20MM (10.9) *		1
Bolt M8x1.25 – 30MM (10.9) *		1
Bolt M8x1.25 – 20MM (10.9) *		1
Engine Support Hanger Tool	AART1256	1
Straight Edge 18" *	07AAJ-59BA110	1
Feeler Gauge *	07AAJ-59BA120	1
Torque Angle Gauge	TA360 or Commercially Available	1
Clutch Alignment Tool	07ZAF-PR8A100	1
Remover Handle	07936-3710100	1
Ring Gear Holder	07LAB-PV00100	1
Ring Gear Holder Set	070AB-5S1A100	1

* Delivered to all dealers in the Warpage Inspection Kit 07AAJ-59BA100



INSPECTION PROCEDURE

1. Begin the inspection when the engine is cold.
2. Run the ALL DTC Check with i-HDS and document all stored PGM-FI DTCs.

NOTE: Print the ALL DTC check results in PDF format to submit with the warranty claim. Claims submitted without the ALL DTC attachment will be denied.

3. Remove the radiator cap, top off the coolant if low, then install a cooling system pressure tester.
4. Buckle the driver's seat belt.
5. With the cooling system pressure tester installed and the climate control OFF, start the engine and let it run until it reaches normal operating temperature (indicated by the cooling fan cycling on or when ECT1 reaches **194°F [90°C]**).
6. Turn the engine OFF once it reaches normal operating temperature.
7. Check the cooling system pressure. If the pressure is below **18 psi**, use the pressure tester to bring the cooling system pressure to **18 psi**.

NOTE: The cooling system pressure could be higher than **18 psi** when vehicle reaches normal operating temperature, which is acceptable.

8. Remove all 4 spark plugs.

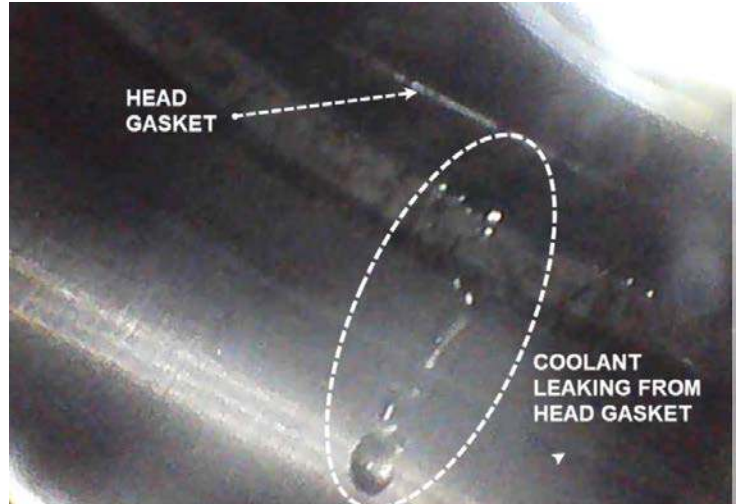
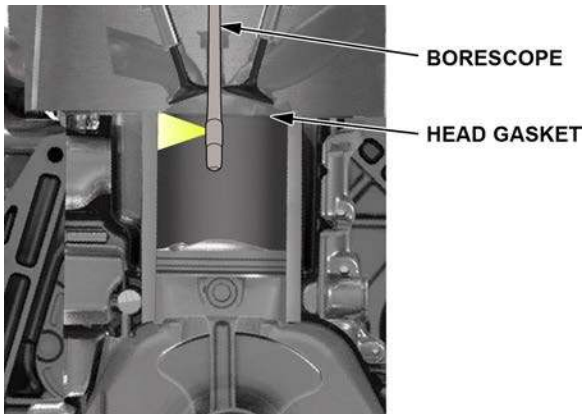
9. Use the Snap-on BK5700 Borescope to inspect all cylinders for coolant entering at the head gasket.

Click here to view the video of coolant leak in cylinder:

▶ PLAY VIDEO

9.1 Write the VIN, repair order number, and current date on a yellow sticky note.

9.2 Insert the borescope through the spark plug hole to inspect for coolant entering the cylinders. Using the **90°** camera to capture a side view, focus on the area where the cylinder head meets the block and scan completely **360°** around the cylinder.



9.3 If coolant is observed, place the yellow sticky note to the side of the borescope screen. Then, take a picture of the borescope showing the yellow sticky note, the image of the leak in the cylinder, and the engine number.

NOTE:

- This image needs to be submitted with the warranty claim. Claims submitted without this image will be denied.
- The image must be saved in PDF format.



ENGINE NUMBER

9.4 Repeat for all cylinders.

Is coolant leaking into the cylinders?

YES – Reinstall the spark plugs and ignition coils, then proceed to DETERMINING NECESSARY REPAIRS on the next page.

NO – This bulletin **does not** apply. Continue with normal troubleshooting.

DETERMINING NECESSARY REPAIRS

1. Remove the cylinder head:

1.1 Do Removal steps 1-9, [Cylinder Head Removal and Installation \(1.5L Engine\)](#).

NOTE: **Do not** do step 10, *Remove VTC Oil Control Solenoid Valve B* at this time.

1.2 Do Removal steps 11-12.

NOTE: **Do not** do step 13, *Remove Injectors* at this time.

1.3 Do Removal steps 14-16.

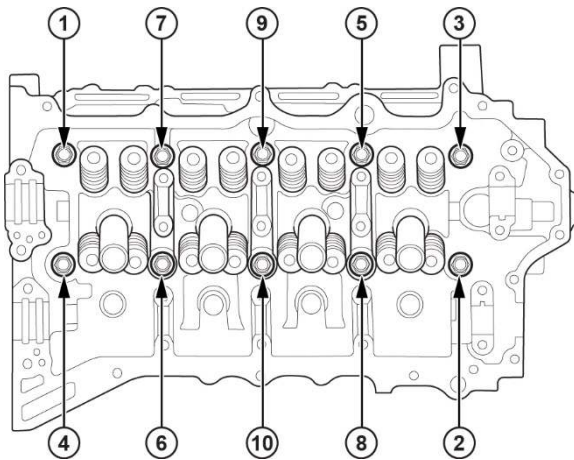
NOTE: **Do not** do step 17, *Remove CMP Sensor A/B* at this time.

1.4 Do Removal steps 18-20.

NOTE:

- **Do not** do step 21, *Remove Camshaft*.
- **Do not** do step 22, *Remove Rocker Arm Assembly*.

1.5 Remove the cylinder head bolts. To prevent warpage, loosen the bolts in sequence, **1/3 turn** at a time. Repeat the sequence until all bolts are loosened.



1.6 Remove the cylinder head.

1.7 Remove all gasket material and carbon from the head gasket mating surface on the engine block with brake cleaner and a clean shop towel.

NOTE:

- Place a clean shop towel in each cylinder to collect and remove any debris that falls into the cylinders.
- If necessary, use red Scotch-Brite® **by hand** to remove any gasket material or residue that remains on the mating surface, then clean again with brake cleaner.
- **Do not** use power tools which can damage the cylinder head and block.

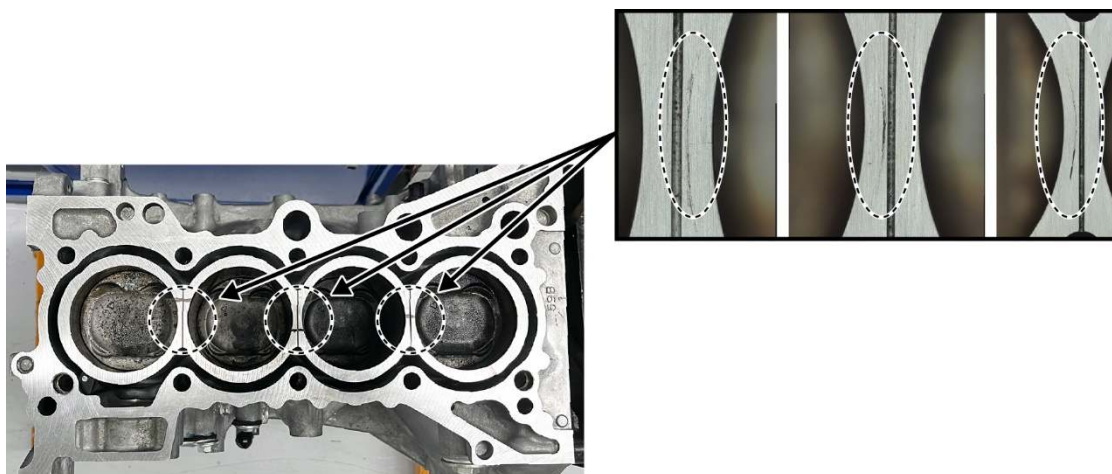
1.8 Remove all gasket material and carbon from the head gasket mating surface on the cylinder head with brake cleaner and a clean shop towel.

NOTE:

- If necessary, use red Scotch-Brite® **by hand** to remove any gasket material or residue that remains on the mating surfaces, then clean again with brake cleaner.
- **Do not** use power tools which can damage the cylinder head and block.

2. Visually inspect the engine block for cracks around the cylinders.

Examples of cracks:



3. Follow the instructions in Job Aid [AJA31119 Inspecting Cylinder Head and Engine Block for Warpage](#) to check the cylinder head and engine block mating surfaces for warpage. Contact the Repair Verification Team for approval if either component is outside of specifications.

IMPORTANT: Replacement of the cylinder head or short block **requires prior approval** from the Repair Validation Team as outlined in Job Aid AJA31119. Warranty claims that include cylinder head or short block replacement which have not received approval from the Repair Verification Team will be denied.

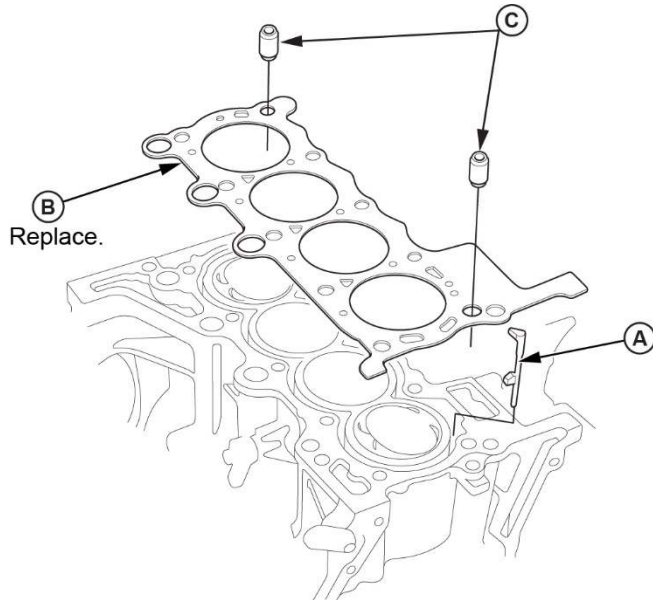
4. Determine the repair direction:

Is the cylinder head warped?	Is the engine block warped?	Repair action
No	No	Repair Procedure #1 -Replace the cylinder head gasket
Yes	No	Repair Procedure #2 - Replace the cylinder head
No	Yes	Repair Procedure #3 - Replace the short block
Yes	Yes	Repair Procedure #3, then Repair Procedure #2 - Replace the short block and the cylinder head

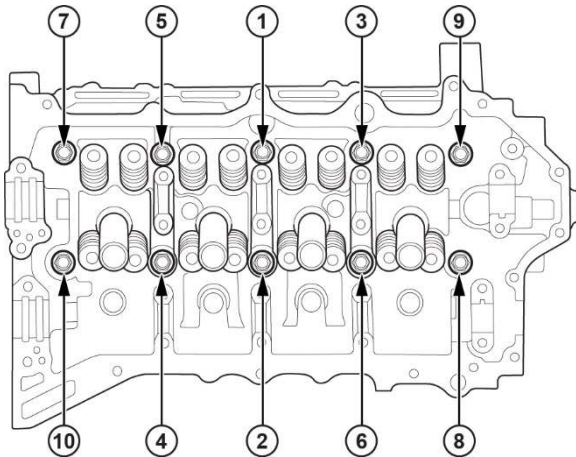
Repair Procedure #1 - Head Gasket Only

1. Install the cylinder head with a new head gasket:

- 1.1 If the engine block was replaced, install a new coolant separator (A) in the engine block if the new block did not come with one.
- 1.2 Install the new cylinder head gasket (B) and the dowel pins (C) on the engine block. Always use a new cylinder head gasket.



- 1.3 Install the cylinder head on the engine block.
- 1.4 Visually inspect the cylinder head bolts for damage. If damage is found, replace all head bolts.
- 1.5 Apply new engine oil to the threads and under the bolt heads of all cylinder head bolts.
- 1.6 Torque the cylinder head bolts in sequence to **30 N·m (22 lb-ft)** with a beam-type torque wrench if possible. When using a click-type torque wrench, be sure to tighten slowly and do not overtighten. If a bolt makes any noise while torquing, loosen the bolt and go back to step 1.4.



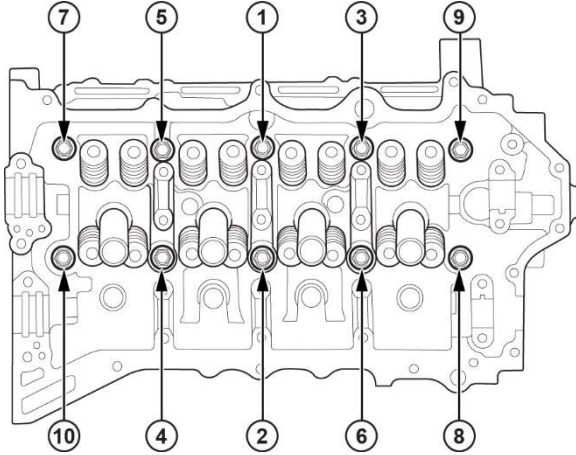
- 1.7 **IMPORTANT:** Once all cylinder head bolts have been initially torqued, and before beginning the angle torque process, repeat the torque process in sequence to ensure all cylinder head bolts are at **30 N·m (22 lb-ft)**.

1.8 After setting the initial head bolt torque, use a torque angle gauge to tighten all the cylinder head bolts to specification following the torque sequence:

- When **new** cylinder head bolts are installed – torque an additional **165°**.
- When the cylinder head bolts are **reused** – torque an additional **140°**.

NOTE:

- Tighten the cylinder head bolts to the specified angle using a commercially available angle gauge.
- If the head bolt is tightened beyond the specified angle, remove the head bolt and go back to step 1.5 of the procedure. **Do not** loosen it back to the specified angle.



2. Continue the cylinder head installation, see Installation steps 2-28 – [Cylinder Head Removal and Installation \(1.5L Engine\)](#).

During installation, once the side engine mount has been installed, do the [Engine Mount Tightening Procedure \(1.5L Engine\)](#).

3. Drain the engine oil.
4. Refill the transmission fluid (if it was drained during the short block replacement).
5. Install a new oil filter and fill the engine with the recommended engine oil.

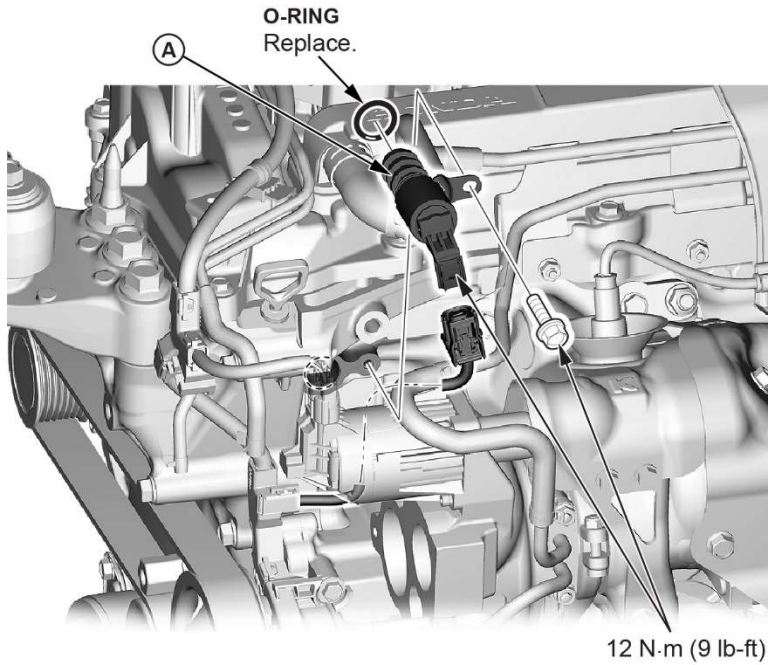
Including oil filter: 3.5 L (3.7 US qt)

After engine replacement: 4.0 L (4.2 US qt)

6. Do the [PCM Reset](#).
7. Do the [CKP Pattern Clear/CKP Pattern Learn Procedure](#).
8. Do the [PCM Idle Learn Procedure](#).
9. Reset the Maintenance Minder for engine oil, coolant and, if applicable, transmission fluid, [Maintenance Minder General Information](#).
10. Do an alignment (Only if the short block has been replaced).

Repair Procedure #2 - Cylinder Head Replacement

1. Swap the following parts from the old cylinder head to the new cylinder head:
 - 1.1 VTC Oil Control Solenoid Valve B (A), use a new O-ring and torque to **12 N·m (9 lb-ft)**.

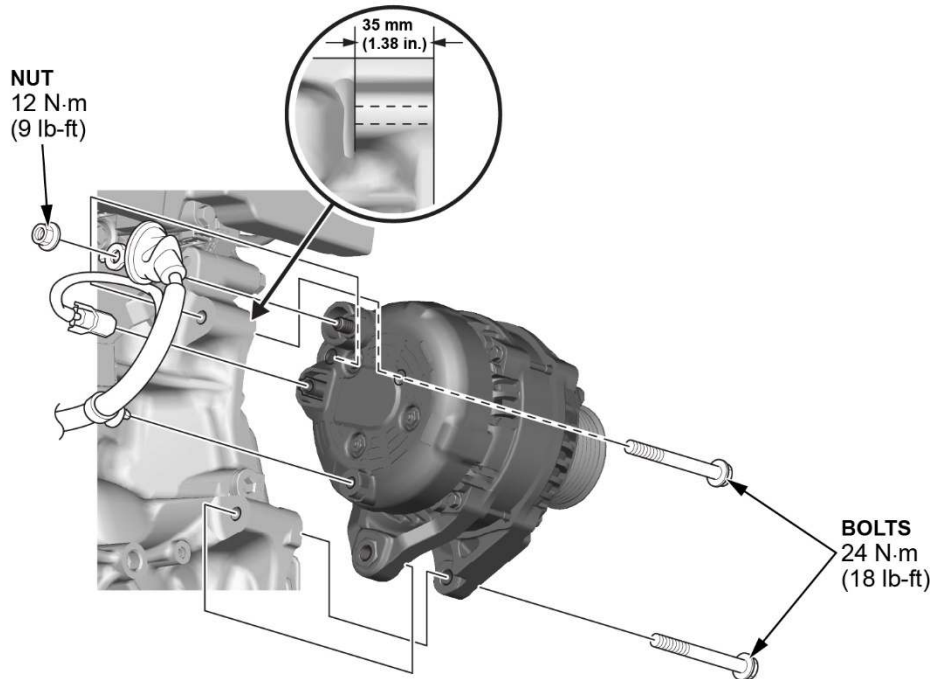


- 1.2 Swap the fuel rail and injectors using new injector clips, O-rings, and back-up rings.
Do Removal steps 9 & 10, then do Installation steps 1 & 2 – [Injector Removal and Installation \(1.5L Engine\)](#).
2. Go to **Repair Procedure #1 – Head Gasket Only**, to install the cylinder head and complete the repair.

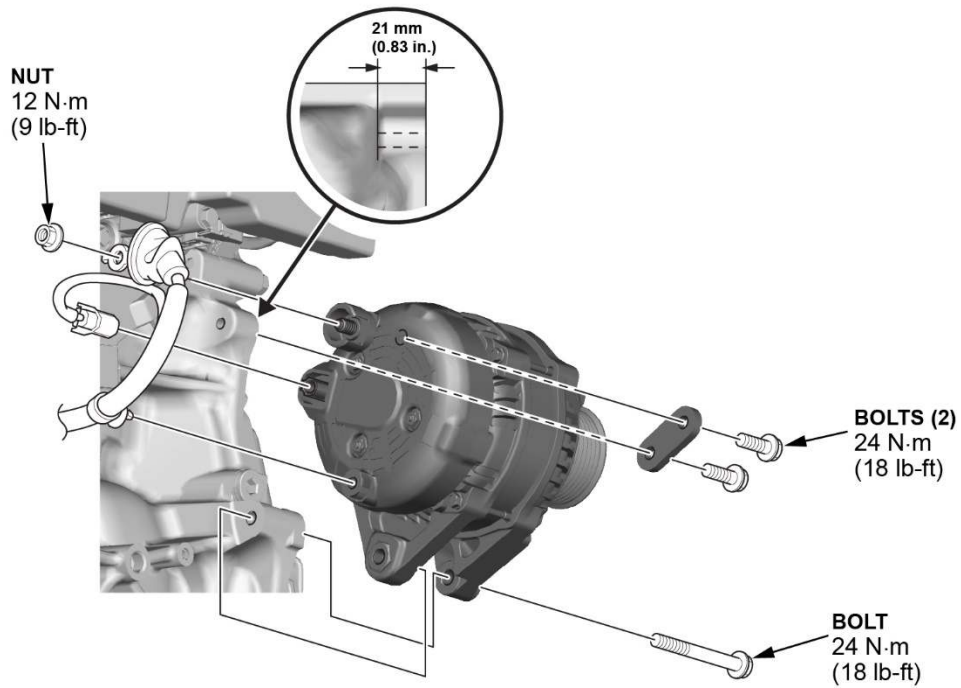
Repair Procedure #3 - Short Block Replacement

1. With the floor jack still supporting the engine, remove the alternator.

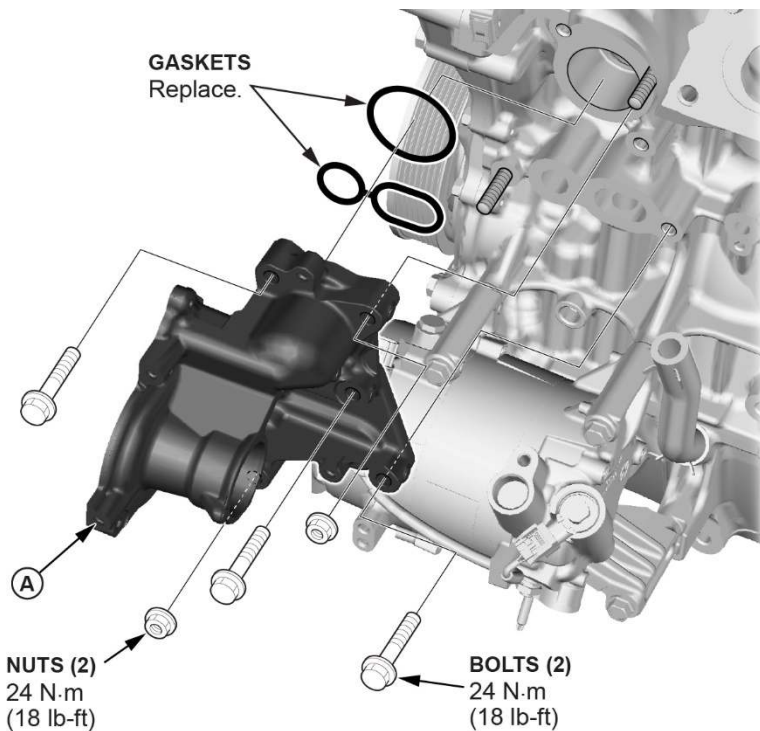
WITHOUT ALTERNATOR BRACKET



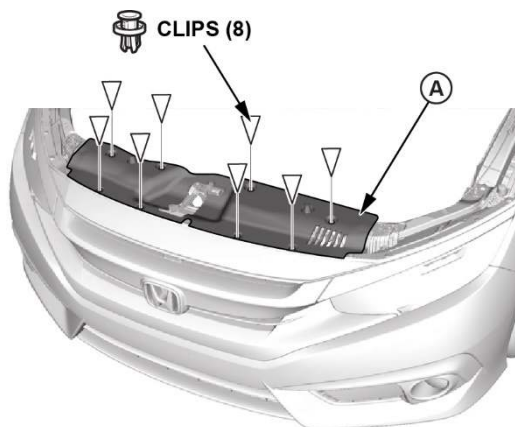
WITH ALTERNATOR BRACKET



2. Leaving the water pump attached, remove the water passage housing (A) and water pump as an assembly.

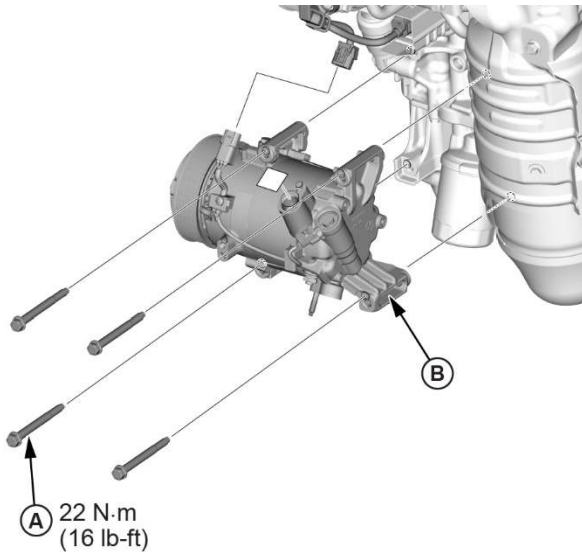


3. Remove the front grille cover (A).

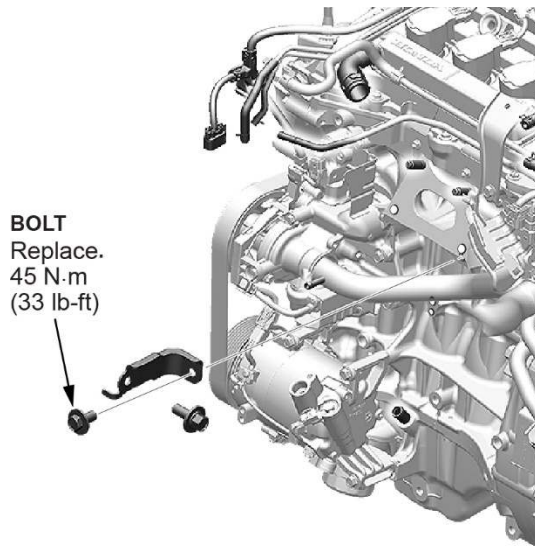


4. Disconnect the wiring connector to the A/C compressor.
5. Leaving the A/C hoses attached to the A/C compressor, remove the 4 mounting bolts (A) securing the A/C compressor (B) to the engine block, then shift it toward the radiator fan and secure it with a strap to the front bulkhead area.

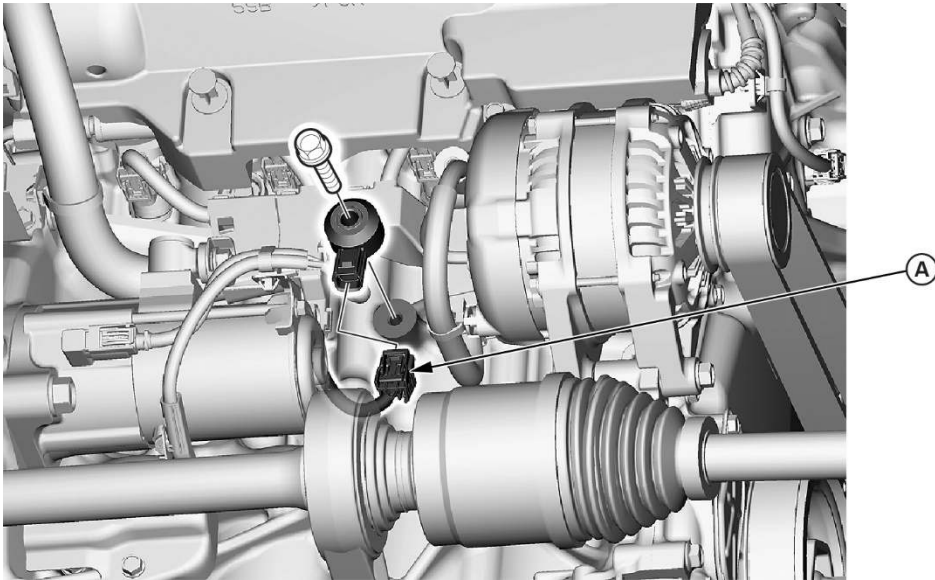
NOTE: **Do not** disconnect the A/C hoses.



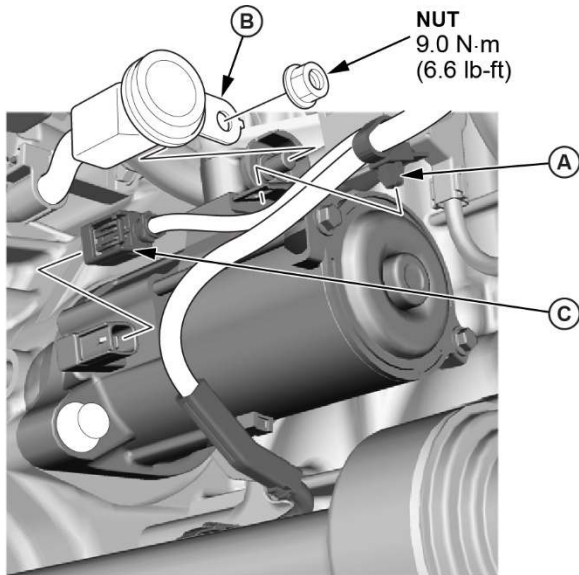
6. Remove the turbocharger support bracket.



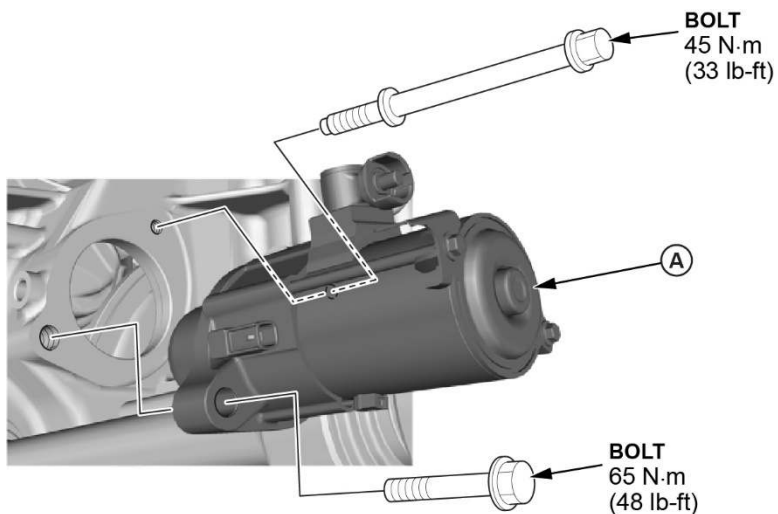
7. Disconnect the knock sensor connector (A).



8. Remove the harness clamp (A), then disconnect the positive starter cable (B) and connector (C).

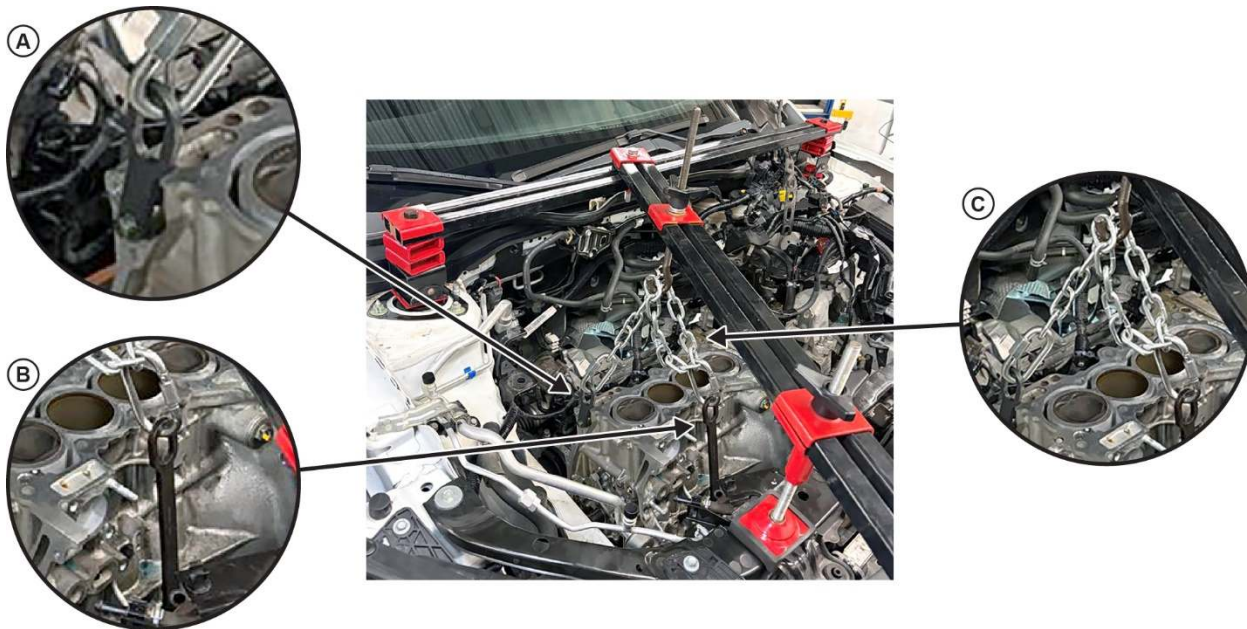


9. Remove the starter (A).



10. Install the lifting eyelets and engine support hanger to support the engine.

- 10.1 Install the lifting eyelet special tool (T/N 07AAK-SNAA120) (A) to the timing chain cover upper rear bolt location using a **20 mm** bolt from the kit, then tighten until the lifting eyelet is snug to the block.
- 10.2 Install the long support eyelet special tool (T/N 07AAK-SNAA600) (B) to the Three Way Catalytic Converter bracket mounting hole in the block using the **20 mm** bolt from the kit, then tighten until the lifting eyelet is snug to the block.
- 10.3 Position the engine hanger tool (T/N AART1256) as shown, then attach a chain to the support eyelets (C) and tighten to support the weight of the engine.



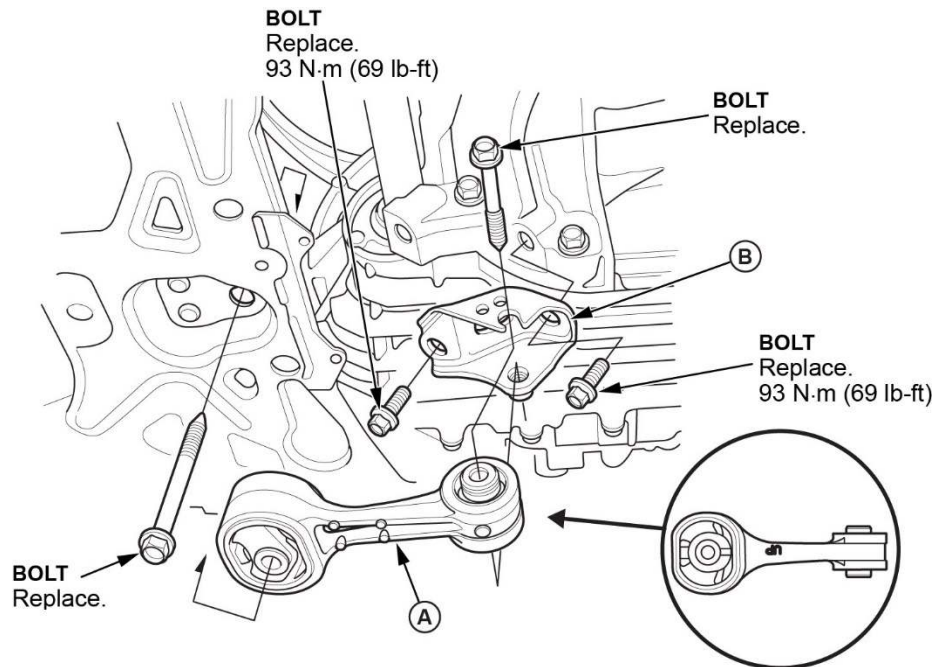
11 Remove the floor jack, then raise the vehicle.

12 Drain the transmission fluid.

13 Remove the lower torque rod (A), then remove the torque rod bracket. (B).

NOTE:

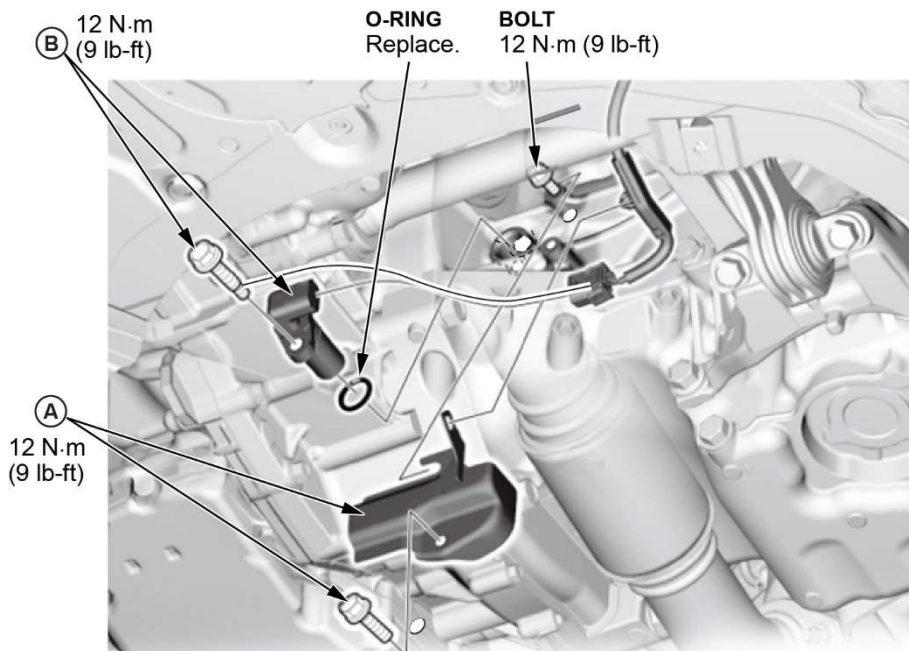
- Use new bolts during installation.
- When installing the torque rod, make sure to install it with the “UP” mark facing up.
- Tighten torque rod mounting bolts until snug but do not final torque at this time. During the cylinder head installation do the [Engine Mount Tightening Procedure](#).



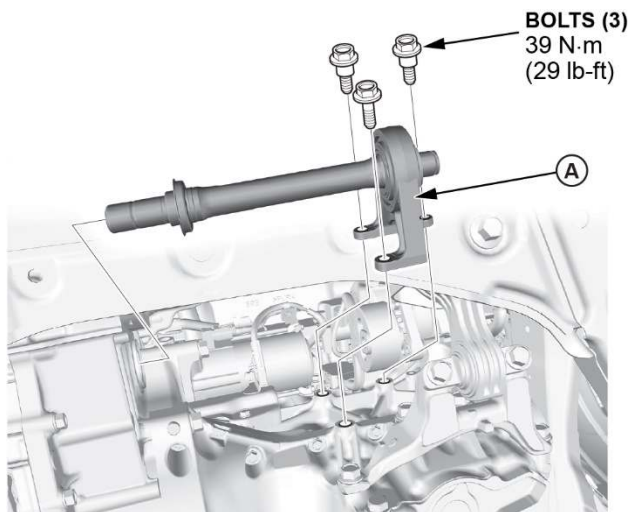
14 Remove the exhaust pipe A, [Exhaust Pipe and Muffler Removal and Installation \(1.5L Engine\)](#).

NOTE: Rotate for clearance.

15 Remove the CKP sensor cover (A), then disconnect the CKP sensor (B).

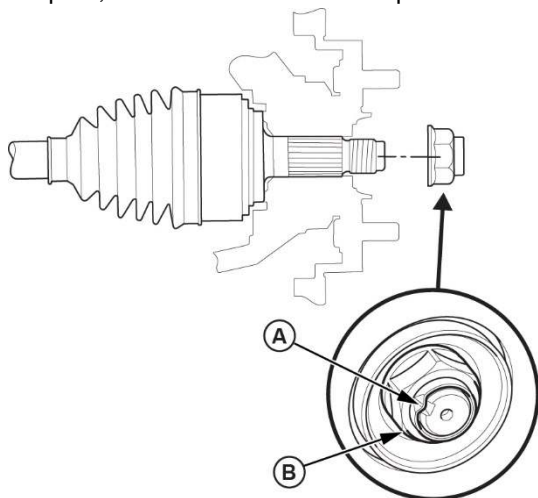


- 16 Remove the 3 bolts mounting the intermediate shaft bracket (A) to the engine block.



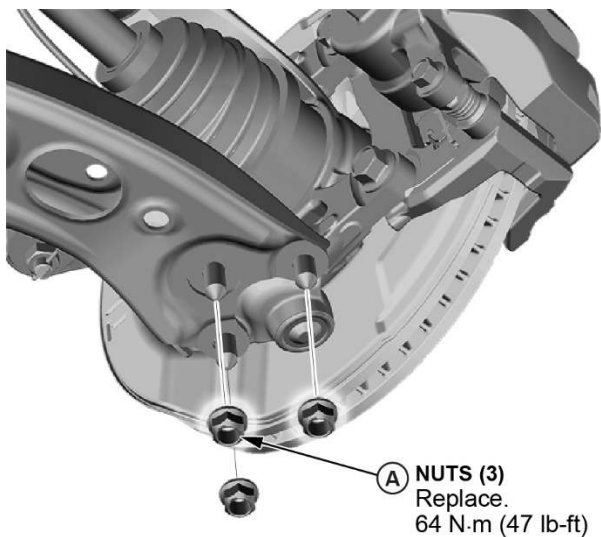
- 17 Remove the **right** front spindle nut. Pry up the stake (A), then remove the spindle nut (B).

During installation, install a new spindle nut and apply oil to the threads, then torque to **328 N·m (242 lb-ft)**. Once torqued, use a drift to stake the spindle nut shoulder (A) to the driveshaft.

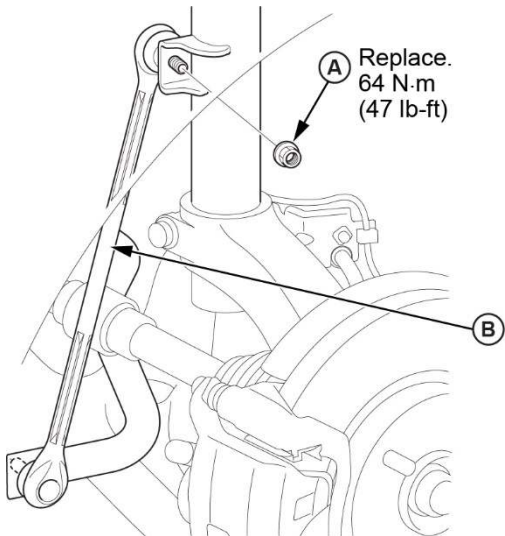


- 18 Remove the 3 nuts (A) mounting the right lower control arm to the ball joint. (Repeat for the left side)

During installation, use new nuts and torque to **64 N·m (47 lb-ft)**.



- 19 Remove the sway bar link upper flange nut (A) securing the right sway bar link (B), then move the link free from the bracket.



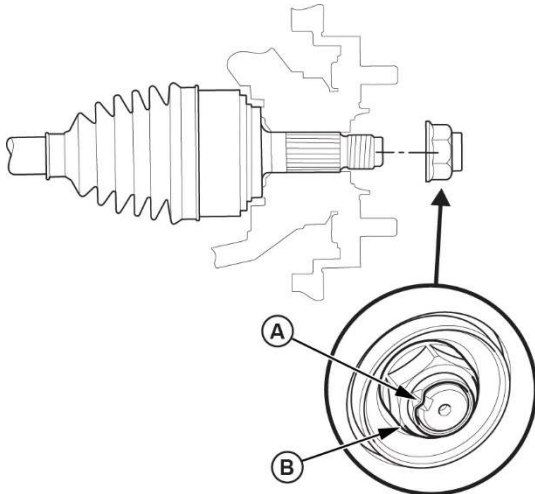
Left side shown for reference.

- 20 Remove the right driveshaft and intermediate shaft as an assembly.

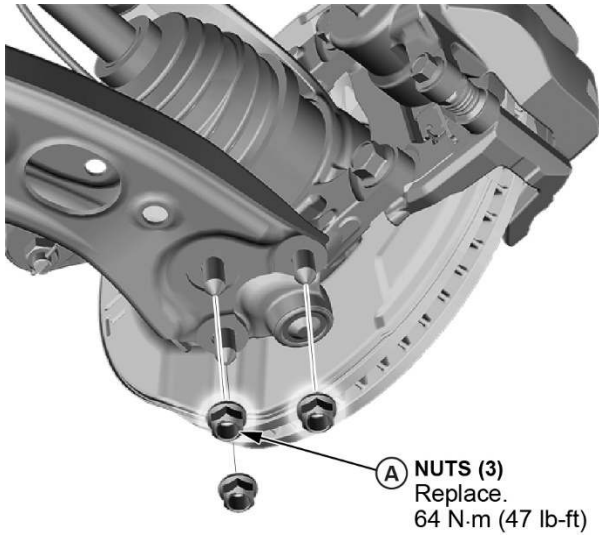


- 21 Remove the **left** front spindle nut. Pry up the stake (A), then remove the spindle nut (B).

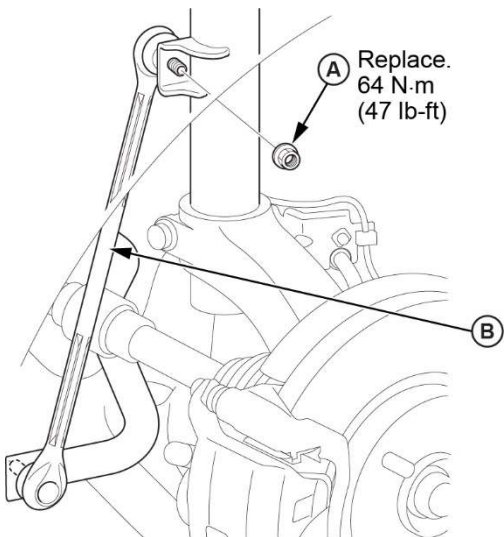
During installation, install a new spindle nut and apply oil to the threads, then torque to **328 N·m (242 lb-ft)**. Once torqued, use a drift to stake the spindle nut shoulder (A) to the driveshaft.



- 22 Remove the 3 nuts (A) mounting the left lower control arm to the ball joint.
During installation, use new nuts and torque to **64 N·m (47 lb-ft)** in the sequence shown.



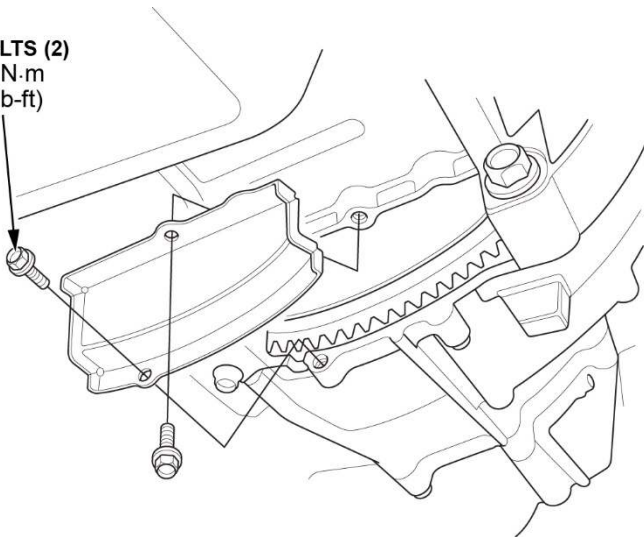
- 23 Remove the sway bar link upper flange nut (A) securing the left sway bar link (B), then move the link free from the bracket.



- 24 Remove the left driveshaft.

25 Remove the clutch cover.

BOLTS (2)
12 N.m
(9 lb-ft)

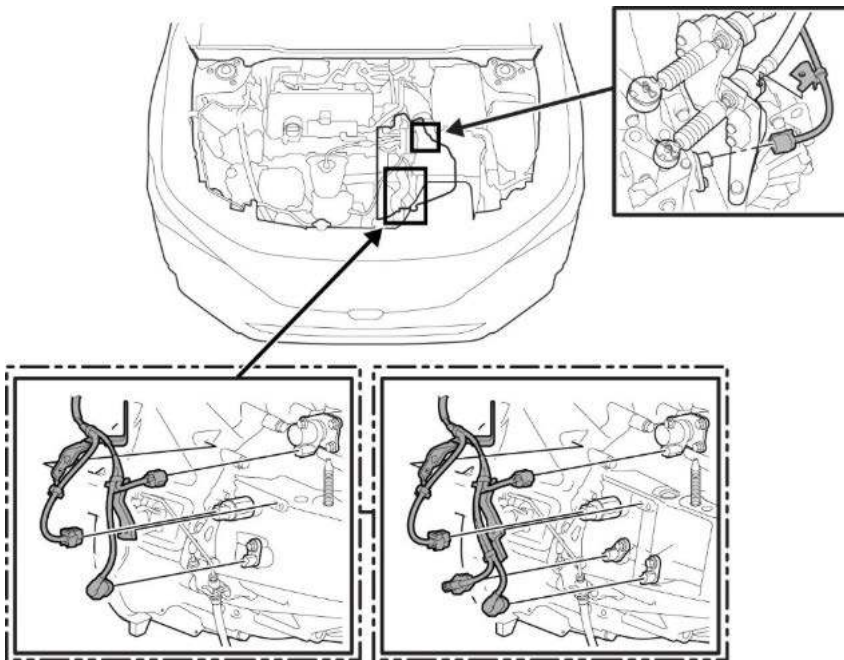


26 Remove the 3 lower transmission mounting bolts.

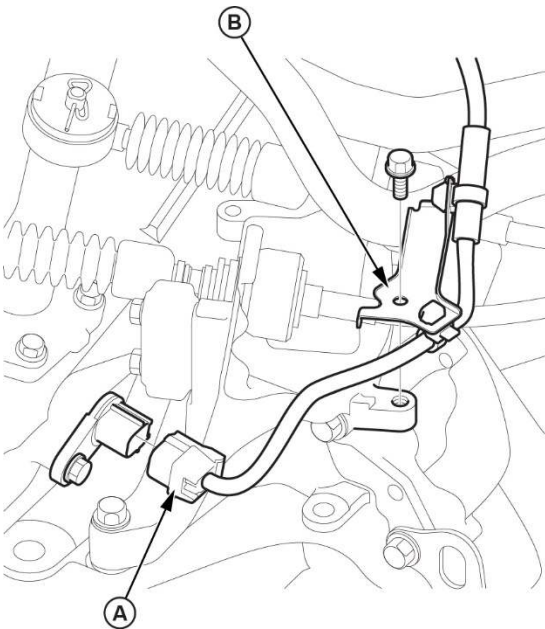


27 Lower the vehicle and use a floor jack to support the engine.

28. Disconnect from sensors



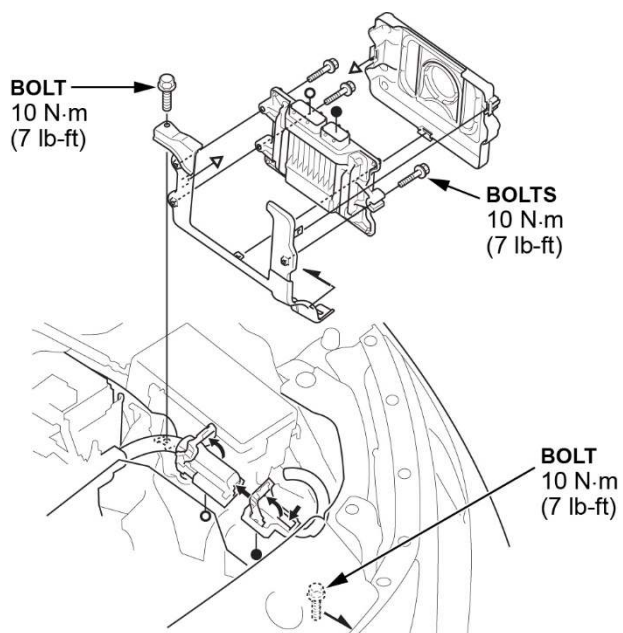
29. Disconnect the connector (A) from the neutral position sensor, then remove the harness bracket (B).



30. Disconnect the engine wiring harness connectors (A), unbolt the ground cables (B), then remove the harness covers (C) and unbolt the engine wire harness bracket (D).

31. Lift the engine wiring harness and set off to the transmission side of the engine compartment.

32. Remove the PCM, see [PCM Removal and Installation](#).



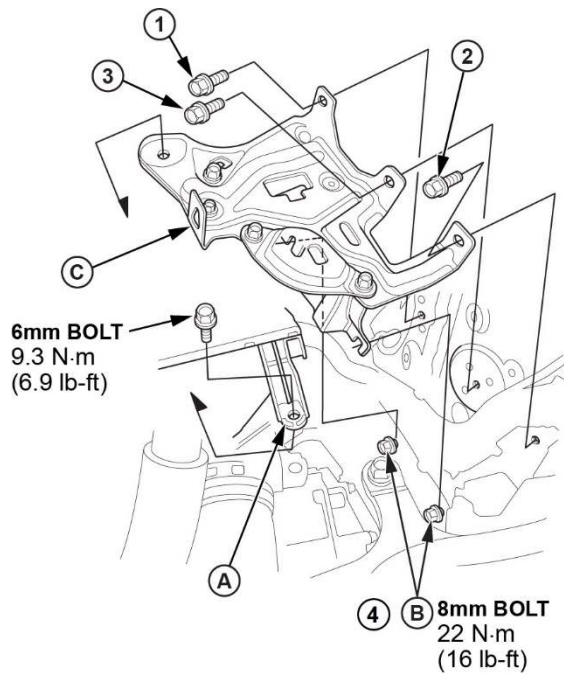
33. Remove the 12-volt battery base.

33.1 Remove the harness holder (A).

33.2 Loosen the bolts (B).

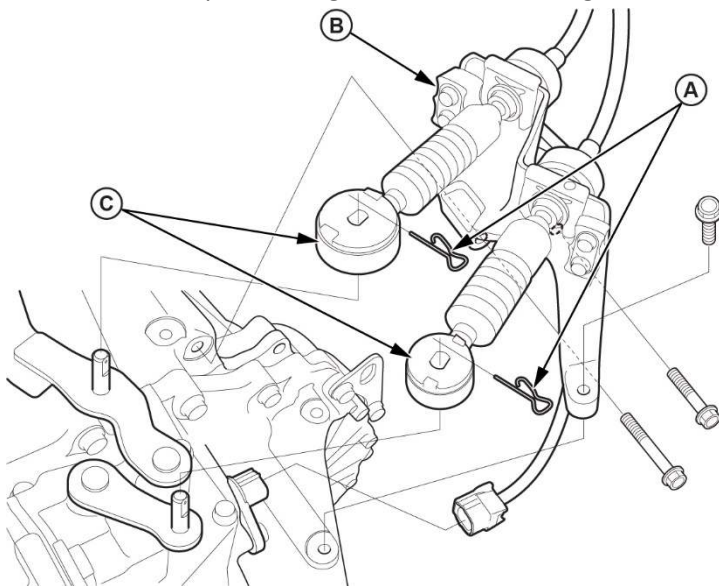
33.3 Remove the 12-volt battery base.

During Installation of the 12-volt battery base, tighten the mounting bolts in the numbered sequence shown.



34. Remove the lock pins (A), then carefully remove the change wire and the change wire bracket (B) together to avoid bending the change wire.

NOTE: **Do not** wipe off the grease from the change wire ends (C).



35. Leaving the hydraulic lines attached, remove the clutch slave cylinder from the transmission:

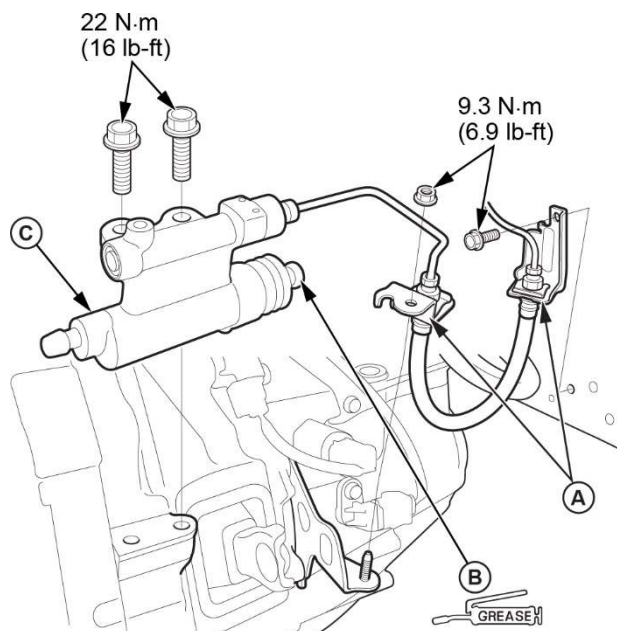
NOTE:

- **Do not** press the clutch pedal after the slave cylinder has been moved.
- **Do not** disconnect the clutch line joints.

35.1 Remove the clutch line brackets (A).

35.2 Remove the slave cylinder (B).

During installation, apply a light coat of super high temp urea grease (P/N 08798-9002) to the pushrod (b) of the slave cylinder (C)



36. Remove upper rear transmission bolt.



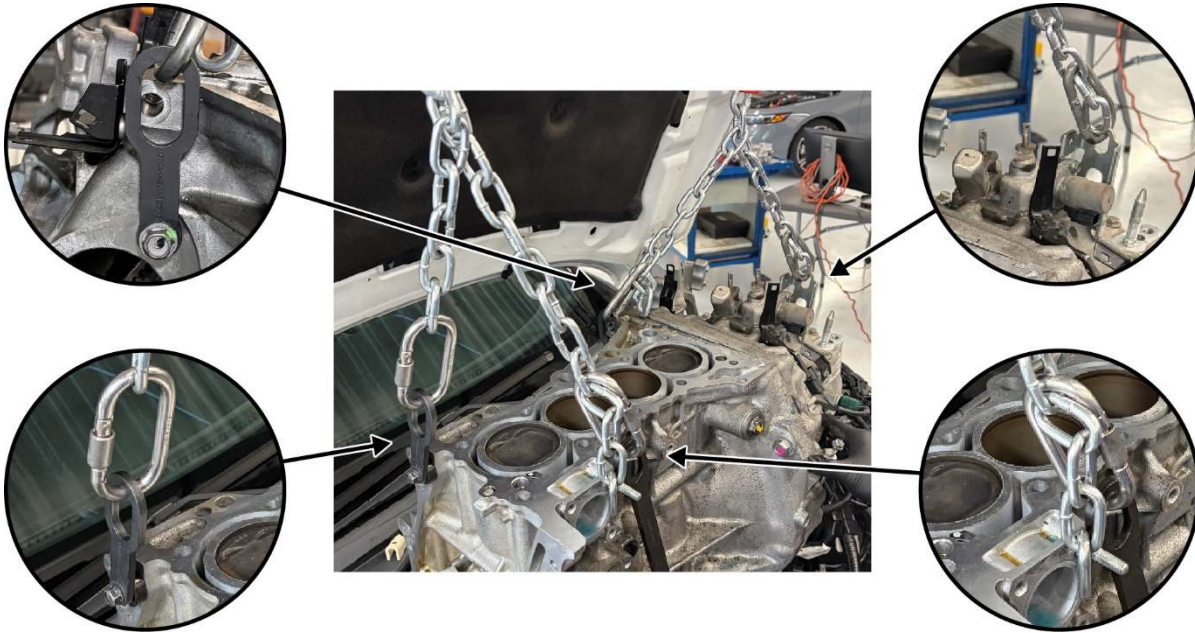
37. Install a lifting eyelet (T/N 07AAK-SNAA120) with a **10 mm** spacer to the upper starter bolt hole using the **30 mm** bolt from the kit, then tighten until the lifting eyelet and spacer are snug to the block.



34 With the floor jack supporting the engine, release tension on the support chains and remove them from the lifting eyelets and the engine support hanger.

35 Remove the engine support hanger.

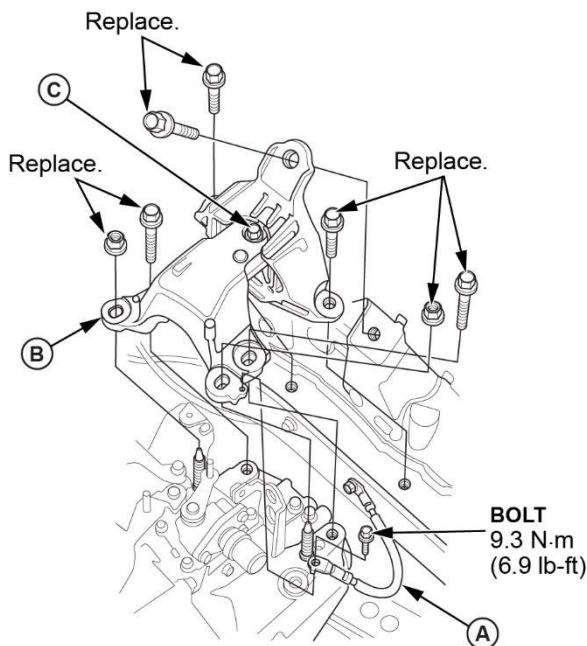
38. Move the engine hoist into position and attach the engine leveler chains to the 3 lifting eyelets and the transmission lifting bracket as shown.



39. Raise the engine hoist to support the weight of the engine and transmission assembly.

40. Remove the ground cable (A), then remove the transmission mount (B).

NOTE: **Do not** remove the bolt (C) from the transmission mount. If the bolt is removed, the transmission mount must be replaced as an assembly.



41. Remove the engine and transmission assembly from the engine compartment and set in a safe and stable location where the engine can be separated from the transmission.
42. Separate the engine from the manual transmission.
43. Remove the clutch assembly.

NOTE: To prevent warping, loosen the pressure plate mounting bolts in a crisscross pattern in several steps, then remove the pressure plate.

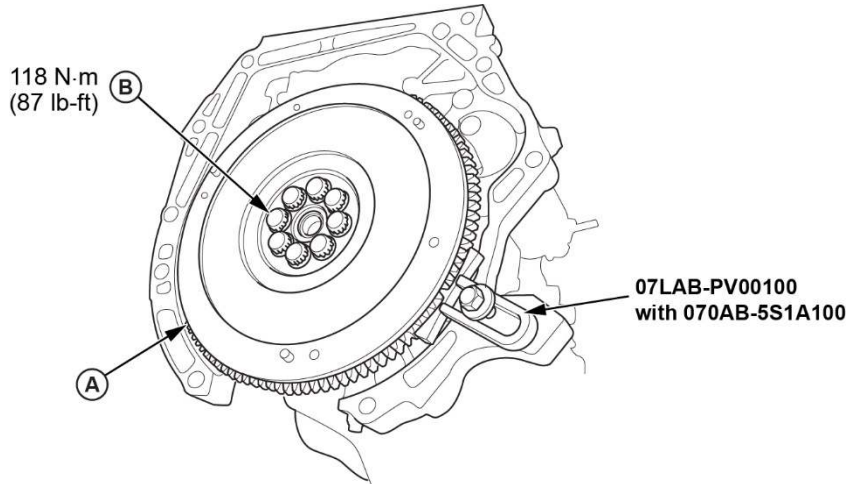
44. Remove the flywheel.

NOTE: Loosen the pressure plate mounting bolts in a crisscross pattern in several steps, then remove the flywheel.

45. Transfer the following parts to the new short block:

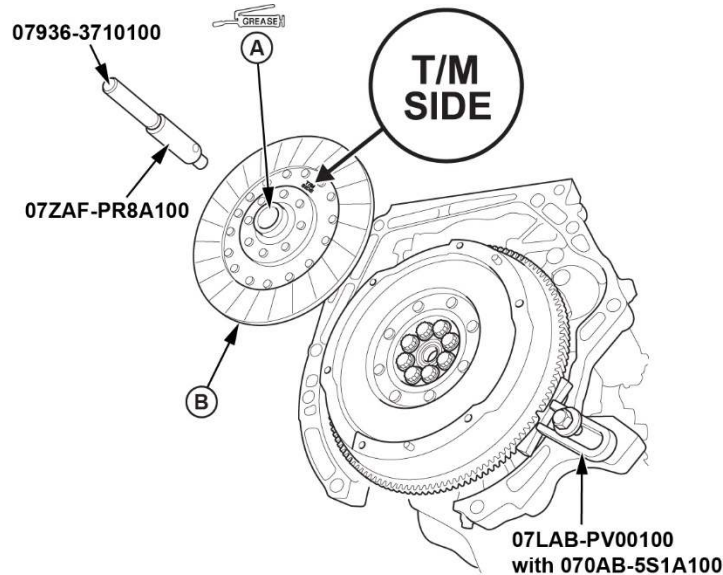
45.1 Flywheel:

- 45.1.1 Install the flywheel (A) on the crankshaft and install the mounting bolts finger tight.
- 45.1.2 Install the ring gear holder attachment and the ring gear holder (T/N 07LAB-PV00100 with 070AB-5S1A100).
- 45.1.3 Torque the flywheel mounting bolts (B) in a crisscross pattern in several steps to a final torque of **118 N·m (87 lb-ft)**.



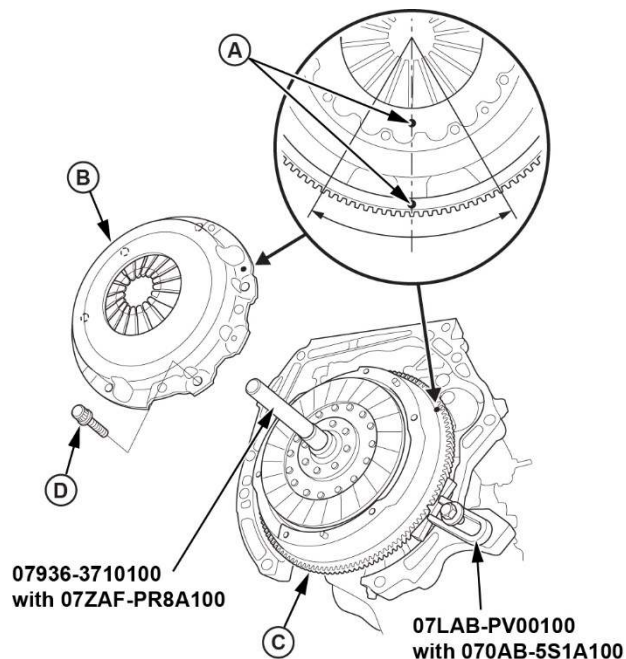
45.2 Clutch disc and pressure plate:

- 45.2.1 Apply super high temp urea grease (P/N 08798-9002) to the splines (A) of the clutch disc (B).
- NOTE: Wipe off any excess grease.
- 45.2.2 Temporarily install the clutch disc onto the splines of the transmission mainshaft. Make sure the clutch disc slides freely on the mainshaft.
- 45.2.3 Using the clutch alignment shaft and remover handle, Install the clutch disc with the surface marked T/M SIDE facing the transmission.

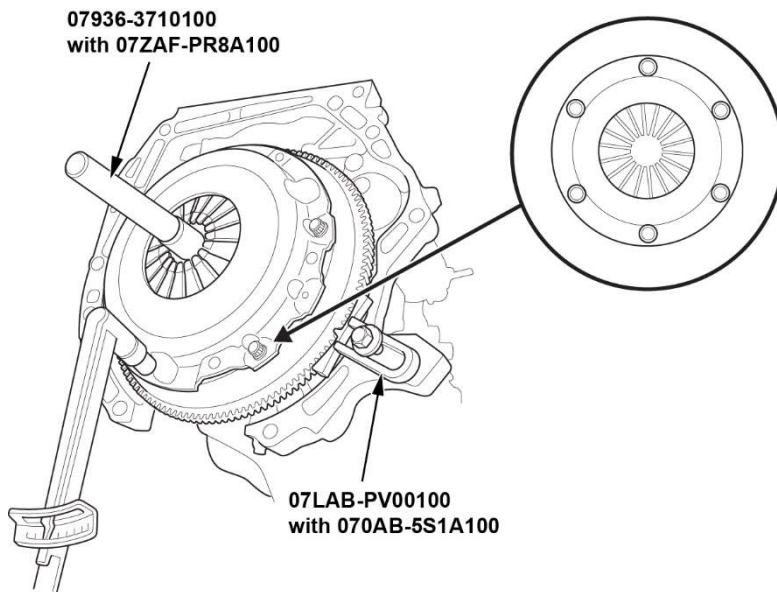


45.3 Pressure Plate:

- 45.3.1 Making sure the alignment marks (A) are lined up on the pressure plate (B) and flywheel (C), Install the pressure plate and then install the pressure plate mounting bolts (D) finger tight.

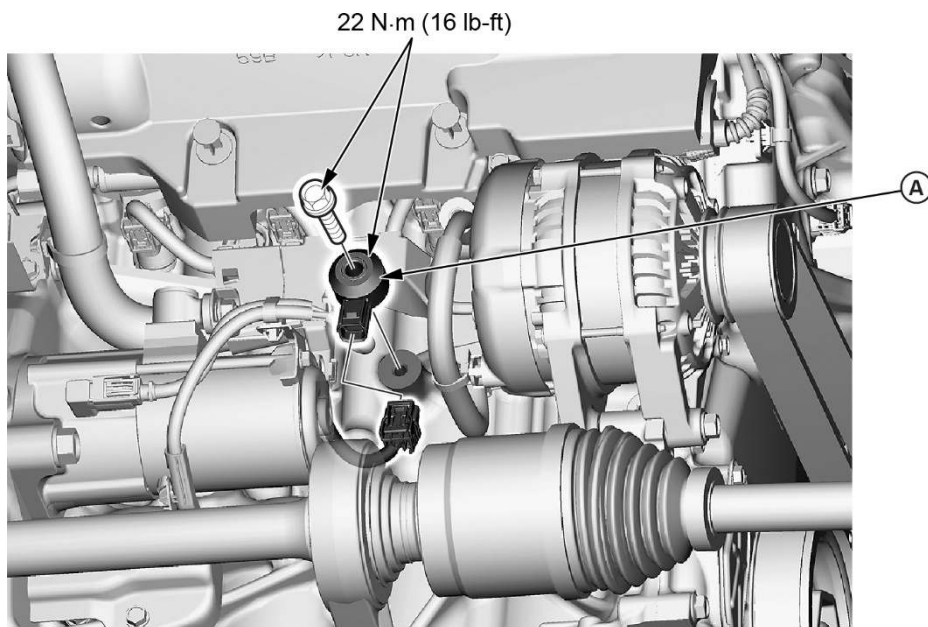


- 45.3.2 Torque the pressure plate mounting bolts to **26 N·m (19 lb-ft)** in a crisscross pattern. Tighten the bolts in several steps to prevent warping the diaphragm spring. Make sure that there is no clearance between the pressure plate and the flywheel.



- 45.3.3 Remove the ring gear holder attachment, the ring gear holder, the remover handle, and the clutch alignment shaft.
- 45.3.4 Make sure the diaphragm spring fingers are all the same height.

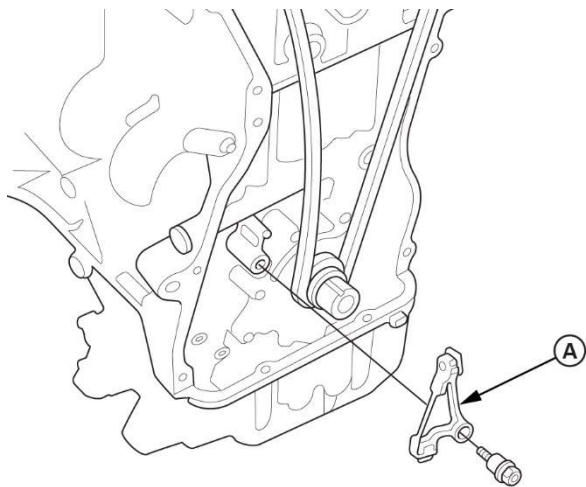
45.4 Knock Sensor (A).



45.5 CKP Sensor – Install with a new seal and torque to **12 N·m (9 lb-ft)**.

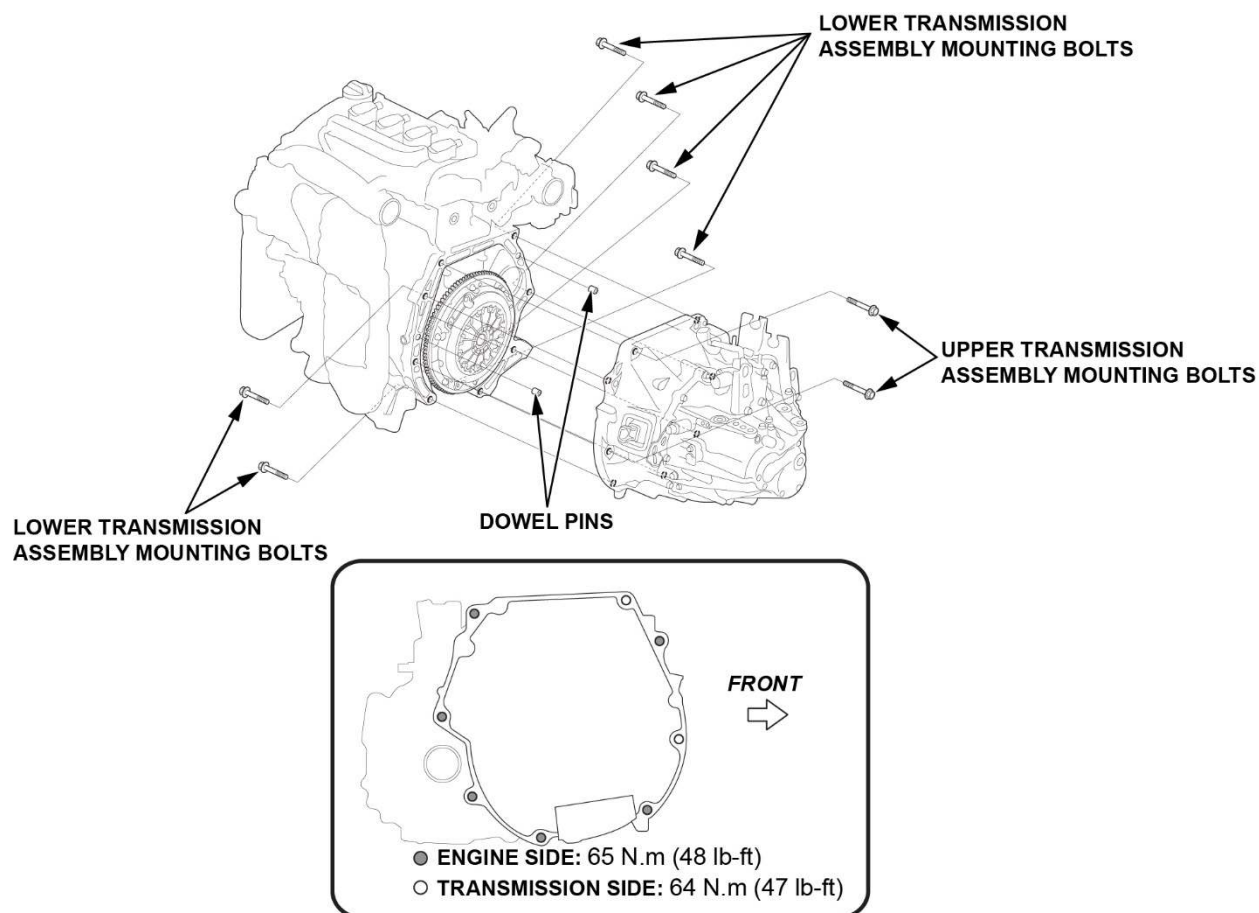
45.6 Cam Chain Drive Sprocket.

45.7 Cam Chain tensioner sub arm (A). Install mounting bolt finger tight.



46. Swap the lifting eyelets from the old short block to the new short block.

47. Attach the manual transmission to the engine short block.



48. Use the engine hoist and leveler to install the new short block and transmission assembly into the vehicle.

49. Complete the Short Block Replacement by installing the remaining parts in the reverse order of removal.

Is the cylinder head also being replaced?

YES – Go to [Repair Procedure #2 - Cylinder Head Replacement](#).

NO – Go to [Repair Procedure #1 – Head Gasket Only](#) to install the cylinder head and complete the repair.