Introduction

This service manual describes the service procedures for and technical feature of the VFR400R.
This Model Specific Manual includes every service procedure that is of a specific nature to this particular model. Basic service procedures that are common to other Honda Motorcycles/Motor Scooters/ATVs are covered in the Common Service Manual. This Model Specific Service Manual should be used together with the Common Service Manual in order to provide complete service information on all aspects of this motorcycle.

Performing the first scheduled maintenance is very important. It compensates for the initial wear that occurs during the break-in period.

Section 1 and 3 apply to the whole motorcycle. Section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections.
While Section 4 through 19 describe parts of the motorcycle, grouped according to locations.

Find the section you want on this page, then turn to the table of contents on the first page of the section.

Most sections describe the service procedure through system illustration. Refer to the next page for details on how to use this manual.

If you are not familiar with this motorcycle, read Technical Feature in section 20.
If you don't know the source of the trouble, go to section 21 TROUBLESHOOTING.

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Contents

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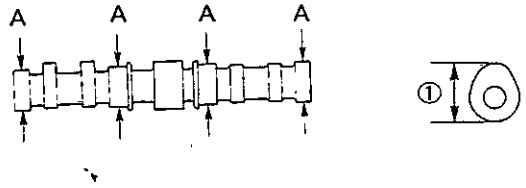
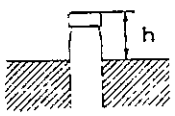
Unit: mm (in)

Cylinder Head

Item	Standard	Service Limit
Cylinder compression	1,274 ± 196 kPa (13.0 ± 2.0 kg/cm², 185 ± 28 psi)/400 min⁻¹ (rpm)	—
Cylinder compression difference	40 mmHg (1.6 inHg)	—
Valve clearance IN	0.12–0.18 (0.005–0.007)	—
EX	0.21–0.27 (0.008–0.011)	—
Cylinder head warpage	—	0.10 (0.004)
Cam lobe height ① IN	32.717–32.957 (1.2882–1.2975)	32.67 (1.286)
EX	32.428–32.668 (1.2767–1.2861)	32.38 (1.275)
Camshaft runout	—	0.03 (0.001)
Camshaft oil clearance A	0.040–0.082 (0.0016–0.0032)	0.092 (0.0036)
B	—	—



Camshaft journal O.D. A	27.939–27.960 (1.1000–1.1008)	27.93 (1.010)
B	—	—
Camshaft holder I.D. A	28.000–28.021 (1.1024–1.1032)	28.03 (1.104)
B	—	—
Valve stem O.D. IN	4.475–4.490 (0.1762–0.1788)	4.47 (0.176)
EX	4.465–4.480 (0.1758–0.1764)	0.46 (0.1756)
Valve guide I.D. IN	4.500–4.512 (0.1772–0.1776)	4.56 (0.180)
EX	4.500–4.512 (0.1772–0.1776)	4.56 (0.180)
Stem-to-guide clearance IN	0.010–0.037 (0.0004–0.0015)	0.09 (0.004)
EX	0.020–0.047 (0.0008–0.0019)	0.12 (0.005)
Valve guide projection above cylinder head IN (h)	10 (0.4)	—
EX (h)	10 (0.4)	—



Before guide installation:
1. Chill the valve guide in the freezer section of a refrigerator for about an hour.
2. Heat the cylinder head to 100–150°C (212–300°F)

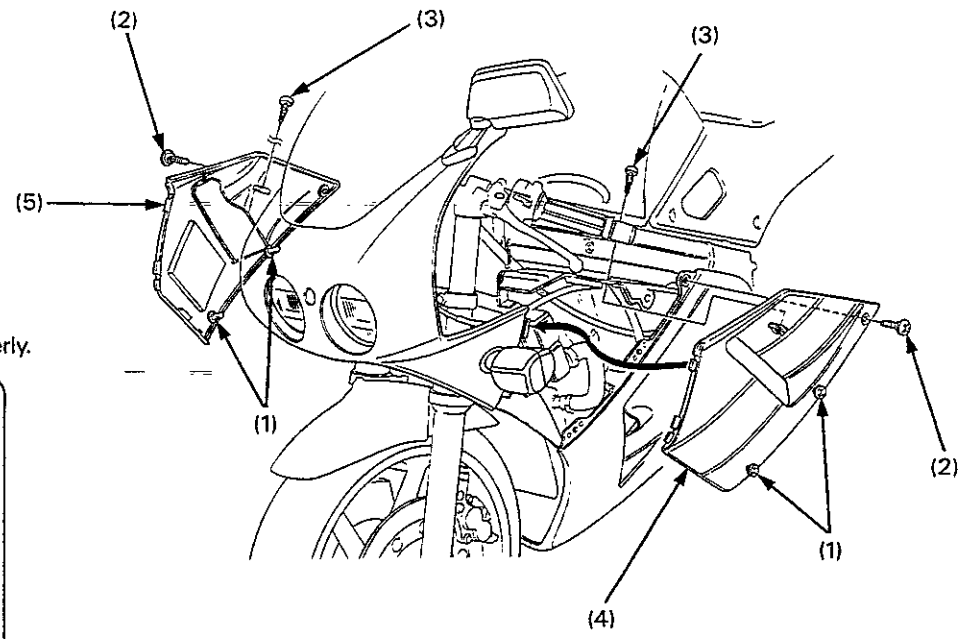
Valve seat width IN	1.70–2.30 (0.067–0.091)	—
EX	1.70–2.30 (0.067–0.091)	—
Valve spring free length IN	—	—
EX	—	—
Inner IN	31.4 (1.24)	30.2 (1.19)
Inner EX	31.4 (1.24)	30.2 (1.19)
Outer IN	34.4 (1.35)	33.2 (1.31)
Outer EX	34.4 (1.35)	33.2 (1.31)
Rocker arm I.D. IN	8.500–8.515 (0.3346–0.3352)	8.53 (0.336)
EX	8.500–8.515 (0.3346–0.3352)	8.53 (0.336)
Rocker arm shaft O.D. IN	8.466–8.484 (0.3333–0.3340)	8.46 (0.333)
EX	8.466–8.484 (0.3333–0.3340)	8.46 (0.333)
Rocker arm-to-rocker arm shaft clearance	—	—
Valve lifter O.D.	—	—
Valve lifter bore I.D.	—	—
Hydraulic tappet adjuster assist spring free length	—	—
Hydraulic tappet adjuster compression stroke with kerosene	—	—

Tools

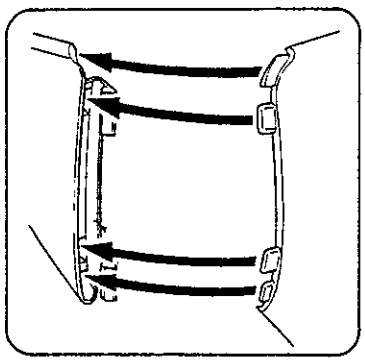
- The newly designed tools are indicated with * mark in the list.

Description	Tool Number	Application	Section
Compression gauge attachment, 8 mm	*07KME – MR80100	Cylinder compression measurement	3
Oil pressure gauge attachment	07510 – 4220100	Engine oil pressure measurement	
Oil filter wrench	07HAA – PJ70100	Oil filter replacement	
Spark plug wrench, 8 mm	*07KMA – MR80200	Spark plug removal/installation	
Lock nut wrench	07HMA – MR70200	Engine removal/installation	7
Valve spring compressor attachment	07959 – KM30101	Cylinder head disassembly/assembly	8
Valve guide driver	07HMD – ML00100	Valve guide replacement	
Valve guide reamer, 4.5 mm	07HMH – ML00101	Valve guide reaming	
Valve seat cutter, 24 mm (45° IN)	07780 – 0010600	Valve seat refacing	
Valve seat cutter, 22 mm (45° EX)	07780 – 0010701		
Valve flat cutter, 24 mm (32° IN)	07780 – 0012500		
Valve flat cutter,21.5 mm (32° EX)	07780 – 0012800		
Valve interior cutter, 22 mm (60° IN/EX)	07780 – 0014202		
Cutter holder, 4.5 mm	07781 – 0010600		
Lock nut wrench, 26 × 30 mm	07716 – 0020203	Clutch disassembly/assembly	9
Extension bar	07716 – 0020500		
Gear holder	07724 – 0010100	Primary drive gear removal/installation	
Fork seal driver	07947 – KA50100	Fork oil seal installation	12
Fork seal driver attachment	07947 – KF00100		
Lock nut wrench, 39 × 41 mm	07GMA – KS40100	Steering stem nut removal/installation	
Steering stem socket	07HMA – MR70100	Steering bearing adjustment nut tightening	
Steering stem driver attachment	07HMD – MR70100	Steering bearing lower inner race installation	
Inner driver C	07746 – 0030100		
Driver attachment B (2 pcs. required)	07946 – KM90200	Steering bearing outer race removal/installation	
Driver assembly shaft	07946 – KM90300		
Bearing remover B	07946 – KM90500		
Assembly base	07946 – KM90600		
Driver	07749 – 0010000	Bearing installation	13
Attachment, 42 × 47 mm	07746 – 0010300	Bearing holder needle bearing replacement	
Attachment, 62 × 68 mm	07746 – 0010500		
Pilot, 40 mm	07746 – 0040900		
Shock absorber compressor attachment	07959 – MB10000	Shock absorber disassembly/assembly	
Shock absorber compressor	07GME – 0010000		
Bushing driver B	07HMF – MM90200	Shock absorber upper mounting bushing replacement	
Pivot adjust wrench	07908 – 4690001	Swingarm pivot bolt removal/installation	
Driver shaft	07946 – MJ00100	Right swingarm pivot bearing installation	
Attachment, 37 × 40 mm	07746 – 0010200		
Pilot, 20 mm	07746 – 0040500		
Bearing remover set	07936 – 3710001	Right swingarm pivot bearing removal	
– Remover handle	07936 – 3710100		
– Bearing remover	07936 – 3710600		
– Sliding weight	07741 – 0010201		
Needle bearing remover	07HMC – MR70100	Left swingarm pivot bearing replacement	
Driver shaft	07946 – MJ00100		
Pilot, 28 mm	07746 – 0041100		

Side Fairing Removal/Installation



Align the tabs with the slots properly.



CAUTION

- **Be careful not to damage the tabs.**
- **Make sure that the clip nut for the tapping screw is installed properly. If it is missing, install it securely with the threaded side facing down.**

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Quick screw	4	
(2)	Screw	2	
(3)	Tapping screw	2	
(4)	Left side fairing	1	
(5)	Right side fairing	1	

CAUTION

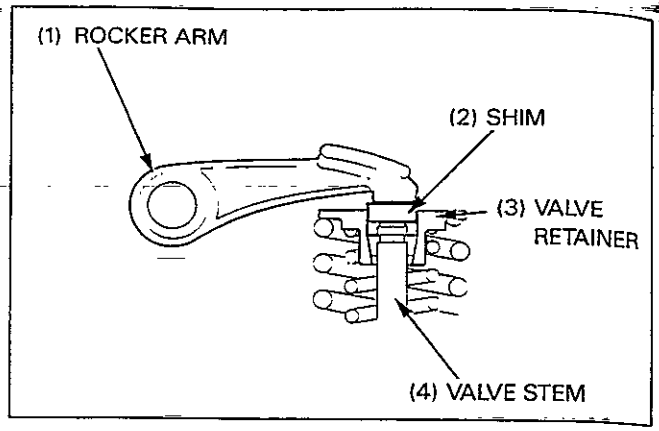
- **Turn the ignition switch OFF and disconnect the battery negative cable from the battery terminal.**
- **Be careful not to bind the wire harness when installing the sub-frame.**
- **Route the wire harness, cable, etc. (page 1-21).**

Requisite Service

- Seat cowling removal/installation (page 2-2)
- Fuel tank removal/installation (page 2-5)
- Battery removal/installation (page 15-4)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Spark plug cap/primary wire connector	2/2	
(2)	Regulator/rectifier connector	1	
(3)	Turn signal relay connector	1	
(4)	Spark unit wire connector	2	
(5)	Rear turn signal wire connector	4	
(6)	License light wire connector	2	
(7)	Fuse box	1	
(8)	Right grab rail	1	
(9)	Shock absorber reservoir/bracket	1	
(10)	Rear brake reservoir	1	**CAUTION** **Keep the reservoir level to prevent air from entering the system.**
(11)	Radiator reserve tank	1	
(12)	Muffler mounting bolt/nut	1/2	
(13)	Sub-frame mounting bolt	4	NOTE Remove the main wire harness from the clamp.
(14)	Rear fender bolt	1	

Carefully slide the rocker arm back to the original position.
Make sure that the shim contacting surface of the rocker arm is positioned in the center of the shim and the shim is completely seated.

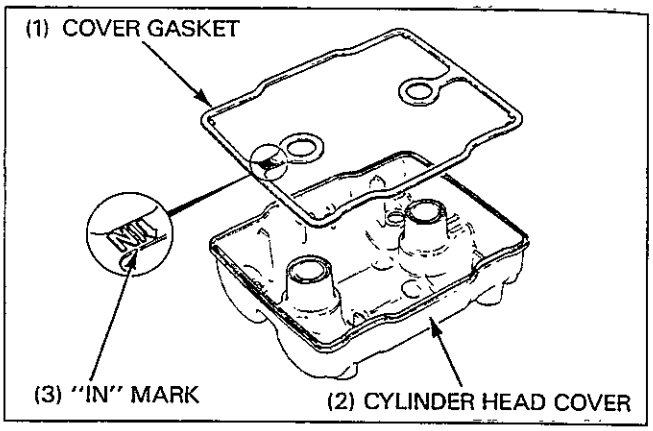


CAUTION

- **Be careful not to bound the shim out when sliding the rocker arm.**

Turn the crankshaft clockwise several times.
Recheck the valve clearance.

Apply Honda bond A or equivalent to the gasket groove in the cylinder head cover.
Install the cover gasket with the "IN" mark facing toward the intake side.

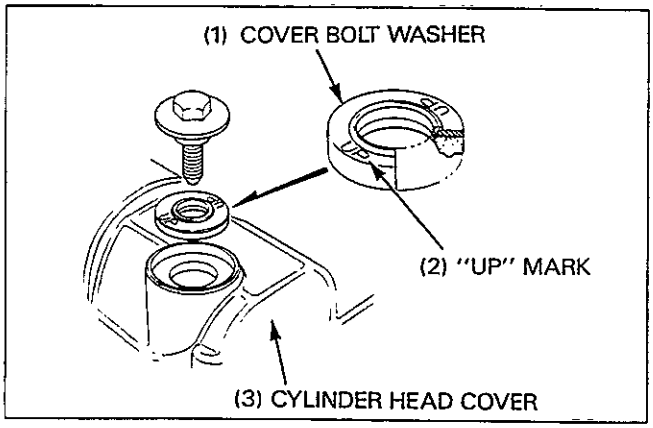


Install the cylinder head cover with the "IN" mark facing toward the intake side.

Install the cover bolt washers with the "UP" mark facing up.
Install the cover bolts and tighten them.

Torque: 10 N·m (1.0 kg-m, 7 ft-lb)

Install the removed parts in the reverse order of removal.



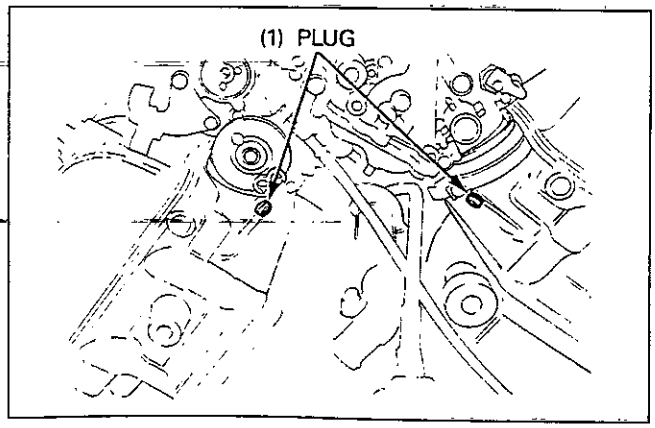
Carburetor Synchronization

NOTE

- Refer to section 2 of Common Service Manual for carburetor synchronization procedure.
- Synchronize the carburetor with the engine at normal operating temperature, transmission in neutral and motorcycle supported upright.

Disconnect the vacuum tube from the No. 3 cylinder intake manifold, apply vacuum to the auto fuel valve and pinch the tube with a clip.

Remove the plugs from the No. 1, 2 and 4 cylinder intake manifold and install the vacuum gauge adaptors.



5. Cooling System

Service Information

⚠ WARNING

- **Wait until the engine is cool before slowly removing the radiator cap. Removing the cap while the engine is hot and the coolant is under pressure may cause serious scalding.**
- **Radiator coolant is toxic. Keep it away from eyes, mouth, skin and clothes.**
  - **— If any coolant gets in your eyes, rinse them with water and consult a doctor immediately.**
  - **— If any coolant is swallowed, induce vomiting, gargle and consult a physician immediately.**
  - **— If any coolant gets on your skin or clothes, rinse thoroughly with plenty of water.**
- **KEEP OUT OF REACH OF CHILDREN.**

- Add coolant at the reserve tank. Do not remove the radiator cap except to refill or drain the system.
- All cooling system service can be made with the engine in the frame.
- Avoid spilling coolant on painted surfaces.
- After servicing the system, check for leaks with a cooling system tester.
- Refer to section 18 for fan motor switch and thermo sensor inspections.

Troubleshooting

Engine Temperature Too High

- Faulty radiator cap.
- Insufficient coolant.
- Passages blocked in radiator, hoses, or water jacket.
- Air in system.
- Faulty water pump.
- Thermostat stuck closed.
- Faulty temperature gauge or thermo sensor.
- Faulty cooling fan motor.
- Faulty fan motor switch.
- Fan shround installed improperly.

Engine Temperature Too Low

- Faulty temperature gauge or gauge sensor.
- Thermostat stuck open.
- Faulty cooling fan motor switch (see section 18).

Coolant Leaks

- Faulty pump mechanical seal.
- Deteriorated O-rings.
- Faulty radiator cap.
- Damaged or deteriorated gasket.
- Loose hose connection or clamp.
- Damaged or deteriorated hoses.

Troubleshooting

Engine Won't Start
- No fuel to carburetors
  - fuel strainer clogged
  - fuel tube clogged
  - faulty fuel valve
  - float level misadjusted
  - fuel tank cap breather hole clogged
- Too much fuel getting to the engine
  - air cleaner clogged
  - flooded carburetors
- Intake air leak
- Fuel contaminated/deteriorated
- Slow circuit or bystarter circuit clogged
- Ignition malfunction

Engine Stalls, Hard to Start, Rough Idling
- Fuel line restricted
- Ignition malfunction
- Fuel mixture too lean/rich
- Fuel contaminated/deteriorated
- Intake air leak
- Idle speed misadjusted
- Pilot screw misadjusted
- Slow circuit or bystarter circuit clogged
- Float level misadjusted
- Fuel tank breather tube clogged

Afterburn on Deceleration
- Lean mixture in slow circuit

Backfiring or Misfiring During Acceleration
- Ignition system faulty
- Fuel mixture too lean

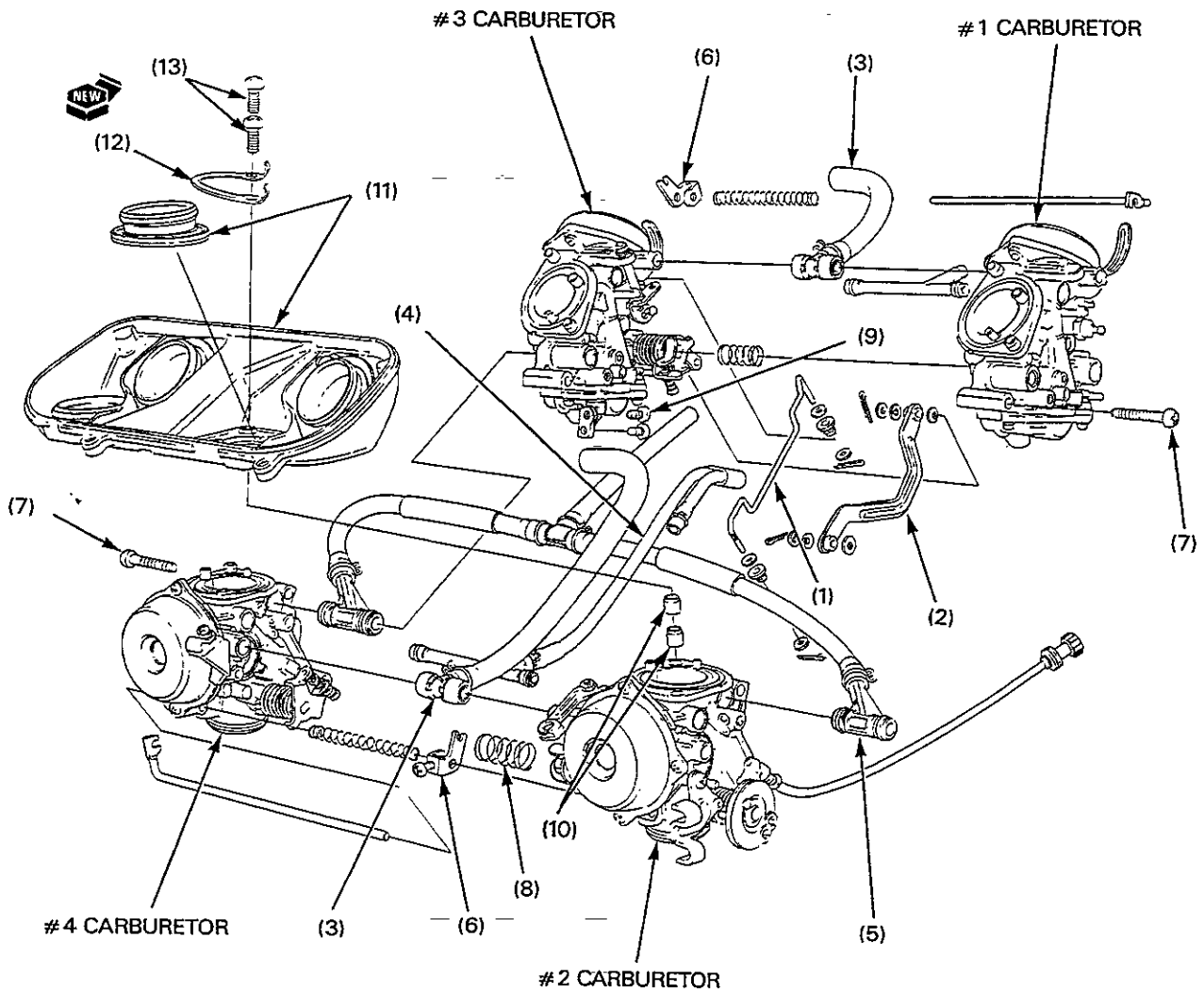
Poor Performance (driveability) and Poor Fuel Economy
- Fuel system clogged
- Ignition malfunction

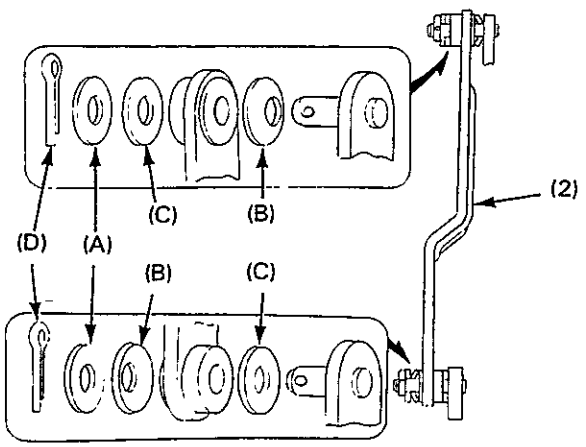
Lean Mixture
- Fuel jets clogged
- Float valve faulty
- Float level too low
- Fuel line restricted
- Carburetor air vent hole (or tube) clogged
- Intake air leak
- Vacuum piston faulty
- Throttle valve faulty

Rich Mixture
- Bystarter valve in ON position
- Float valve faulty
- Float level too high
- Air jets clogged
- Air cleaner element contaminated
- Flooded carburetors

Carburetor Combination

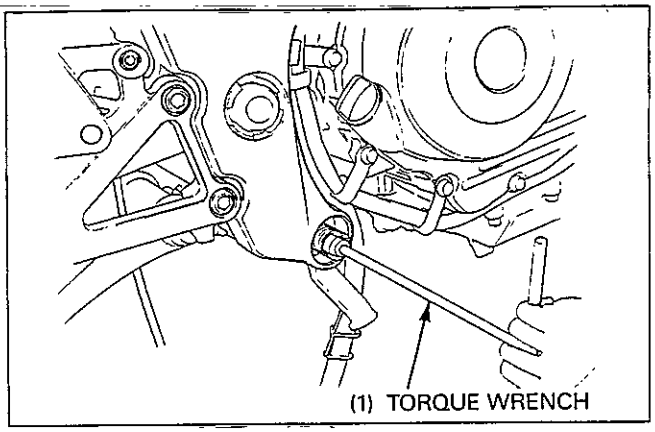
: O-RING, COTTER PIN





(A) THRUST WASHER
(B) PLASTIC SPRING WASHER
(C) PLASTIC THRUST WASHER
(D) COTTER PIN

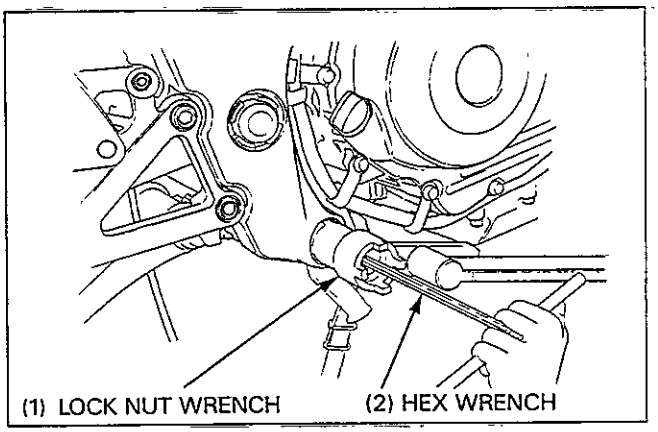
Tighten the mounting bolt and the adjusting bolt by using a hex wrench.
TORQUE: 11 N·m (1.1 kg-m, 8 ft-lb)



Install the lock nut. Hold the mounting bolt and tighten the lock nut by using the lock nut wrench.
TORQUE: 55 N·m (5.5 kg-m, 40 ft-lb)

S TOOL
LOCK NUT WRENCH 07HMA-MR70200

Tighten the mounting nut on the other side.
TORQUE: 40 N·m (4.0 kg-m, 29 ft-lb)

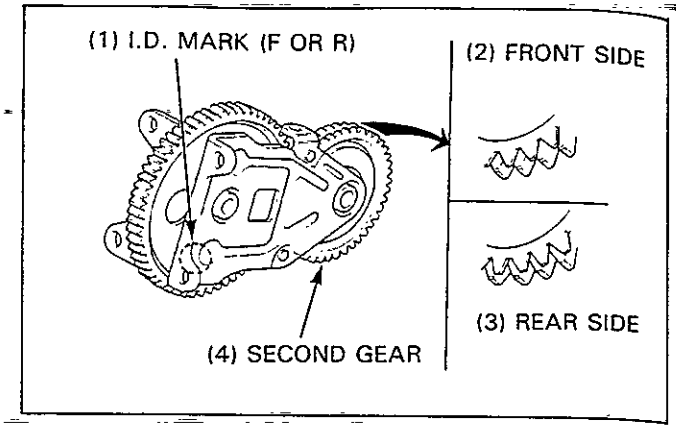


Cam Gear Case Installation

NOTE

- The cam gear case is marked with F or R on the flange. Install the gear case marked F on the front cylinder and the case marked R on the rear cylinder.
- When the identification mark is not clear, the gear case can be identified by the sub gear of the second gear. With the sub gear toward you:

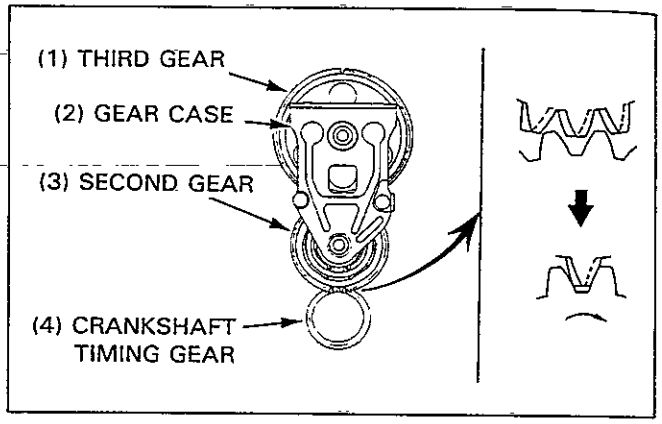
— for front cylinder: the sub gear is off to the left side from the main gear.
— for rear cylinder: the sub gear is off to the right side from the main gear.



Push the gear case dowel pins fully into the cylinder head.

NOTE

- The second gear and the crankshaft timing gear do not engage properly when the dowel pins are not pushed into the full.

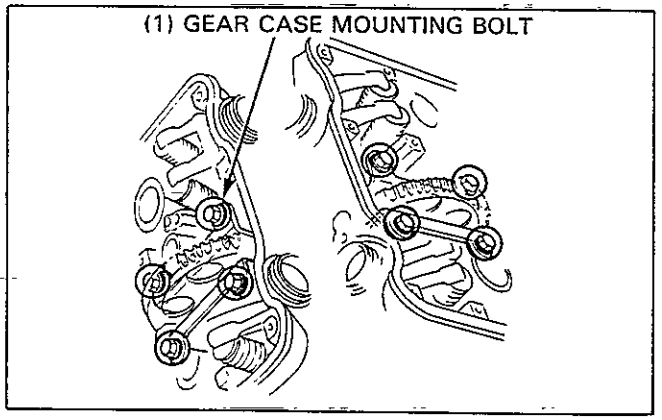


Check the I.D. mark on the gear case and install the case on the designate cylinder head.
Check for the proper engagement of the timing gear and the seconds gear in the following procedures.
Lightly move the third gear back and forth with the gear case lightly pushed down. The engagement is correct if the flange of the gear case is pushed by the timing gear and raised off the cylinder head slightly.
Remove the gear case and reinstall it if necessary.

Tighten the four gear case mounting bolts fully with your fingers.
Install and loosely tighten the gear case set bolt and the copper washer.

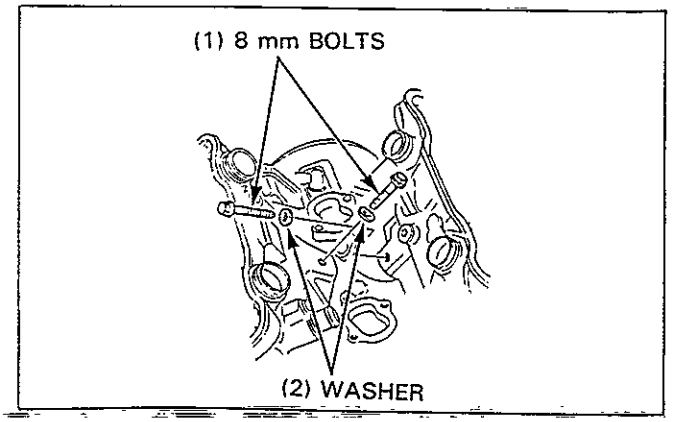
NOTE

- When tightening the set bolt, take care not to damage the gear cse threads and the bolt threads.



Tighten the gear case mounting bolts of the dowel pin side to the specifiled torque.
TORQUE: 36 N·m (3.6 kg-m, 26 ft-lb)
Then tighten the remaining mounting bolts.

Tighten the gear cse set bolt.
TORQUE: 12 N·m (1.2 kg-m, 9 ft-lb)



NOTE

- To loosen the clutch center lock nut, straighten the locking tabs with care not to damage them, then;
  Move the shift lever to the 6th speed and operate the rear brake.
  When the engine dismounted from the frame, move the shift lever to the 6th speed and hold the drive sprocket with a universal holder or equivalent.
- Loosen the oil pump driven sprocket bolt with the clutch assembly installed before removing the bolt. Note that the bolt threads are coated with the thread locking agent.
- Note the connection and installation direction of the lifter rod once it is removed. Special alignment is required at the left lifter cam connecting section (page 10-2).

Requisite Serice

- Right crankcase cover removal/installation (page 9-2).
- Starter clutch removal (page 17-2).

	Procedure	Q'ty	Remarks
	Removal Order		
(1)	Snap ring	1	NOTE • When removing the oil pump driven sprocket bolt, loosen it first with the clutch outer installed.
(2)	Clutch lifter plate	1	NOTE • Remove the bearing only on replacement.
(3)	Lifter guide	1	NOTE • Remove the stopper ring only on replacement.
(4)	Lifter rod	1	NOTE • Do not depress the clutch lever with the rod removed.
(5)	Clutch center lock nut	1	NOTE • Straighten the locking tabs first (page 9-3)
(6)	Lock washer	1	
(7)	Clutch spring set plate	1	
(8)	Diaphragm spring	3	NOTE • Replace the three springs as a set.
(9)	Pressure plate	1	NOTE • Remove the stopper ring only on replacement.
(10)	Thrust washer	1	
(11)	Clutch disc	10	NOTE • Disc contact surface of the two end plates is black.
(12)	Clutch plate	9	
(13)	Clutch center B	1	
(14)	One-way clutch assembly	1	NOTE • Do not disassemble unnecessarily.
(15)	Thrust washer	1	
(16)	Clutch center A	1	
(17)	Clutch outer	1	
(18)	Oil pump driven sprocket bolt	1	
(19)	Oil pump driven sprocket	1	
(20)	Oil pump drive chain/sprocket	1/1	NOTE • Remove the oil pump drive chain and sprocket together.
(21)	Clutch outer guide	1	

NOTE

- When installing the water pump, check the water pump shaft and oil pump shaft connection.

Requisite Service

- Oil pan installation (page 4-4).
- Drive sprocket cover installation (page 10-2).
- Water pump installation (page 5-5).
- Clutch installation (page 9-6).
- Lower fairing installation (page 2-4).

	Procedure	Q'ty	Remarks
	Removal Order		
	Shift Drum		
(1)	Shift drum/bearing	1/1	
(2)	Shift fork	3	NOTE • Install the left shift fork on the C6 gear, center shift fork on the M3/M4 gear, and the right shift fork on the C5 gear respectively with the marks faxing right (page 11-4).
(3)	Shift fork shaft	1	NOTE • Apply engine oil and push in from the right side.
(4)	Stopper washer/bolt	1/1	
	Gearshift Linkage		
(5)	Shift drum pin	1	NOTE • Install the shift drum pin on the shift drum.
(6)	Shift drum center	1	**CAUTION** • **Install by aligning the shift drum pin with the longhole in the drum center.**
(7)	Shift drum center bolt	1	
(8)	Doel pin	2	
(9)	Shift drum set plate	1	
(10)	Spacer collar	1	
(11)	Stopper arm assembly/spring	1/1	NOTE • Loosely tighten the two set bolts and install the roller on the drum center with the spring hook set on the arm and the reerse side set on the crankcase. Remove the set bolts.
(12)	Thrust washer	1	
(13)	Guide plate/drum shifter assembly	1/1	NOTE • Assemble the shifter body, plunger, spring, and reatched pawl with the shifter plate. Pushing the pawl with your fingers, install the assembled plate on the shift drum center.
(14)	Bolt	2	
(15)	Shift collar	1	
(16)	Thrust washer	1	
(17)	Gearshift spindle/spring	1/1	NOTE • Install by aligning the long hole with the shifter collar and the two return springs with the stud pins on the case.
(18)	Gasket	1	
(19)	Dowel pin	1	
(20)	Gearshift linkage cover	1	NOTE • Install with care not to damage the dust seal.
(21)	Gearshift linkage cover bolt	5	
(22)	Gearshift spindle joint/gearshift spindle joint bolt	1	NOTE • Align the punch mark with the one on the shift arm and install on the spindle.

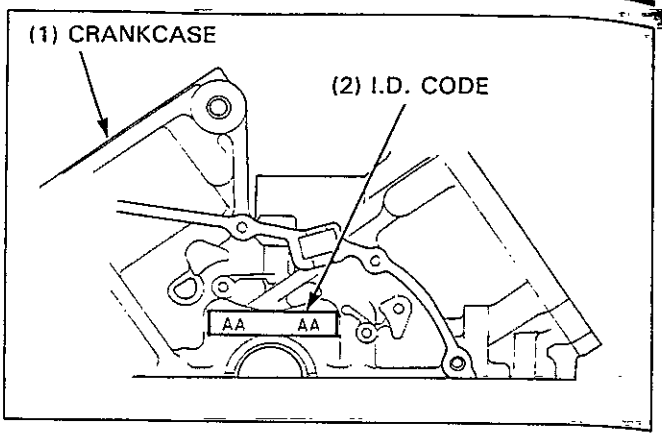
Bearing Selection

Main Bearing

Record the crankcase I.D. code.

NOTE

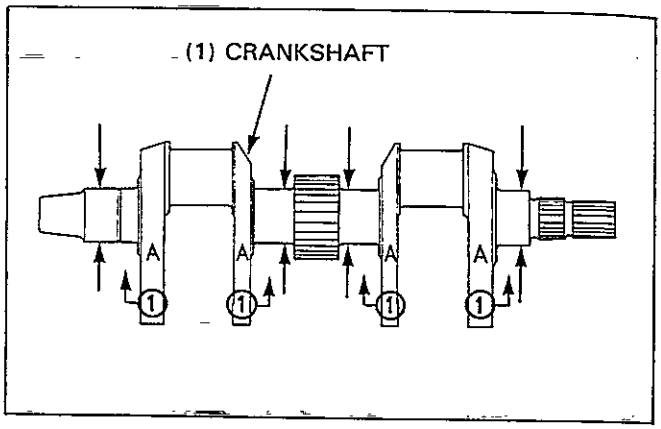
- A or B stamped on the No.4 journal of the upper crankcase is the I.D. code of the journal. The code letters, from left to right, indicate each journal I.D. respectively. (Refer to the drawing to the right.)



Record the crankshaft main journal O.D. code (or measure the main journal O.D.).

NOTE

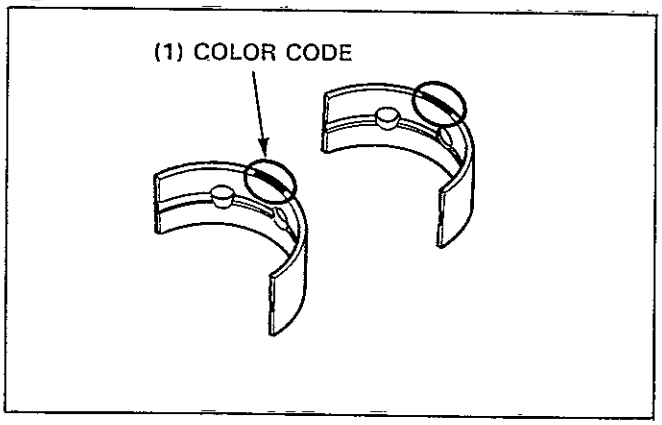
- 1 or 2 stamped on the crank weight is the main journal O.D. code. (Refer to the drawing to the right.)



Determine the bearing I.D. code by referring to the case I.D. code and the main journal code.

			Main journal O.D. code	
			1	2
			29.994–30.002mm (1.1809–1.1812in)	30.002–30.010mm (1.1812–1.1815in)
Case I.D. code	A	33.000–33.008mm (1.2992–1.2995in)	C (Yellow)	B (Green)
	B	33.008–33.016mm (1.2995–1.2998in)	B (Green)	A (Brown)

A (Brown): 1.498–1.502 mm (0.0590–0.0591 in)
B (Green): 1.494–1.498 mm (0.0588–0.0590 in)
C (Yellow): 1.490–1.494 mm (0.0587–0.0588 in)



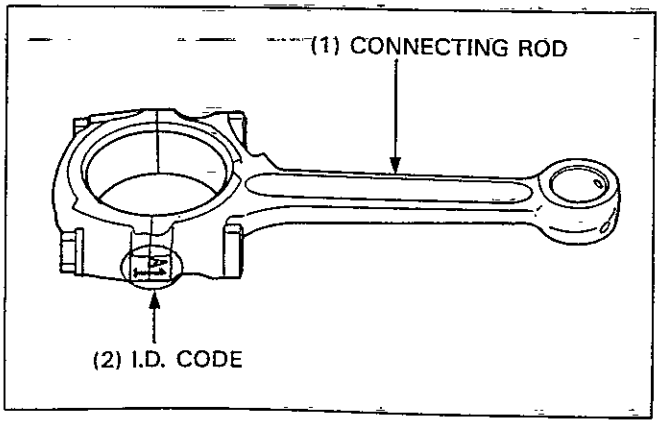
Thickness of the bearing metal can be identified by the color code.

Connecting Rod Bearing

Record the connecting rod I.D. code number.

NOTE

1 or 2 stamped on the connecting rod is the connecting rod I.D. code number. (Refer to the drawing to the right.)



⚠ WARNING

- **A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.**
- **Inhaled asbestos fibers have been found to cause respiratory disease and cancer. Never use an air hose or dry brush to clean brake assemblies.**

NOTE

- Install the front wheel with the arrow mark (stamped on the right side) facing to the normal rotating direction.
- Do not depress the brake lever when the caliper is removed, or it will be difficult to refit the disc between the brake pads.

Requisite Service

- Raise the wheel off the ground by placing a jack or other support under the engine.

	Procedure	Q'ty	Remarks
	Removal Order		
(1)	Caliper mounting bolt	4	
(2)	Front caliper assembly	2	**CAUTION** • **Do not hang the caliper by the brake hose.**
(3)	Right axle pinch bolt	2	Loosen the bolts.
(4)	Axle bolt	1	
(5)	Left axle pinch bolt	2	Loosen the bolts.
(6)	Axle shaft	1	
(7)	Front wheel assembly	1	Disassembly/assembly (page 12-8)
(8)	Side collar	2	
	Installation Order		
(8)	Side collar	2	NOTE • Right side collar is longer than the left side collar. • Apply grease to the dust seal lips before installing.
(7)	Front wheel assembly	1	
(6)	Axle shaft	1	NOTE • Apply thin coat of grease.
(4)	Axle bolt	1	
(5)	Left axle pinch bolt	2	
(3)	Right axle pinch bolt	2	NOTE • Tighten after tightening the axle bolt.
(2)	Front caliper assembly	2	**CAUTION** • **Be careful not to damage the pads.**
(1)	Caliper mounting bolt	4	

NOTE

- Check the steering bearing preload after installing.

Requisite Service

- Fork installation (page 12-10)
- Front wheel installation (page 12-6)

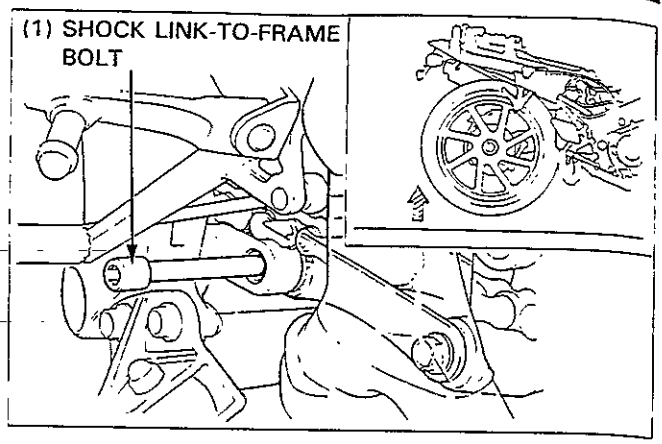
	Procedure	Q'ty	Remarks
	Installation Order		
(1)	Upper bearing outer race	1	Use the driver attachment B (07946—KM90200), driver assembly shaft (07946—KM90300), bearing remover B (07946—KM90500) and base (07946—KM90600).
(2)	Lower bearing outer race	1	
(3)	Lower dust seal	1	
(4)	Lower bearing inner race	1	Use the stem driver attachment (07HMD—MR70100) and inner driver C (07746—0030100).
(5)	Lower bearing	1	
(6)	Steering stem	1	
(7)	Upper bearing	1	
(8)	Upper bearing inner race	1	
(9)	Upper dust seal	1	
(10)	Steering bearing adjustment nut	1	Use the steering stem socket (07HMD—MR70100).
(11)	Lock washer	1	Bend down the two tabs into the adjustment nut grooves.
(12)	Lock nut	1	Hand tighten, align the grooves with the lock washer tabs and bend up the tabs into the grooves.
(13)	Top bridge	1	
(14)	Steering stem nut	1	NOTE Temporarily install the fron forks and tighten the nut.
(15)	Steering stem nut cap	1	
(16)	Horn	1	Connect the horn wires.
(17)	Brake hose clamp	1	

Rear Suspension Bolt Removal

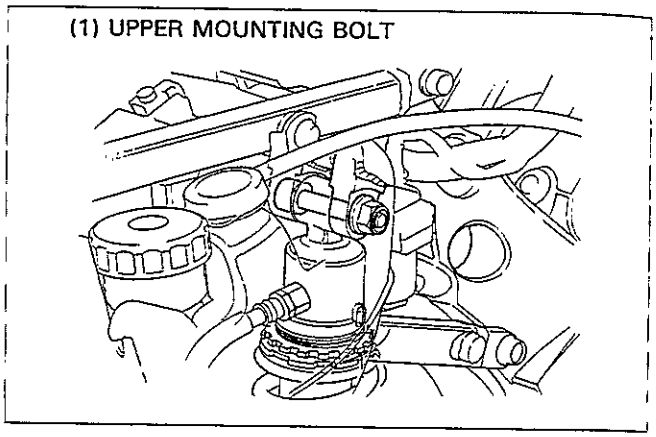
Raise the rear wheel off the ground and support the motorcycle securely.
Remove the seat cowling.
Remove the shock link-to frame bolt.

NOTE

- Loosen the nut first then remove the bolt for easy removal.



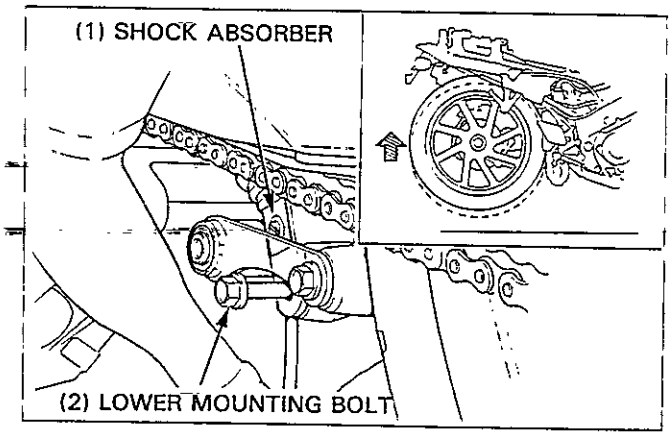
Remove the shock absorber upper mounting bolt while supporting the rear wheel by hand.



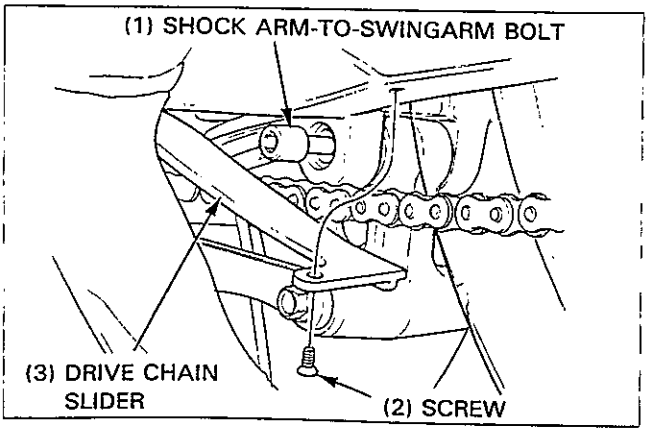
Loosen the shock absorber lower mounting nut.
Raise the wheel further by hand and remove the shock absorber lower mounting bolt.

NOTE

- Be careful not to damage the exhaust pipe while servicing.



Remove the screw and the lower portion of the drive chain slider from the swingarm.
Remove the shock arm-to-swingarm bolt.



Pivot Bearing Replacement

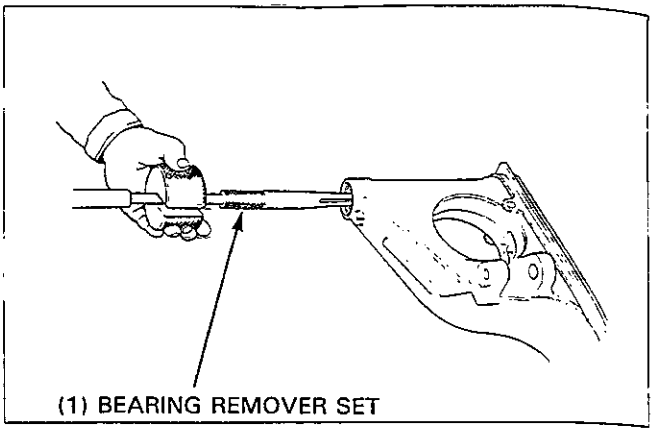
Removal

Remove the snap ring.

Remove the ball bearing from the right swingarm pivot.

S TOOL

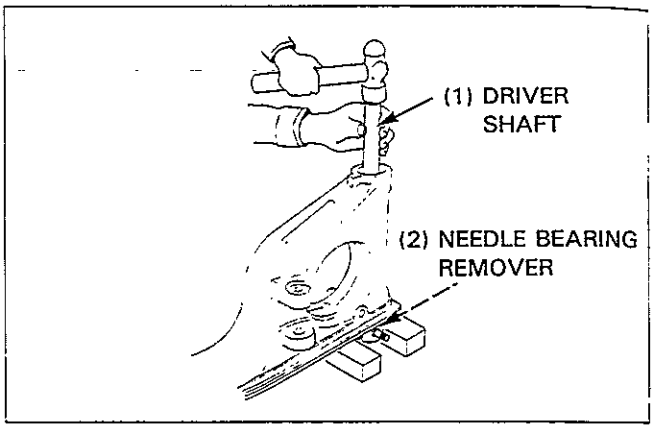
Bearing remover set	**07936—3710001**



Drive the needle bearing out of the left swingarm pivot.

S TOOL

Needle bearing remover	**07HMC—MR70100**
Driver shaft	**07946—MJ00100**



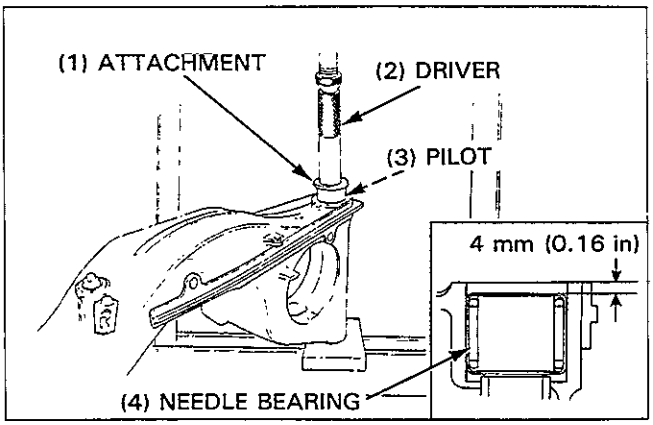
Installation

Apply molybdenum disulfide grease to a new needle bearing.

Carefully press the needle bearing into the left swingarm pivot 4 mm (0.16 in) from the edge of the swingarm, measuring with the vernier caliper.

S TOOL

Driver	**07749—0010000**
Attachment, 37 x 40 mm	**07746—0010200**
Pilot, 28 mm	**07746—0041100**

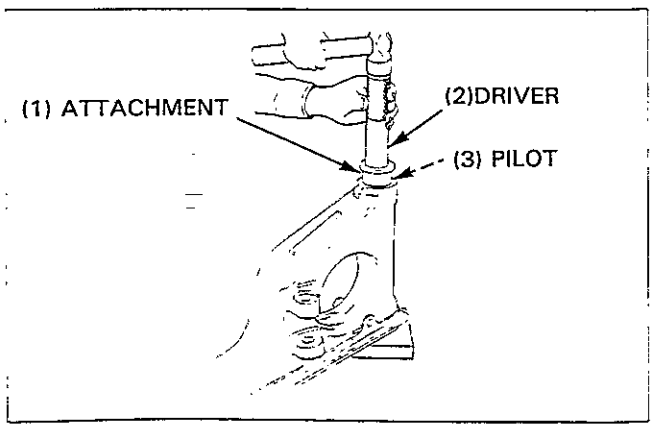


Drive ball bearings into the right swingarm pivot one by one with the marked side facing out until they bottom.

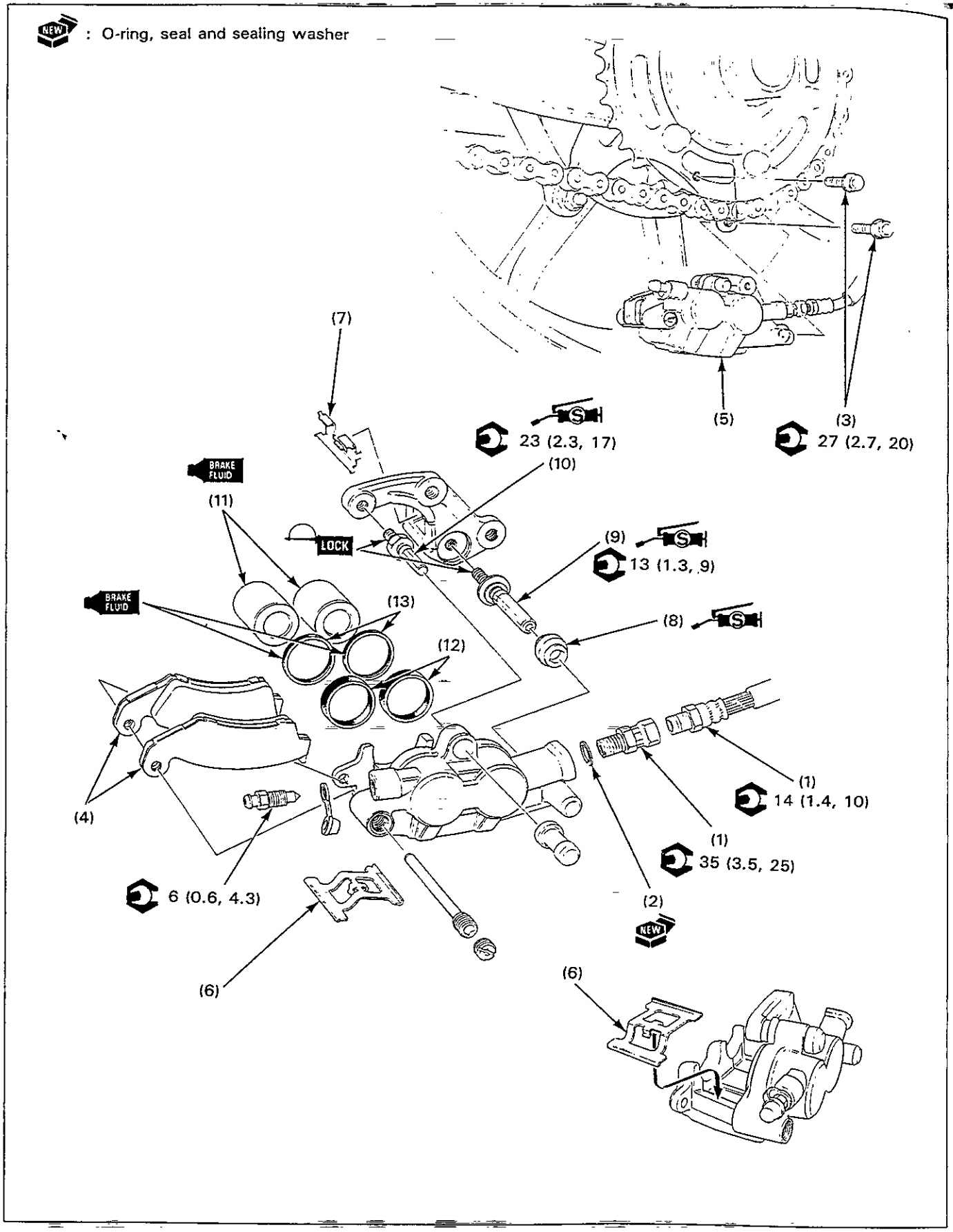
S TOOL

Driver	**07749—0010000**
Attachment, 37 x 40 mm	**07746—0010200**
Pilot, 20 mm	**07746—0040500**

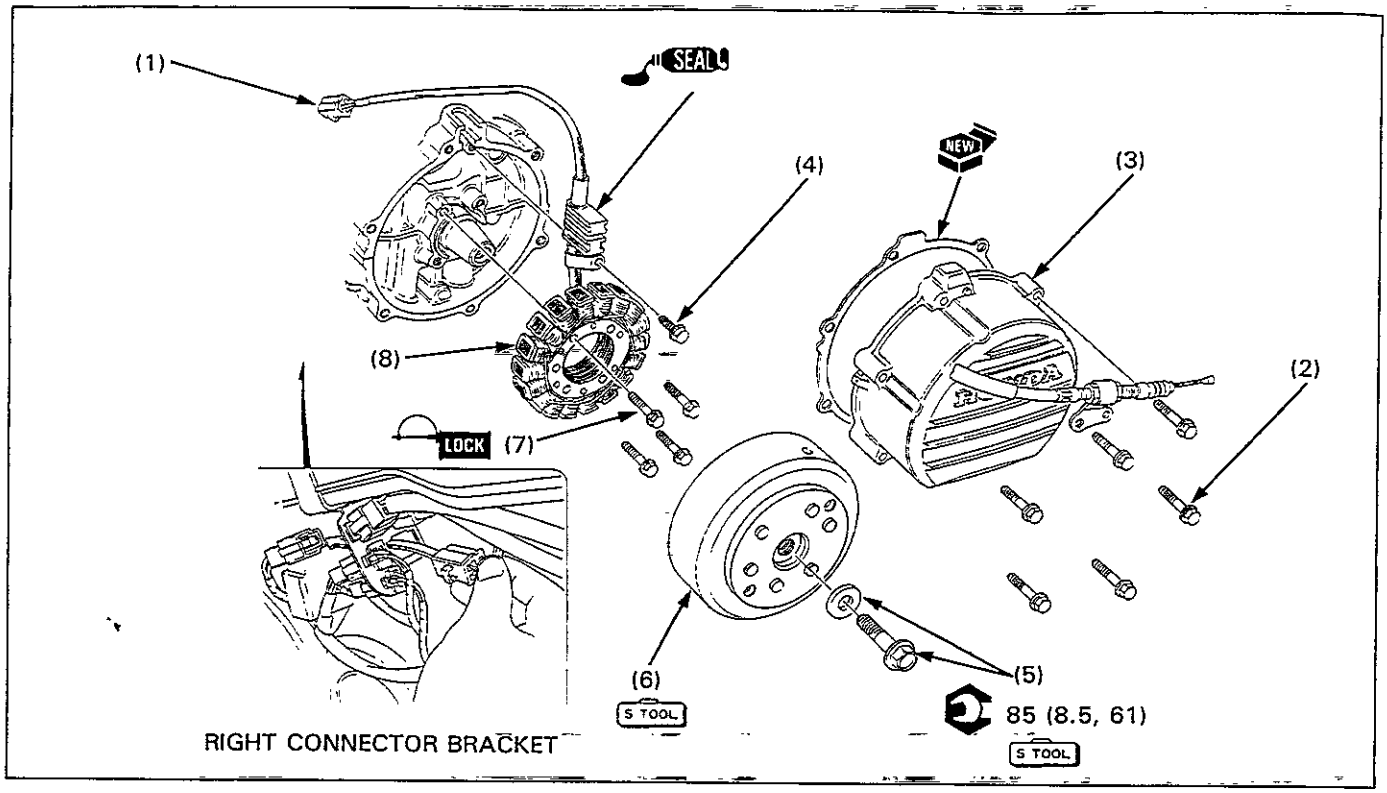
Install the snap ring



Rear Brake Caliper Disassembly/Assembly



Alternator Removal/Installation



NOTE

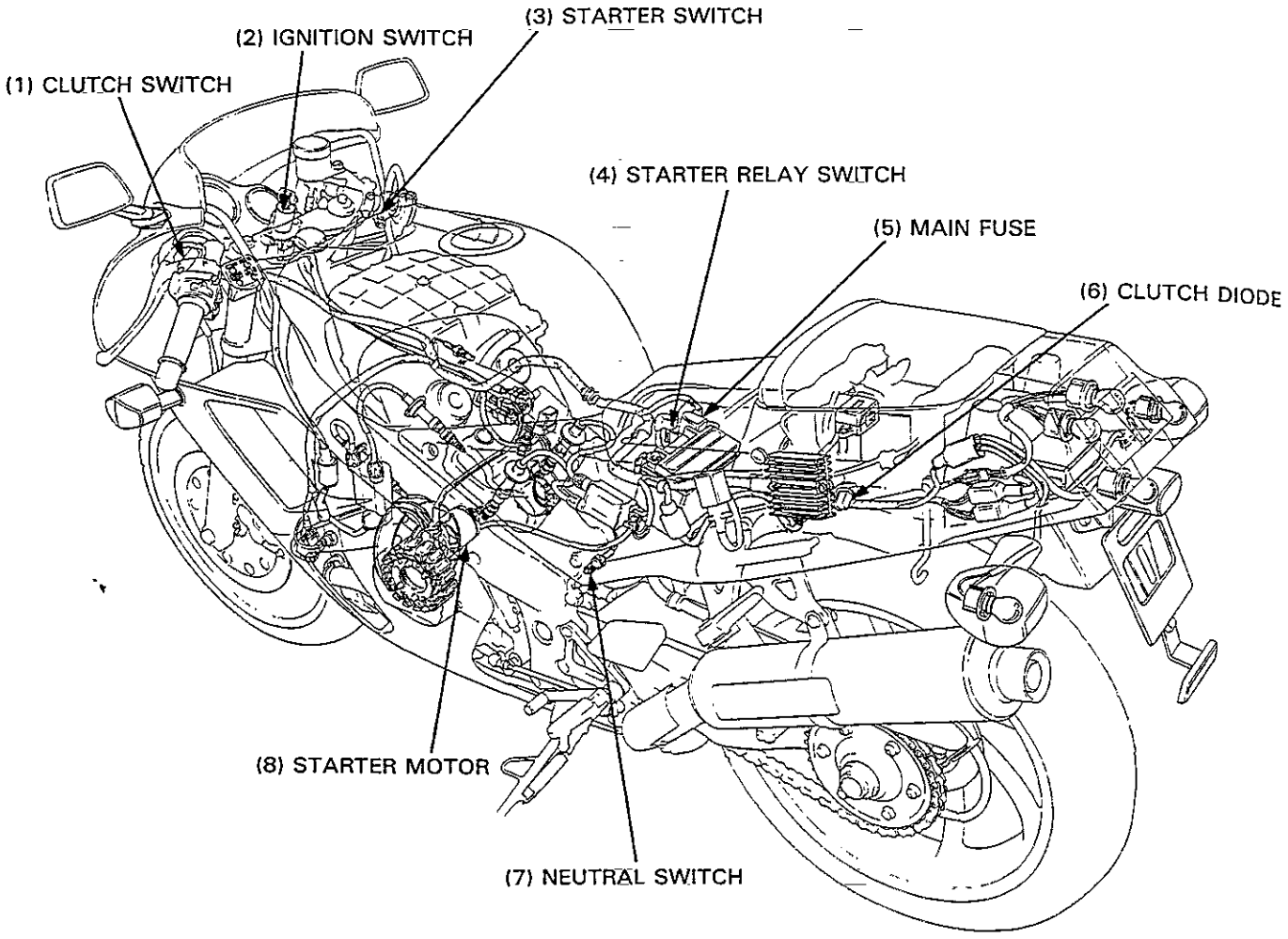
- The engine oil will spill out when the left crankcase cover is removed. Place a clean oil pan under the engine to catch the oil and add the recommended oil to the specified level after installing the cover.

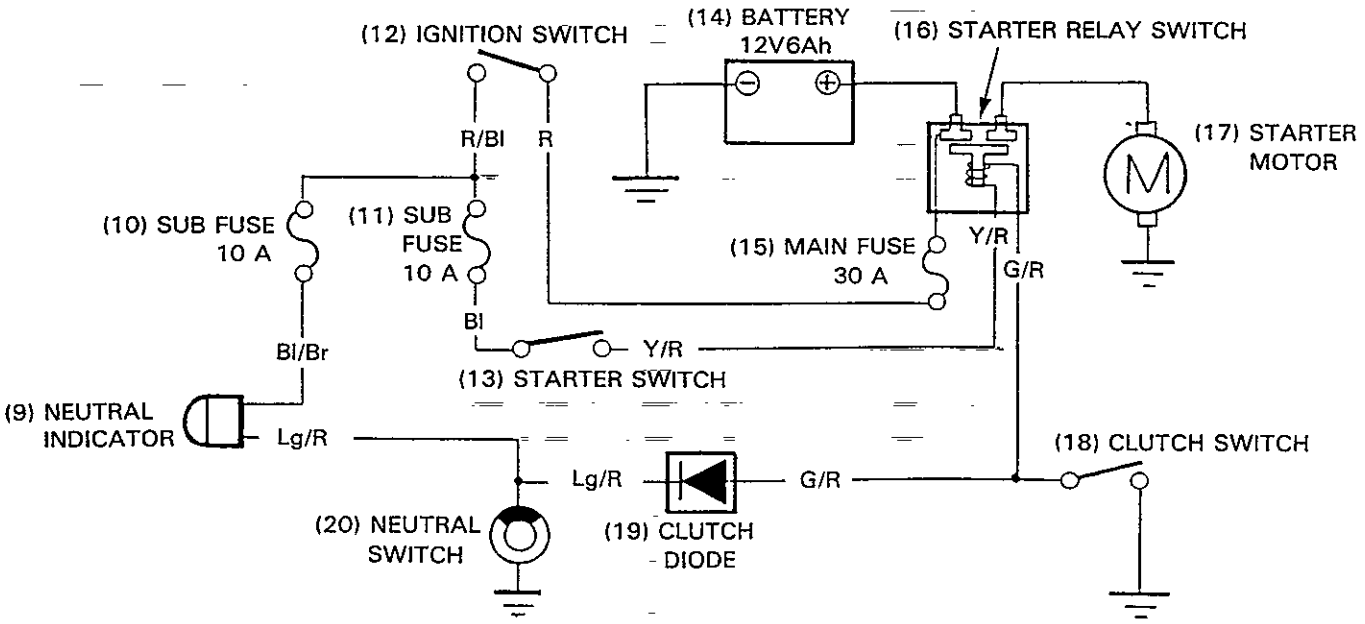
Requisite Service

- Lower fairing removal/installation (page 2-4)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse or der of removial.
(1)	Alternator wire connector	1	Disconnect the connector.
(2)	Left crankcase cover bolt	6	
(3)	Left crankcase cover	1	
(4)	Wire clamp/bolt	1/1	
(5)	Flywheel bolt/washer	1/1	Hold the flywheel with the universal holder (07725—0030000) and remove the bolt.
(6)	Flywheel	1	Use the rotor puller (07733—0020001).
(7)	Stator mounting bolt	4	
(8)	Stator	1	

System Location

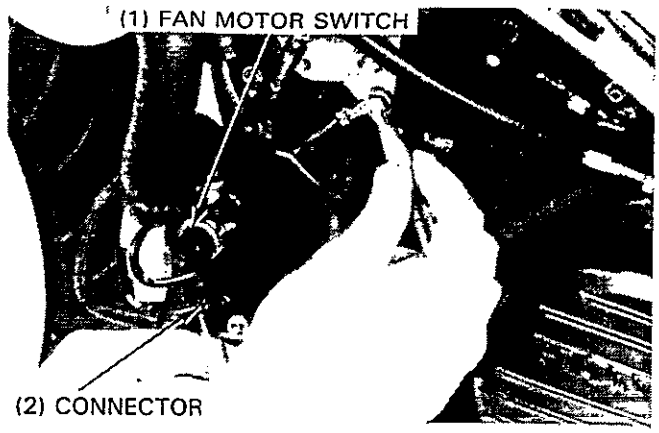




If the fan motor does not start:

1. Disconnect the fan motor switch connector from the switch and ground it with a jumper wire.
2. Turn the ignition switch ON, and check the fan motor.

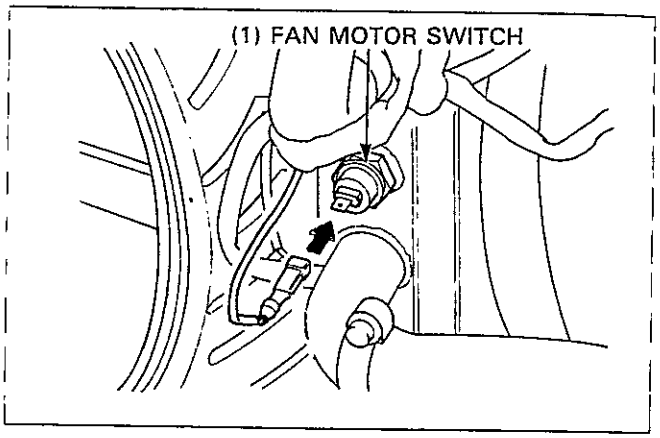
– If the motor turns, the fan motor switch is faulty or switch connector is loose or poorly connected.
– If the motor does not turn, check for voltage between the connector and ground.
  ◦ If the battery voltage exists, the fan motor is faulty.
  ◦ If no voltage, the wire harness has an open circuit.



When installing a new fan motor switch, apply sealant to the threads and tighten it to the specified torque.

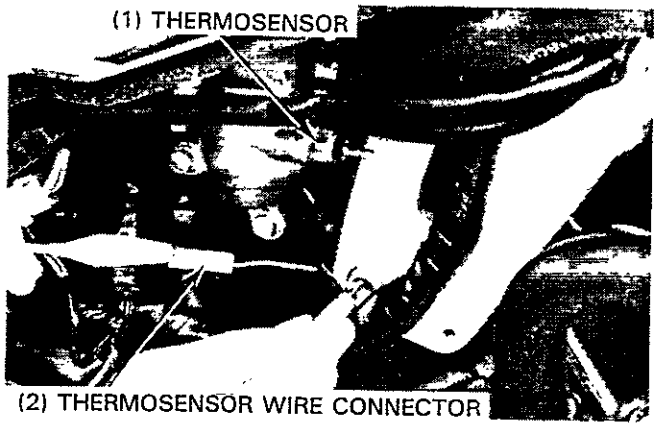
Torque: 18 N·m (1.8 kg-m, 13 ft-lb)

Connect the fanmotor switch connector.
Install the lower fairing (page 2-4).



Coolant Temperature Gauge Inspection

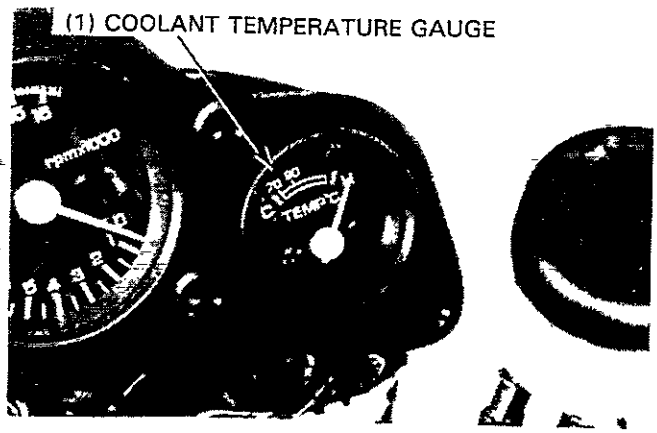
Remove the lower fairing (page 2-4) and the fuel tank (page 2-5).
Disconnect the thermosensor wire connector from the sensor and ground it with a jumper wire.



Turn the ignition switch ON and check the coolant temperature gauge. Disconnect the thermosensor wire from the ground immediately when the gauge needle moves jully to H.

CAUTION

- **Do not ground the thermosenor wire longer trhan 5 seconds to prevent damage to the gauge.**



If the needle does not move to H, check the wire harness between the switch and gauge.
If the wire harness is normal, replace the coolant temperature gauge.
Install the removed parts in the reverse order of removal.