A Few Words About Safety

Service Information

The service and repair information contained in this manual is intended for use by qualified, professional technicians.
Attempting service or repairs without the proper training, tools, and equipment could cause injury to you or others. It could also damage the vehicle or create an unsafe condition.

This manual describes the proper methods and procedures for performing service, maintenance, and repairs. Some procedures require the use of specially designed tools and dedicated equipment. Any person who intends to use a replacement part, service procedure or a tool that is not recommended by Honda, must determine the risks to their personal safety and the safe operation of the vehicle.

If you need to replace a part, use genuine Honda parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.

For Your Customer's Safety

Proper service and maintenance are essential to the customer's safety and the reliability of the vehicle. Any error or oversight while servicing a vehicle can result in faulty operation, damage to the vehicle, or injury to others.

⚠WARNING

Improper service or repairs can create an unsafe condition that can cause your customer or others to be seriously hurt or killed.

Follow the procedures and precautions in this manual and other service materials carefully.

For Your Safety

Because this manual is intended for the professional service technician, we do not provide warnings about many basic shop safety practices (e.g., Hot parts–wear gloves). If you have not received shop safety training or do not feel confident about your knowledge of safe servicing practice, we recommended that you do not attempt to perform the procedures described in this manual.

Some of the most important general service safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing service and repair procedures. Only you can decide whether or not you should perform a given task.

⚠WARNING

Failure to properly follow instructions and precautions can cause you to be seriously hurt or killed.

Follow the procedures and precautions in this manual carefully.

Important Safety Precautions

Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and using safety equipment. When performing any service task, be especially careful of the following:

- Read all of the instructions before you begin, and make sure you have the tools, the replacement or repair parts, and the skills required to perform the tasks safely and completely.
- Protect your eyes by using proper safety glasses, goggles or face shields any time you hammer, drill, grind, pry or work around pressurized air or liquids, and springs or other stored-energy components. If there is any doubt, put on eye protection.
- Use other protective wear when necessary, for example gloves or safety shoes. Handling hot or sharp parts can cause severe burns or cuts. Before you grab something that looks like it can hurt you, stop and put on gloves.
- Protect yourself and others whenever you have the vehicle up in the air. Any time you lift the vehicle, either with a hoist or a jack, make sure that it is always securely supported. Use jack stands.

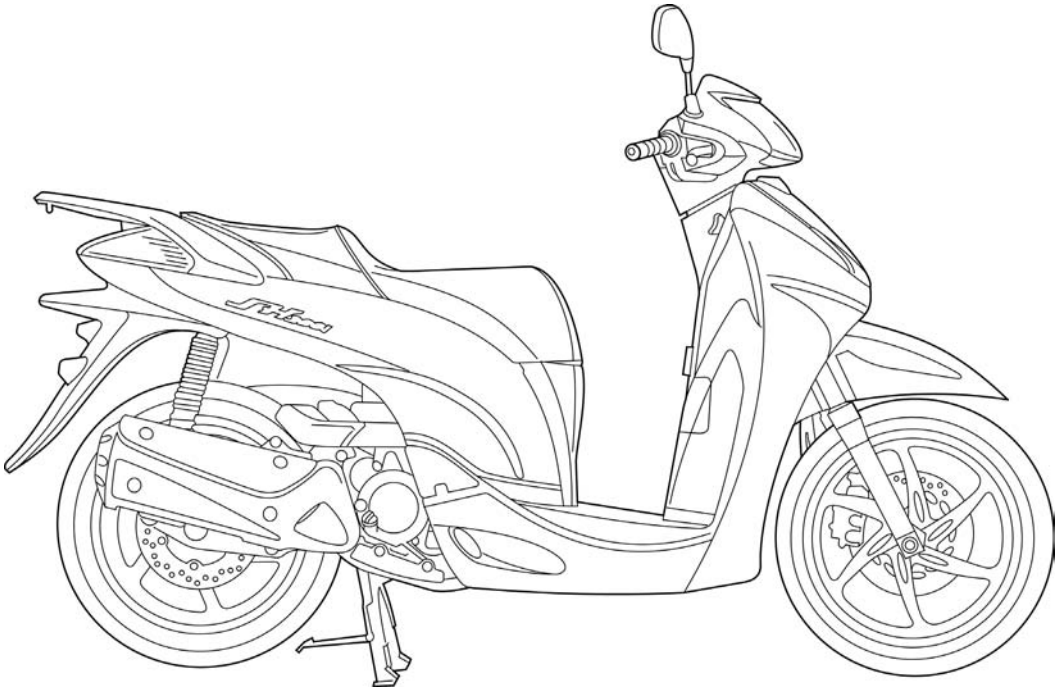
Make sure the engine is off before you begin any servicing procedures, unless the instruction tells you to do otherwise.
This will help eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust. Be sure there is adequate ventilation whenever you run the engine.
- Burns from hot parts or coolant. Let the engine and exhaust system cool before working in those areas.
- Injury from moving parts. If the instruction tells you to run the engine, be sure your hands, fingers and clothing are out of the way.

Gasoline vapors and hydrogen gases from batteries are explosive. To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries.

- Use only a nonflammable solvent, not gasoline, to clean parts.
- Never drain or store gasoline in an open container.
- Keep all cigarettes, sparks and flames away from the battery and all fuel-related parts.

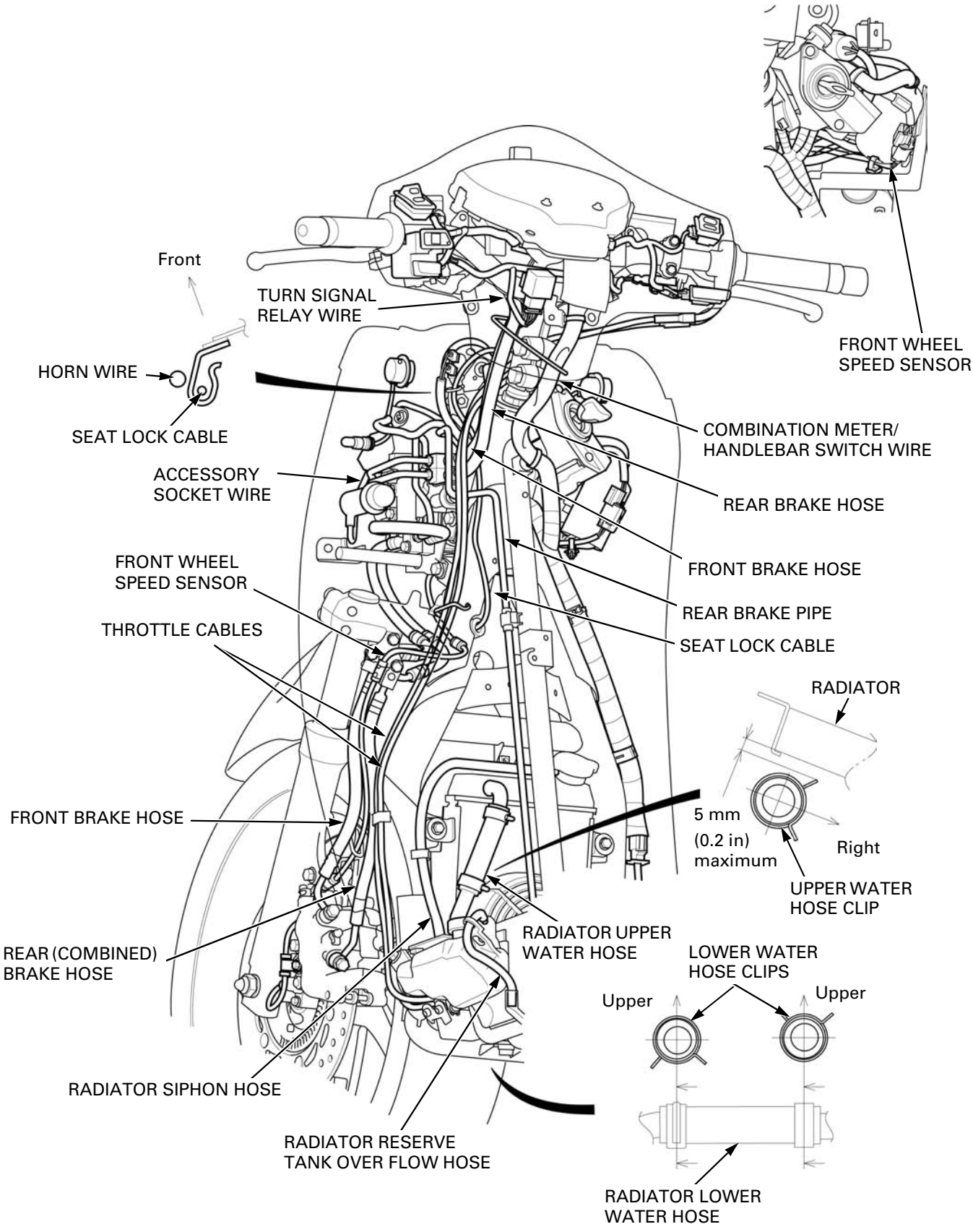
MODEL IDENTIFICATION



SERIAL NUMBERS

The Vehicle Identification Number (V.I.N.) is stamped on the right side of the frame near the rear shock absorber.

The registered number plate is attached on the left side of the frame near the rear shock absorber.


Front
TURN SIGNAL RELAY WIRE
HORN WIRE
SEAT LOCK CABLE
ACCESSORY SOCKET WIRE
FRONT WHEEL SPEED SENSOR
THROTTLE CABLES
FRONT BRAKE HOSE
REAR (COMBINED) BRAKE HOSE
RADIATOR SIPHON HOSE
RADIATOR RESERVE TANK OVER FLOW HOSE
FRONT WHEEL SPEED SENSOR
COMBINATION METER/ HANDLEBAR SWITCH WIRE
REAR BRAKE HOSE
FRONT BRAKE HOSE
REAR BRAKE PIPE
SEAT LOCK CABLE
RADIATOR
5 mm (0.2 in) maximum
Right
UPPER WATER HOSE CLIP
RADIATOR UPPER WATER HOSE
LOWER WATER HOSE CLIPS
Upper
Upper
RADIATOR LOWER WATER HOSE

REAR FENDER

REAR FENDER A

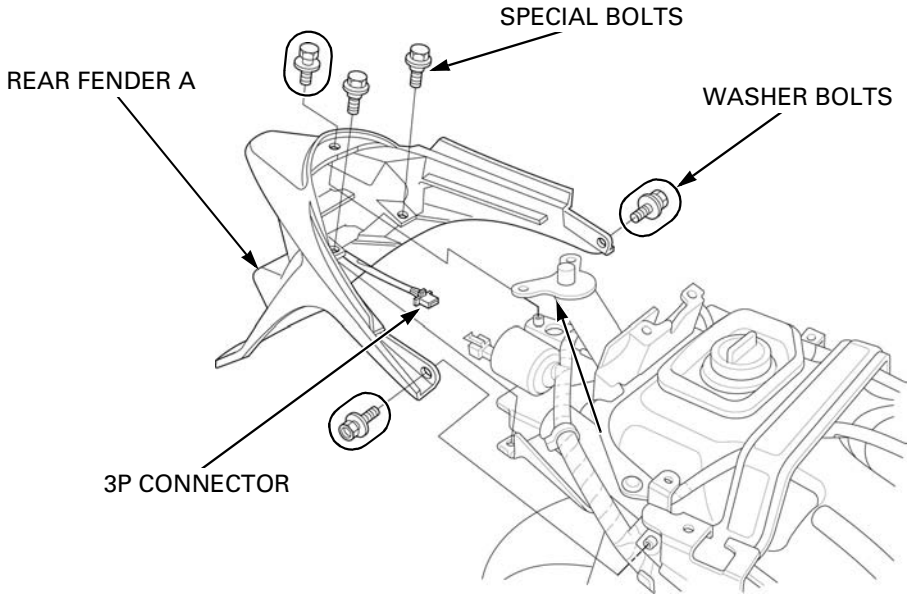
Remove the body cover (page 3-6).

Remove the following:

– license light 3P (black) connector
– two special bolts
– three washer bolts
– rear fender A

Route the license light wire properly (page 1-19).

Installation is in the reverse order of removal.



REAR FENDER B

Remove the rear fender A (page 3-7).

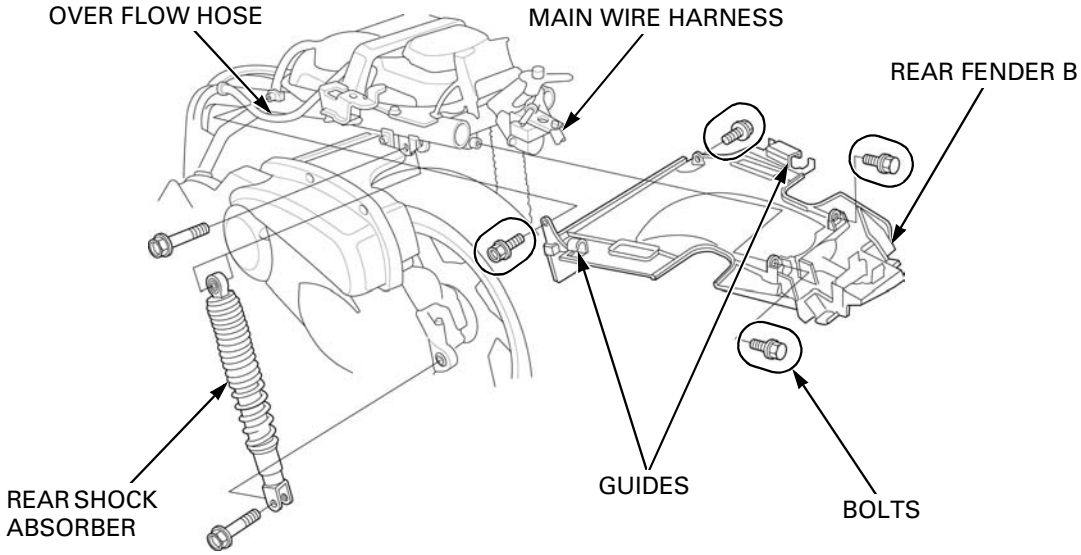
Support the swingarm securely.
Remove either rear shock absorber (page 16-12).

Remove the ECM (page 6-65).
Remove the fuel pump/engine stop relays (page 6-69) from the rear fender B.
Release the main wire harness and fuel tank over flow hose from the guides of rear fender B.

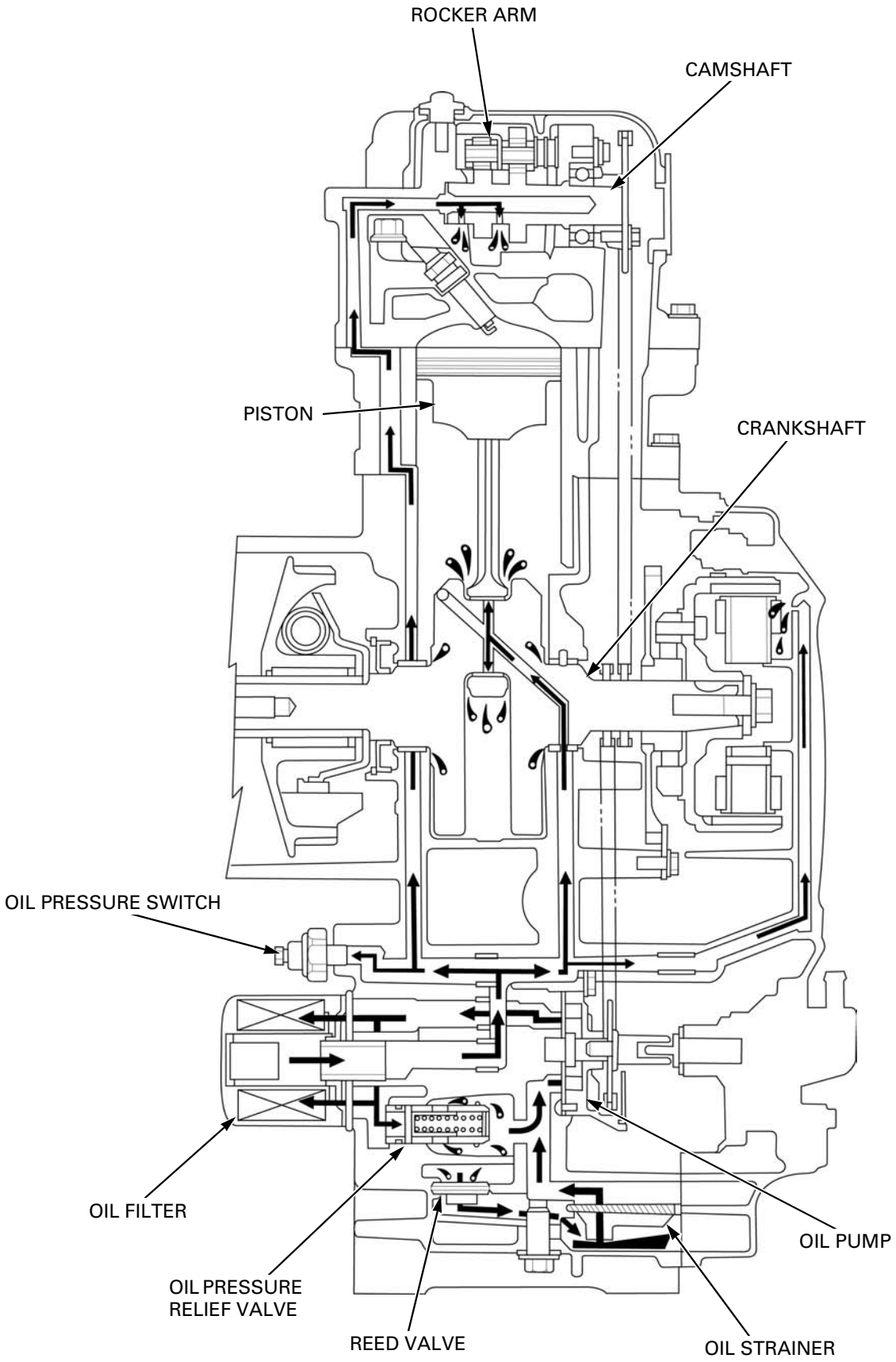
Remove the four bolts and the rear fender B.

Route the wires properly (page 1-19).

Installation is in the reverse order of removal.



LUBRICATION SYSTEM DIAGRAM



2. MAP Sensor Inspection

Turn the ignition switch "OFF".

Disconnect the sensor unit 5P (Black) connector.

Connect the MAP sensor terminals at the wire harness side with a jumper wire.

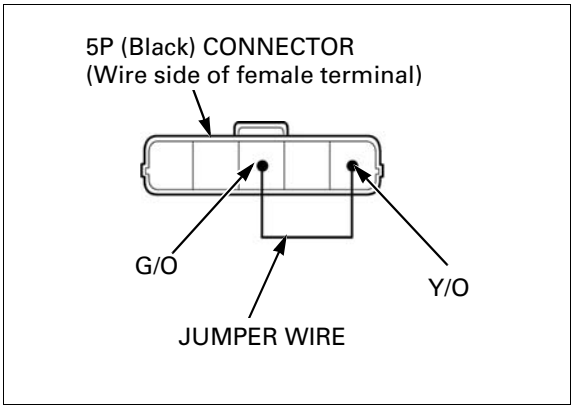
CONNECTION: Yellow/Orange – Green/Orange

Turn the ignition switch "ON".
Check the MAP sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – Replace the sensor unit with a new one, and recheck (Faulty MAP sensor)

NO – GO TO STEP 3.



3. MAP Sensor Output Line Open Circuit Inspection

Turn the ignition switch "OFF".

Disconnect the ECM 33P connector.

Check for continuity between the sensor unit 5P (Black) connector of the wire harness side and ECM 33P connector of the wire harness side.

CONNECTION: Yellow/Orange – No. 27 (Yellow/Orange)

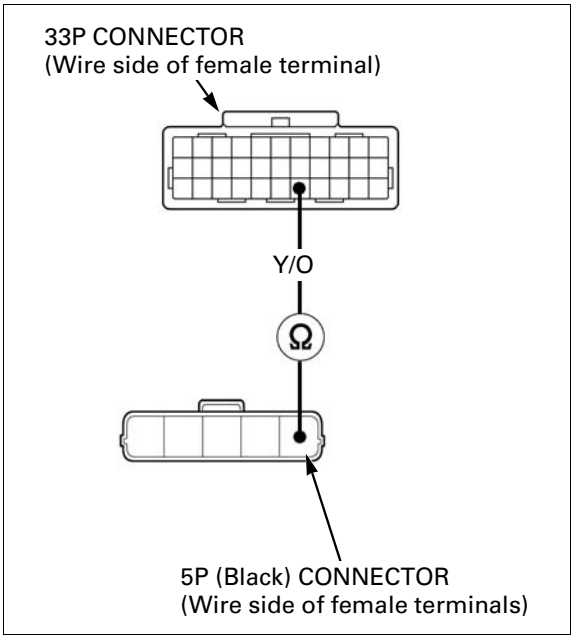
STANDARD: Continuity

TOOL:
Test probe 07ZAJ-RDJA110

Is there continuity?

YES – GO TO STEP 4.

NO – Open circuit in the Yellow/Orange wire



4. MAP sensor Ground line Open Circuit Inspection

Turn the ignition switch "OFF".

Check for continuity between the sensor unit 5P (Black) connector of the wire harness side and ECM connector of the wire harness side.

CONNECTION: Green/Orange – No. 4 (Green/Orange)

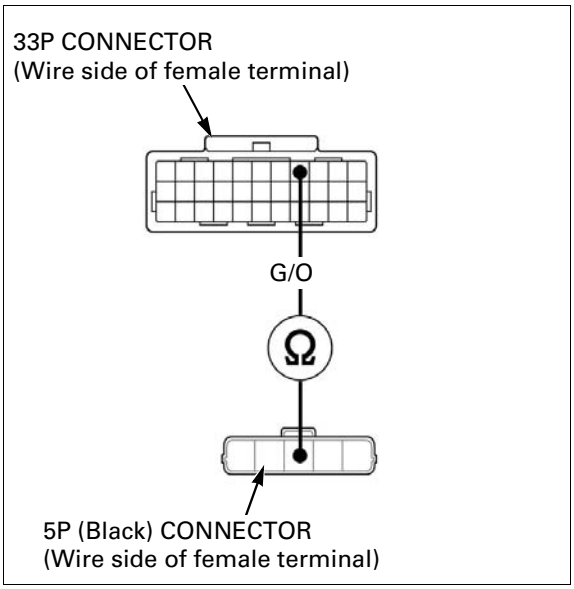
STANDARD: Continuity

TOOL:
Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a new one, and recheck; refer to Key Registration Procedures (page 23-4)

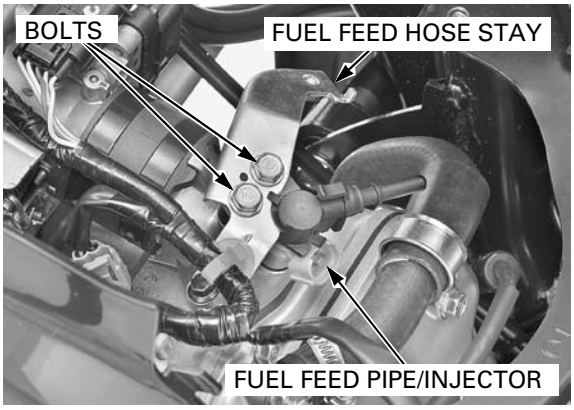
NO – Open circuit in Green/Orange wire



Remove the following:

– Bolts
– Fuel feed hose stay
– Fuel feed pipe/injector

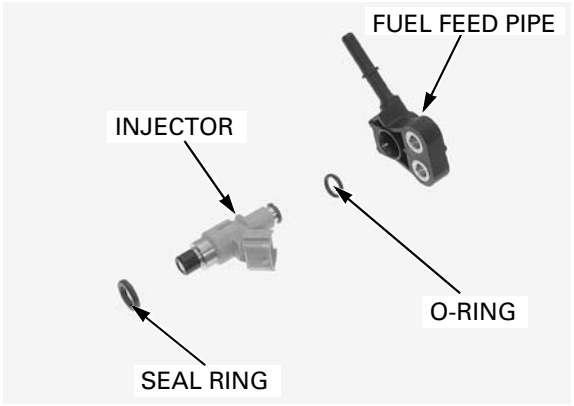
Seal the injector port with a shop towel or cover it with a piece of tape to prevent any foreign material from dropping into the engine.



Remove the following:

– Fuel feed pipe
– O-ring
– Seal ring

To prevent damage and keep foreign matter out, cover the disconnected connector and pipe end with the plastic bags.



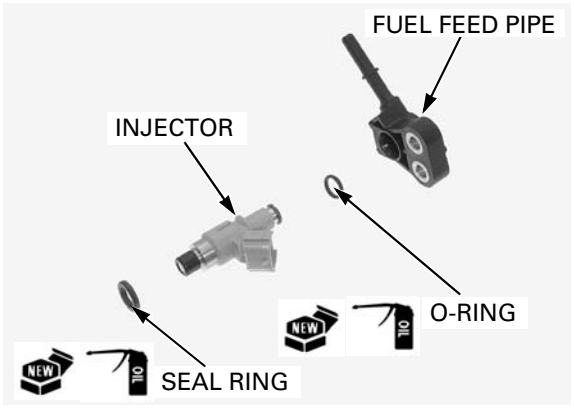
INSTALLATION

Coat the new O-ring and seal ring with engine oil.

Install the O-ring and seal ring to the injector.

- Replace the O-ring and seal ring with new ones as a set.
- Be careful not to damage the O-ring and seal ring.

Install the injector to the fuel feed pipe.

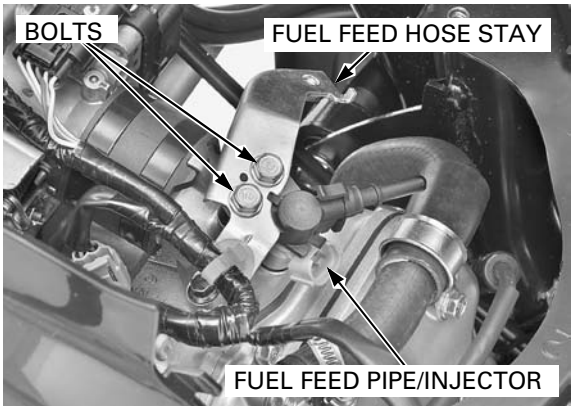


Install the fuel feed pipe/injector to the intake pipe.

NOTICE

Be careful not to allow dirt and debris between the intake pipe and seal ring.

Install the fuel feed hose stay and bolts.
Tighten the bolts.



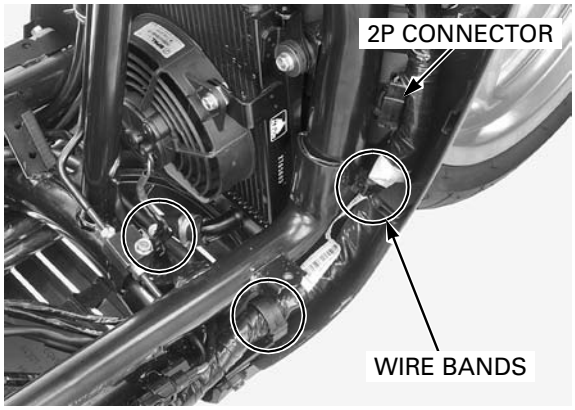
RADIATOR COOLING FAN

REMOVAL/INSTALLATION

Remove the following:

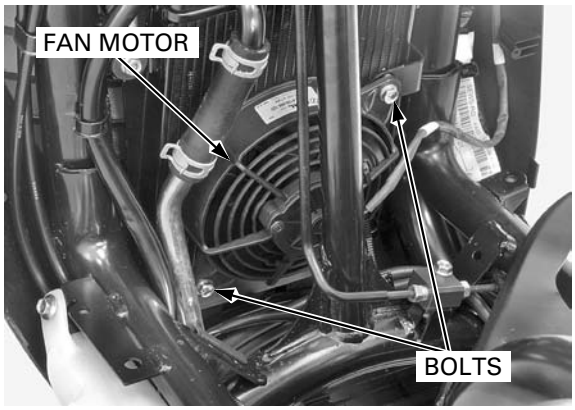
– floor side cover (page 3-8)
– front inner cover (page 3-10)
– floor panel (page 3-13)

Disconnect the cooling fan motor 2P (black) connector and release the wire from the three wire bands.



Be careful not to damage the radiator fins.

Remove the two mounting bolts and fan motor assembly.



Route the fan motor wire properly (page 1-19).

Installation is in the reverse order of removal.

TORQUE:
Cooling fan motor mounting bolt:
8.5 N·m (0.9 kgf·m, 6.3 lbf·ft)

RADIATOR

REMOVAL/INSTALLATION

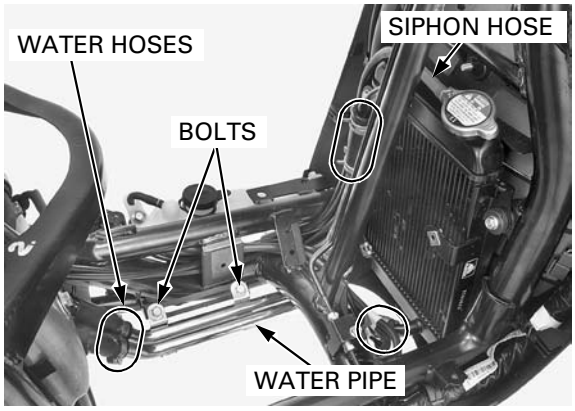
Remove the following:

– floor side cover (page 3-8)
– under cover (page 3-9)
– front inner cover (page 3-10)
– floor panel (page 3-13)
– cooling fan motor (page 7-13)

Drain the coolant from the system (page 7-7).

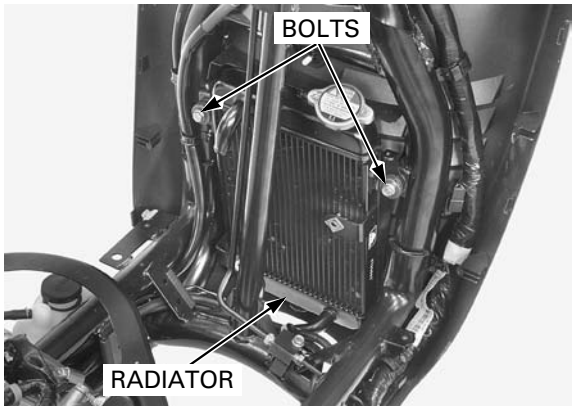
Disconnect the four water hoses.
Disconnect the radiator siphon hose.

Remove the two bolts and water pipe.



Be careful not to damage the radiator fins.

Remove the two mounting bolts and radiator.



Route the wire harness properly (page 1-19).

Installation is in the reverse order of removal.

- When installing the radiator, align the rubber of the radiator and hole of the frame.

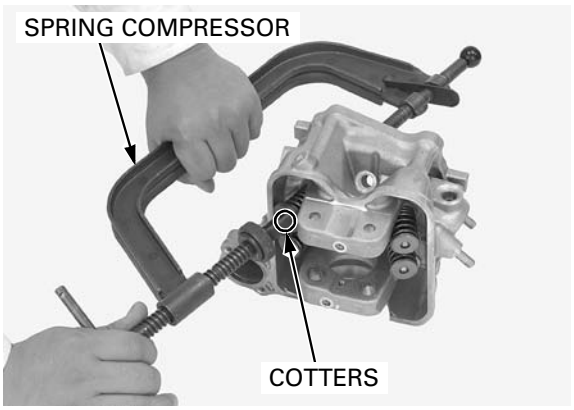
Fill and bleed the cooling system (page 7-6).

To prevent loss of tension, do not compress the valve springs more than necessary.

Install the valve spring cotters using the valve spring compressor.

TOOLS:

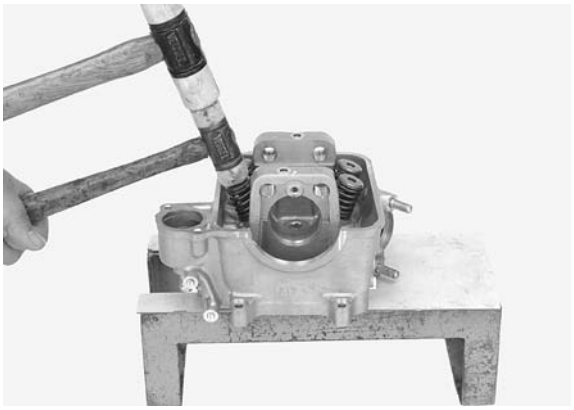
Valve spring compressor	**07757-0010000**
Valve spring compressor attachment	**07959-KM30101**



Support the cylinder head so the valve heads will not contact anything that cause damage.

Tap the valve stems gently with two plastic hammers to seat the cotters firmly.

Install the cylinder head (page 9-19).

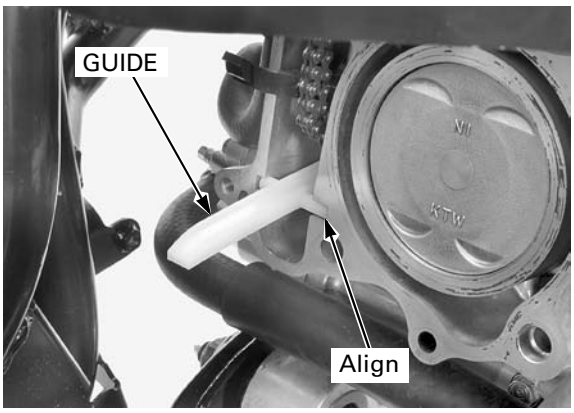


CYLINDER HEAD INSTALLATION

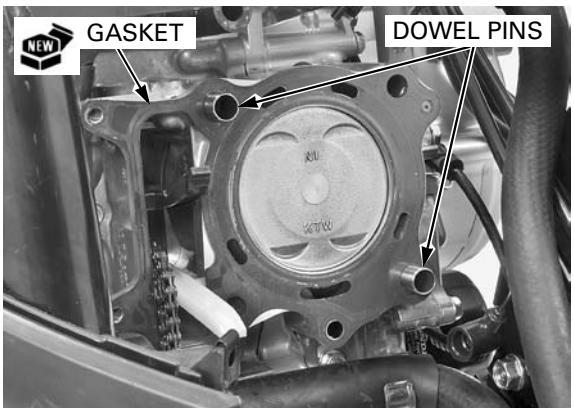
Be careful not to damage the mating surfaces.

Clean the mating surfaces of the cylinder head and cylinder thoroughly.
Blow out the oil passages in the cylinder head with compressed air.

Install the cam chain guide by aligning it bosses with the grooves in the cylinder.



Install the two dowel pins and a new gasket.

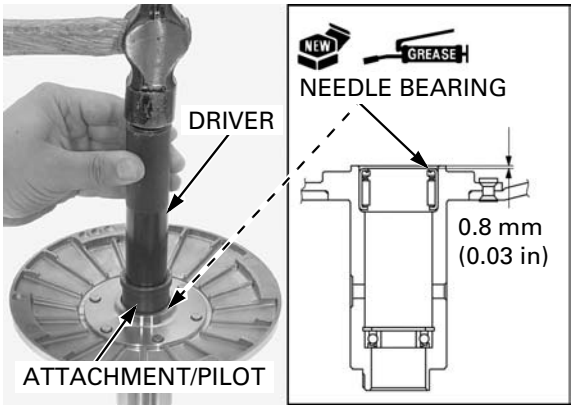


Apply grease to a new needle nearing rollers.

Install the needle bearing into the driven face squarely with the sealed side facing up so that the depth from the driven face surface is 0.8 mm (0.03 in) using the special tool.

TOOLS:

Driver	**07749-0010000**
Attachment, 32 x 35 mm	**07746-0010100**
Pilot, 25 mm	**07746-0040600**

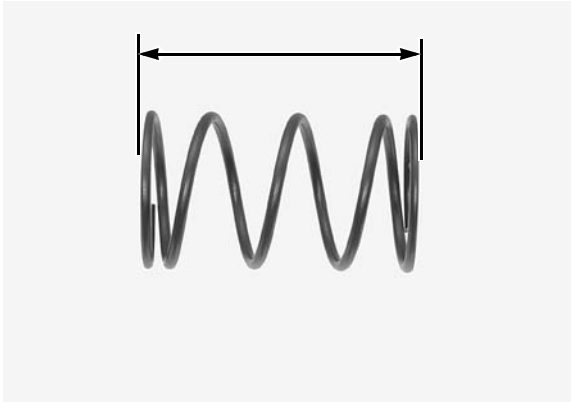


INSPECTION

DRIVEN FACE SPRING

Measure the driven face spring free length.

SERVICE LIMIT: 106 mm (4.2 in)



DRIVEN FACE

Check the driven face for scratches, scoring or damage.

Measure the driven face boss O.D.

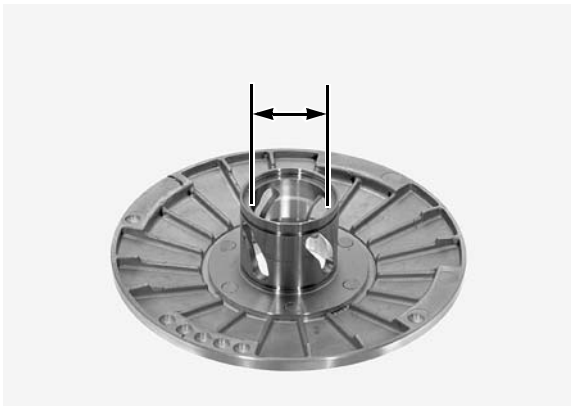
SERVICE LIMIT: 39.94 mm (1.572 in)

MOVABLE DRIVEN FACE

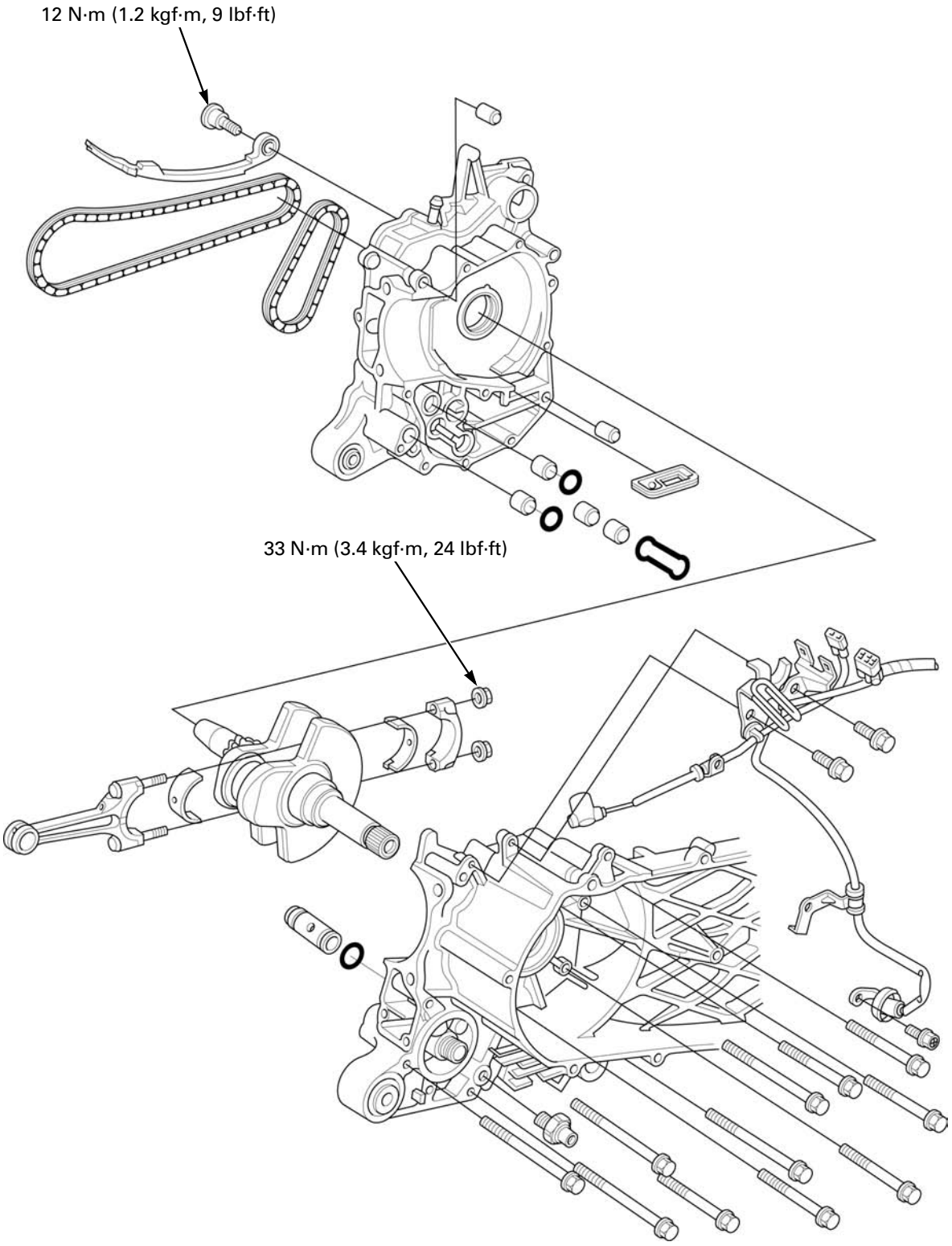
Check the movable driven face for scratches, scoring or damage.
Check the guide grooves for stepped wear or damage.

Measure the movable driven face I.D.

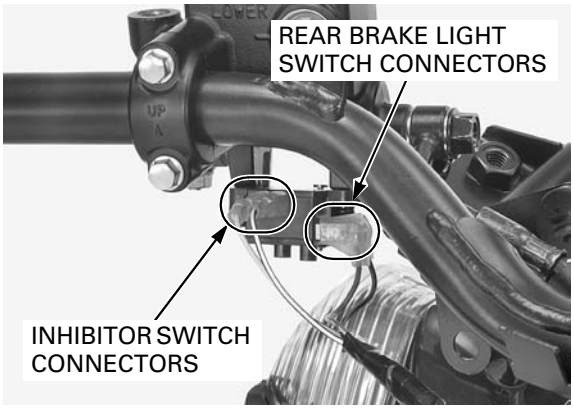
SERVICE LIMIT: 40.06 mm (1.577 in)



COMPONENT LOCATION



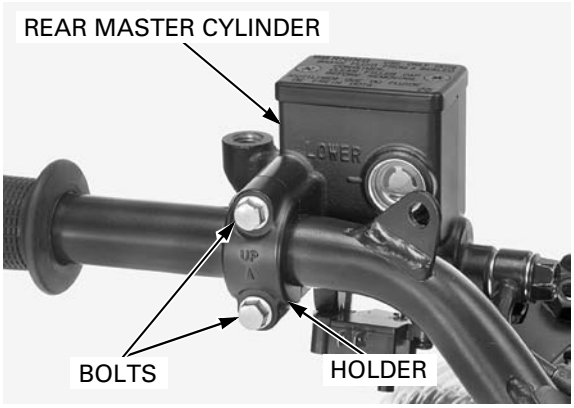
Disconnect the inhibitor switch and rear brake light switch connectors.



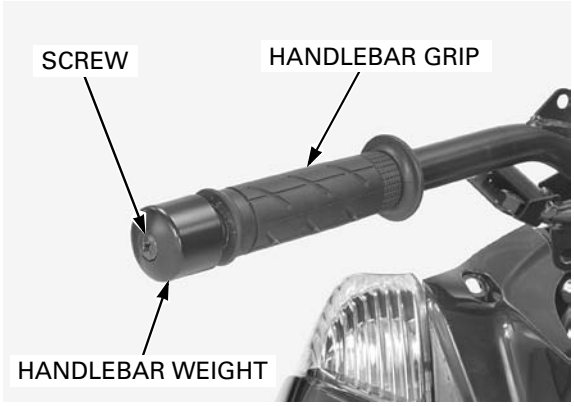
Remove the following:

- two bolts
- holder
- rear brake master cylinder

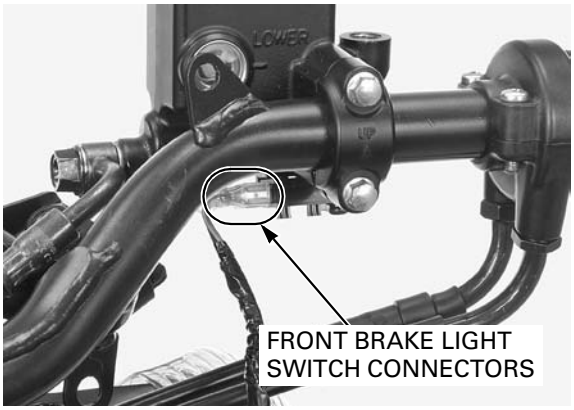
Keep the rear master cylinder upright, to prevent air from entering the hydraulic system. Do not twist the brake hose.



- screw
- left handlebar weight
- handlebar grip



Disconnect the front brake light switch connectors.



SERVICE INFORMATION

GENERAL

⚠ CAUTION

Frequent inhalation of brake pad dust, regardless of material composition, could be hazardous to your health.
- Avoid breathing dust particles.
- Never use an air hose or brush to clean brake assemblies. Use and OSHA-approved vacuum cleaner.

NOTICE

Spilled brake fluid will severely damage instrument lenses and painted surfaces. It is also harmful to same rubber parts. Be careful whenever you remove the reservoir cap; make sure the master cylinder reservoir is horizontal first.

- This model is equipped with a Combined Brake System. The system air bleeding procedure on page 17-7 must be followed.
- A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.
- Check the brake system by applying the brake levers after the air bleeding.
- Never allow contaminates (dirt, water, etc.) to get into an open reservoir.
- Once the hydraulic system has been opened, or if the brake feels spongy, the system must be bled.
- Always use fresh DOT 4 brake fluid from a sealed container when servicing the system. Do not mix different types of fluid, they may not be compatible.
- Always check brake operation before riding the scooter.
- This section covers service of the standard brake components (including CBS) of the brake system. page 18-4 for ABS service.
- The brake fluid replacement procedure for the ABS model should be performed in the same manner as in the standard model. Note that there is no brake fluid in the ABS modulator (except in the modulator head), because the modulator is the motor-driven hydraulic pressure type. Therefore, brake fluid replacement and bleeding air from the modulator body is not necessary.

SPECIFICATIONS

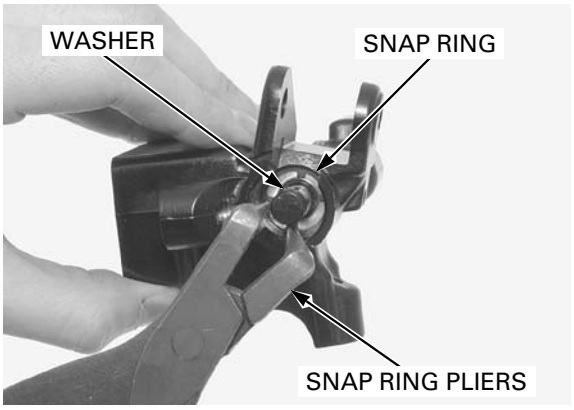
Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Front	Specified brake fluid		DOT 4	–
	Brake disc thickness		4.3 – 4.7 (0.17 – 0.19)	3.5 (0.14)
	Brake disc warpage		–	0.25 (0.010)
	Master cylinder I.D.		11.000 – 11.043 (0.4331 – 0.4348)	11.055 (0.4352)
	Master piston O.D.		10.957 – 10.984 (0.4314 – 0.4324)	10.945 (0.4309)
	Caliper cylinder I.D.	Upper	25.400 – 25.450 (1.0000 – 1.0020)	25.460 (1.0024)
		Middle	22.650 – 22.700 (0.8917 – 0.8937)	22.710 (0.8941)
		Lower	25.400 – 25.450 (1.0000 – 1.0020)	25.460 (1.0024)
	Caliper piston O.D.	Upper	25.318 – 25.368 (0.9968 – 0.9987)	25.31 (0.996)
		Middle	22.585 – 22.618 (0.8892 – 0.8905)	22.56 (0.888)
		Lower	25.318 – 25.368 (0.9968 – 0.9987)	25.31 (0.996)
Rear	Specified brake fluid		DOT 4	–
	Brake disc thickness		4.8 – 5.2 (0.19 – 0.20)	4.0 (0.16)
	Brake disc warpage		–	0.25 (0.010)
	Master cylinder I.D.		12.700 – 12.743 (0.5000 – 0.5017)	12.755 (0.5022)
	Master piston O.D.		12.657 – 12.684 (0.4983 – 0.4994)	12.645 (0.4987)
	Caliper cylinder I.D.		38.180 – 38.230 (1.5031 – 1.5051)	38.24 (1.506)
	Caliper piston O.D.		38.098 – 38.148 (1.4999 – 1.5019)	38.09 (1.500)

Install the washer and snap ring into the groove in the master cylinder.

TOOL:
Snap ring pliers 07914-SA50001

- Install the snap ring with the chamfered edges facing the thrust load side.
- Check that the snap ring is seated in the grooves.

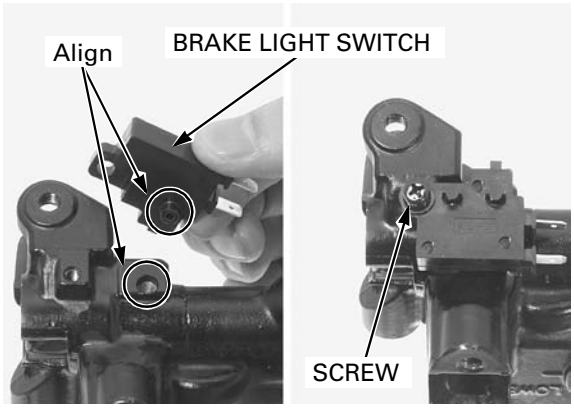


Apply silicone grease to the piston boot inner surface.

Install the piston boot into the master cylinder and the piston groove.

Instal the brake light switch by aligning the boss of the switch body and hole of the master cylinder.
Install and tighten the screw to the specified torque.

TORQUE: 1.2 N·m (0.1 kgf·m, 0.9 lbf·ft)



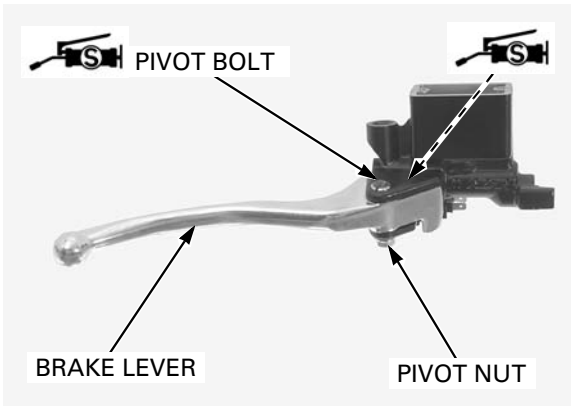
Apply 0.1 g of silicone grease to the contact surfaces of the brake lever, piston tip and brake lever pivot bolt sliding surface.
Install the brake lever.

Install the pivot bolt and tighten it to the specified torque.

TORQUE: 1 N·m (0.1 kgf·m, 0.7 lbf·ft)

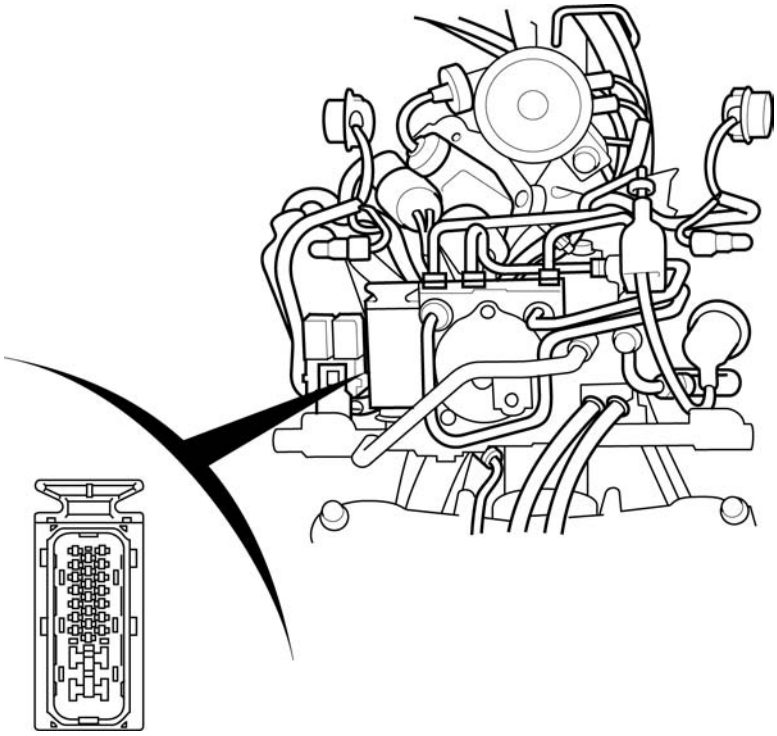
Install the pivot nut and tighten it to the specified torque.

TORQUE: 6 N·m (0.6 kgf·m, 4.4 lbf·ft)



ABS CONNECTOR LOCATIONS

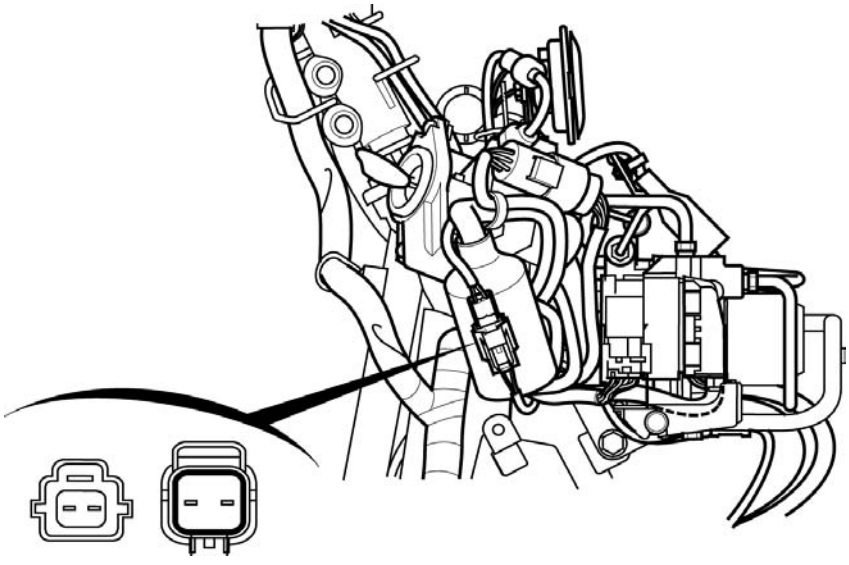
NOTE 1: Remove the front upper cover (page 3-9).



Wire side of female terminal

ABS MODULATOR 25P CONNECTOR (NOTE 1)

NOTE 2: Remove the front inner cover (page 3-10).



Wire side of female terminal

Sensor side of male terminal

FRONT WHEEL SPEED SENSOR 2P CONNECTOR (NOTE 2)