

## **5. ENGINE REMOVAL/INSTALLATION**

---



---

### **ENGINE REMOVAL/INSTALLATION**

---

SERVICE INFORMATION .....	5-1
ENGINE HANGER REMOVAL .....	5-2
ENGINE REMOVAL .....	5-3

## **5. ENGINE REMOVAL/INSTALLATION**

---

### **SERVICE INFORMATION**

#### **GENERAL INSTRUCTIONS**

- A floor jack or other adjustable support is required to support and maneuver the engine. Be careful not to damage the motorcycle body, cables and wires during engine removal.
- Use shop towels to protect the motorcycle body during engine removal.
- Drain the coolant before removing the engine.
- After the engine is installed, fill the cooling system with coolant and be sure to bleed air from the water jacket. Start the engine to check for coolant leaks.
- Before removing the engine, the rear brake caliper must be removed first. Be careful not to bend or twist the brake fluid tube.

#### **SPECIFICATIONS**

Engine oil capacity: at disassembly: 1.1 liter

Coolant capacity:

    Total capacity           : 1165cc

    Radiator capacity       : 825cc

Reserve tank capacity     : 340cc

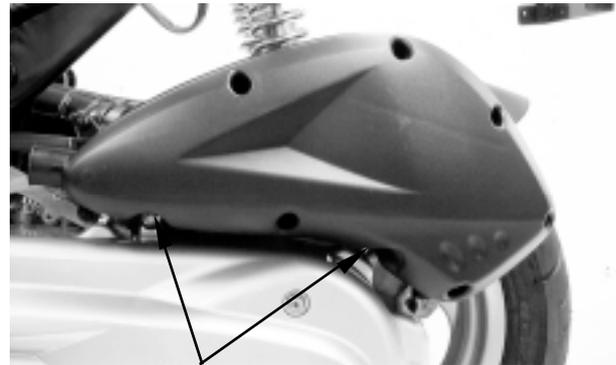
#### **TORQUE VALUES**

Rear axle nut	110_	130
Rear shock absorber lower bolt	35_	45
Engine hanger bolt (frame side)	45_	55
Engine hanger bolt (engine side)	45_	55
Rear caliper bolt	29_	35
Exhaust muffler pipe nut	18_	22
Exhaust muffler bolt	32_	38
Rear fork bolt	29_	35

## 5. ENGINE REMOVAL/INSTALLATION

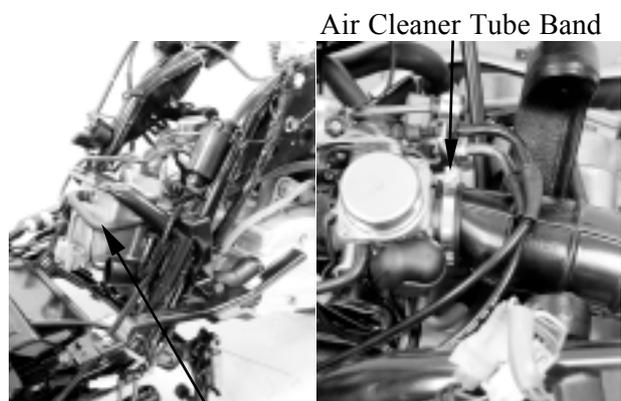
### ENGINE HANGER REMOVAL

Remove rear carrier (⇒2-6), met-in box (⇒2-6), center cover (⇒2-7), rear fender A (⇒2-8), and rear body cover. (⇒2-8)  
Remove two bolts on air cleaner.



Bolts

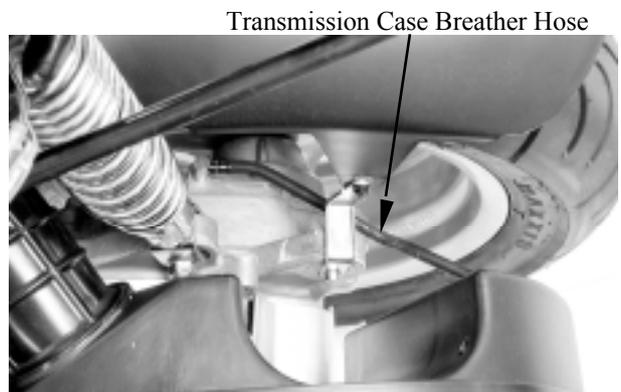
Disconnect the oil vapor recovery tube and loosen air cleaner tube band.



Air Cleaner Tube Band

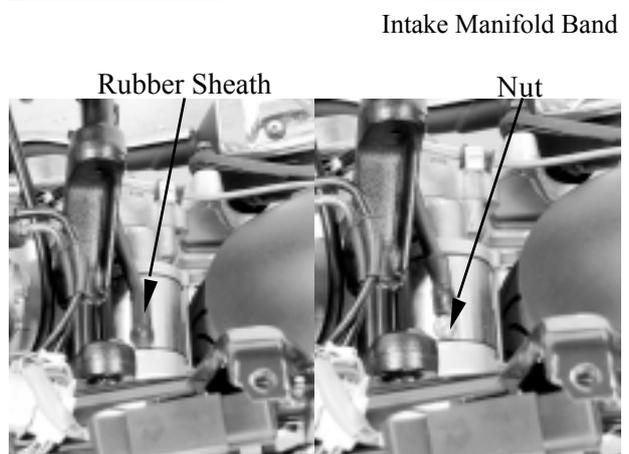
Oil Vapor Recovery Tube

Disconnect the transmission case breather hose, then remove air cleaner.



Transmission Case Breather Hose

Open the rubber sheath and remove the nut, then disconnect the starter motor wire.



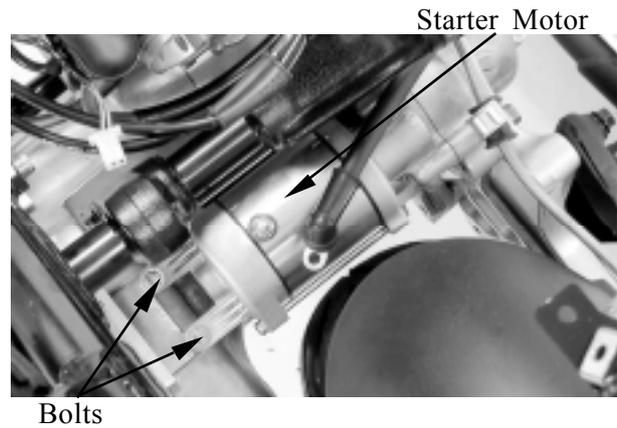
Intake Manifold Band

Rubber Sheath

Nut

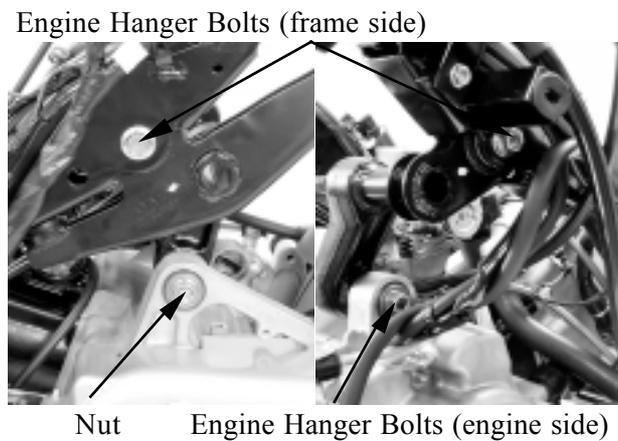
## 5. ENGINE REMOVAL/INSTALLATION

Remove two bolts, then remove the starter motor.



Remove the engine hanger nut, then remove the engine hanger bolt (engine side).

Remove the engine hanger bolts (frame side) and collar, then remove the engine hanger.



Inspect the engine hanger bushings and stopper rubber for wear or damage.

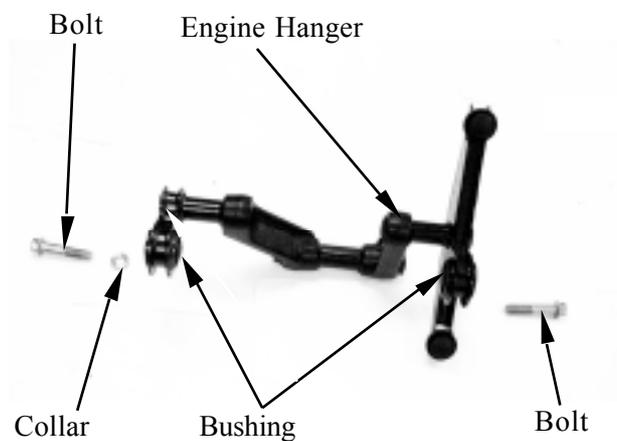
Install the engine hanger in the reverse order of remove.

Tighten the engine hanger bolt. (frame side)

**Torque:** 45\_ 55N-m

Tighten the engine hanger bolt. (engine side)

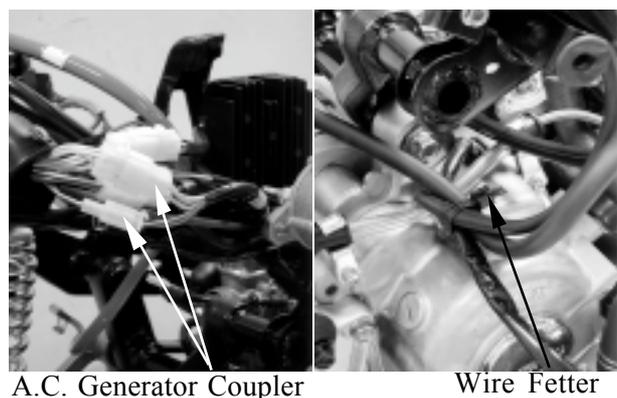
**Torque:** 45\_ 55N-m



### ENGINE REMOVAL

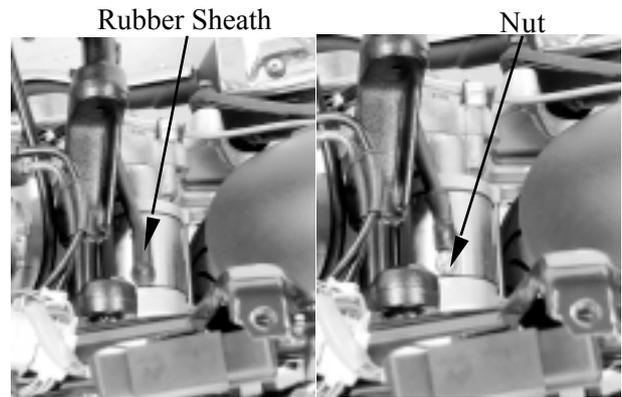
Remove rear carrier (⇒2-6), met-in box (⇒2-6), center cover (⇒2-7), rear fender A (⇒2-8), rear body cover, (⇒2-8) and air cleaner. (⇒5-2)

Disconnect the A.C. generator coupler and relax the wire fetter.

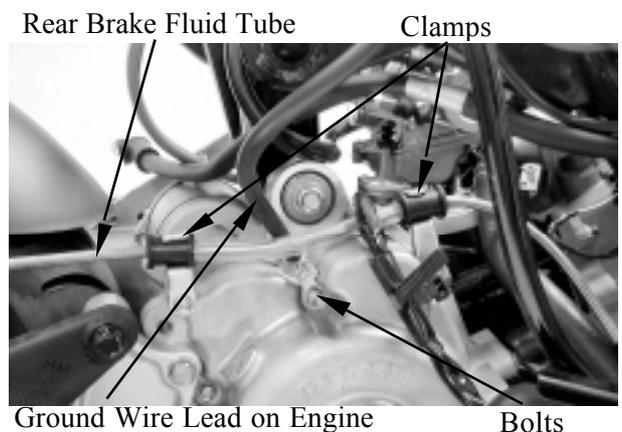


## 5. ENGINE REMOVAL/INSTALLATION

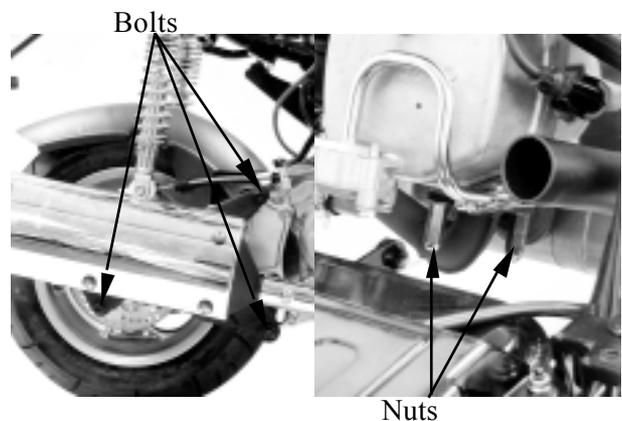
Open the rubber sheath and remove the nut, then disconnect the starter motor lead.



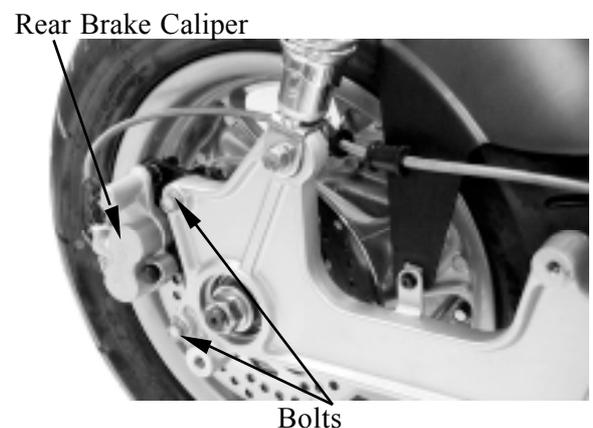
Disconnect rear brake fluid tube from clamps. Remove the bolt on right crankcase cover for disconnect ground wire lead.



Remove the two exhaust muffler joint lock nuts. Remove the three exhaust muffler lock bolts to remove the exhaust muffler. Remove the exhaust muffler and joint packing collar.



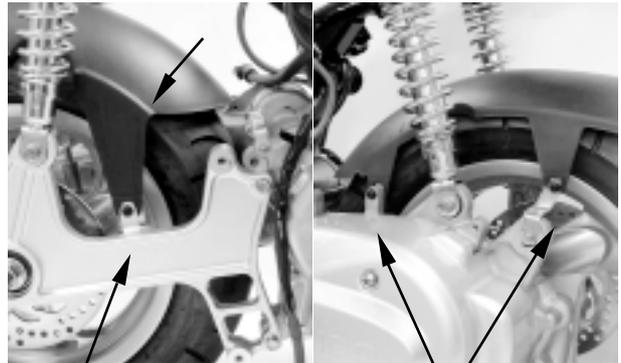
Remove two bolts on the rear fork, then remove rear brake caliper.



## 5. ENGINE REMOVAL/INSTALLATION

Remove three screws, then remove rear fender C.

Rear Fender C



Screw

Screws

Remove the right rear shock absorber lower bolt, rear axle nut, collar and two rear fork bolts. Remove the rear fork.

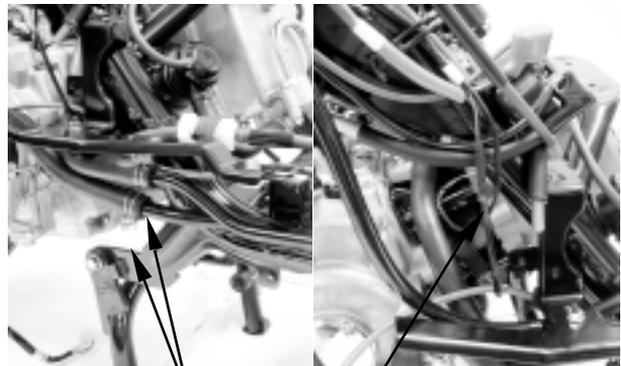
Right Rear Shock Absorber Lower Bolt



Rear Axle Nut

Rear Fork Bolts

Disconnect two water hoses from water ducts.  
Disconnect oil pressure switch lead.

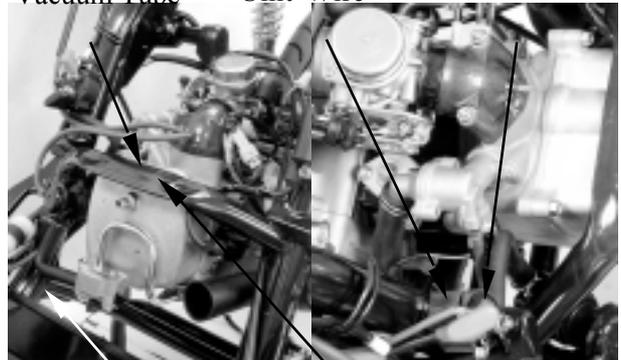


Water Hose

Oil Pressure Switch Lead

Disconnect secondary air vacuum tube and fuel pump vacuum tube from intake manifold.  
Disconnect secondary air cleaner fresh air outlet hose from secondary air cleaner.  
Disconnect thermo unit wire and radiator air ventilated tube from thermostat.

Fuel Pump Vacuum Tube      Thermo Unit Wire      Radiator Air Ventilated Tube



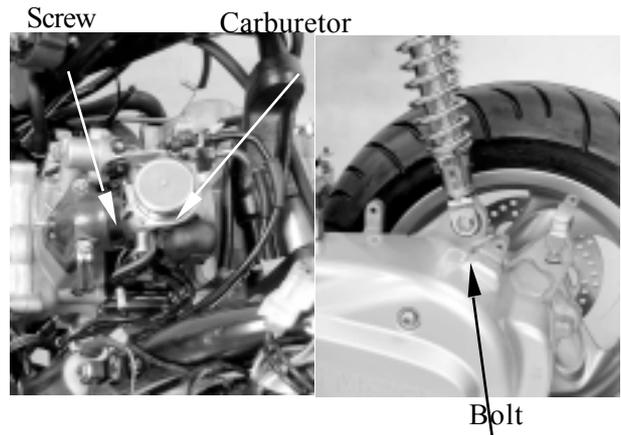
Secondary Air Cleaner Fresh Air Outlet Hose

Secondary Air Vacuum Tube

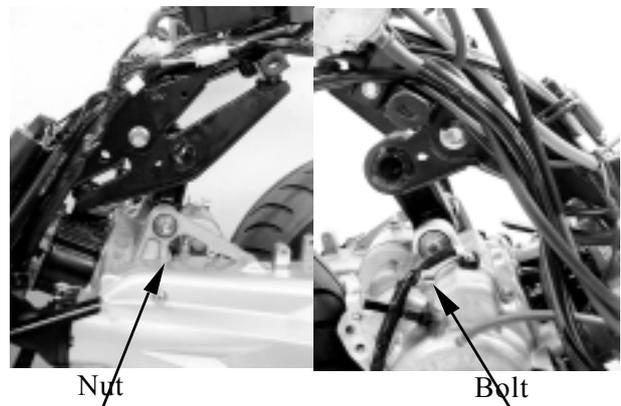
## 5. ENGINE REMOVAL/INSTALLATION

Loosen band screw, then disconnect carburetor.

Remove the left rear shock absorber lower bolt.



Remove engine hanger nut and bolt (engine side).



Remove and pull the engine assembly to back of the machine.

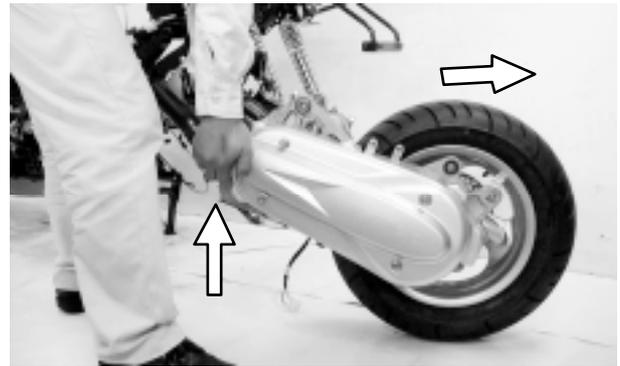


Put the engine assembly to below of the machine.



## 5. ENGINE REMOVAL/INSTALLATION

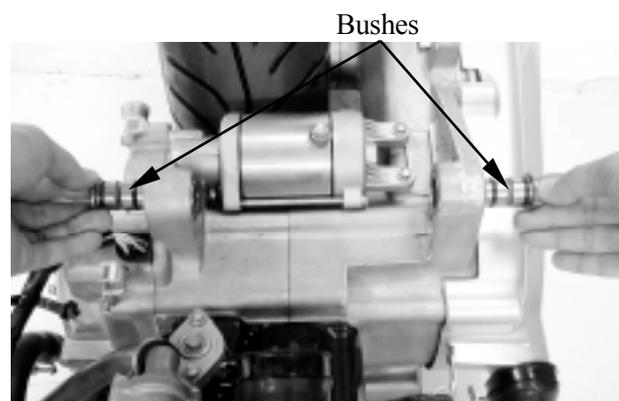
Move the engine assembly by rear wheel.



### ENGINE ASSEMBLY INSTALLATION

Install the engine assembly in the reverse order of removal.

- \* • Apply grease onto the bushes before install the engine assembly.



Tighten bolts and nuts

#### TORQUE VALUES

Rear axle nut	110_	1
30		
Rear shock absorber lower bolt	35_	45
Engine hanger bolt (frame side)	45_	55
Engine hanger bolt (engine side)	45_	55
Rear caliper bolt	29_	35
Exhaust muffler pipe nut	18_	22
Exhaust muffler bolt	32_	38
Rear fork bolt	29_	35

After installation, inspect and adjust the following:

- Throttle grip free play (⇒3-3)
- Fill the cooling system with coolant and start the engine to bleed air from the system.