ADV160 #1
Revised: November 2025

# Service Bulletin

American Honda Motor Co., Inc.

## SAFETY RECALL

# 2024 and 2025 ADV160
# OIL PUMP DRIVEN GEAR

NEW

(This bulletin has been revised to update the flywheel removal special tools information on page 7.)

### BACKGROUND

Honda launched a **SAFETY RECALL** on **CERTAIN 2024 and 2025 ADV160 scooters** to replace the engine's oil pump driven gear due to abnormal wear. Due to a manufacturing defect, the gear may wear prematurely causing inadequate oil pressure to the engine. If the scooter continues to operate with low oil pressure, the engine can eventually seize, causing the engine to stall while riding, potentially increasing the risk of a crash or injury.

### AFFECTED UNITS

As of March 24, 2025, you **MUST NOT SELL** any **AFFECTED NEW or USED** 2024 or 2025 ADV160 scooter until it is repaired according to this Service Bulletin. Additionally, you **MUST NOT SELL** or **INSTALL** any affected oil pump driven gear with part number 15133-K2S-N00.

- To search for applicable recalls on a specific unit, you **MUST** use *Unit Information* on ***iN***.
- To manage your affected new inventory, use your dealer *eResponsibility Report on* ***iN***.

### CUSTOMER NOTIFICATION

American Honda mailed customer letters to all owners of affected 2024 and 2025 ADV160 scooters in May 2025. Customers were informed that their scooter is affected by a safety related defect and that repair parts are currently unavailable. Affected customers were sent a second letter in early August informing them that parts are now available and to contact an authorized service dealer to have their scooter repaired.

### IMPORTANT

Due to the complexity of this repair, please read the *Parts Information* and *Inspection* procedure in their entirety to understand what is required for each individual affected unit.

| DEALER REPAIR RESPONSIBILITY |
|---|
| • Repairs must be performed by a qualified technician.<br>• Performing this repair exactly as shown in Repair Procedure instructions is critical for the remedy to be effective. Carefully follow all instructions.<br>• Service Management should inspect and confirm the repair.<br>• Dealer submission of a warranty claim affirms this repair was properly performed. |

## PARTS INFORMATION

Order parts based on the results of the Inspection Procedure (page 5).

Most affected units are expected to pass inspection and will only require the Oil Pump Driven Gear Kit. To expedite the repair, when scheduling an appointment for a customer with an affected unit, obtain their scooter's VIN and pro-actively order the Oil Pump Driven Gear Kit and Drain Plug Washer (12 mm) as described below.

If an affected unit **PASSES** the inspection, order the Oil Pump Driven Gear Kit and the Drain Plug Washer (12 mm) shown on page 3.

- You must reuse the existing engine oil and engine coolant.
- The Oil Pump Driven Gear Kit must be ordered using the Controlled Parts Order process (page 39).
- The Drain Plug Washer (12 mm) must be ordered through your standard parts ordering process.

If an affected unit **FAILS** the inspection, order **both kits** (Oil Pump Driven Gear Kit and Engine Parts Kit), new engine oil and new engine coolant shown on page 3.

- The Engine Parts Kit is under TechLine control. You must submit a request through TechLine Connect to have the parts released. An affected VIN and a photo of the failed oil pump gear will be required to order the kit.
- The Oil Pump Driven Gear Kit must be ordered using the Controlled Parts Order process (page 39).
- You must use new engine oil and engine coolant.
- The bottle of engine oil and bottle of coolant must be ordered through your standard parts ordering process.

## Oil Pump Driven Kit

| Part Name | Part Number | Qty. |
|---|---|---|
| **Kit, Oil Pump Driven**<br>Includes the following parts: | 06150-K0W-305 | 1 |
| Gasket, Stator Base | | 1 |
| Oil Seal, 20.8 x 32 x 6 mm | | 1 |
| Gear, Oil Pump Driven | | 1 |
| Seal, Drain | | 1 |
| Washer, Sealing (6.5 mm) (for 6 x 16 flange bolt) | | 1 |
| | | |
| **NOTE:** The drain washer (12 mm) is **not included** in the above kit. However, the cost of the drain washer is already included in the warranty template claims. If not already in stock, order the oil drain washer (12 mm) through standard daily parts ordering process. The drain washer is already **included** in the Engine Parts Kit shown below if the unit fails the inspection. | | |
| Washer, Drain Plug (12 mm) | 94109-12000 | 1 |

## Engine Parts Kit

| Part Name | Part Number | Qty. |
|---|---|---|
| **Kit, Engine Parts**<br>Includes the following parts: | 06100-K0W-305 | 1 |
| Gasket, L. Cover (NICHIAS) | | 1 |
| Cylinder | | 1 |
| Gasket, Cylinder | | 1 |
| O-Ring, 15.4 x 2 | | 2 |
| Gasket, Cylinder Head (Nippon Leakless) | | 1 |
| Gasket, Cylinder Head Cover (ARAI) | | 1 |
| Crankshaft | | 1 |
| Ring Set, Piston (Std) (Riken) | | 1 |
| Ring Set, Piston (Std) (TPR) | | 1 |
| Piston (Std) | | 1 |
| Pin, Piston | | 1 |
| Clip, Piston Pin, 14mm | | 2 |
| Camshaft | | 1 |
| Arm Comp, IN Valve Rocker | | 1 |
| Arm, EX Valve Rocker | | 1 |
| Shaft, Rocker Arm | | 2 |
| Gasket, Tensioner Lifter (Nichias) | | 1 |
| Gasket, EX Pipe | | 1 |
| Gasket, Water Pump Body | | 1 |
| Seal, L Cover | | 1 |
| Bolt, Flange (6 x 16 mm) | | 2 |
| Screw, Tappet Adjusting | | 4 |
| Bolt, Flange (6 x 12 mm) **(Not used in this repair. Discard it.)** | | 2 |
| Bolt, Flange, 8 x 32 mm **(Not used in this repair. Discard it.)** | | 1 |
| Bolt, Flange (8 x 40 mm) **(Not used in this repair. Discard it.)** | | 2 |
| Nut, Tappet, Adjusting | | 4 |
| Key - Woodruff (4 mm) | | 1 |
| Bearing, Radial Ball, 35 x 72 x 15 mm | | 1 |
| Oil, Seal, 24 x 45 x 6 (NOK) | | 1 |
| O-Ring (8 mm) | | 1 |
| O-Ring, 31.2 x 2.4 mm | | 1 |
| O-Ring Inlet Pipe | | 2 |
| Washer, Plug Drain, 12 mm | | 1 |
| Pin, Split (3.0 x 20) | | 1 |
| | | |
| **NOTE:** The engine oil and engine coolant are **not included** in the above kit. However, the cost of the engine oil and coolant is already included in the KR9C and KR9D warranty templates claims. Order new engine oil and engine coolant if an affected unit fails inspection. | | |
| Engine Oil, HP4M 10W-30 Quart | 08232-M99-K0BA1 | 1 |
| HP Coolant (Premix) 32 Oz. | 08C50-C321S02 | 1 |

## WARRANTY CLAIM INFORMATION

After completing this *Service Bulletin* repair, submit one warranty claim per unit with the applicable template number.

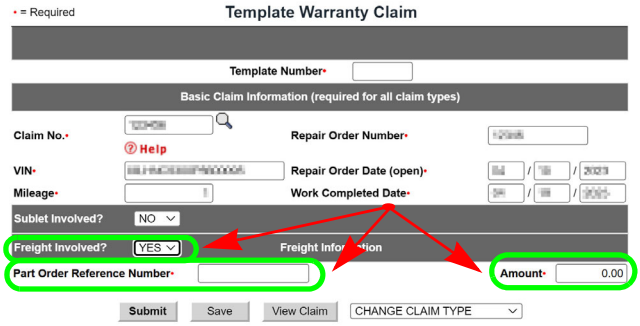
| YEAR | MODEL | TEMPLATE | FLAT RATE |
|---|---|---|---|
| 2024 | ADV160 | Gear Replacement KR9**A** | 1.1 hr |
| 2025 | ADV160 | Gear Replacement KR9**B** | 1.1 hr |
| | | | |
| 2024 | ADV160 | Engine Repair KR9**C*** | 7.3 hours |
| 2025 | ADV160 | Engine Repair KR9**D*** | 7.3 hours |

*Includes replacement engine oil and coolant.

**NOTES:**

All warranty template claims will reimburse freight for the Oil Pump Driven Gear Kit and the Engine Parts Kit. To ensure your dealership receives the freight credit, follow these steps.

1. Make sure 'YES' is selected from the *Freight Involved* drop down window.
2. Make sure to include the *Part Order Reference Number*.
3. Include the freight *Amount* associated with the listed *Part Order Reference Number.*
   - The *Part Order Reference Number* can be found on your *Parts Order Statement* on *iN*.




## DEALER SUPPORT

### TECHNICAL QUESTIONS

If you have any technical questions relating to this update procedure, please contact:
Motorcycle TechLine Online:

***iN > Service > TechLine > TechLine Connect***

### WARRANTY QUESTIONS

If you have any warranty administration questions relating to warranty claim templates, and claim filing procedures, please contact:

Motorcycle Warranty Online:

***iN > Service > Warranty & HondaCare > Warranty Connect Filing***
Or call (800) 421-1900, option 7

## RECALL REPAIR IDENTIFICATION

Before you begin the repair procedure, verify that the unit has not already been repaired by searching *Unit Information* on ***iN***.

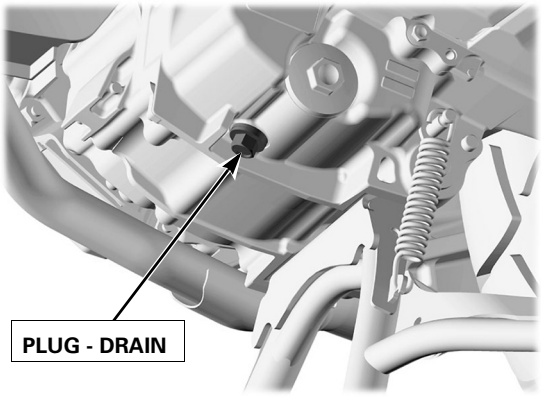
## INSPECTION

Perform this inspection procedure on all new and used dealer inventory and in-service customer units.
Refer to the appropriate service manual if you need additional information or assistance.

**NOTE:** Be careful not to scratch any parts.

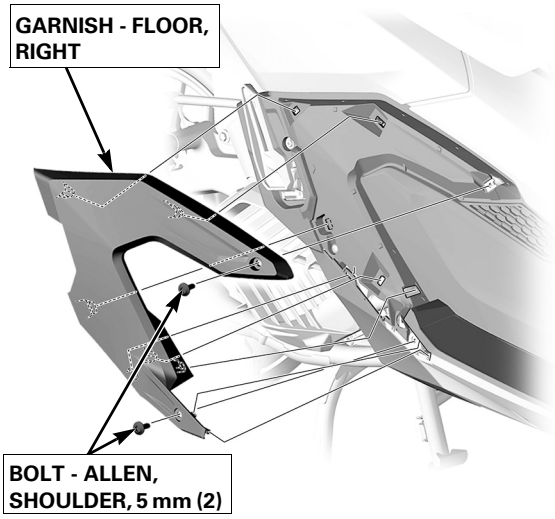
### DISASSEMBLY

1. Drain the engine oil into a suitable clean container and retain it for reuse after assembly.

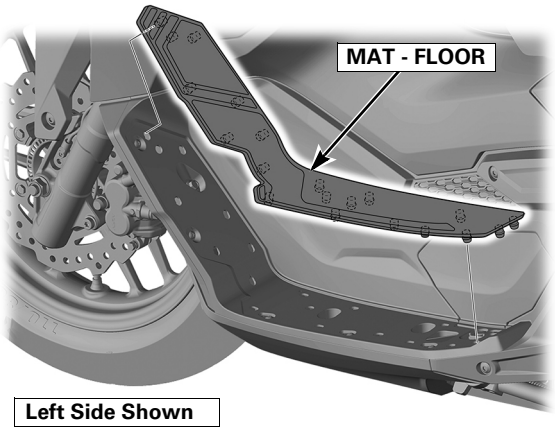



2. Remove the two (2) 5 mm Allen bolts, and then remove the right floor garnish.

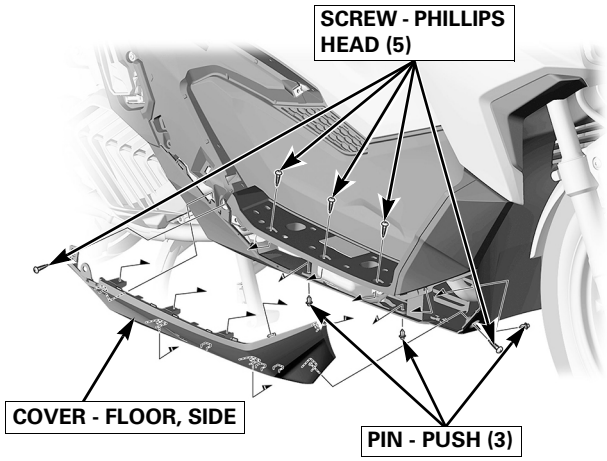
   **TORQUE:** 4.2 N·m (0.42 kgf·m, 3.09 lbf·ft)



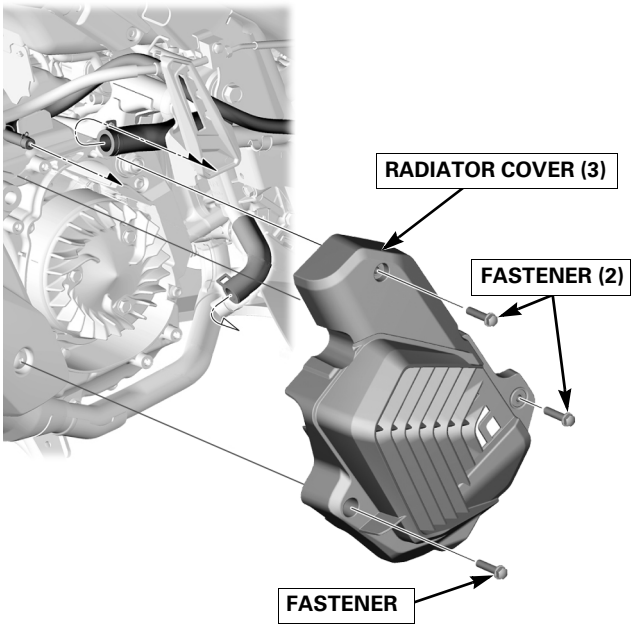

3. Remove the floor mat of the **right** rubber step.



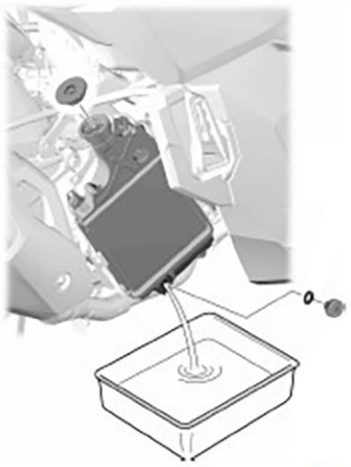

4. Remove the five (5) Phillips head screws, three (3) push pins, and then the right garnish floor.



5. Remove the radiator cover and three (3) fasteners.

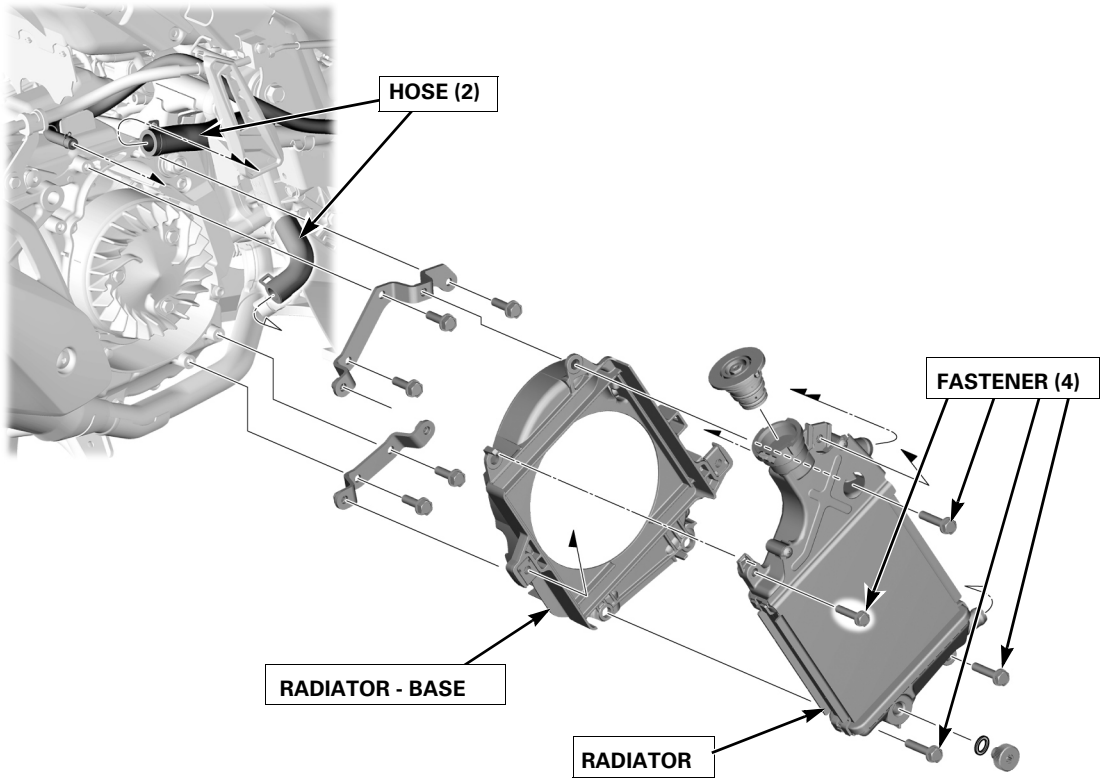



6. Drain the coolant into a suitable clean container and retain it for reuse after assembly.



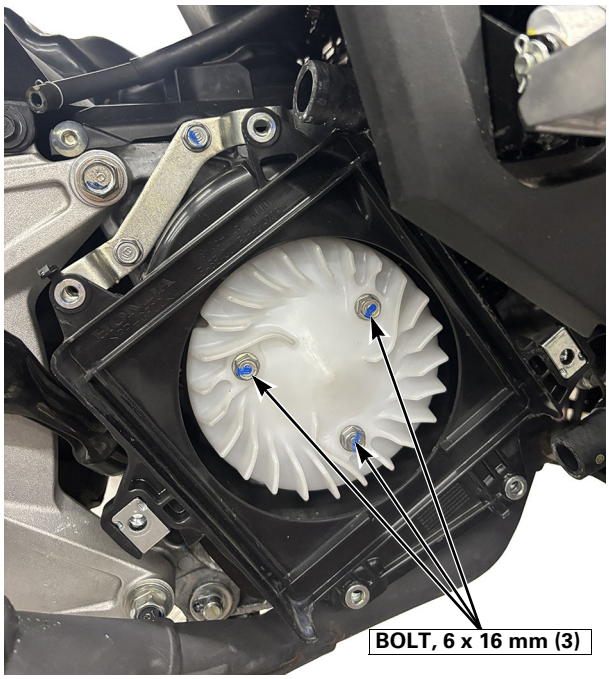
7. Remove the radiator, radiator base, four (4) 6 x 30 bolts, and two (2) hoses.

   **TORQUE:** 10 N·m (1.0 kgf·m, 7.3 lbf·ft)



8. Remove the three (3) 6 x 16 mm bolts cooling fan fasteners.

   Remove the cooling fan.



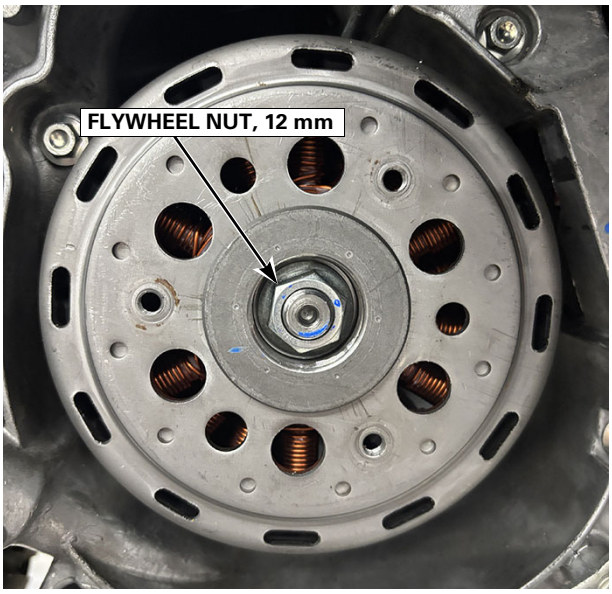

NEW

9. Remove the 12 mm flywheel nut.

   **TOOLS:**

   Flywheel holder: 07725-0030000

   **TORQUE:** 69 N·m (7.0 kgf·m, 51 lbf·ft)

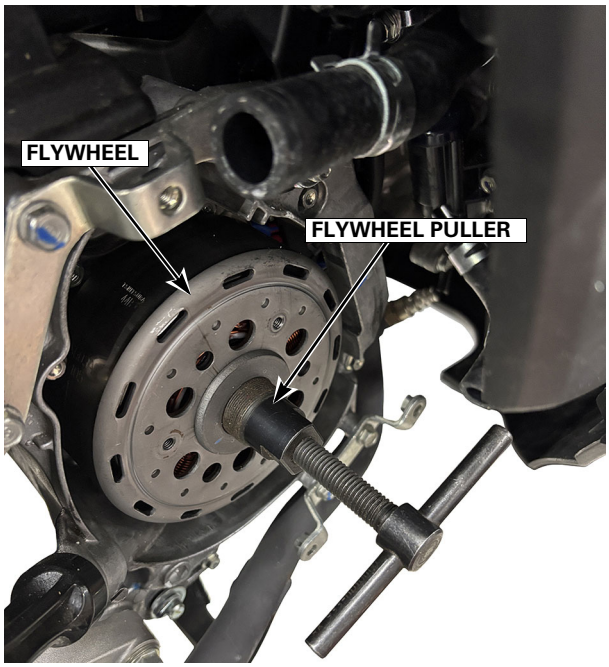



NEW

10. Remove the flywheel with a flywheel puller.

    **TOOLS:**

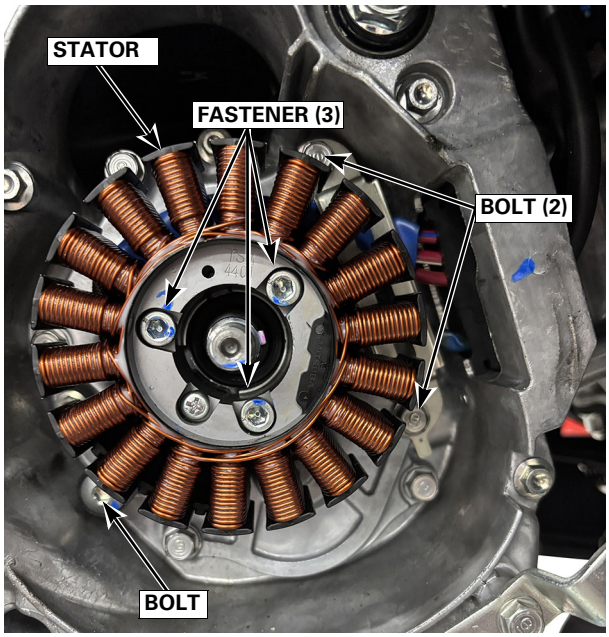
    Flywheel puller: 07933-0010000



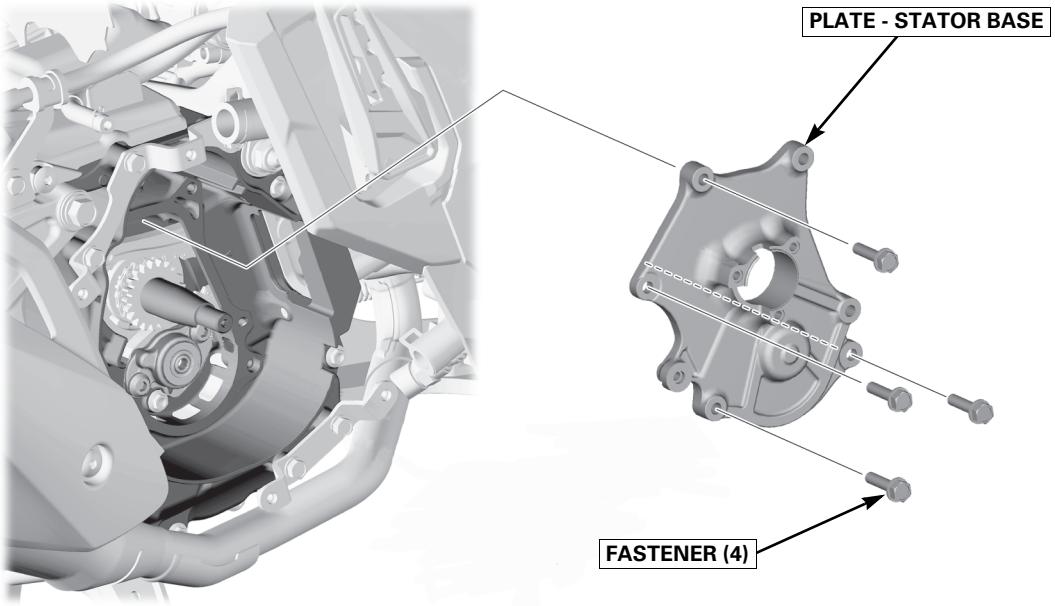

11. Remove the stator, three (3) fasteners and two (2) bolts for plate, one (1) bolt for the retainer.

    **STATOR MOUNTING BOLT TORQUE:** 10 N·m (1.0 kgf·m, 7.3 lbf·ft)

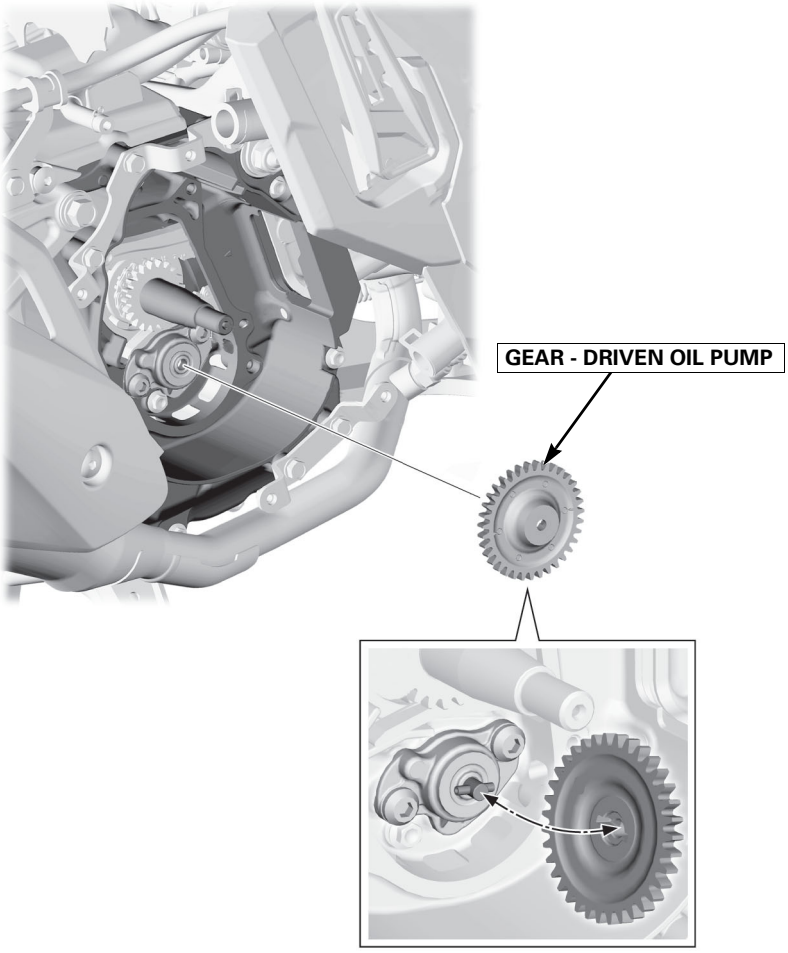
    **NOTE:** Secure the stator with a wire so that it does not loosely hang.



12. Remove the base stator plate and four (4) fasteners.




13. Remove the oil pump driven gear from the oil pump.



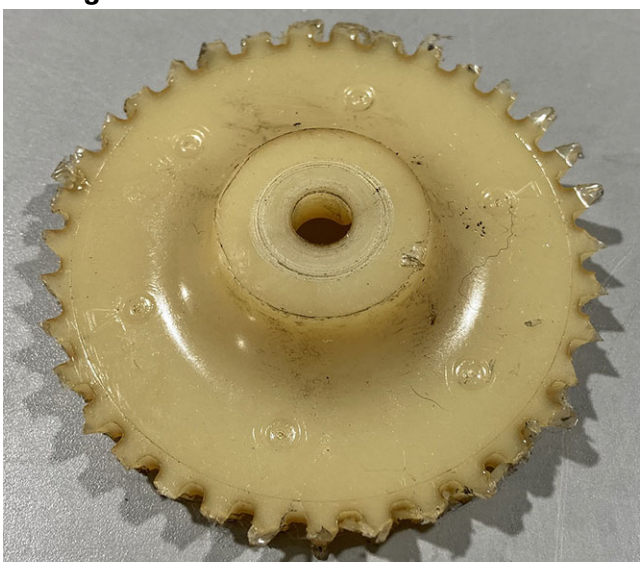
14. Inspect the oil pump driven gear by measuring the outside diameter of the gear using a Vernier caliper.

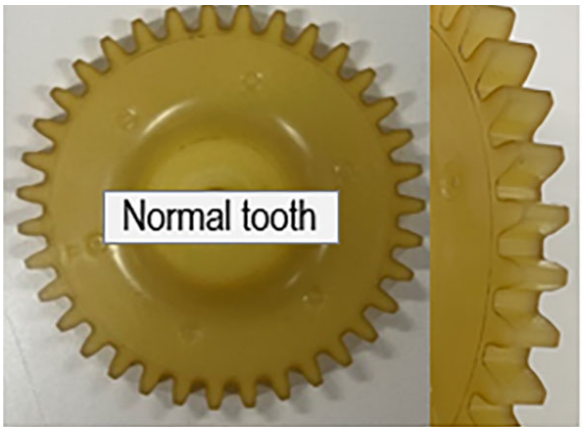
    

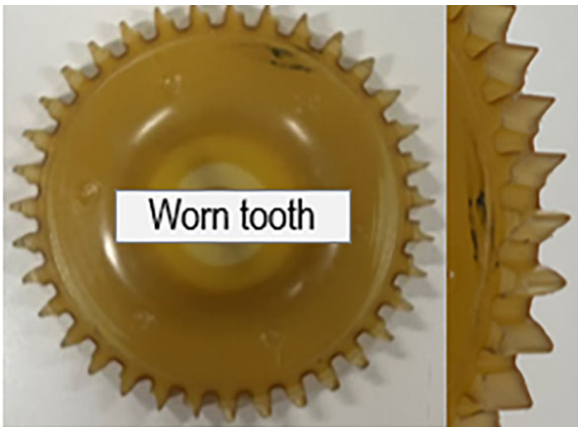
    The gear should measure larger than 62 mm in diameter and have no damage or irregular wear on the teeth.

    - If the outside diameter of the gear measures **62 mm or larger** and appears undamaged, the gear has **PASSED** inspection. Install the Oil Pump Driven Gear Kit shown in the Parts Information section Oil Pump Driven Gear Kit Installation procedure beginning on page 10.
    - If the gear measures **less than 62 mm** in diameter or has broken or irregular wear on the teeth (as shown below), the gear has **FAILED** inspection. Submit a TechLine Connect request to inform TechLine that an oil pump driven gear has failed the inspection. Include a photograph with the gear that failed inspection in a Vernier caliper, with the measurement clearly shown. If the gear has damaged teeth, include a photograph of the damaged gear.
    - Repair parts for units that fail the inspection are under Techline control. After receiving all repair parts, use the repair procedure beginning on page 12 to repair the scooter.

    **Damaged Gear Teeth**

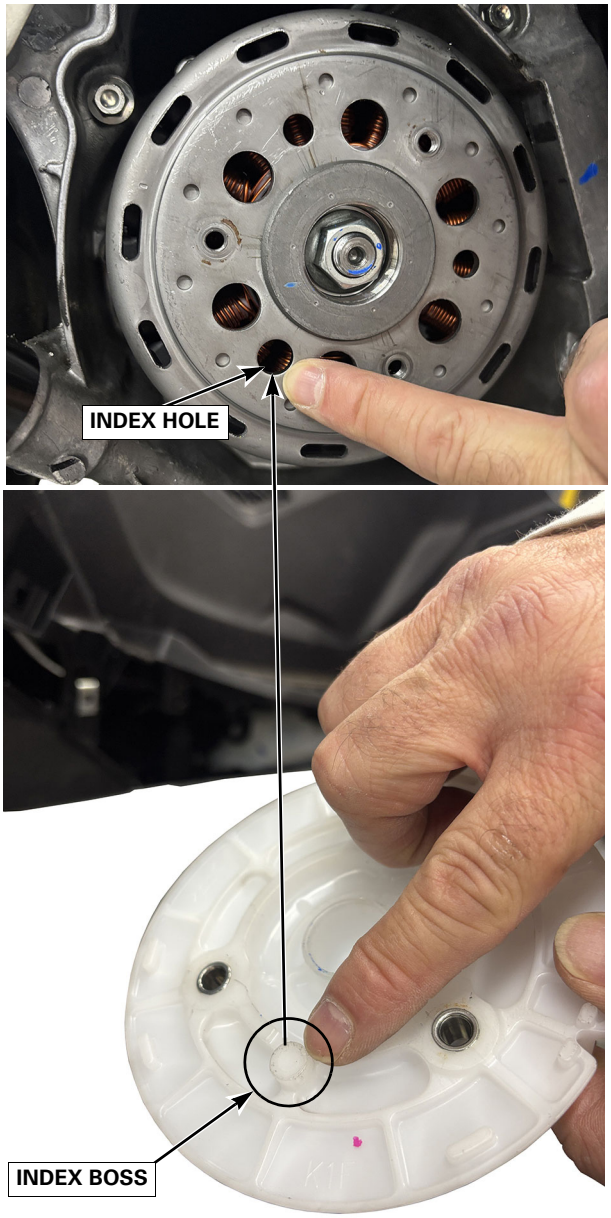
    
    

## OIL PUMP DRIVEN GEAR KIT INSTALLATION

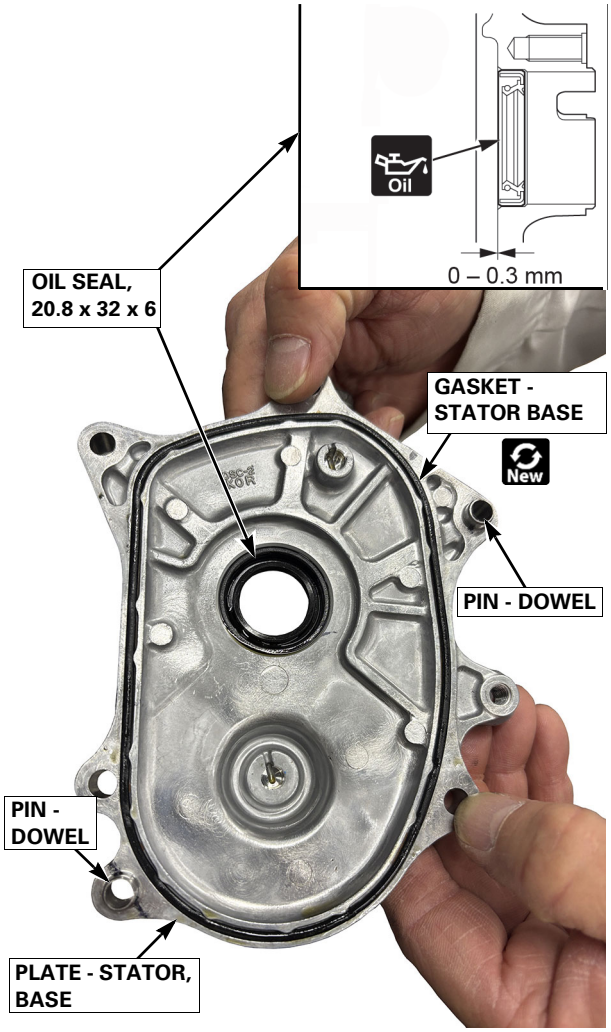
If an affected unit PASSED the *Inspection* on page 9, install the oil pump driven gear kit shown in the Parts Information section. Reassemble the unit in the reverse order of disassembly paying special attention to the cooling fan. Refill the engine oil and coolant using the procedures on page 11.

**NOTES:**

- The index boss on the cooling fan must be aligned with the index hole on the flywheel as shown.




- The stator base gasket and oil seal will need to be replaced on this cover upon reassembly using the new parts in the kit.
- Be sure the dowel pins are installed in the stator base plate.

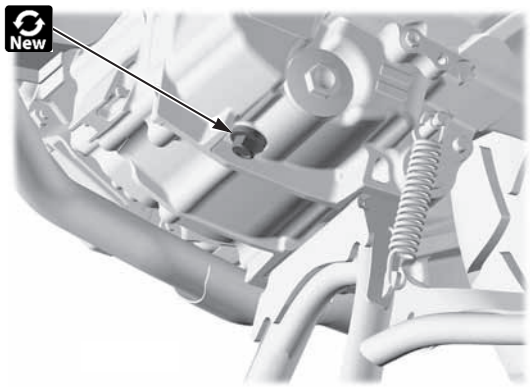


## OIL REFILL

Refill the crankcase using the engine oil that was drained during disassembly.

**REASSEMBLY:**
Install a **new** 12 mm drain washer (p/n 94109-12000) and then tighten the oil drain plug to the specified torque:

**TORQUE:** 24 N·m (2.4 kgf·m, 18 lbf·ft)




**RECOMMENDED ENGINE OIL:**

Pro Honda HP4M (with molybdenum additives) 4-stroke oil (U.S.A. & Canada) or equivalent motorcycle oil.

API service classification: SJ or higher

JASO T903 standard: MB

Viscosity: SAE 10W-30

**ENGINE OIL CAPACITY:**

0.75 Liter after draining

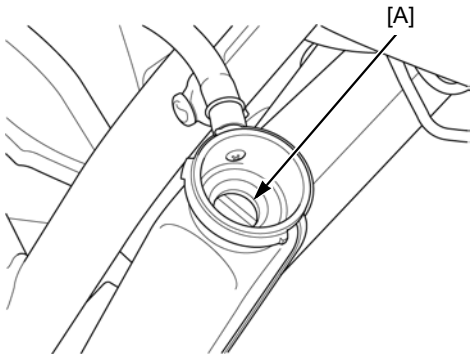
0.85 Liter after oil strainer screen cleaning

0.9 Liter after disassembly

## COOLANT REFILL AND AIR BLEEDING

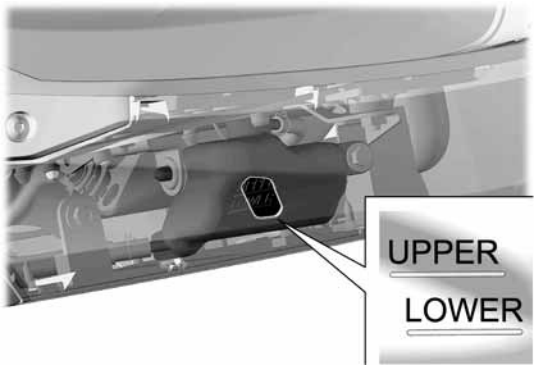
**NOTE:** When filling the system or reserve tank with coolant, or checking the coolant level, support the vehicle in an upright position on a flat, level surface.

1. Refill the system with the coolant that was drained during disassembly through the filler opening to the filler neck [A].




**RECOMMENDED ANTIFREEZE:**
Pro Honda HP Coolant or an equivalent high-quality ethylene glycol antifreeze containing corrosion protection inhibitors.

2. Bleed air from the system:
   a. Start the engine and let it idle for 2 ~ 3 minutes.
   b. Snap the throttle 3 ~ 4 times to bleed air from the system.
3. Stop the engine and add coolant up to the filler neck.
4. Screw in the radiator cap until its boss is contacting the lug of the radiator.
5. Fill the reserve tank with coolant to the upper level line.

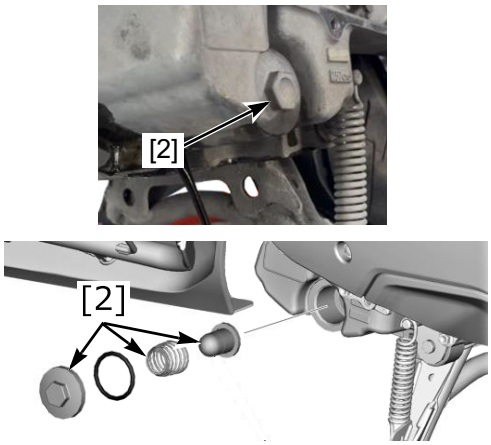


## ENGINE PARTS KIT INSTALLATION

This Engine Parts Kit procedure only applies to units that failed the oil pump gear inspection, as described on page 9.

### ENGINE OIL

1. Remove the oil filter screen components as a whole unit [2].




2. Drain the oil completely.

**REASSEMBLY:**

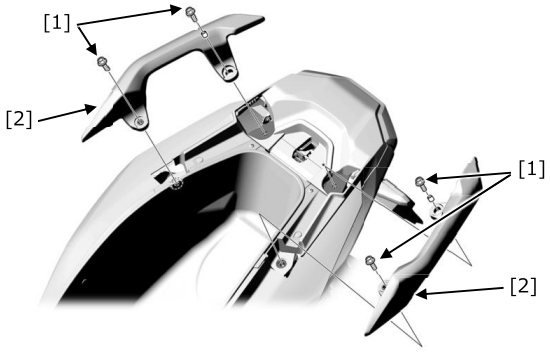
1. Install the following new parts:
   - Washer - Sealing [3]
   - O-ring [4]


2. Install the drain plug bolt.

   **TORQUE:** 20 N·m (2.0 kgf·m, 14.7 lbf·ft) [2]

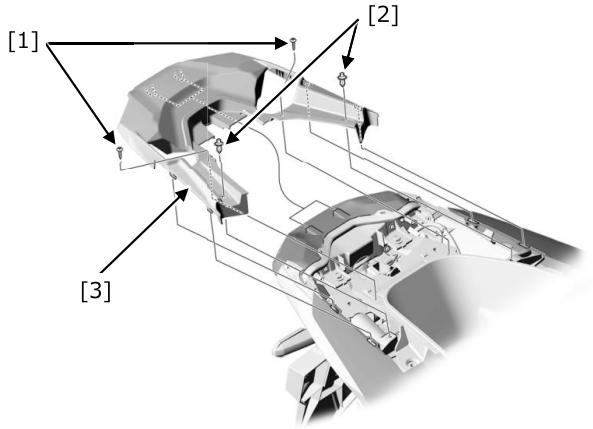
### GRAB RAIL

1. Remove the four (4) 8 x 30 mm bolt-washers [1].
2. Remove the two (2) grab rails [2].




### REAR CENTER COVER

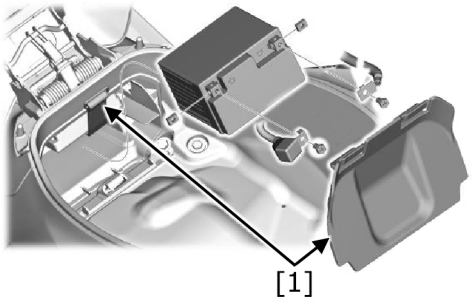
1. Remove the two (2) 4 x 12 mm tapping screws [1].
2. Remove the two (2) push rivets [2].
3. Remove the rear center cover [3].



## LUGGAGE BOX

**NOTE:** During reassembly and before the luggage box is installed, perform the TP sensor reset (page 36).

1. Remove the battery cover and unhook the battery band [1].



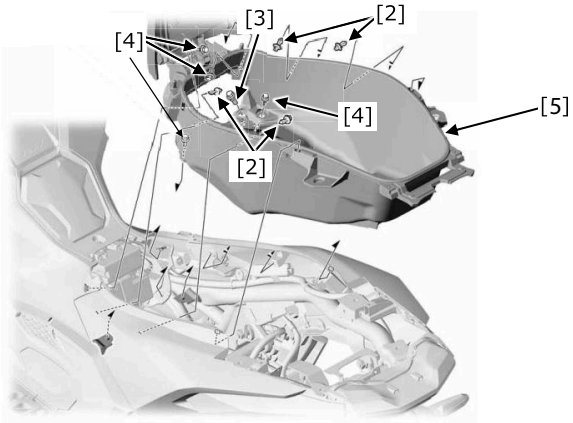

2. Remove the four (4) bumper seal clips [2].
3. Remove the two (2) fender fixing bolts [3].

   **REASSEMBLY:**
   **TORQUE:** 5.2 N·m (0.53 kgf·m, 3.83 lbf·ft)

4. Remove the four (4) 6 x 12 mm bolt-washers [4].

   **REASSEMBLY:**
   **TORQUE:** 5.2 N·m (0.53 kgf·m, 3.83 lbf·ft)

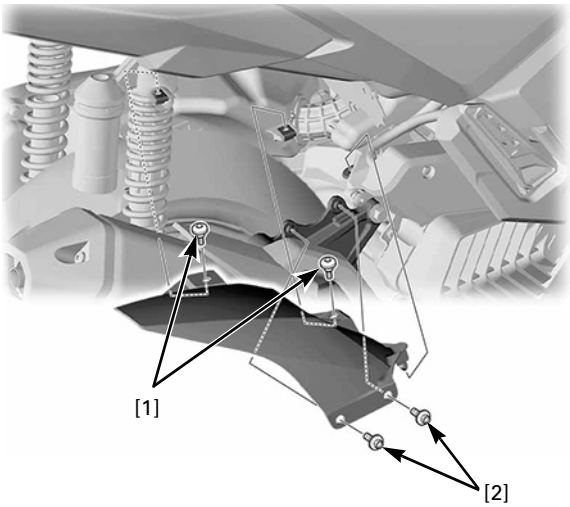
5. Remove the luggage box [5].




## REAR INNER FENDER

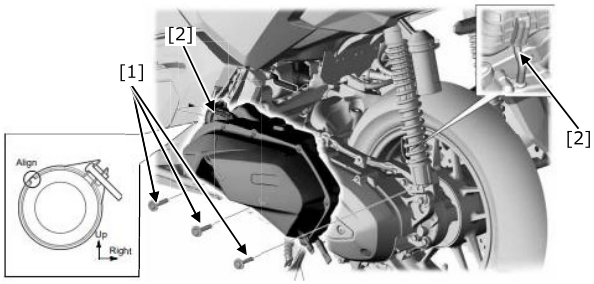
1. Remove the two (2) socket bolts [1].
2. Remove the rear inner fender [2].

   **REASSEMBLY:**
   **TORQUE:**
   3.5 N·m (0.35 kgf·m, 2.5 lbf·ft) [1]




## AIR CLEANER

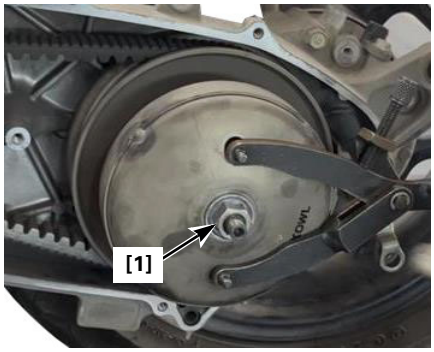
1. Remove the three (3) bolt-washers [1].
2. Disconnect the two (2) tubes [2].



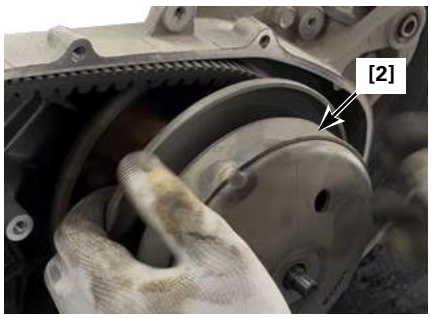
## DRIVEN FACE • DRIVE FACE • DRIVE BELT

1. Remove the 12 mm nut [1].

   **REASSEMBLY:**
   **TORQUE:** 49 N·m (4.9 kgf·m, 36 lbf·ft)

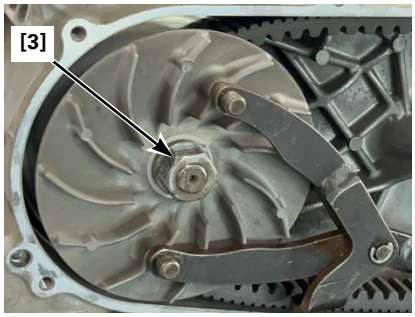



2. Remove the driven face as a whole unit [2].

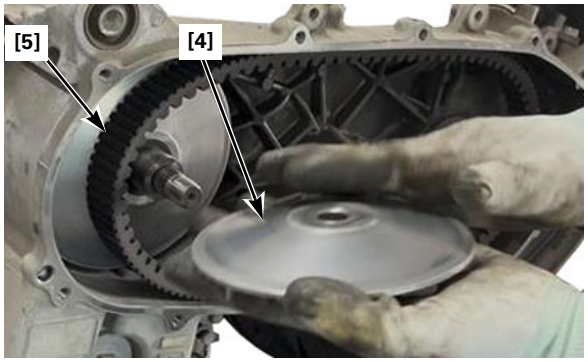



3. Remove the 14 mm nut [3].

   **TOOL:** Universal holder: 07725-0030000

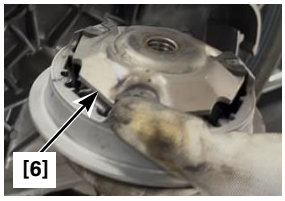



4. Remove the drive face [4] and drive belt [5].




5. Remove the movable drive face as a whole unit [6].

   **REASSEMBLY:**
   **TORQUE:** 59 N·m (5.9 kgf·m, 43 lbf·ft)




## MUFFLER

1. Disconnect the oxygen sensor coupler [1].
2. Remove the 7 mm cap nuts [2], [3].

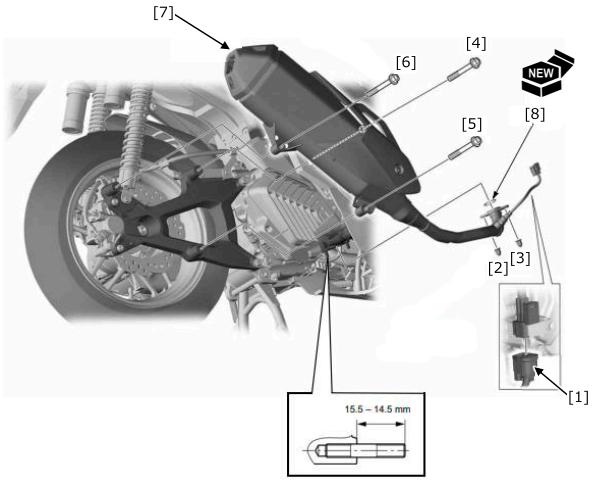
   **REASSEMBLY:**
   **TORQUE:**
   29 N·m (2.95 kgf·m, 21 lbf·ft)

3. Remove the 10 x 65 mm flange bolts [4], [5], [6].

   **REASSEMBLY:**
   **TORQUE:**
   49 N·m (4.9 kgf·m, 36 lbf·ft)

4. Remove muffler [7].

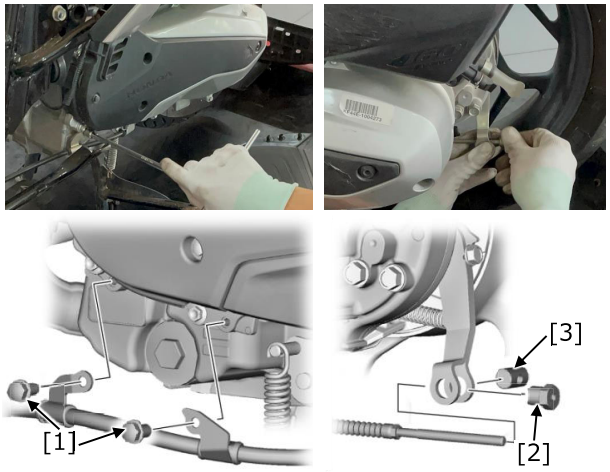
   [2] to [6]: Tightening sequence




**REASSEMBLY:**
Install a new exhaust pipe gasket [8].

## REAR BRAKE

1. Remove the two (2) bolts [1].
2. Remove the nut [2] and brake arm joint [3].



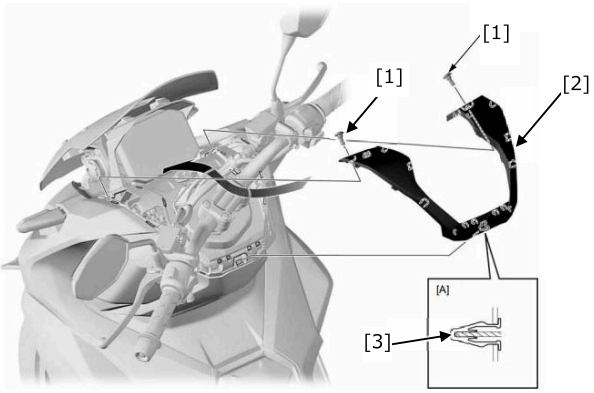

3. Continue to UPPER INNER GARNISH on page 15.

## UPPER INNER GARNISH

1. Remove the two (2) 5 x 14 mm pan screws [1].

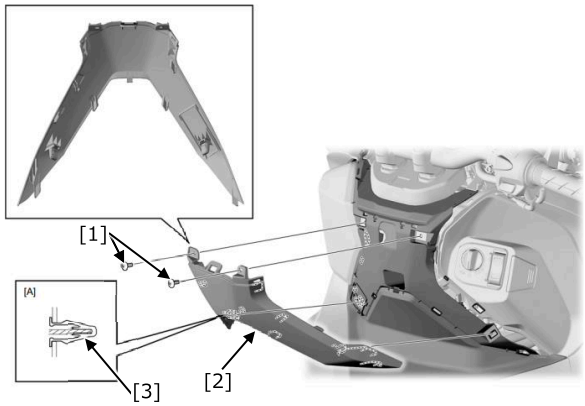
   **REASSEMBLY:**
   **TORQUE:** 4.2 N·m (0.42 kgf·m, 3.09 lbf·ft) [1]

2. Remove the upper inner garnish [2] by releasing the snap fit clip [3].



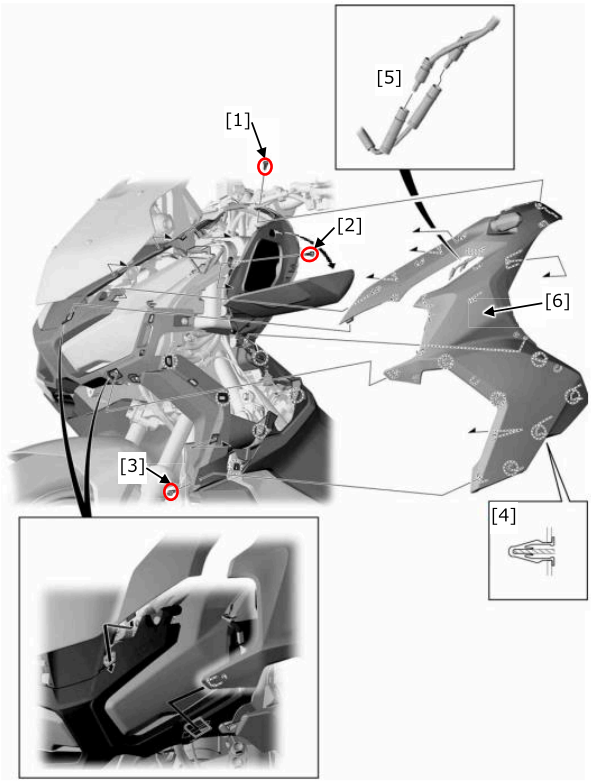

## LOWER INNER GARNISH

1. Remove the 4 x 12 mm tapping screw [1].
2. Remove the lower inner garnish [2] by releasing the snap fit clip [3].



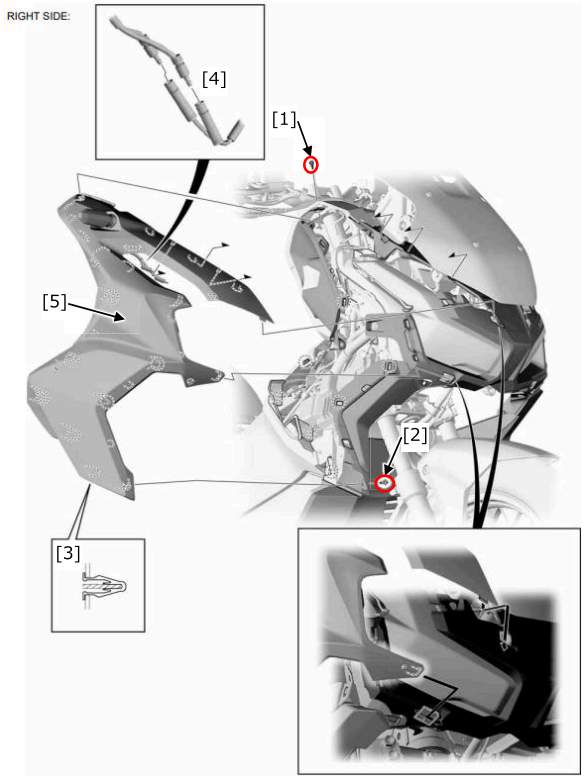

## LEFT FRONT SIDE COVER

1. Remove the 4 x 16 mm screw [1].
2. Remove the 4 x 12 mm screw [2].
3. Remove the clip [3].
4. Release the snap fit clip [4].
5. Disconnect the left front turn signal connectors [5].
6. Remove the left front side cover [6].



## RIGHT FRONT SIDE COVER

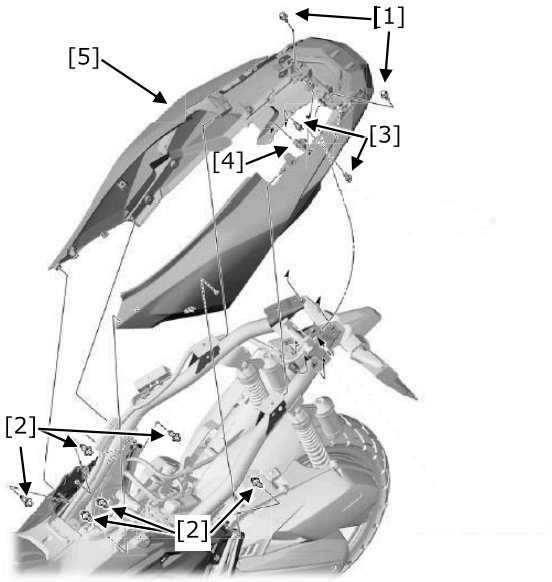
1. Remove the 4 x 16 mm screw [1].
2. Remove the clip [2].
3. Release the snap fit clip [3].
4. Disconnect the right front turn signal connectors [4].
5. Remove the right front side cover [5].

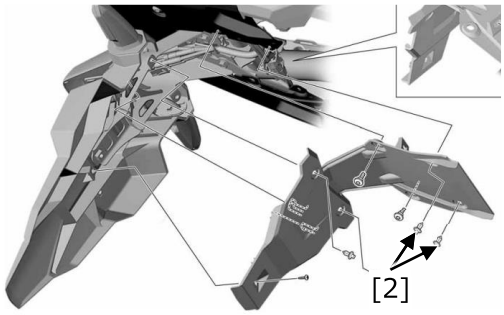



## BODY COVER

1. Remove the two (2) bolt-washers [1].
2. Remove the eight (8) clips [2].
3. Remove the two (2) pan screws [3].

   **REASSEMBLY:**
   **TORQUE:** 4.2 N·m (0.42 kgf·m, 3.09 lbf·ft)
4. Disconnect the taillight coupler [4].
5. Remove the body cover [5].

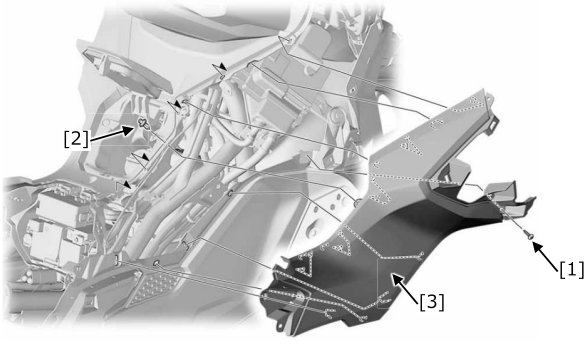


## CENTER SIDE COVER

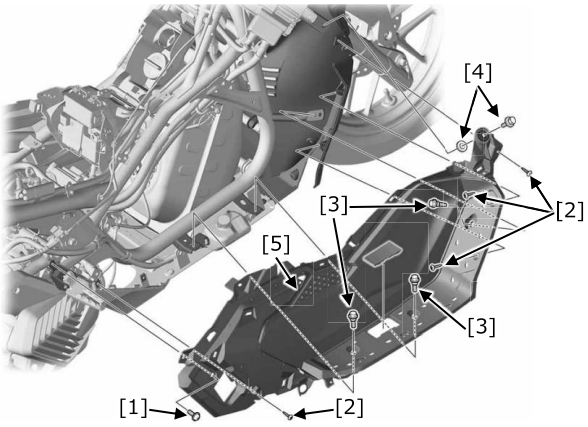
1. Remove the screws [1].
2. Remove the clip [2].
3. Remove the center side cover [3].

   Remove the center side cover for the other side.




## FLOOR STEP

1. Remove the 5 x 11.5 mm screw [1].
2. Remove the four (4) 4 x 12 mm screws [2].
3. Remove the three (3) 6 mm bolts [3].
4. Remove the bolt-washer and mounting rubber (4).
5. Remove floor step [5].
6. Remove the floor step for the other side.

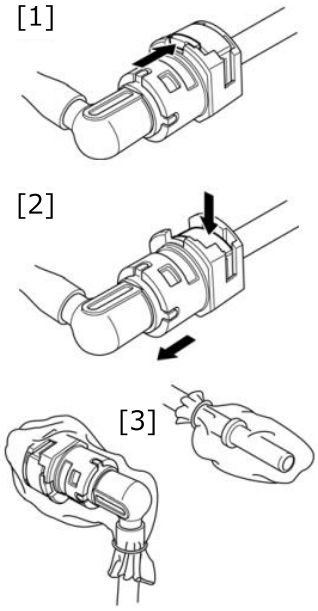



## FUEL QUICK CONNECT FITTING

### REMOVAL

1. Press the retainer tab forward [1].
2. Press down the retainer, and then disconnect the connector from the fuel joint [2].
3. Cover the disconnected connector and pipe end with plastic bags [3].

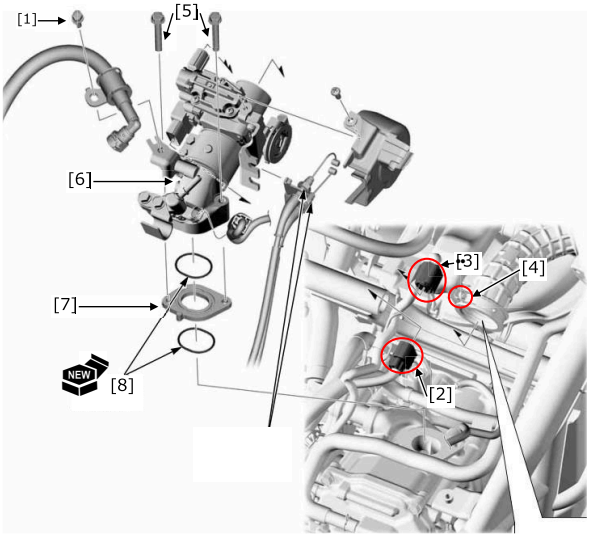
   **NOTE:** During installation, press the connector onto the fuel joint until the retainer locks with a "CLICK".



## THROTTLE BODY

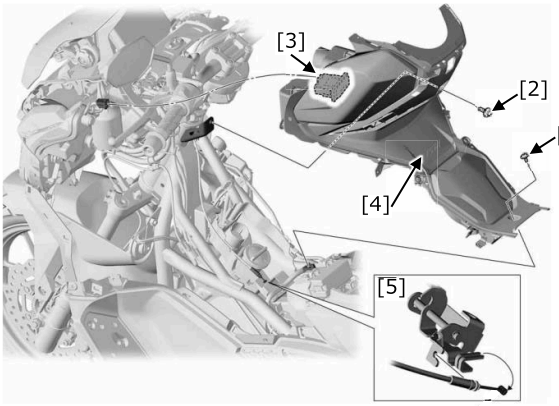
1. Remove the bolt [1].
2. Disconnect the sensor coupler [2] and the air control valve coupler [3].
3. Loosen the bolt [4].
4. Remove the two (2) 6 x 40 mm bolts [5].
5. Remove the throttle body [6].
6. Remove the throttle body insulator [7].

**REASSEMBLY:**
Install two (2) new O-rings [8].



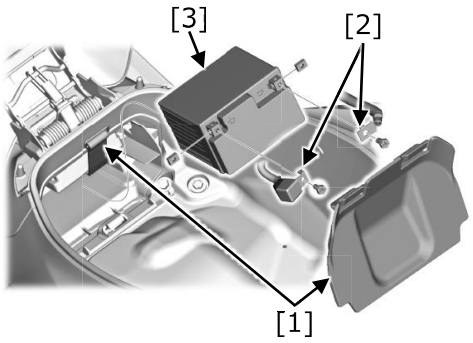

## CENTER COVER

1. Remove the 5 x 11.5 mm screw [1].
2. Remove the bolt [2].
3. Remove the USB coupler [3].
4. Remove the center cover [4].
5. Pull up the inner cover and disconnect the fuel lid cable [5].

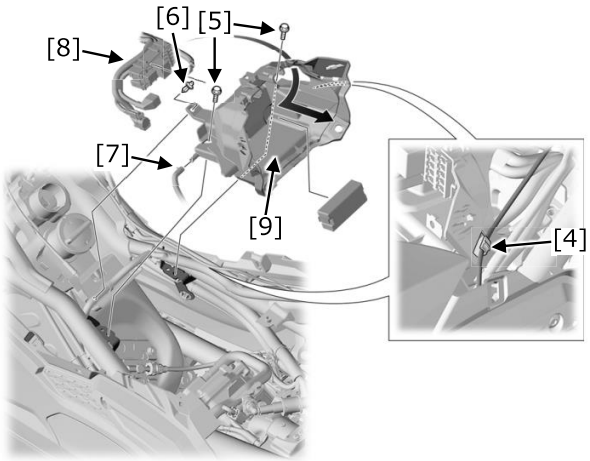



## BATTERY AND BATTERY BOX REMOVAL

1. Remove the battery cover and unhook the battery band [1].
2. Disconnect the battery terminals [2].
3. Remove the battery [3].



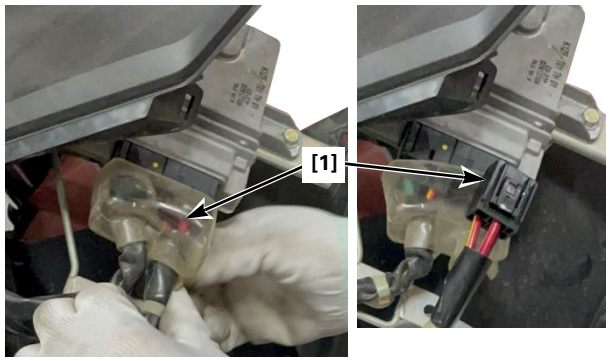

4. Release the wire [4].
5. Remove the two (2) bolts [5].
6. Remove the clip [6].
7. Disconnect the drain tube [7].
8. Release the fuse box [8] from the battery box [9].
9. Remove the battery box [9].



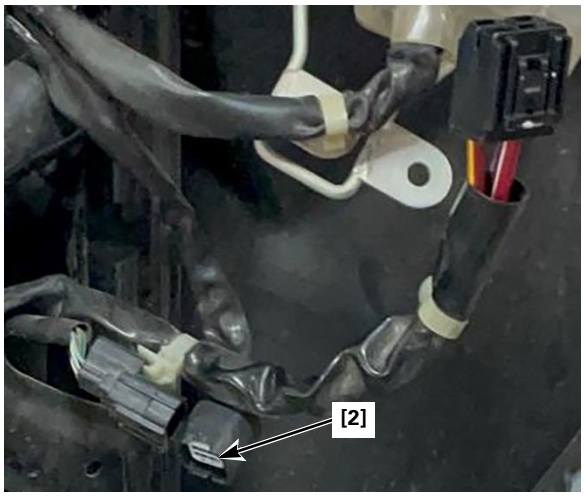
## WIRING

**NOTE:** Take photos of how the wires are routed for ease of reassembly.

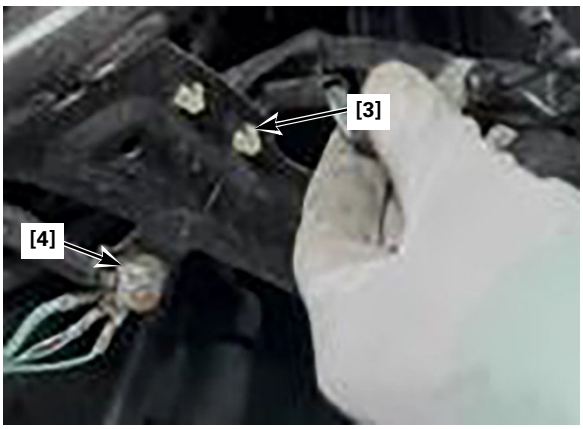
1. Disconnect the ECM 3P connector [1].




2. Disconnect the CKP sensor 6P connector [2].




3. Disconnect the clip [3].
4. Remove the frame ground terminal [4].




5. Disconnect the clip [5].


6. Remove the stator and stator base wire harness.

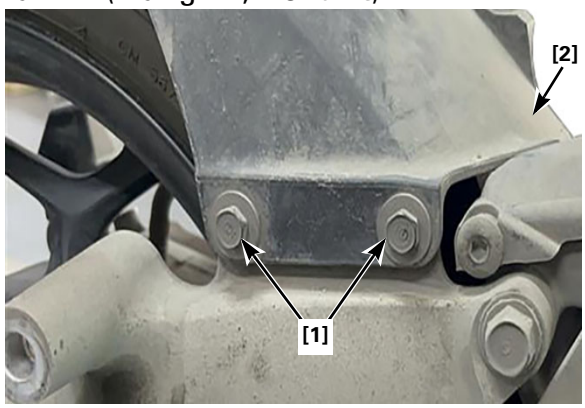
## REAR FENDER • ENGINE TOP COVER • SPEED SENSOR PROTECTOR

1. Remove the two (2) 6 x 12 mm bolt-washers [1].

   **REASSEMBLY:**
   **TORQUE:**
   10 N·m (1.0 kgf·m, 7.3 lbf·ft)

2. Remove the rear fender [2].
3. Remove two (2) 6 x 18 mm bolts [3].

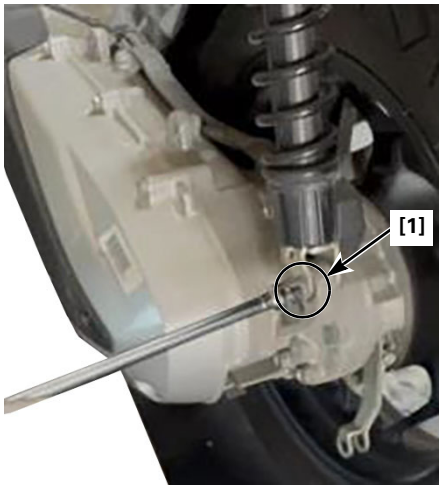
   **REASSEMBLY:**
   **TORQUE:**
   10 N·m (1.0 kgf·m, 7.3 lbf·ft)

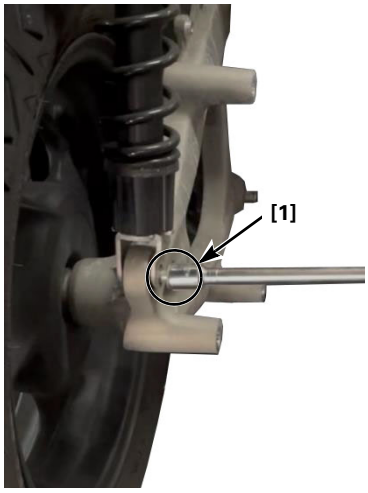



## VS SENSOR

1. Remove the two (2) rear cushion bolts [1].

   **REASSEMBLY:**
   **TORQUE:**
   24 N·m (2.4 kgf·m, 17 lbf·ft)

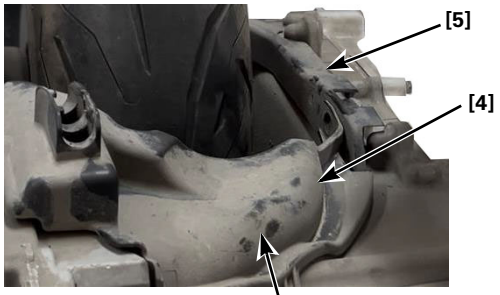


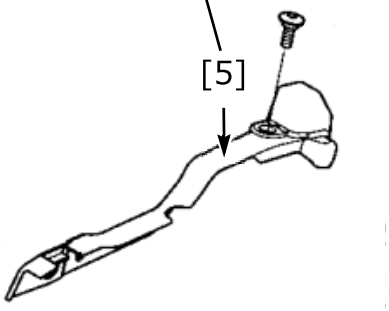




2. Remove the 6 x 18 mm bolt [2].

   **REASSEMBLY:**
   **TORQUE:**
   10 N·m (1.0 kgf·m, 7.3 lbf·ft)

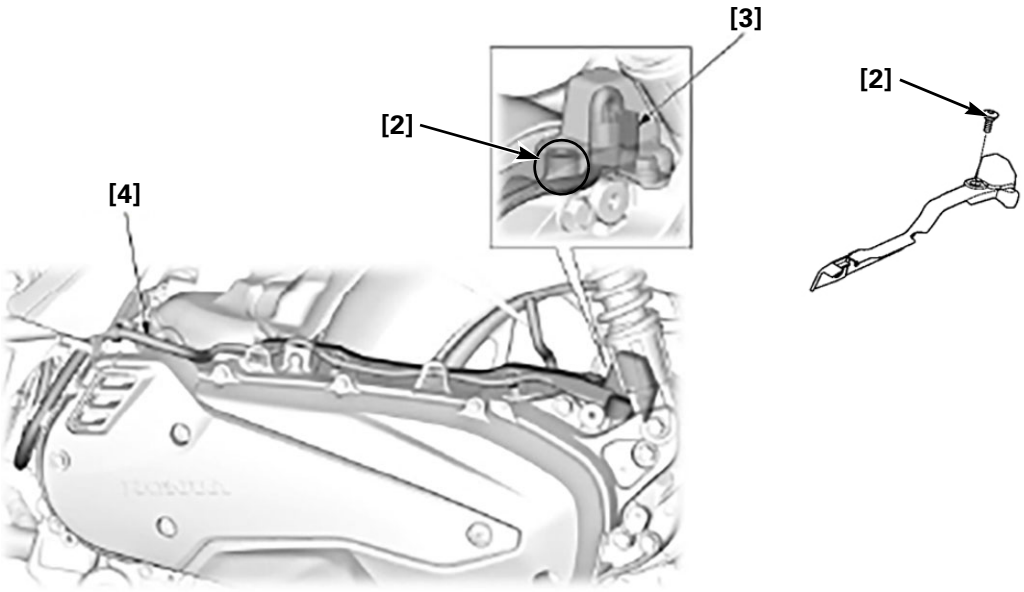
3. Remove the engine top cover [4] and the speed sensor protector [5].




4. Disconnect the VS sensor connector [3].

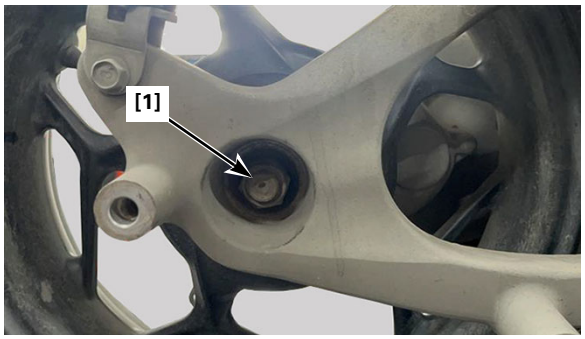
5. Disconnect the engine sub harness [4] from the left crankcase.




## ENGINE HANGER (DISCONNECTING)

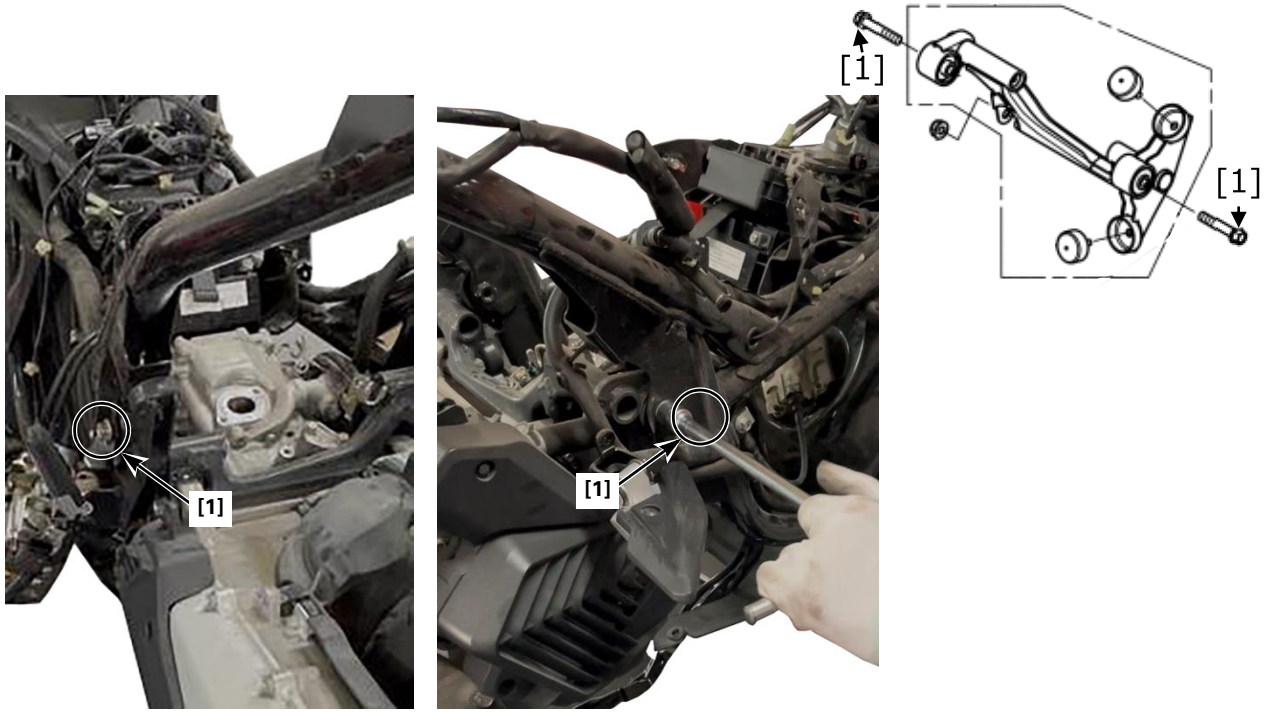
1. Remove the 16 mm nut [1].

**REASSEMBLY:**
**TORQUE:** 118 N·m (118.0 kgf·m, 97 lbf·ft)]



2. Remove the two (2) 10 x 55 mm bolts [1].

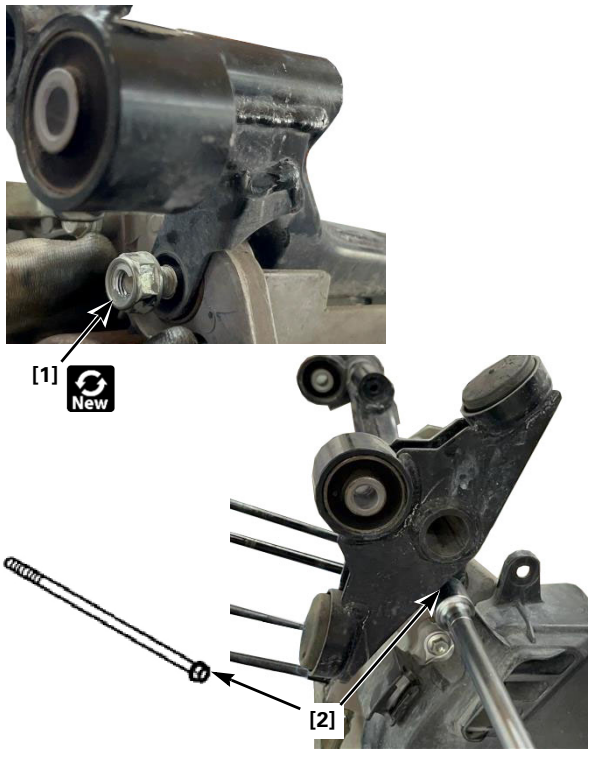
   **TORQUE:** 59 N·m (5.9 kgf·m, 43 lbf·ft)



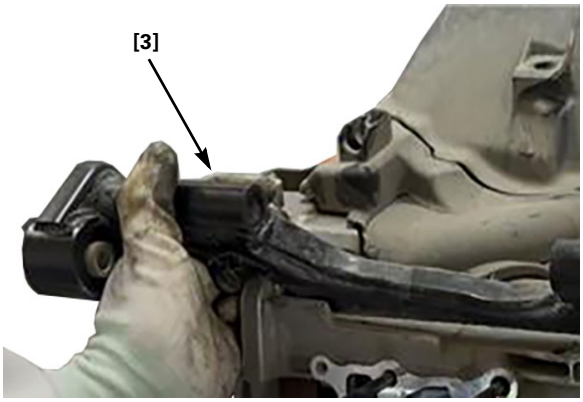

## ENGINE HANGER LINK

1. Remove the 10 mm nut [1] and 10 x 255 mm bolt [2].

   **REASSEMBLY:**
   **TORQUE:** 69 N·m (6.9 kgf·m, 50 lbf·ft)

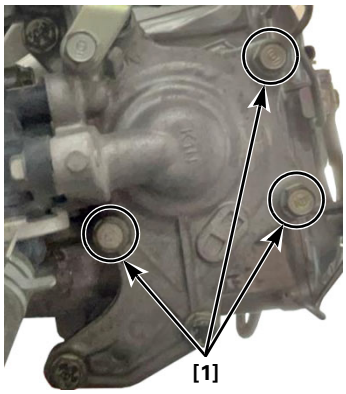


2. Remove the engine hanger link [3].

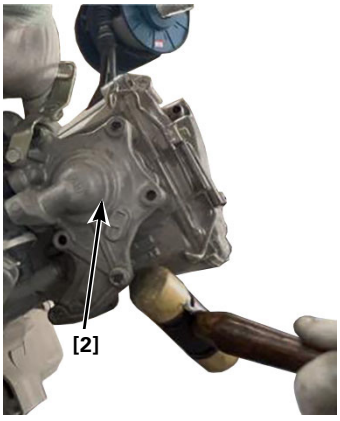



## WATER PUMP

1. Remove the three (3) 6 x 30 mm bolts [1].



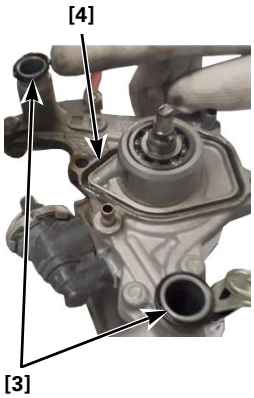

2. Remove the water pump [2].




**REASSEMBLY:**

Install the following new parts:

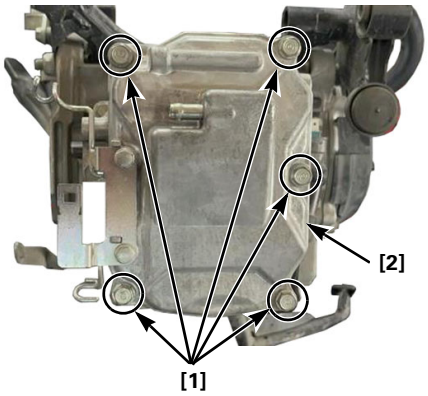
- O-ring (2 pieces) [3]
- Gasket [4]




**NOTE:** Upon installation, the water pump is driven off the camshaft, and these parts need to be lined up.

## CYLINDER HEAD COVER

1. Remove the five (5) 6 x 18 mm bolts [1].
2. Remove the cylinder head cover assembly [2].

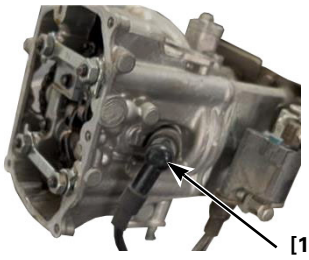



3. Install a new gasket [3].


**REASSEMBLY:**
Perform the Valve Adjustment procedure shown on page 33.

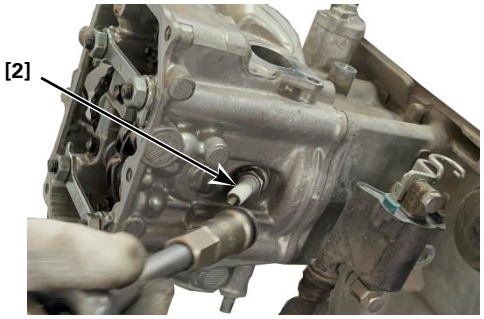
## SPARK PLUG

1. Remove the noise suppressor cap [1].



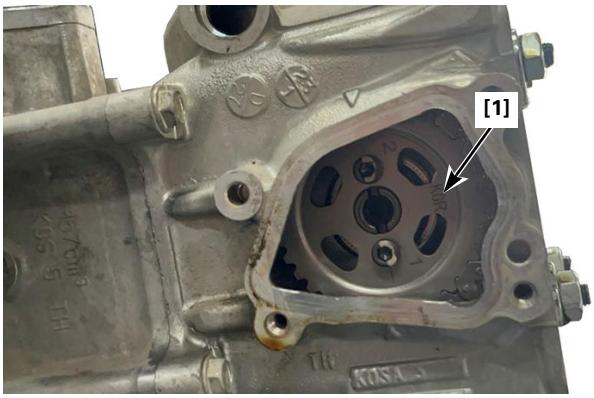

2. Remove the spark plug [2].

   **REASSEMBLY:**
   **TORQUE:** 16 N·m (1.6 kgf·m, 11.8 lbf·ft)



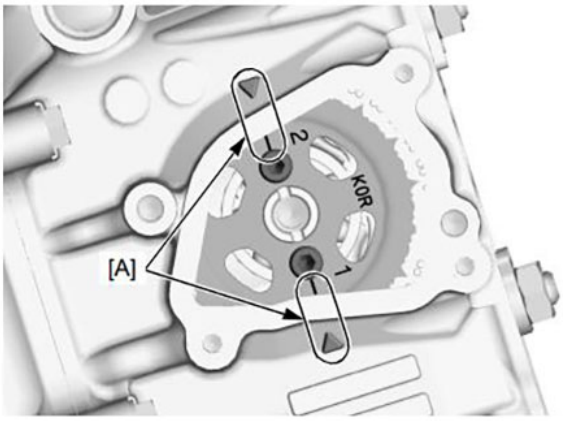

## CAM SPROCKET ADJUSTMENT

1. Adjust the cam sprocket [1].



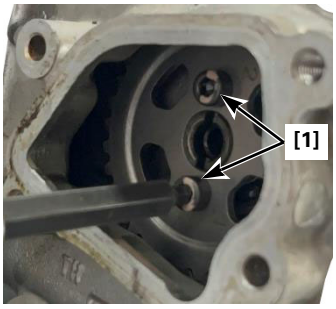

2. Ensure that the index lines [A] on the cam sprocket aligns with the index marks of the cylinder head.

**NOTE:** To align the cam sprocket, set to TDCC by temporarily reinstalling the flywheel and turning the crank

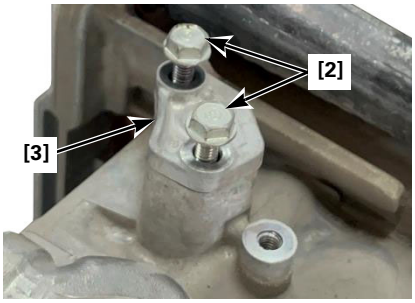



## CAM SPROCKET

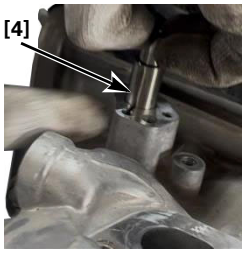
1. Loosen the two (2) bolts [1].




2. Remove the 6 x 22 mm bolt [2] at chain tensioner.
3. Remove the tensioner lifter cap [3].




4. Remove the tensioner lifter assembly [4].

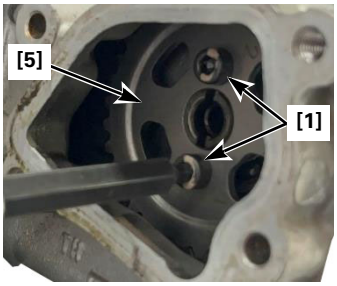


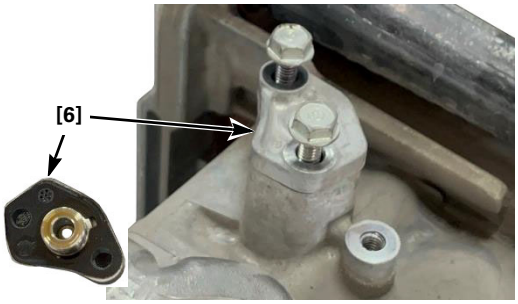
5. Remove the two (2) bolts [1].

   **REASSEMBLY:**
   **TORQUE:** 8 N·m (0.8 kgf·m, 5.9 lbf·ft)

6. Remove the cam sprocket [5].

   **REASSEMBLY:**
   Install a new gasket [6].




① Fill the inner shaft with clean engine oil.

② Gently press the inner shaft to penetrate the oil into the outer shaft.

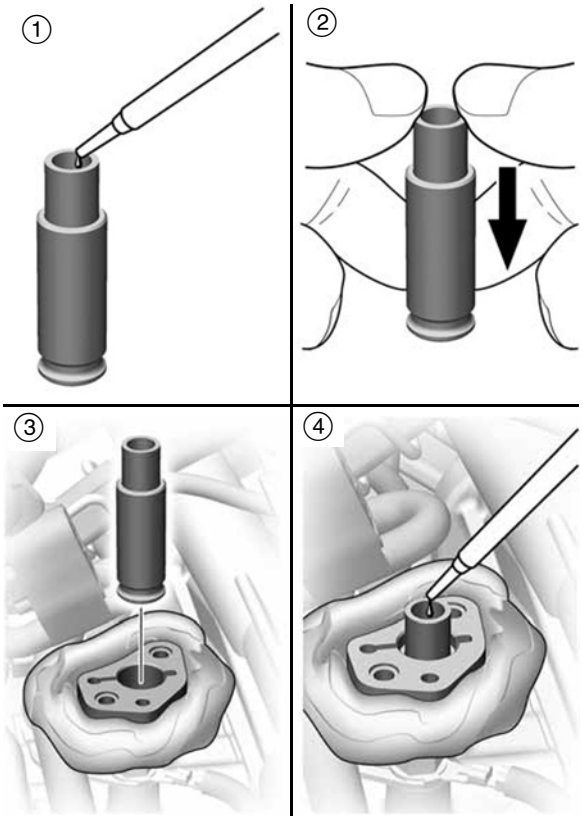
Repeat the above procedures once again.

③ Cover around the tensioner lifter base on the cylinder with a rag.

Install the cam chain tensioner lifter into the opening of the cylinder.

④ Refill the inner shaft with clean engine oil.

Install the tensioner lifter cap with a new gasket in the reverse order of removal.

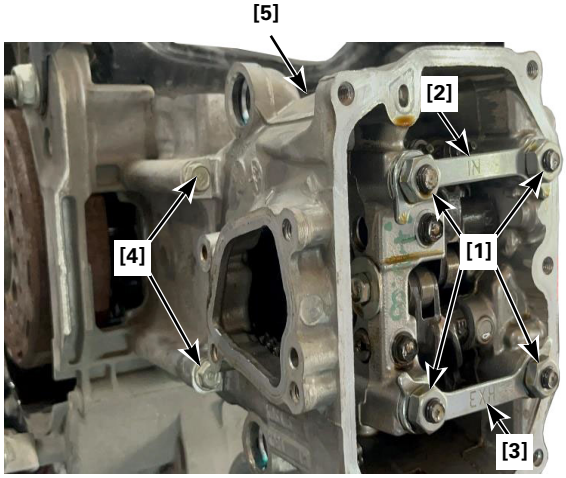


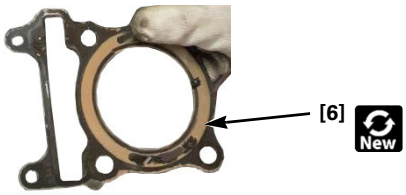
## CYLINDER HEAD

1. Remove the four (4) 8 mm nuts [1].
2. Remove the IN plate [2] and the EX plate [3].
3. Remove two (2) 6 x 90 mm bolts) [4].

   **REASSEMBLY:**
   **TORQUE:** 30 N·m (3.0 kgf·m, 22 lbf·ft) (4 places) [1]
4. Remove the cylinder head [5].

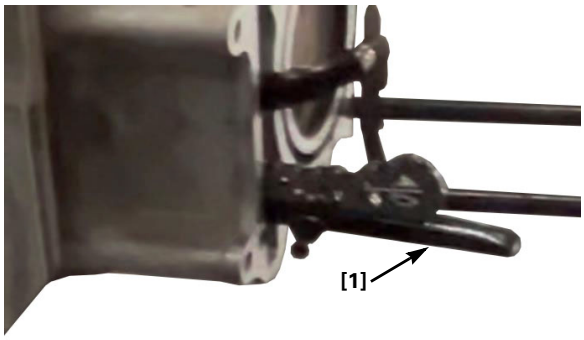
   **REASSEMBLY:**
   Replace the gasket [6] with a new one.



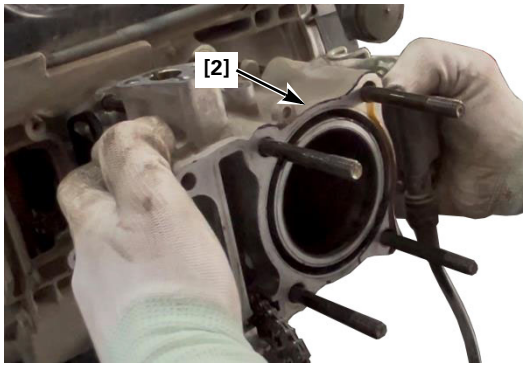




## CYLINDER BODY

1. Remove the cam chain guide [1].

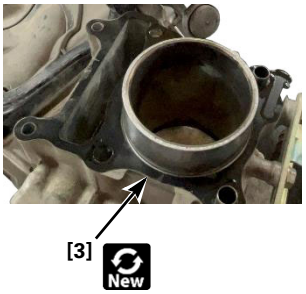



2. Remove the cylinder [2].



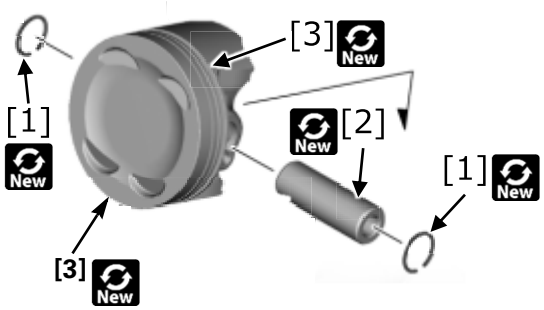

**REASSEMBLY:**
Install the following new parts:

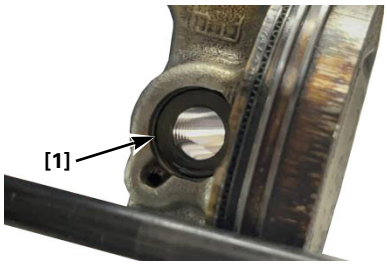
- Cylinder [2]
- Gasket [3]



## PISTON

1. Remove the two (2) piston pin clips [1].
2. Remove the piston pin [2].
3. Remove the piston [3].



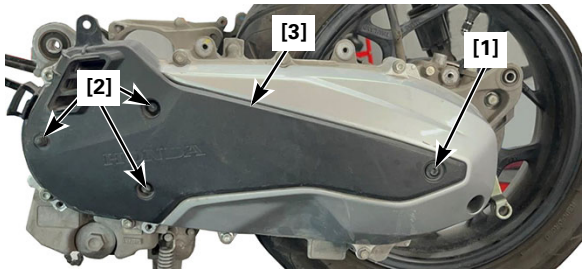

**REASSEMBLY:**
Install the following new parts:

- Piston pin clip (2 pieces) [1]
- Piston pin [2]
- Piston [3]
- Piston rings set

## LEFT COVER DUCT

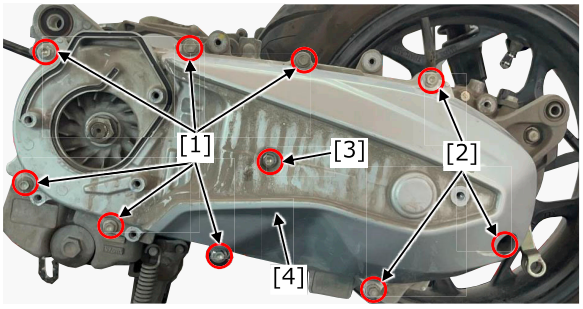
1. Remove the 6 x 18 mm socket bolt [1].

   **REASSEMBLY:**
   **TORQUE:** 10 N·m (1.0 kgf·m, 7.3 lbf·ft)
2. Remove the three (3) 6 x 18 mm flange bolts) [2].
3. Remove the left cover duct [3].



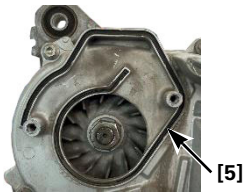

## LEFT SIDE COVER

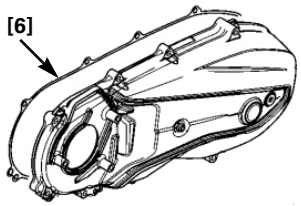
1. Remove the six (6) 6 x 8 mm bolts [1].
2. Remove the three 6 x 45 mm bolts [2].
3. Remove the 6 x 65 mm bolt [3].
4. Remove the left side cover [4].




**REASSEMBLY:**
Install the following new parts:

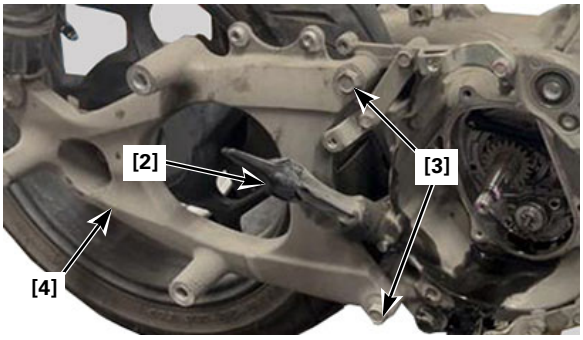
- Seal [5]
- Gasket [6]




## RIGHT REAR SWING ARM

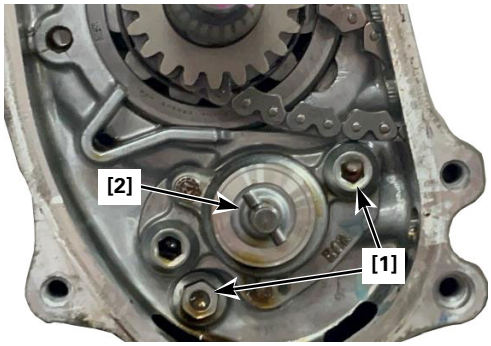
1. Remove the following:
   - Oil level gauge [2]
   - Two (2) 10 x 40 mm bolt-washers [3]
   - Right rear swing arm [4]



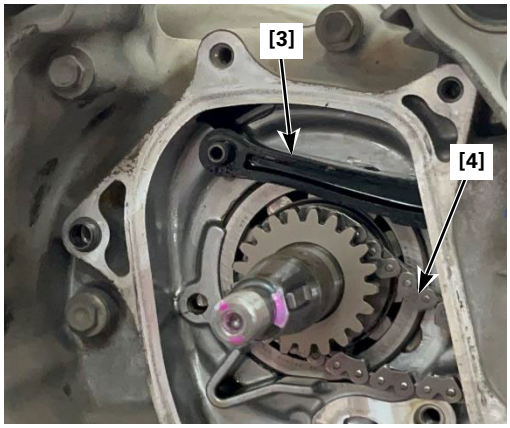
## RIGHT CRANKCASE

**NOTE**: Move the engine to an oil drain table to prevent oil leaks to the working area.

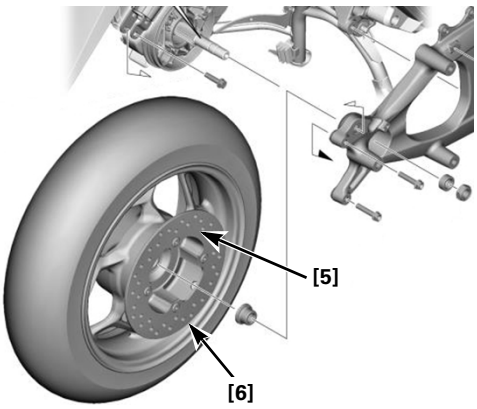
1. Remove the two (2) 6 x 19 mm special bolts [1], and the remove the oil pump [2].



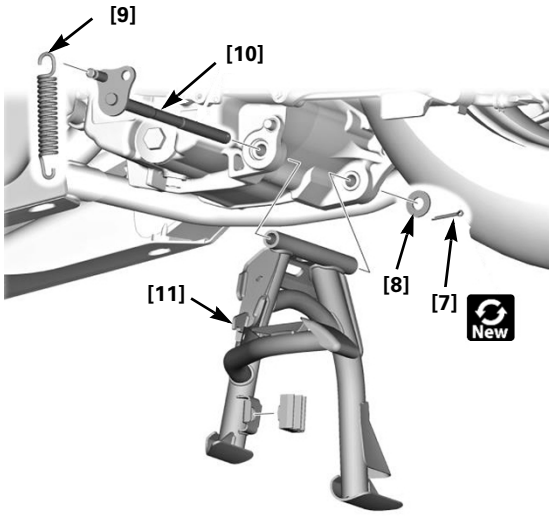

2. Remove the cam chain tensioner [3], and then remove the cam chain [4].



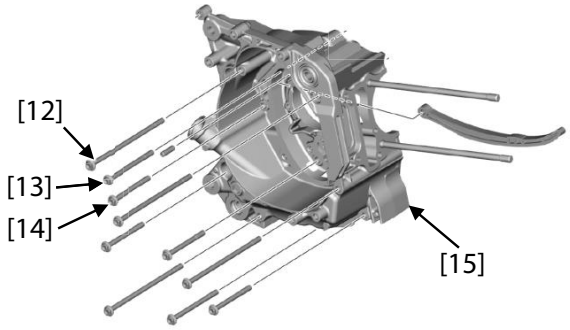

3. Remove the rear wheel [5] and collar [6].




4. Remove the following:
   - Split pin [7] (Replace with a new one.)
   - Washer [8]
   - Spring [9]
   - Shaft [10]
     GREASE: Shaft
   - Main stand [11]

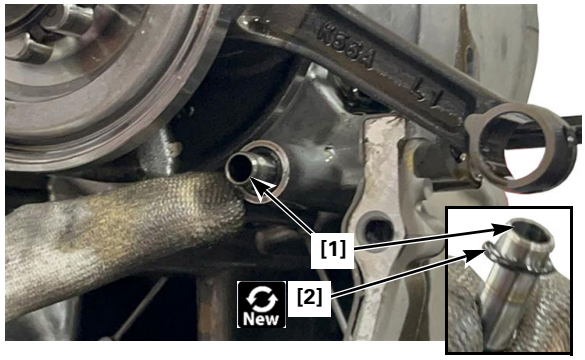


5. Remove the following:
   - Four (4) 6 x 130 mm flange bolts [12]
   - Two (2) 6 x 80 mm flange bolts [13]
   - Four (4) 6 x 65 mm flange bolts [14]
   - Right crankcase [15]




## CRANKSHAFT REMOVAL

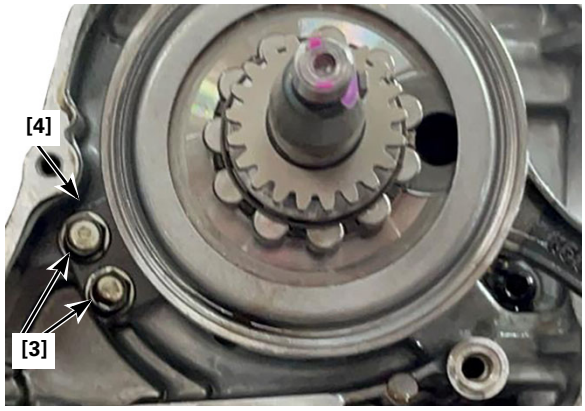
1. Remove the dowel pin [1] and O-ring [2].




2. Remove the two (2) 6 x 16 mm bolts [3] and bearing setting plate [4].

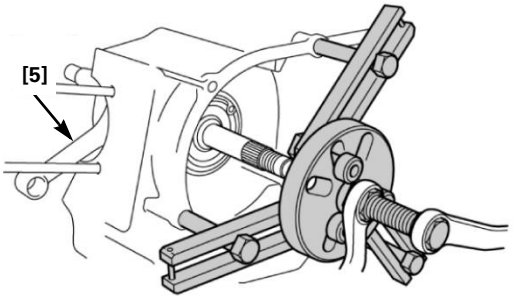
   Apply Loctite® to bolts before reassembly.

   **REASSEMBLY:**
   **TORQUE:** 12 N·m (1.2 kgf·m, 8.8 lbf·ft)

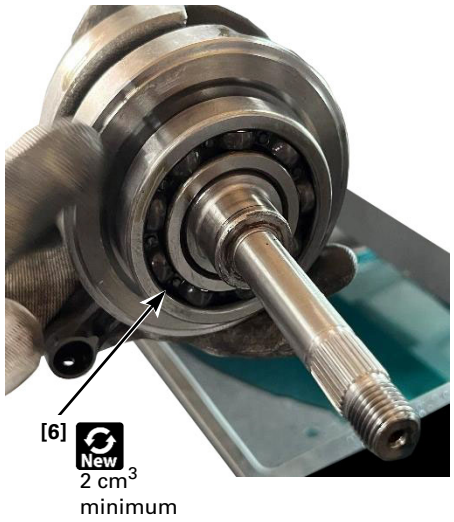



3. Remove the crankshaft [5].

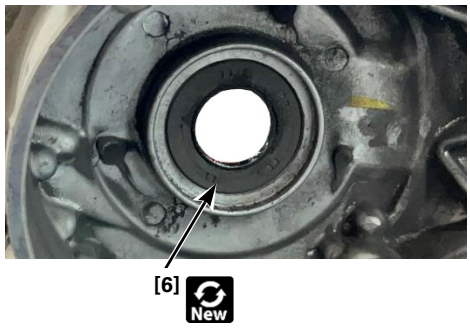
   **TOOLS:**
   - Case puller: 07SMC-0010001
   - Universal bearing puller: 07631-0010000




4. Coat with oil at the bearing and crankcase contact point [6].




5. Remove the oil seal [7].



## CRANKSHAFT REASSEMBLY

1. Install the following new parts:
   - O-ring [2]
   - Bolt - 6 x 16 mm (2 pieces) [3] Apply Loctite®.

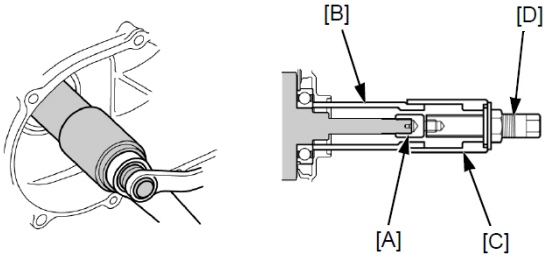
   Coat the seal with oil to ease installation.Crankshaft [5]
   - Woodruff key
   - Bearing [6]
   - Oil seal [7]

**NOTES:**

(1) Pull the crankshaft into the left crankshaft bearing until it is fully seated.

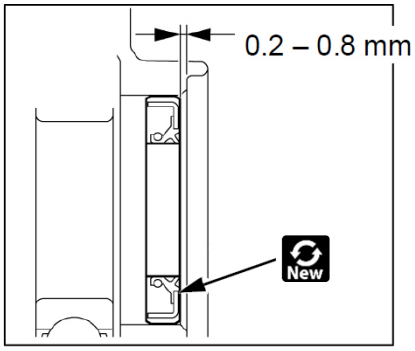
**TOOLS:**

- [A] Threaded Adapter M14 x 1.5 mm: 07WMF-KFF0200
- [B] Collar 30.1 x 40/37 x 42.7: 07965-VM00100
- [C] Collar 40.2 x 48.6: 07931-KF00100
- [D] Threaded Shaft 12 x 1.25 x 80L: 07965-VM00200

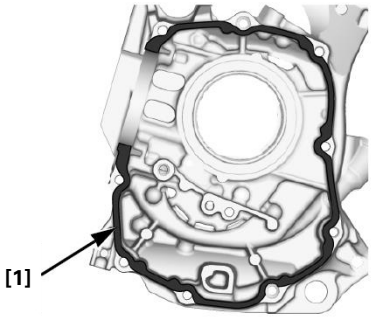



(2) Install a new oil seal to the left crankcase with the specified depth.

**NOTE:** Coat the seal with oil to ease installation.

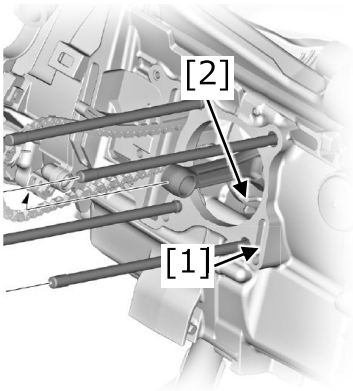



(3) Apply sealant (ThreeBond® TB1215, TB1207B, LOCTITE® 5060S, 5020 or equivalent) to the right crankcase mating surface [1].

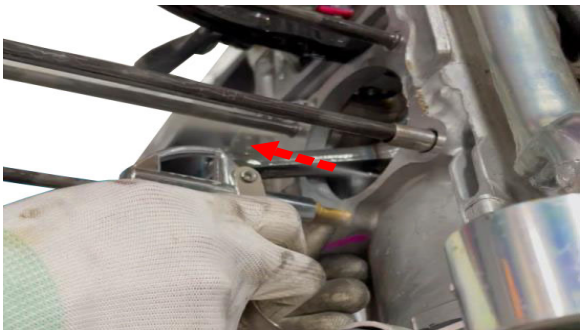



## OIL PASSAGE CLEANING

1. Spray brake cleaner to clean oil jet passage [1].
2. Blow pressurized air into this oil jet passage.
3. Confirm if pressurized air can get out from the oil jet orifice [2] properly.




4. Blow pressurized air into the oil jet passage.

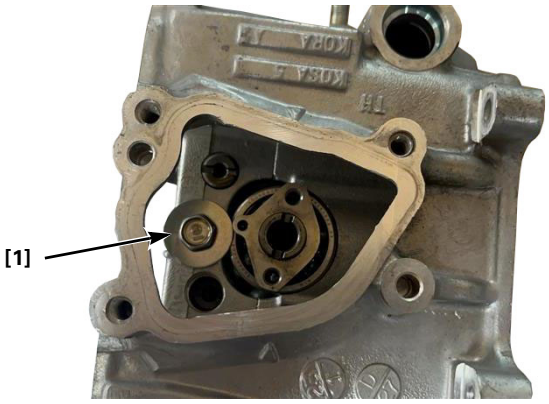


5. Check that the pressurized air comes out from the oil jet orifice.

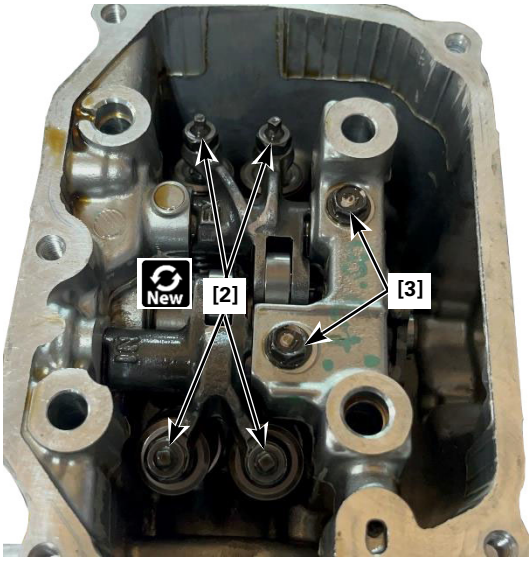
## CYLINDER HEAD DISASSEMBLY

1. Remove bolt-washer [1].

   **REASSEMBLY:**
   **TORQUE:** 10 N·m (1.0 kgf·m, 7.3 lbf·ft)



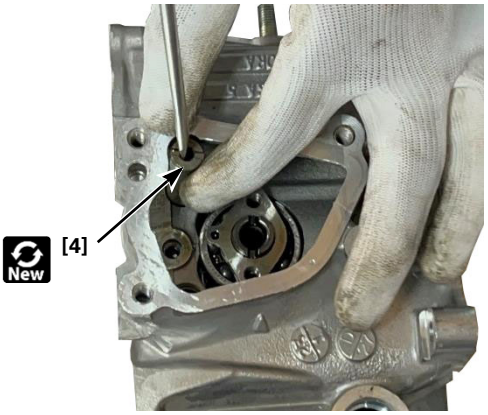

2. Loosen nut and tappet adjusting screw (4 pieces) [2].

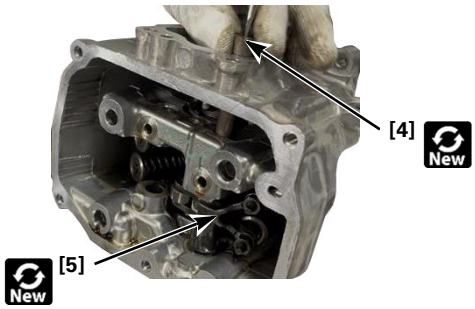


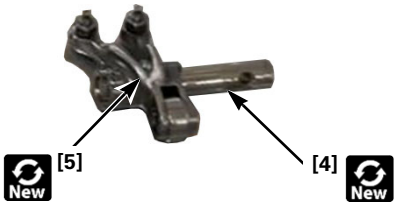

3. Remove bolt (2 pieces) [3].

   **REASSEMBLY:**
   **TORQUE:** 5 N·m (0.5 kgf·m, 3.6 lbf·ft)

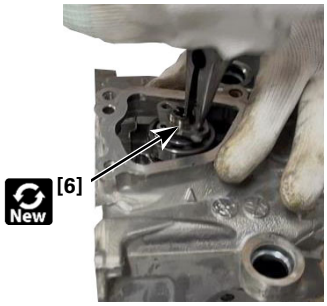
4. Remove rocker arm shaft (2 places) [4].
5. Remove valve rocker arm (EX, IN) [5].

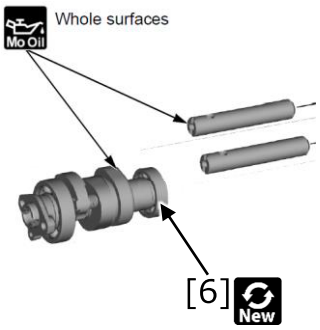


6. Remove camshaft [6].




**REASSEMBLY:**
Install the following new parts:

- Nut and tappet adjusting screw (4 pieces) [2]
- Rocker arm shaft (2 pieces) [4]
- Valve rocker arm (EX, IN) [5]
- Camshaft [6]

Coat the cam lobes with moly oil.

## INSTALLATION

Reassembly is the reverse of the disassembly procedure. Also refer to the additional information on page 10.

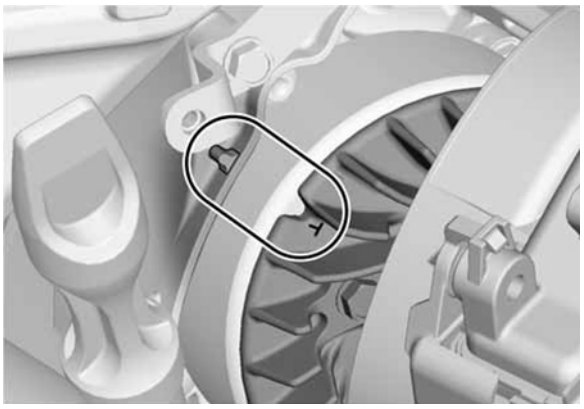
Be sure to install BOTH the oil pump driven gear kit and the engine parts kit, as described in the Parts Information section.

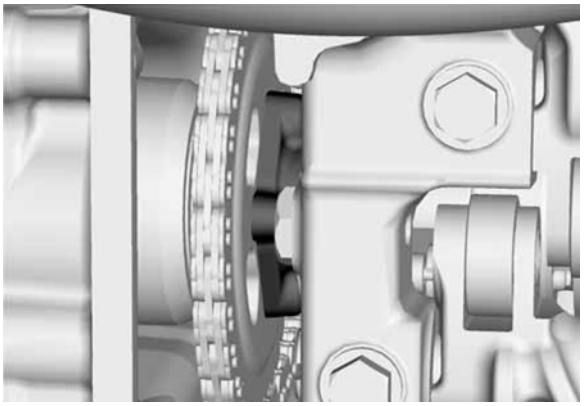
Inspect, adjust, and reset all necessary items:

- Valve Clearance Adjustment (page 33)
- Oil Refill (page 34)
- Coolant Refill and Air Bleeding (page 35)
- Oil change indicator reset (after oil change) (page 35)
- Throttle cable check and adjustment (page 36)
- TP Sensor Reset (page 36)

### VALVE CLEARANCE ADJUSTMENT

1. Inspect and adjust while the engine is cold (below 35°C).

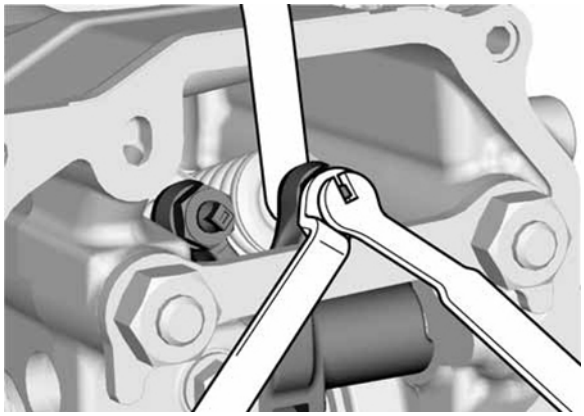




2. After the valve clearance inspection, check the engine idle speed.

3. Install a new gasket [3].


4. Turn the crankshaft in rotating direction slowly and align the cut-out ("T" mark) with the lug on the right crankcase.
5. Confirm the TDC (Top Dead Center) on the compression stroke by checking the tab [A] on the camshaft flange faces to the cylinder head cover side. If the tab can not be seen, rotate the crankshaft one full turn slowly and recheck.
6. Valve clearance (Insert a feeler gauge between the valve adjusting screw and valve stem).



**IN:** 0.10 ±0.02 mm, **EX:** 0.24 ±0.02 mm

**TOOL:** Tappet Adjusting Wrench 3 x 4: 07908-KE90200)

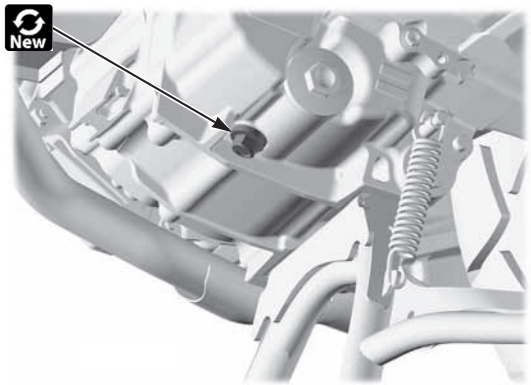
7. Loosen the lock nut and turn the adjusting screw until there is a slight drag on the feeler gauge.
8. Hold the adjusting screw and tighten the lock nut.
9. Recheck after tightening.

## OIL REFILL

1. Install a **new** 12 mm drain washer (p/n 94109-12000) and then tighten the oil drain plug.

   **TORQUE:** 24 N·m (2.4 kgf·m, 17.7 lbf·ft)

2. Refill the crankcase with new engine oil.




**RECOMMENDED ENGINE OIL:**

Pro Honda HP4M (with molybdenum additives) 4-stroke oil (U.S.A. & Canada) or equivalent motorcycle oil.

API service classification: SJ or higher

JASO T903 standard: MB

Viscosity: SAE 10W-30

**ENGINE OIL CAPACITY:**

0.75 Liter after draining

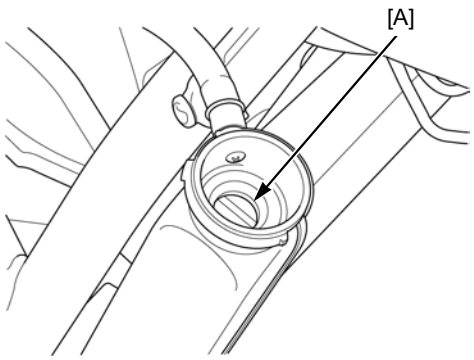
0.85 Liter after oil strainer screen cleaning

0.9 Liter after disassembly

## COOLANT REFILL AND AIR BLEEDING

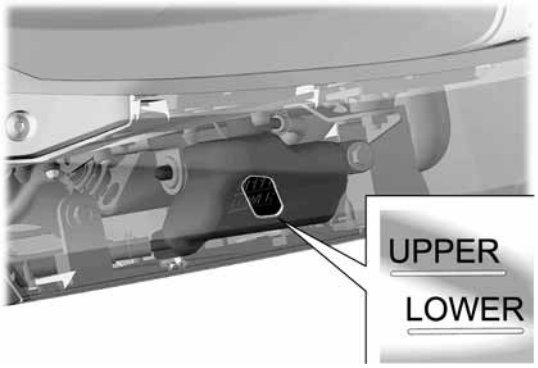
**NOTE:** When filling the system with new coolant, or checking the coolant level, support the vehicle in an upright position on a flat, level surface.

1. Fill the system with NEW coolant through the filler opening to the filler neck [A].

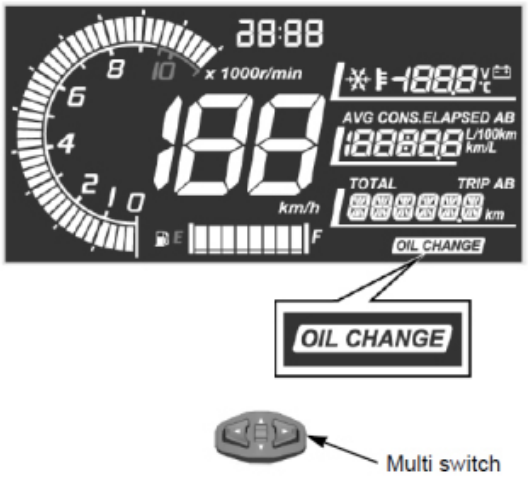



**RECOMMENDED ANTIFREEZE:**
Pro Honda HP Coolant or an equivalent high-quality ethylene glycol antifreeze containing corrosion protection inhibitors.

2. Bleed air from the system:
   a. Start the engine and let it idle for 2 ~ 3 minutes.
   b. Snap the throttle 3 ~ 4 times to bleed air from the system.
3. Stop the engine and add coolant up to the filler neck.
4. Screw in the radiator cap until its boss is contacting the lug of the radiator.
5. Fill the reserve tank with coolant to the upper level line.




## OIL CHANGE INDICATOR RESET (AFTER OIL CHANGE)




The indicator is turned on whenever the running distance reaches the programmed oil change interval. When the oil change indicator displays, reset the indicator after changing the engine oil. The oil change indicator displays for the first time when the running distance reaches 600 miles (1,000 km).

The oil change indicator displays when the running distance reaches every 4,000 miles (6,000 km) after the first indication was reset.

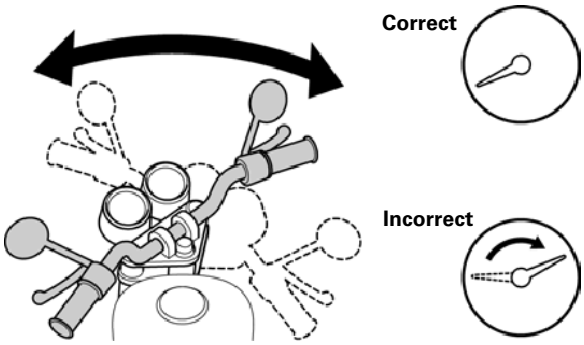
If the oil is changed before the oil change indicator displays, be sure to reset the oil change indicator after changing the oil. Press and hold the ◄ and ► of the multi-switch while turning the ignition switch to the ON position and keep holding them until the oil change indicator distance starts flashing.

Press and hold the multi-switch to the ►. The oil change indicator and remaining distance are reset. If you do not reset the oil change indicator, press the ▼ of the multi-switch.

## THROTTLE CABLE CHECK AND ADJUSTMENT

**NOTE:** Reusing a damaged or abnormally bent or kinked throttle cable can prevent proper throttle slide operation and may lead to a loss of throttle control while riding.

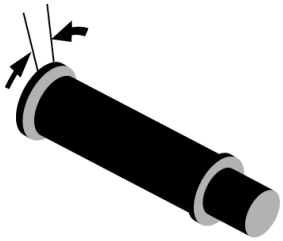
1. Check for any deterioration or damage to the throttle cable.
2. Check the throttle grip for smooth operation. Check that the throttle opens and automatically closes in all steering positions.




3. If the throttle grip does not return properly, check the throttle cable routing and lubricate the throttle grip housing.
4. If the throttle grip still does not return properly, replace the throttle cable.

### Throttle Grip Freeplay

1. After adjustment, verify correct throttle freeplay in all steering position.

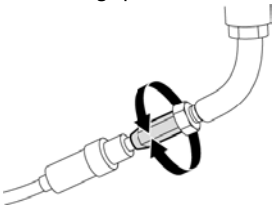


2. Measure the throttle grip freeplay.

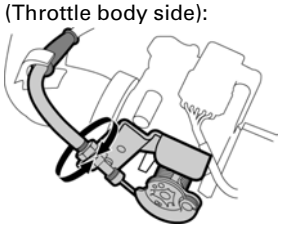
   THROTTLE GRIP FREEPLAY:
   2 ~ 6 mm (0.1 ~ 0.2 in)

3. If the screw portion of the throttle grip side adjuster is small, it is necessary to adjust the freeplay on the throttle body side after screwing the adjuster all the way and returning it one rotation.

Minor Adjuster (Throttle grip side):



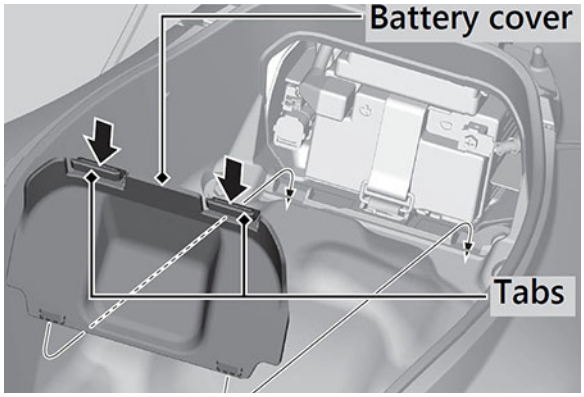
Major Adjuster (Throttle body side):



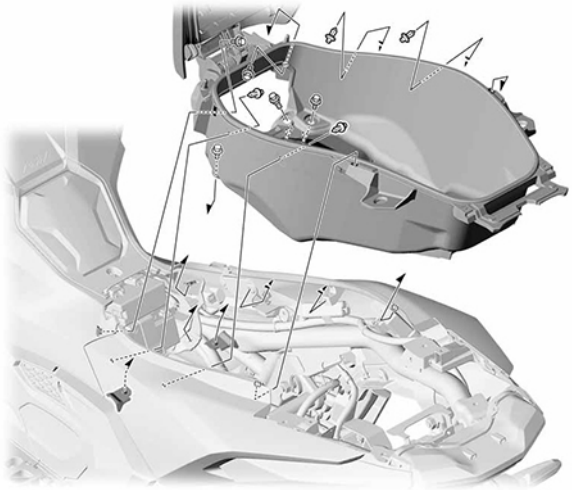
4. Minor adjustment (Throttle grip side: Loosen the lock nut and turn the adjuster as required. After adjustment, hold the adjuster and tighten the lock nut.)
5. Major adjustment (Throttle body side: Loosen the lock nut and turn the adjuster as required. After adjustment, hold the adjuster and tighten the lock nut.)

## TP SENSOR RESET

1. Ensure that DTC is not stored in ECM. If the DTC is stored in ECM, TP sensor reset mode will not start by following the procedure below.
2. Remove the battery box lid.



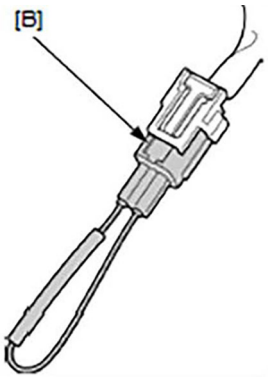
3. Remove the luggage box.



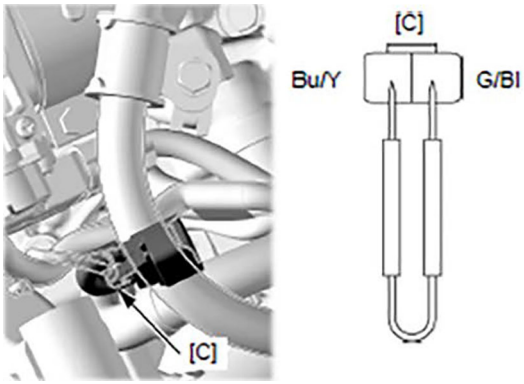
4. Remove the dummy connector [A] from the DLC.


5. Connect the special tool to the DLC.

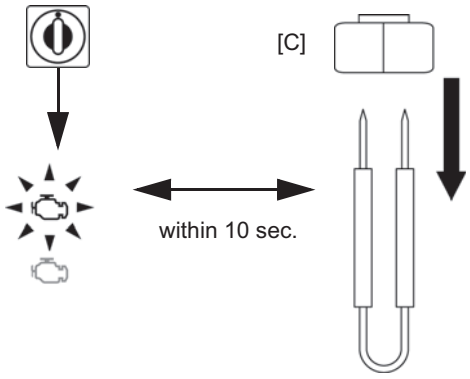
   **TOOL:** SCS Short Connector:
   070MZ-001A300




6. Remove the ECT sensor 2P connector [C].



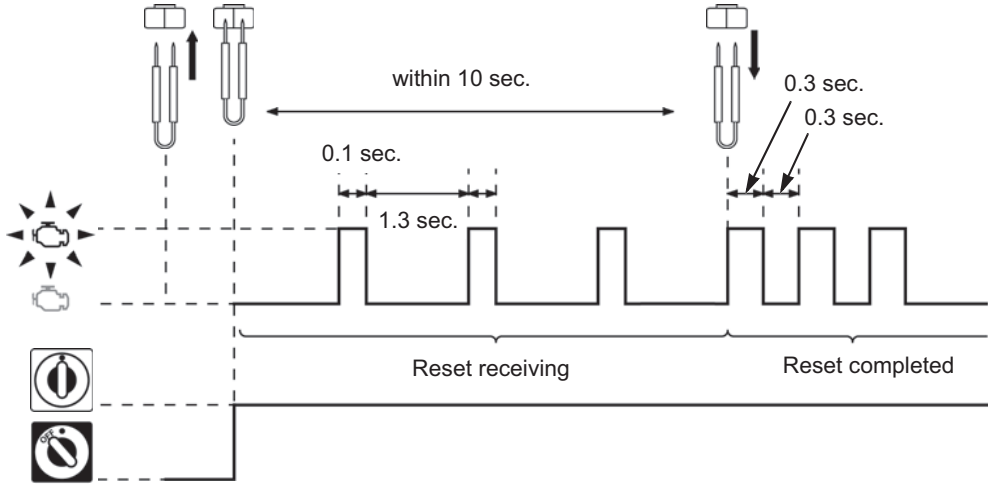

7. Short the main wire harness side ECT sensor 2P connector terminals with jumper wire.
   Connection: Bu/Y - G/BI
8. Tum the ignition switch ON.
9. Disconnect the jumper wire from the ECT sensor 2P connector [C] within 10 seconds while the MIL is blinking (reset receiving pattern).



10. Check for the MIL blinks.

    After disconnecting the jumper wire, the MIL should start blinking. (reset completed pattern)

    If the jumper wire is connected for more than 10 seconds, the MIL will stay ON (unsuccessful pattern). Try again from the first.




11. Check the engine idle speed.

## CONTROLLED PARTS ORDER PROCEDURE

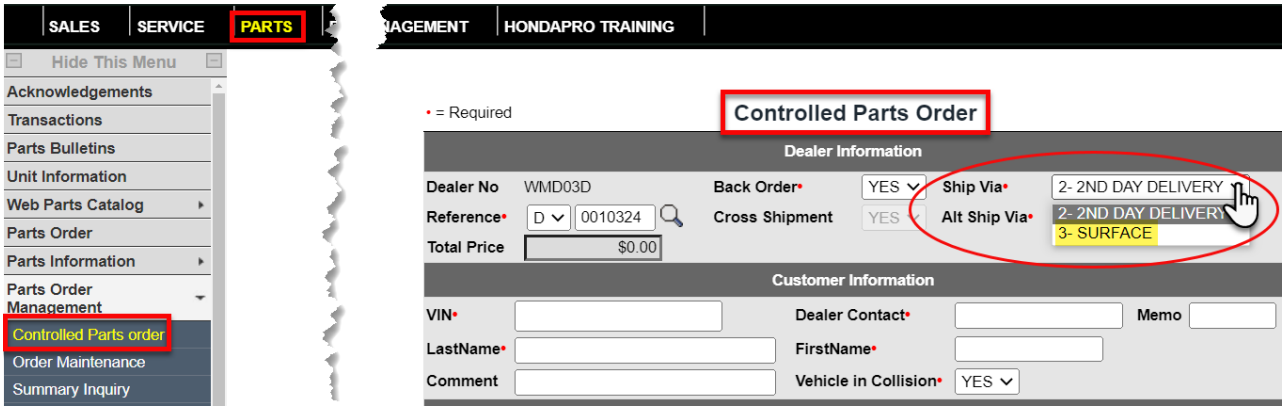
To order parts through the Controlled Parts Order process, follow the steps below:

1. From the ***iN*** home page go to:

   Parts > Parts Order Management > Controlled Parts Order

   Select the desired shipping method from the *Ship Via* drop down list.

   **NOTE:** The default *Ship Via* is 2ND DAY DELIVERY, which will incur additional freight charges to the dealer. Normal freight charges apply if the order does not meet the pre-paid freight minimum.




2. Enter the required information: *VIN, Dealer Contact, Customer Name, Part Number* and *Quantity* (you may order only one (1) part per part number).
3. Set *Vehicle in Collision* and *Specification Label Request* to *NO*.
4. Click Submit.