HRC
Honda Racing

OWNER'S MANUAL
PARTS LIST

2004-RS125R

Important

This machine is designed and manufactured for competition use only and is sold "as-is" with no warranty. It does not conform to federal motor vehicle safety standards and operation on public streets, roads, or highways is illegal.

State laws prohibit operation of this vehicle except in an organized racing or competitive event upon a closed course which is conducted under the auspices of a recognized sanctioning body or permit issued by the local governmental authority having jurisdiction.

First determine that operation is legal.

Operator only, no passengers.

Read this manual carefully.

This manual should be considered as a permanent part of the motorcycle and should remain with the motorcycle when resold.

Safety Messages

Your safety and the safety of others is very important. We have provided important safety messages in this manual and on the RS125R. Please read these messages carefully.

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol ⚠ and one of three words, **DANGER**, **WARNING**, or **CAUTION**.

These mean:

⚠ DANGER **You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.**

⚠ WARNING **You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.**

⚠ CAUTION **You CAN be HURT if you don't follow instructions.**

Each message tells you what the hazard is, what can happen and what you can do to avoid or reduce injury.

Damage Prevention Messages

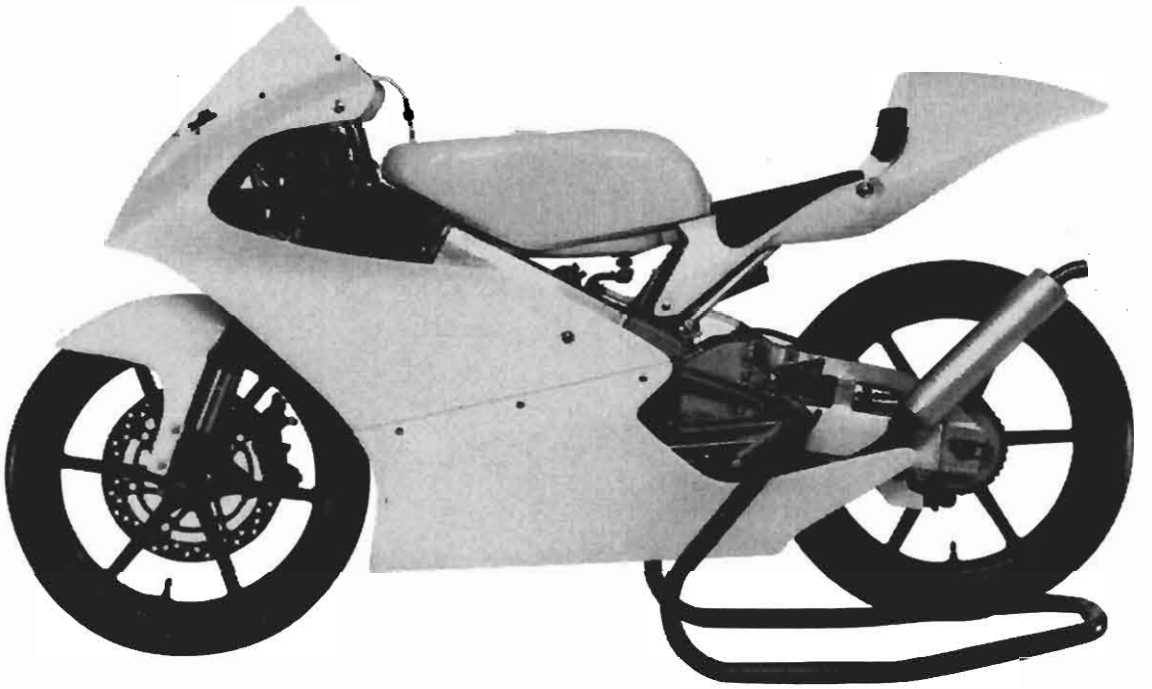
You will also see other important messages that are preceded by the word **NOTICE.**

This word means:

NOTICE Your RS125R or other property can be damaged if you don't follow instructions.

The purpose of these messages is to help prevent damage to your RS125R, other property, or the environment.

HONDA RACING RS125R
Owner's Manual



Contents

To The New Owner

By selecting a HRC roadracer RS125R as your new machine, you have placed yourself in a distinguished family of owners and riders.

The RS is a high performance racing machine utilizing the latest racing technology. This motorcycle is intended for competition use by experienced riders only.

This new racer was designed to be as competitive as possible. But motorcycle racing is a physically demanding sport that requires more than just a fine racing machine. To do well, you must be in excellent physical condition and be a skillful rider. For the best possible results, work diligently on your physical conditioning and practice frequently.

The purpose of this Manual is to help ensure that you obtain the greatest possible satisfaction from your new RS roadracer.

Importance Of Proper Preparation

Proper pre-race preparation and regular service is essential to rider safety and the reliability of the machine. Any error or oversight made by the technician during preparation or servicing can easily result in faulty operation, damage to the machine, or injury to the rider.

Parts Availability

Orders for the parts tend to be concentrated during the season, so you need to plan your parts orders carefully. To prevent delays in shipment, place orders on regularly replaced and fast-wearing parts well ahead of the season (see page 3-2).

How To Use This Manual

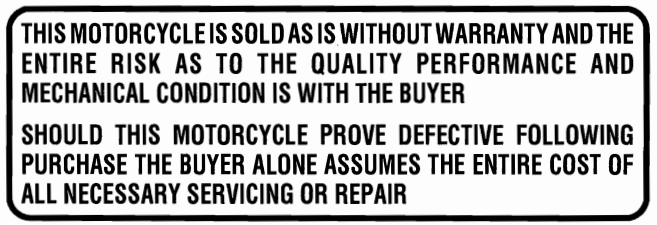
The purpose of this Owner's Manual is to help ensure that you obtain the greatest possible satisfaction from your new RS roadracer; satisfaction with the performance of the motorcycle, and through success in competition.

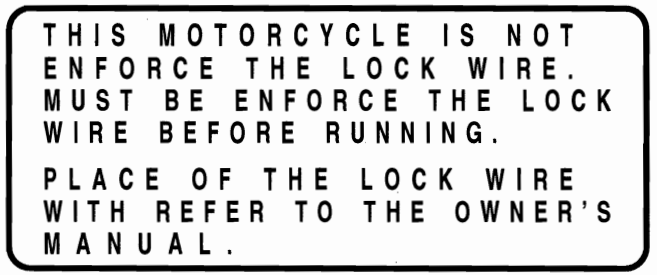
If you plan to do any service on your RS, section 3 describes standard maintenance and sections 4 through 6 contain in information on repair, disassembly, assembly and special tools.

Follow the Maintenance Schedule recommendation (page 3-1) to ensure that your RS is always in peak operating condition.

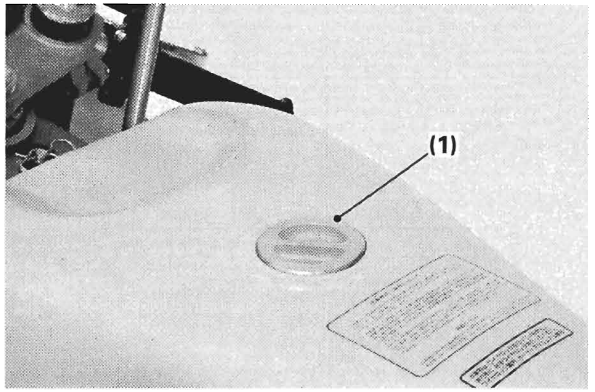
CAUTION MARK DESCRIPTION

Part : Fuel tank caution
Position: On the top of fuel tank





Part : Rear shock absorber label
Position: On the rear shock absorber reservoir



(1) FUEL FILL CAP

Fuel

Your RS125R has a two stroke engine that requires a gasoline-oil mixture as described below.

Gasoline: Premium unleaded gasoline (research octane number of 100 or higher)
Oil: ELF HTX976 or CASTROL A747
Fuel/oil mixing ratio: 30:1
Fuel tank capacity: 14 liter (3.7 US gal, 3.1 Imp gal)

To open the fuel fill cap, turn the tank cap counterclockwise.

⚠ WARNING

Gasoline is highly flammable and is explosive. You can be burned or seriously injured when refueling.

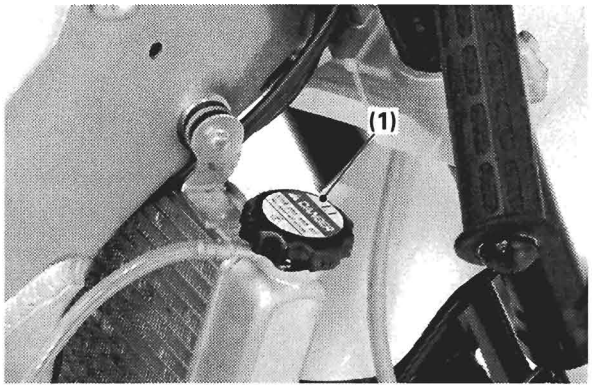
- **Stop engine and keep heat, sparks, and flame away.**
- **Refuel only outdoors.**
- **Wipe up spills immediately.**

Fuel 30	Oil 1
Liters	cm^3
0.5	17
1.0	33
1.5	50
2.0	67
2.5	83
3.0	100
3.5	117
4.0	133
4.5	150
5.0	167

30:1 FUEL OIL MIXING CHART

- Use premium unleaded gasoline provided for the purpose. Premium unleaded gasoline with a research octane number above 100 may be used. If "knocking" or "pinging" occurs, try a different brand of gasoline or a higher octane grade.
- Premix gasoline and oil in a ratio of 30:1. Prepare the fuel mixture in clean container, and shake until thoroughly mixed before filling the fuel tank. USE ELF HTX976 OR CASTROL A747.
- Too much oil will cause excessive smoking and spark plug fouling. Too little oil will cause engine damage or premature wear.
- Do not mix vegetable and mineral based oils.
- Vegetable oils separate from gasoline more easily than mineral oils, especially in cold weather. It is advisable to use mineral oil when ambient temperatures below 0°C (32°F) are expected.
- If the gasoline-oil mixture is left standing in a container for a long period of time, lubricity will deteriorate. Use the mixture within 24 hours.
- Once an oil container is opened, the oil must be used within one month, since oxidation may occur.
- Install the three baffle sponges into the fuel tank. One baffle sponge to be used for carburetor setting when you riding in rain (page 7-20).

Install the fuel fill cap by turning it clockwise.
Install the breather tube.



(1) RADIATOR CAP

Coolant

The engine of the RS125R is a water-cooled type. In order to provide adequate cooling, it is essential that the radiator be filled with coolant up to the proper level.

Coolant: Water only. Use clean tap water or distilled water.

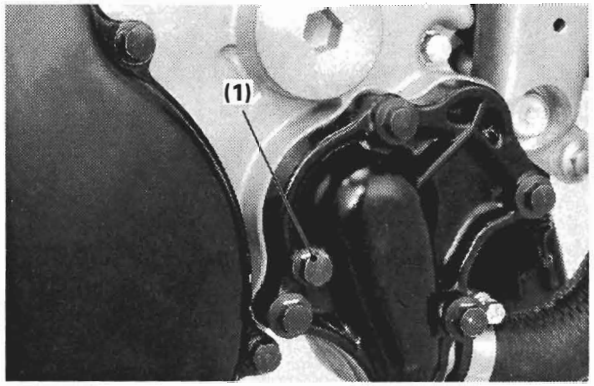
⚠ WARNING

Removing the radiator cap while the engine is hot will allow the coolant to spray out, seriously scalding you.

Always let the engine and radiator cool down before removing the radiator cap.

NOTICE

Failure to bleed the air completely may cause overheating and damage the engine.



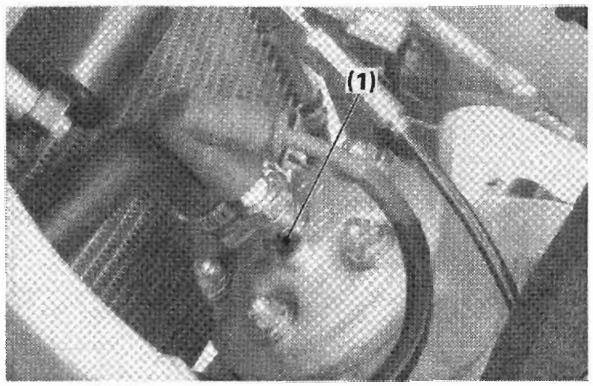
(1) AIR BLEED BOLT (WATER PUMP)

When filling the cooling system, be sure to bleed air completely by loosing the air bleeder bolts so that the system can be sufficiently filled.

Bleed the air thoroughly using the following procedure:

Raise the front end of the machine and put a stand beneath engine.

1. Bleed the air from the water pump.



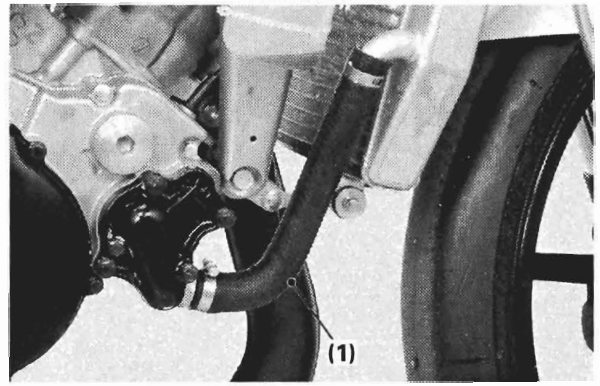
(1) AIR BLEED BOLT (CYLINDER HEAD)

2. Bleed the air from the cylinder head.
3. Rock the machine from left to right 2—3 times holding the handlebars.
4. Repeat 1 to 3 until the water level does not go down.
5. Reinstall the radiator cap and air bleed bolt and tighten securely.

NOTICE

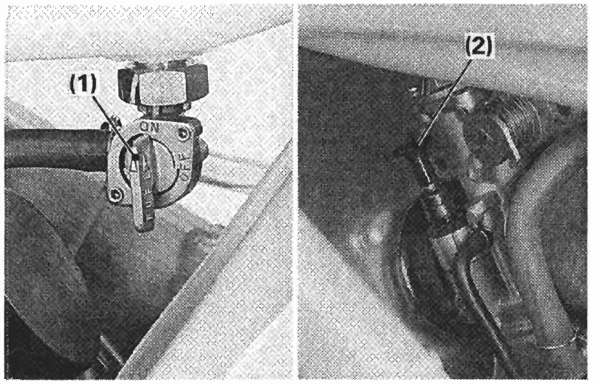
If the radiator cap is not installed properly, it will cause excessive coolant loss and may result in overheating and engine damage.

6. After starting the engine, check the coolant level. The coolant level is correct when it is at the bottom of the radiator filler neck.
   Add coolant up to the filler neck if the level is low.



(1) RADIATOR HOSE

After running, check the radiator and coolant passages for rusting or clogging. Since the cooling system uses water only, it should be drained completely at the end of each race day to prevent corrosion damage.
Remove the radiator-to-water pump hose and drain the coolant.



(1) FUEL VALVE (2) STARTER VALVE KNOB

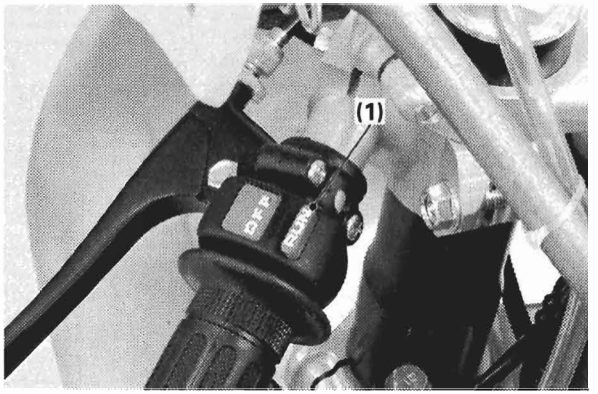
Basic Operation

Starting The Engine

Your RS125R exhaust contains poisonous carbon monoxide gas. High levels of carbon monoxide can collect rapidly in enclosed areas such as a garage. Do not run the engine with the garage door closed. Even with the door open, run the engine only long enough to move your RS out of the garage.

Cold Engine Starting

1. Turn the engine stop switch to RUN.
2. Turn the fuel valve ON.
3. Shift the transmission into low gear.
4. Pull the starter valve up.
5. With the throttle closed, start the engine by pushing the machine.
6. After the engine starts, run it for a few minutes, "blipping" the throttle, until it warms up enough to idle with starter valve pushed down. The knob should be pushed down, as soon as possible, to prevent spark plug fouling.



(1) ENGINE STOP SWITCH

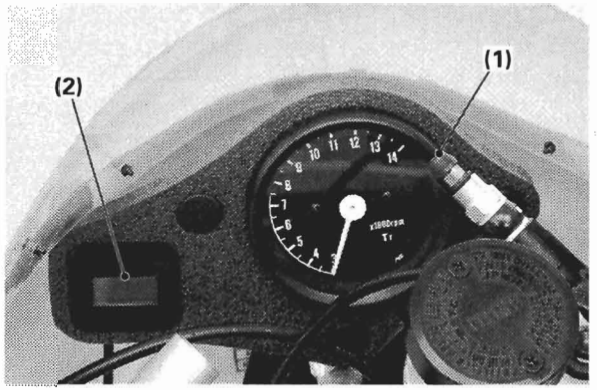
Warm Engine Starting

Follow the cold engine starting procedure without operating the starter valve knob.

Stopping The Engine

1. Shift the transmission into neutral.
2. Turn the fuel valve OFF.
3. Lightly open the throttle 2—3 times, and then close it.
4. When the engine slows down, turn the engine stop switch OFF until the engine stops completely.

If the fuel valve is not closed, the fuel could overflow through the carburetor, into the crankcase, causing hard starting.



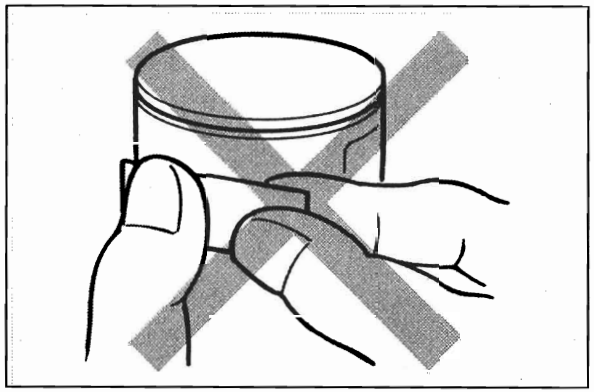
(1) TACHOMETER
(2) WATER TEMPERATURE METER (°C)

Warm Up Procedure

- While warm up the engine, do not rev the engine at high revolution for long time.

1. After the engine starts, keep the rev between 6,000 to 7,000 min^{-1} (rpm) until the water temperature reaches 40—50°C while keeping the throttle opening constant.
2. The water temperature reaches 40—50°C, gradually increase the engine rev to 10,000 min^{-1} (rpm). Then blip the engine and warm up the engine until the water temperature reaches about 55°C.
   Close the fuel valve OFF.
   Finish the warm up procedure, when the water temperature reaches 60—65°C or the engine rev feel lightly.
3. When you stop the engine, just close the throttle and wait fully OFF.
   Do not open the throttle when you turn OFF the engine stop switch.

Since '98 model, RS125R is equipped with the power jet in the carburetor.
The power jet is always injecting the fuel when the engine rev is below 4,000 min^{-1} (rpm).
While warming up the engine, spark plug folding is occur if you keep the engine rev below 4,000 min^{-1} (rpm).
Follow warm up procedure avoid folding the spark plug.



Break-In Procedure

New Machine

Following proper break-in procedure helps ensure that the most important and expensive components on your new machine will provide maximum performance and service life. (Also follow proper break-in procedure for a newly rebuilt engine.)
When riding a new machine, operate the machine for the first 30 minutes using no more than half throttle and shifting gears so that the engine does not lug:

Below 7,000 min^{-1}(rpm)...About 50 km (30 mi) (About 30 minutes)
Below 8,000 min^{-1}(rpm)...About 15 km (9 mi)
Below 9,000 min^{-1}(rpm)...About 15 km (9 mi)
Below 10,000 min^{-1}(rpm)...About 15 km (9 mi) (About 30 minutes)

Total: About 95 km (57 mi) (About one hour)

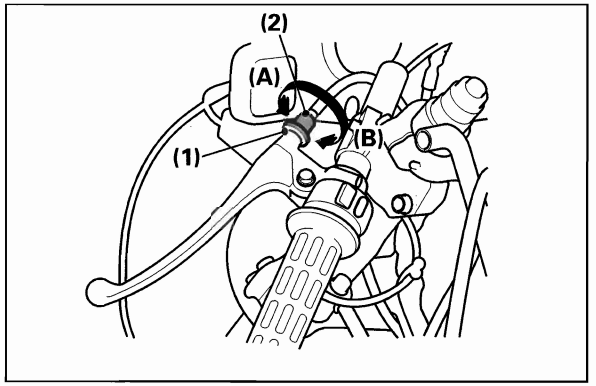
- When refueling, be sure to use a pre-mixed gasoline-oil mixture.
- Raise the main jet number by 2 ranks to enrich the mixture during breaking-in the machine.
- Do not repair the piston sliding surface. Engine damage will result if the piston is repaired.
- After brake-in, check the control cable for elongation.

Reconditioned Machine

- After replacing the cylinder and crankshaft, operate the machine for the first 95 km (57 mi; about one hour) observing the same cautions as for a new machine.
- When the piston, piston ring, gears, etc. are replaced, they must be broken in for the first 50 km (30 mi; 30 minutes) using no more than half throttle and shifting gears so that the engine does not lug:

Below 7,000 min^{-1} (rpm)...About 20 km (12 mi)
Below 8,000 min^{-1} (rpm)...About 10 km (6 mi)
Below 9,000 min^{-1} (rpm)...About 10 km (6 mi)
Below 10,000 min^{-1} (rpm)...About 10 km (6 mi)

Total: About 50 km (30 mi; about 30 minutes)

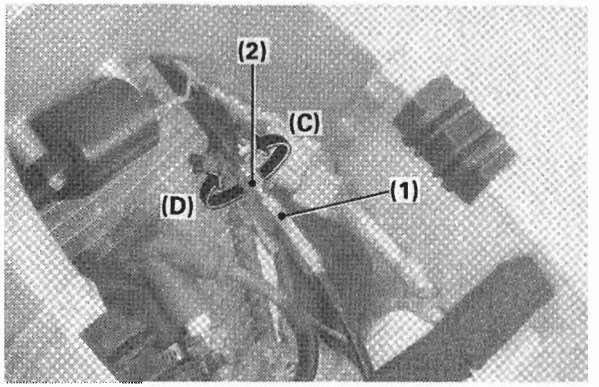


(1) LOCK NUT (2) ADJUSTER
(A) INCREASE (B) DECREASE

Controls

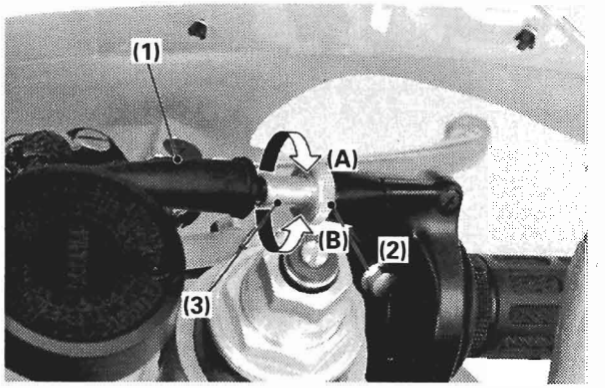
Clutch

1. The normal clutch lever free play is 10—20 mm (0.4—0.8 in) measured at the tip of the lever.
2. Minor adjustments can be made with the cable end adjuster.
   Loosen the lock nut and turn the adjuster. Turning the adjuster in direction A will increase free play, turning the adjuster in direction B will decrease free play. After adjustment, tighten the lock nut.
   If the adjuster is threaded out near its limit or the correct free play cannot be reached, turn the adjuster all the way in and back out one turn. Tighten the lock nut and make the adjustment with the integral cable adjuster.



(1) LOCK NUT (2) ADJUSTER
(C) INCREASE (D) DECREASE

3. Major adjustments can be made at the integral cable adjuster.
   Loosen the lock nut and turn the adjuster. Turning the adjuster in direction C will increase free play and turning it in direction D will decrease free play. Tighten the lock nut after adjusting.
4. Test ride to be sure the clutch operates properly without slipping or dragging.



(1) DUST COVER (2) LOCK NUT (3) ADJUSTER
(A) DECREASE (B) INCREASE

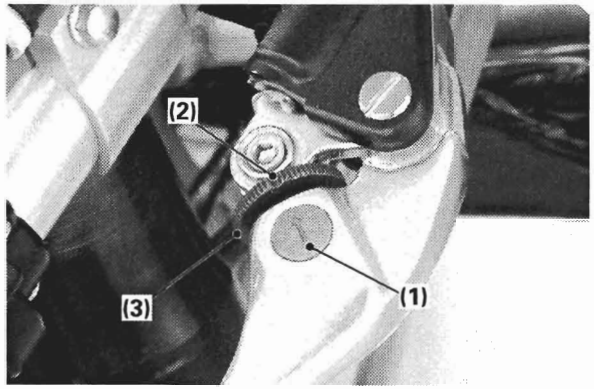
Throttle Grip

1. Throttle Grip Free Play

Standard throttle grip free play is approximately 3 mm (0.12 in) of grip rotation.

Adjustment is made with the upper adjuster.
Remove the dust cover and loosen the lock nut.
Turning the adjuster in direction A will decrease free play, turning it in direction B will increase free play.
Tighten the lock nut and reinstall the dust cover after adjustment.

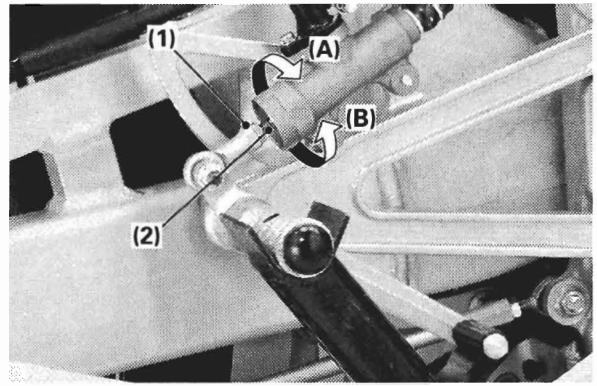
Operate the throttle grip to ensure that it functions smoothly and returns completely in all steering position.



(1) ARROW (2) INDEX MARK (3) ADJUSTER

Front Brake Lever

The distance between the tip of the brake lever and the grip can be adjusted by turning the adjuster. Align the allow on the brake lever with index mark on the adjuster.

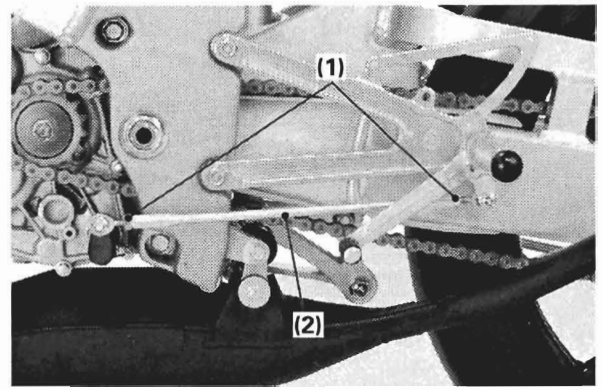


(1) LOCK NUT (2) ADJUSTING BOLT
(A) RAISE THE PEDAL HEIGHT
(B) LOWER THE PEDAL HEIGHT

Brake Pedal Height

The brake pedal height can be adjusted to the rider's preference.

To adjust the rear brake pedal height:
1. Loosen the lock nut and turn the adjusting bolt in direction A to raise the pedal, or in direction B to lower it.
2. Tighten the lock nut at the desired pedal height.



(1) LOCK NUTS (2) CHANGE ROD

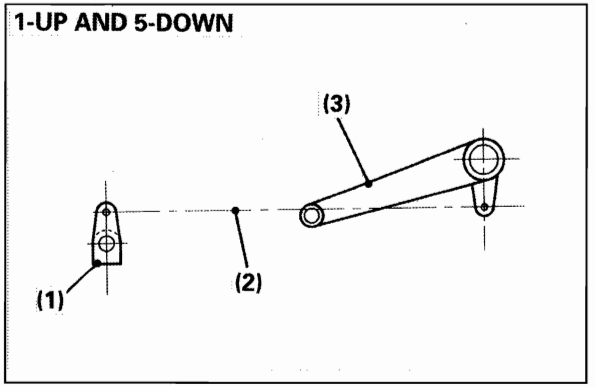
Gearshift Pedal Height

The gearshift pedal height can be adjusted to the rider's preference.
The gearshift pedal height can be adjusted by changing the length of the change rod on its threaded ends.

To adjust the gearshift pedal height:
1. Loosen the lock nuts (one lock nut has reverse threads) on both ends of the change rod, and turn the rod as required.
2. Tighten the lock nuts at the desired pedal height. The gearshift arm should be installed so that it has at a right angle to the gearshift pedal lever.

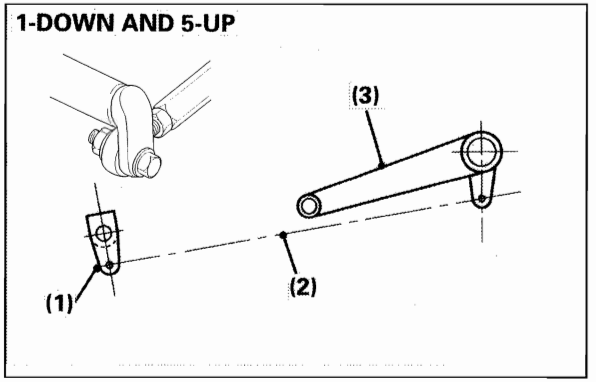
Shifting pattern: 1-UP and 5-DOWN

1-UP AND 5-DOWN



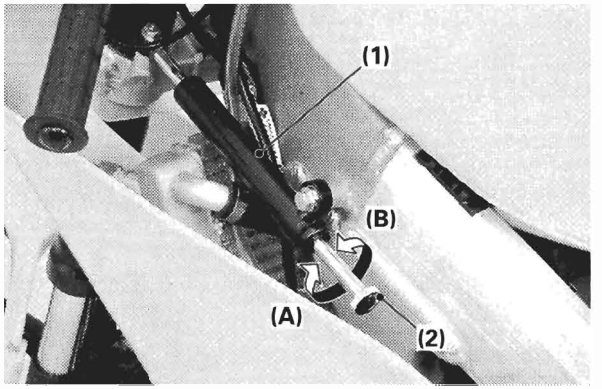
(1) GEARSHIFT ARM (2) CHANGE ROD
(3) GEARSHIFT PEDAL

1-DOWN AND 5-UP



(1) GEARSHIFT ARM (2) CHANGE ROD
(3) GEARSHIFT PEDAL

To change the pattern to "1-DOWN and 5-UP", reinstall the gearshift arm upside down (rod connecting end facing down).
When using "1-DOWN and 5-UP" gearshift pattern, install gearshift arm side ball joint facing in as shown.
Before running, apply grease to the gearshift pedal pivot surface.



(1) STEERING DAMPER (2) ADJUSTER
(A) HARD (B) SOFT

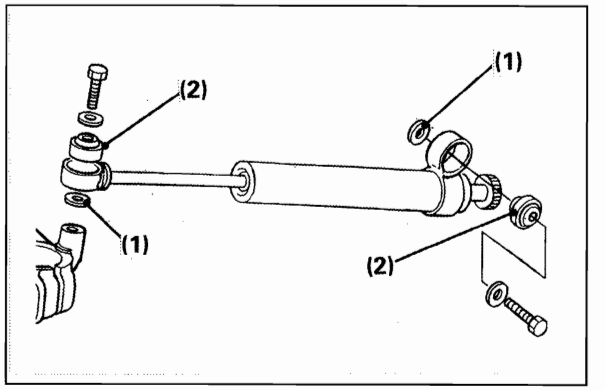
Steering Damper

Turn the adjuster clockwise to increase damping, counterclockwise to decrease damping. There are 12—17 notches between minimum and maximum. Do not force the adjuster to pass its limit.

Standard setting: Full soft position

NOTICE

Improper handling or failure to install the damper properly may damage the steering damper.



(1) THICK WASHER (2) SPHERICAL BEARING

- When installing the damper on the frame, pay careful attention to prevent the piston rod from being applied with excessive bending force beyond the allowable rotation angle of the spherical bearing.
- Handle carefully to avoid scratching, damaging or leaving foreign substances on the rod.
- Be sure that the adjuster knob on the lock nut of end joint is not touch the steering damper body when making a full turning sweep from left to right.
- Do not try to disassemble the steering damper.
- The steering damper must first be set at the standard (full soft) position, than adjust as required.
- At steering damper installation, set the thick washer (2.3 mm) between the spherical bearing and frame, and the spherical bearing and bottom bridge.

Memo

Specifications

Item		Specification
Dimensions	Overall length	1,800 mm (70.9 in)
	Overall width	570 mm (22.4 in)
	Overall height	995 mm (39.2 in)
	Wheelbase	1,215 mm (47.8 in)
	Ground clearance	110 mm (4.3 in)
	Seat height	700 mm (27.6 in)
	Half dry weight	71.5 kg (158 lbs)
Frame	Type	Aluminum twin tube
	Front suspension	Telescopic, inverted type
	Rear suspension	Swingarm, Pro-link
	Front brake	Single disc with 4-piston caliper
	Rear brake	Single disc with single piston caliper
	Fuel tank capacity	14.0 liter (3.7 US gal, 3.1 Imp gal)
	Caster angle	23° 30′
	Trail length	84 mm (3.3 in)
Engine	Type	Liquid cooled, 2-stroke
	Cylinder arrangement	Single cylinder, inclined 40° from vertical
	Bore and stroke	54 × 54.5 mm (2.13 × 2.15 in)
	Displacement	124 cm^3 (7.6 cu-in)
Drive Train	Clutch type	Multi plate, wet
	Transmission	6-speed, constant mesh
	Gearshift pattern	Left foot operated return system
		1 - N - 2 - 3 - 4 - 5 - 6
	Primary reduction	2.952 (62/21)
	Gear ratio 1st	1.875 (30/16)
	2nd	1.524 (32/21)
	3rd	1.304 (30/23)
	4th	1.167 (28/24)
	5th	1.077 (28/26)
	6th	1.000 (24/24)
	Final reduction	2.250 (36/16)
Electrical	Ignition system	Digital acvanced CDI
	Ignition timing	28.5° BTDC at 6,000 min^{-1} (rpm)

Service Data

Unit: mm (in)

Item	Standard	Service Limit
Lubrication		
Specified engine oil	ELF HTX976 or CASTROL A747	————
Fuel/oil mixing ratio	30 : 1	————
Transmission oil capacity	0.5 liter (0.53 US qt, 0.44 Imp qt)	————
Specified transmission oil	Honda 4-stroke oil or ELF HTX830 API service Classification: SE or SF Viscosity: SAE 10W-30	————
Fuel System		
Carburetor identification number	SPJ09D	————
Main jet (Standard)	#195	————
Slow jet (Standard)	#45	————
Power jet (Standard)	#40	————
Jet needle (Standard)	1268/3466/2351/1159	————
Jet needle clip position	4th groove	————
Throttle valve	#6.0	————
Air screw initial opening	1 3/4 turns out	————
Float level	8.0 (0.31)	————
Main jet holder	ø3.9 (ø0.154)	————
Throttle grip free play	3.0 (0.12)	————
Cooling System		
Recommended coolant	Clean tap water or distilled water	————
Radiator cap relief pressure	108—137 kPa (1.1—1.4 kgf/cm^2, 16—20 psi)	————
Clutch System		
Clutch lever free play	10—20 (0.4—0.8)	————
Clutch spring free length	37 (1.5)	35.5 (1.40)
Clutch plate warpage	————	0.16 (0.006)
Cylinder Head		
Cylinder head warpage	————	0.10 (0.004)
Crankshaft		
Connecting rod small end I.D.	19.002—19.012 (0.7481—0.7485)	19.022 (0.7489)
Crankshaft side clearance	0.40—0.80 (0.016—0.031)	0.85 (0.033)
Crankshaft runout	————	0.05 (0.002)

Unit: mm (in)

Item		Standard		Service Limit
Wheels/Tires				
Cold tire pressure	Front	186 kPa (1.9 kgf/cm², 27 psi)		————
	Rear	177 kPa (1.8 kgf/cm², 26 psi)		————
Front and rear axle runout		————		0.5 (0.02)
Front and rear wheel rim runout				
	(Radial)	————		0.3 (0.01)
	(Axial)	————		0.3 (0.01)
Drive chain slack		25 ± 3 (1.0 ± 0.1)		————
Drive chain slider thickness		————		2.0 (0.08)
Front Suspension				
Fork tube runout		————		0.20 (0.008)
Recommended fork fluid		Honda Ultra Cushion Oil Special (SAE 5W)		————
		Showa SS05 Operation Oil or equivalent		————
		R•H	L•H	————
Fork oil level	(Standard)	111 (4.37)	106 (4.17)	————
	(Max.)	92 (3.6)	87 (3.4)	————
	(Min.)	152 (6.1)	147 (5.8)	————
Fork oil capacity	(Standard)	233 cm³ (7.9 US oz, 8.2 Imp oz)		————
	(Max.)	257 cm³ (8.7 US oz, 9.0 Imp oz)		————
	(Min.)	210 cm³ (7.1 US oz, 7.4 Imp oz)		————
Compression adjuster standard position		10 clicks out from full hard		————
Rebound adjuster standard position		6 clicks out from full hard		————
Rear Suspension				
Damper gas pressure		981—1,275 kPa (10.0—13.0 kgf/cm², 142—185 psi)		————
Damper rod compressed force (at 10 mm compressed)		150—195 N (15.4—20.0 kgf)		————
Shock absorber spring pre-load length		147 (5.8)		————
Compression adjuster standard position		6 clicks out from full hard		————
Rebound adjuster standard position		10 clicks out from full hard		————

Unit: mm (in)

Item		Standard	Service Limit
Brakes			
Brake fluid		DOT 4 brake fluid	————
Front brake	disc thickness	4.0 (0.16)	3.5 (0.14)
	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)	12.650 (0.4980)
Rear brake	disc thickness	4.0 (0.16)	3.5 (0.14)
	disc runout	————	0.3 (0.01)
	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)	12.650 (0.4980)
	Caliper cylinder I.D.	27.000—27.005 (1.0640—1.0632)	27.06 (1.065)
	Caliper piston O.D.	26.900—26.950 (1.0591—1.0610)	26.85 (1.057)
Electrical			
Spark plug	(Standard)	NGK: R6385—105P	————
	(Optional)	NGK: R6385—11P	————
		NGK: R6385—10P	————
Spark plug gap		0.5—0.6 (0.020—0.024)	————
Ignition coil resistance			
(Primary)		0.45—0.55Ω (20°C/68°F)	————
(Secondary: with plug cap)		12.39—16.81 kΩ (20°C/68°F)	————
(Secondary: without plug cap)		8.64—10.56 kΩ (20°C/68°F)	————
Ignition pulse generator coil resistance		180—220Ω (20°C/68°F)	————
Alternator charging coil resistance		2.9—3.6Ω (20°C/68°F)	————
Throttle sensor resistance		4—6 kΩ (20°C/68°F)	————
Power jet solenoid resistance		21.6—26.4Ω (20°C/68°F)	————

Optional Parts

Engine

Item	Optional
Mainshaft/M1 gear (Standard: 16T)	16, 17T
M2 gear (Standard: 21T)	17, 18, 19T
M3/4 gear (Standard: 23/24T)	20/20, 20/21, 20/22, 20/24, 21/20, 21/21, 21/22, 21/24, 22/20, 22/21, 22/22, 22/24, 23/20, 23/21, 23/22T
M5 gear (Standard: 26T)	20, 23, 25T
M6 gear (Standard: 24T)	23, 26, 27T
C1 gear (Standard: 30T)	29, 30, 31, 32T
C2 gear (Standard: 32T)	27, 28, 29T
C3 gear (Standard: 30T)	27, 29, 30, 31T
C4 gear (Standard: 28T)	23, 25, 26, 29T
C5 gear (Standard: 28T)	22, 24, 28T
C6 gear (Standard: 24T)	26, 27T
Cylinder gasket Standard: thickness 0.50 mm (0.020 in)	0.40 mm (0.016 in) 0.60 mm (0.024 in)
Spark plug (Standard: R6385—105P)	R6385—11P R6385—10P
Main jet (Standard: #195)	#150~#215 (16 size)
Slow jet (Standard: #45)	#40, #42, #48, #50
Power jet (Standard: #40)	#35, #38, #42, #45, #48, #50
Jet needle (Standard: 1268/3466/2351/1159)	1265/3466/2351/1159 ~1272/3366/2550/1159 (15 size)
Throttle valve (Standard: #6.0)	#5.0, #5.5, #6.5
Main jet holder [Standard: ø3.9 mm (ø0.154 in)]	ø3.6 mm (ø0.142 in) ø3.7 mm (ø0.146 in)
Drive sprocket (Standard: 16T)	15, 17T

Frame

Item	Optional
Fork spring (Standard: 0.60 kgf/mm)	0.65, 0.55 kgf/mm
Rear shock absorber spring (Standard: 8.0 kgf/mm)	8.5, 7.5, 7.0, 6.5 kgf/mm
Driven sprocket (Standard: 36T)	32, 33, 34, 35, 37, 38, 39, 40T

Torque Values

Standard

Item	Torque N·m (kgf·m, lbf·ft)
5 mm bolt and nut	5 (0.50, 3.6)
6 mm bolt, SH flange bolt and nut	10 (1.0, 7)
8 mm bolt and nut	22 (2.2, 16)
10 mm bolt and nut	34 (3.5, 25)
12 mm bolt and nut	54 (5.5, 40)
5 mm screw	4 (0.40, 2.9)
6 mm screw	9 (0.9, 6.5)
6 mm flange bolt (NSHT type) and nut	12 (1.2, 9)
8 mm flange bolt and nut	26 (2.7, 20)
10 mm flange bolt and nut	39 (4.0, 29)

Engine

Item	Q'ty	Threads	Torque N·m (kgf·m, lbf·ft)	Remarks
Water pump impeller	1	7	12 (1.2, 9)	
Gearshift drum center pin bolt	1	8	22 (2.2, 16)	Apply locking agent
Spark plug	1	14	18 (1.8, 13)	
Primary drive gear special bolt	1	10	54 (5.5, 40)	
Shift drum stopper arm pivot bolt	1	6	12 (1.2, 9)	
Oil drain special bolt	1	12	29 (3.0, 22)	Wire lock
Clutch center lock nut	1	18	54 (5.5, 40)	
Cylinder head cap nut	5	8	23 (2.3, 17)	
Carburetor insulator band screw	1	5	———	End gap; 7—9 mm
Cylinder flange nut	4	8	25 (2.5, 18)	Apply oil
Drive sprocket flange bolt	1	8	31 (3.2, 24)	Apply oil
Shift drum guide plate bolt	2	6	10 (1.0, 7)	Apply locking agent
Mainshaft bearing set plate bolt	2	6	10 (1.0, 7)	Apply locking agent
Countershaft bearing set plate screw	1	6	10 (1.0, 7)	Apply locking agent
Balancer shaft bearing set plate screw	1	6	10 (1.0, 7)	Apply locking agent
Shift drum bearing set plate bolt	2	6	10 (1.0, 7)	Apply locking agent
Inner rotor flange nut	1	10	39 (4.0, 29)	Apply locking agent
Balancer driven gear lock nut	1	14	54 (5.5, 40)	Apply locking agent
Crankcase NSHF bolt	9	6	10 (1.0, 7)	Apply oil
Left crankcase cover NSHF bolt	9	6	10 (1.0, 7)	Apply oil
Stator mounting bolt	3	6	10 (1.0, 7)	
Water pump cover NSHF bolt	4	6	12 (1.2, 9)	
Ignition pulse generator mounting – bolt	2	5	6 (0.6, 4.3)	Apply locking agent
– 30 mm cap	1	30	8 (0.8, 5.8)	Apply grease

Frame

Item	Q'ty	Threads	Torque N·m (kgf·m, lbf·ft)	Remarks
Engine hanger adjusting bolt	2	18	15 (1.5, 11)	Apply grease
Engine hanger adjusting bolt lock nut	2	18	39 (4.0, 29)	
Steering thread	1	26	See page 5—17	Apply oil
Steering stem bolt	1	18	59 (6.0, 43)	Apply grease
Fork top/bottom bridge pinch bolt	6	8	23 (2.3, 17)	
Front/rear axle nut	2	14	69 (7.0, 51)	
Front axle holder pinch bolt	4	8	22 (2.2, 16)	
Fork bolt	2	39	34 (3.5, 25)	
Fork bolt lock nut	2	20	34 (3.5, 25)	
Fork socket bolt	2	10	34 (3.5, 25)	
Swingarm pivot adjusting bolt	1	30	15 (1.5, 11)	Apply grease
Swingarm pivot adjusting bolt lock nut	1	30	44 (4.5, 33)	
Swingarm pivot nut	1	18	95 (9.7, 70)	
Chain guard bolt	2	6	8 (0.8, 6.0)	
Shock absorber spring lock nut	1	50	49 (5.0, 36)	
Height adjuster lock nut	1	16	64 (6.5, 47)	
Front brake caliper mounting bolt	2	10	49 (5.0, 36)	
Rear brake pad pin	2	10	18 (1.8, 13)	
Rear brake pad pin plug	2	10	1.5 (0.15, 1.1)	
Front brake hose oil bolt	2	10	24 (2.4, 17)	
Rear brake hose oil bolt	2	10	24 (2.4, 17)	
Front brake bleeder bolt	3	8	24 (2.4, 17)	
Front caliper bleeder screw	1	10	7 (0.7, 5.1)	
Brake bleeder screw	1	8	7 (0.7, 5.1)	
Front brake disc bolt	6	6	12 (1.2, 9)	
Rear brake disc bolt	3	8	42 (4.3, 31)	
Torque rod end tightening nut	2	8	18 (1.8, 13)	
Fuel valve lock nut	1	18	19 (1.9, 14)	
Handlebar holder pinch bolt	2	8	23 (2.3, 17)	
Clutch cable nut	1	8	10 (1.0, 7)	
Clutch lever holder screw	2	5	4 (0.40, 2.9)	
Step holder socket bolt	4	8	15 (1.5, 11)	
Tw sensor	1	12	11 (1.1, 8)	Apply grease

* Do not apply oil and grease to the none specified parts.

Tools

Description	Tool Number
Fuel System:	
Float level gauge	07401-0010000
Cooling System:	
Bearing remover set	07936-1660001
– Remover shaft	07936-1660120
– Remover head	07936-1660110
– Remover sliding weight	07741-0010201
Water seal driver	07945-KA30000
Attachment, 24 × 26 mm	07746-0010700
Pilot, 12 mm	07746-0040200
Bearing remover	07931-KA30000
Bearing driver	07946-KA30100
Engine Removal/Installation:	
* Lock nut wrench	07907-NX5-010
Clutch/Primary Drive Gear/Balancer:	
Clutch center holder	07724-0050002
Gear holder	07724-0010100
Lock nut wrench, 20 × 24 mm	07716-0020100
Left Crankcase Cover/Transmission:	
Attachment, 37 × 40 mm	07746-0010200
Pilot, 17 mm	07746-0040400
Pilot, 30 mm	07746-0040700
Attachment, 42 × 47 mm	07746-0010300
Pilot, 20 mm	07746-0040500
Crankcase/Crankshaft:	
Crankcase puller	07937-4300001
– Setting bolt	07PMC-KZ40100
Universal bearing puller	07631-0010000
* Crankcase assembly tool set	89001-NX4-003
– Crankcase assembly shaft	07965-GM00300
– Crankcase assembly collar	07965-GC70100
– * Threaded adapter	89002-NX4-003
Attachment, 62 × 68 mm	07746-0010500
Pilot, 25 mm	07746-0040600
Attachment, 42 × 47 mm	07746-0010300
Pilot, 15 mm	07746-0040300
Pilot, 20 mm	07746-0040500
Pilot, 25 mm	07746-0040600
Attachment, 37 × 40 mm	07746-0010200
Pilot, 17 mm	07746-0040400
* L. crankshaft cap	89100-NX4-000

Description	Tool Number
Front Wheel/Suspension:	
Bearing remover head	07746-0050400
Bearing remover shaft	07746-0050100
Attachment, 32 × 35 mm	07746-0010100
Pilot, 15 mm	07746-0040300
Fork seal driver	07KMD-KZ30100
* Fork seal driver attachment	07916-NX4-700
* Fork set collar	51481-NX4-610
Steering stem socket	07916-KA50100
* Ball race driver set	07910-NX4-003
– * Driver shaft nut	07911-NX4-003
– * Assembly collar	07912-NX4-003
– * Driver attachment, 47 mm	07913-NX4-003
– * Driver attachment, 51 mm	07914-NX4-003
– * Driver shaft	07915-NX4-003
Steering stem driver	07946-MB00000
Rear Wheel/Suspension:	
Lock nut wrench	07908-4690002
Bearing remover head	07746-0050400
Bearing remover shaft	07746-0050100
Attachment, 32 × 35 mm	07746-0010100
Pilot, 15 mm	07746-0040300
Bearing remover set, 20 mm	07936-3710001
– Remover handle	07936-3710100
– Remover head	07936-3710600
– Remover sliding weight	07741-0010201
Bearing remover, 28 mm	07HMC-MR70100
Needle bearing driver	07946-MJ00000
– Driver shaft	07946-MJ00100
– Driver head	07946-MJ00200
Attachment, 37 × 40 mm	07746-0010200
Pilot, 20 mm	07746-0040500
Pilot, 28 mm	07746-0041100
Attachment, 24 × 26 mm	07746-0010700
Pilot, 17 mm	07746-0040400
Pin spanner	07702-0020001
Spherical bearing driver	07946-KA30200
Brake System:	
Snap ring plier	07914-3230001
Electrical:	
Rotor puller	07733-0010000

The tool marked * is exclusive for HRC. Order directly from HRC.

Lubrication & Seal Points

Engine

Item	Material	Remarks
Crankcase mating surface	Three BOND 1207B	
Crankshaft journals/bearings Connecting rod big end/small end Piston/piston pin outer surface Piston ring whole surface Cylinder inner surface	ELF: HTX976 or CASTROL: A747	
Transmission gear teeth and sliding surface Cylinder flange bolt threads and seating surface Crankcase bolt threads and seating surface Left crankcase cover bolt threads and seating surface Drive sprocket bolt threads and seating surface Mainshaft/countershaft bearings Shift drum bearings Water pump shaft bearing Clutch lifter/outer Thrust bearing	Honda 4-stroke oil or ELF: HTX830 API Service Classification: SE or SF Viscosity: SAE 10W-30	 Apply for torque stabilizing Apply for torque stabilizing Apply for torque stabilizing
Mainshaft and countershaft spline and gear rotating area	Molybdenum disulfide oil (A mixture of the transmission oil and molybdenum grease with the ratio 70 cm^3: 100 g)	
Clutch lifter cam sliding surface	Molybdenum grease	
Each O-ring Each Oil seal lips	Multi-purpose grease	
Shift drum center bolt threads Shift drum guide plate bolt threads Bearing set plate bolt/screw threads – Mainshaft bearing (bolt) – Countershaft bearing (screw) – Balancer bearing (screw) – Shift drum bearing (bolt) Cylinder stud bolt threads Cylinder head stud bolt threads Balancer lock nut threads (14 mm) Pulse generator screw threads Clutch lifter stopper collar bolt threads	Locking agent	Coating area: 6.5 ± 1 mm Coating area: 6.5 ± 1 mm Coating area: 6.5 ± 1 mm Coating area: 6.5 ± 1 mm Coating area: 6.5 ± 1 mm Coating area: 6.5 ± 1 mm Coating area: 8 ± 1 mm Coating area: 8 ± 1 mm Coating area: 3 ± 1 mm Coating area: 8 ± 1 mm

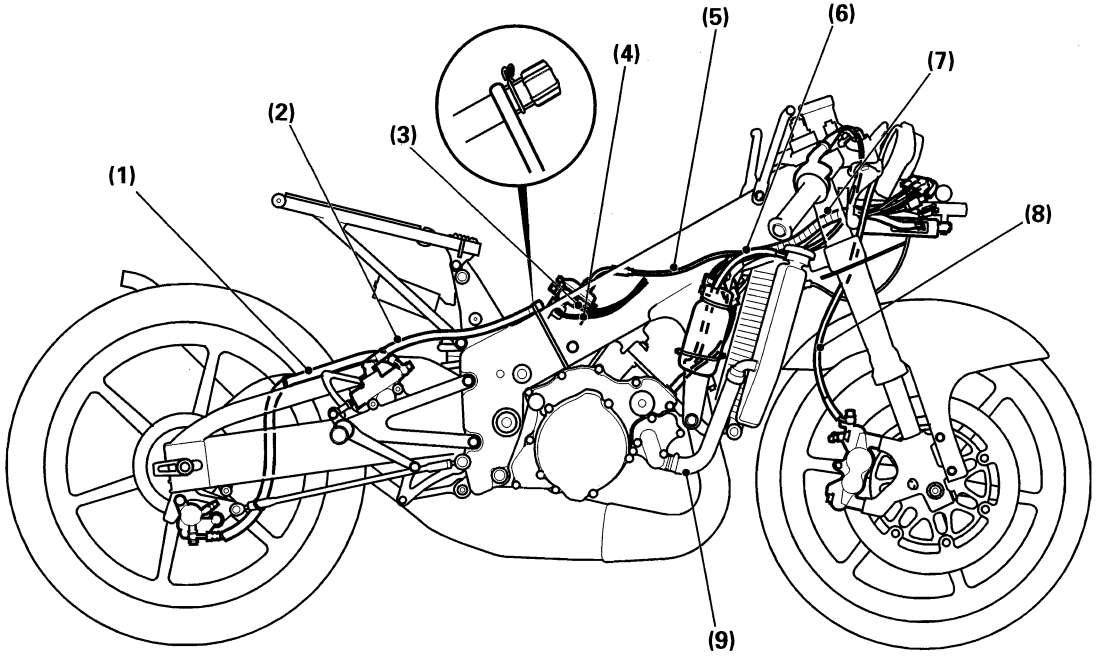
Frame

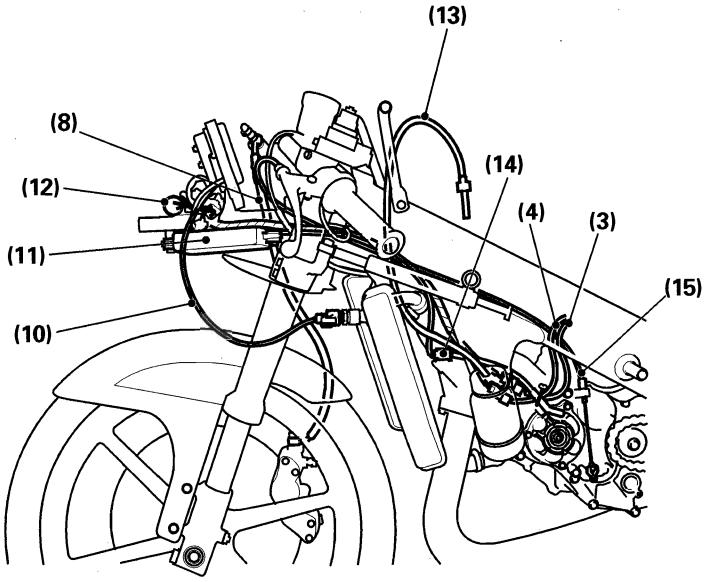
Item	Material	Remarks
Inner rotor nut threads Handlebar lever pivot bolt surface Cable adjusting bolt threads Front/rear axle shaft surface Driven sprocket washer both sides Driven sprocket collar O-ring Steering head bearings/outer races Steering stem bolt threads and seating surface Caliper bracket both end Rear brake pedal pivot surface Gearshift pedal pivot surface Swingarm pivot needle/ball bearing Swingarm pivot dust seal lips Swingarm pivot adjusting bolt threads Shock arm needle bearing Shock arm dust seal lips Tw sensor threads Engine hanger adjusting bolt threads	Multi-purpose grease	Coating area: 8 ± 1 mm
Brake master cylinder pivot surface and piston contact area Rear caliper bracket pin bolt Rear caliper piston seal	Silicone grease	
Expansion chamber mouth piece and end piece Silencer socket bolt threads Exhaust chamber and joint contact area	Silicone rubber (KE45)*	
Drive chain slider screw threads	Locking agent	
Steering stem bearing adjusting nut thread	Honda 4-stroke oil or ELF: HTX830	
Handle grip/throttle pipe Seat rail rubber fitting area Fuel tank mounting rubber fitting area Step arm/Step arm end	Honda bond A or Cemedine #540	Protrusion limit 3 mm max.

Part No. for the silicone rubber (KE45): 88883-NF4-000

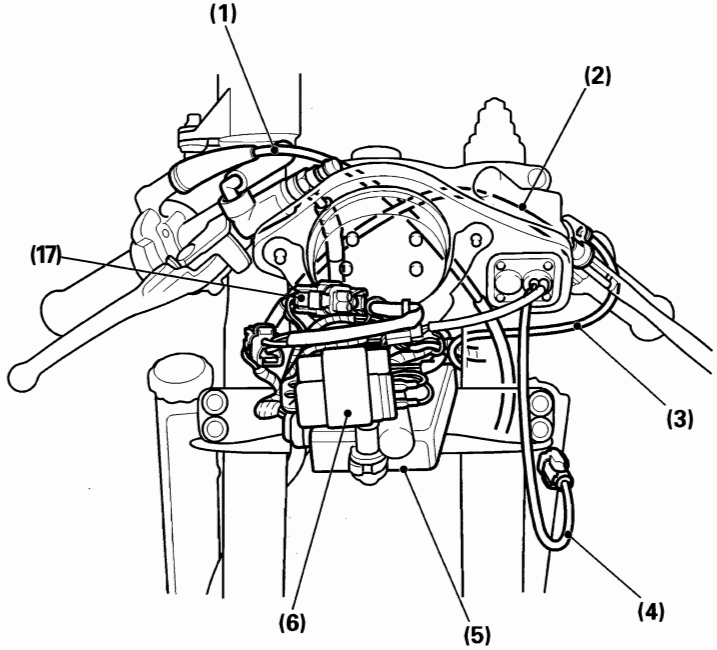
Cable & Harness Routing

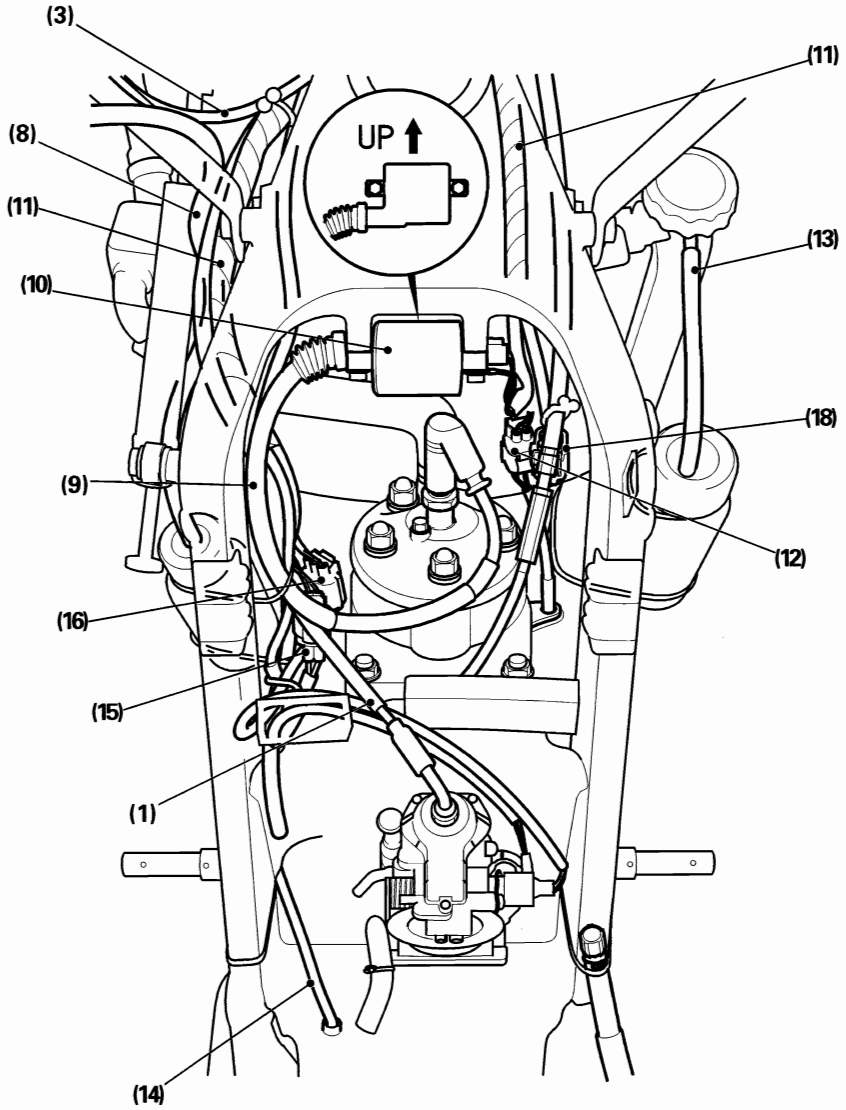
Wire Locking:
See page 3-8





(1) REAR BRAKE HOSE
(2) REAR RESERVOIR TUBE
(3) THROTTLE SENSOR WIRE
(4) POWER JET SOLENOID WIRE
(5) THROTTLE CABLE
(6) RADIATOR OVERFLOW TUBE
(7) MAIN WIRE HARNESS
(8) FRONT BRAKE HOSE
(9) LOWER RADIATOR HOSE
(10) Tw (WATER TEMPERATURE) SENSOR WIRE
(11) IGNITION CONTROL MODULE
(12) REGULATOR/RECTIFIER
(13) FUEL TANK OVERFLOW TUBE
(14) ALTERNATOR WIRE CONNECTOR
(15) CLUTCH CABLE





(1) THROTTLE CABLE
(2) CLUTCH CABLE
(3) ENGINE STOP SWITCH WIRE
(4) Tw (WATER TEMPERATURE) SENSOR WIRE
(5) IGNITION CONTROL MODULE
(6) REGULATOR/RECTIFIER
(7) FRONT BRAKE HOSE
(8) FUEL TANK OVERFLOW TUBE
(9) SPARK PLUG WIRE
(10) IGNITION COIL
(11) MAIN WIRE HARNESS
(12) IGNITION PULSE GENERATOR WIRE CONNECTOR
(13) RADIATOR OVERFLOW TUBE
(14) CRANKCASE BREATHER TUBE
(15) THROTTLE SENSOR CONNECTOR
(16) POWER JET SOLENOID CONNECTOR
(17) COUPLER POWER JET MODE
(18) DATA LOGGER CONNECTOR

Maintenance Schedule

Perform the Pre-ride Inspection at each scheduled maintenance period.

I: Inspect and Clean, Adjust, Lubricate or Replace if necessary. C: Clean. R: Replace. L: Lubricate.

Item \ Frequency	Each race or about 2.5 hours	Remarks
Throttle Operation	I	
Spark Plug	I	
Transmission Oil	I	R: First 100 km (60 mi) Every race
Cooling System	I	
Cylinder Head Decarbonizing	I	
Piston And Piston Ring	C	R: Every 500 km (300 mi)
Piston Pin And Connecting Rod Small End Bearing	I	R: Every 500 km (300 mi)
Crankshaft Oil Seals	I	R: Every 2,000 km (1,200 mi)
Transmission C1 Gear Needle Bearing	I	R: Every 2,000 km (1,200 mi)
Reed Valve	I	R: Every 1,000 km (600 mi)
Drive Chain	I•L	R: Every 500 km (300 mi)
Drive Chain Slider	I	
Drive Sprocket	I	
Driven Sprocket	I	
Brake Pad Wear	I	
Brake Fluid	I	R: Every 3 races (after riding in rain)
Brake System	I	
Clutch System	I	
Control Cables	I•L	
Expansion Chamber/Silencer	I	
Suspension	I	R: Every 2,000 km (1,200 mil), Every 4 races
Swingarm/Shock Linkage	C	
Fork Oil	I	R: First 100 km (60 mi) Every 3 races
Wheels/Tires	I	
Nuts/Bolts/Fasteners	I	

Pre-ride Inspection

For your safety, it is very important to take a few moments before each ride to walk around your RS125R and check its condition.

⚠ WARNING

Improperly maintaining this RS125R or failing to correct a problem before riding can cause a crash in which you can be seriously hurt or killed.

Always perform a Pre-ride and Pre-race inspection before every ride and correct any problems.

Check the following items before you get on the RS125R:

- Fuel, oil and water leaks
- Coolant for proper level
- Spark plug for proper heat range, carbon fouling and spark plug cap terminals for looseness
- Clutch operation and free play
- Steering head bearings and related parts for condition
- Damaged or distorted frame
- Throttle grip and throttle valve operation
- Tires for damaged or improper inflation pressure
- Front and rear suspension for proper operation
- Front and rear brakes, for proper operation
- Drive chain for correct slack and adequate lubrication
- Drive chain slider for damage or wear
- Expansion chamber spring for damage or lack of tension
- Loose bolts, screws and other fasteners (particularly drain bolt lock wire)

Warming-up Inspection

When warming-up the engine:
- Do not rev the engine more than necessary or engine damage may result.
- Avoid overheating the engine by observing the water temperature meter.
- Check for fuel, oil and water leaks
- Warm up the engine for a few minutes until it is heated to the operating temperature until the engine responds to the throttle smoothly [water temperature 50—60°C (122—140°F)].

Ride Inspection

When running the RS, check the following:
- Water temperature meter and tachometer
- Carburetor setting
- Gear ratio
- Control system
- Brake stopping power

After Ride Inspection

After riding the RS, check the following:
- Color condition of piston head and spark plug
- Signs of detonation
- Fuel, oil and water leaks
- Loose or missing bolts and nuts
- Conformity between piston, piston ring and cylinder

Replacement Parts

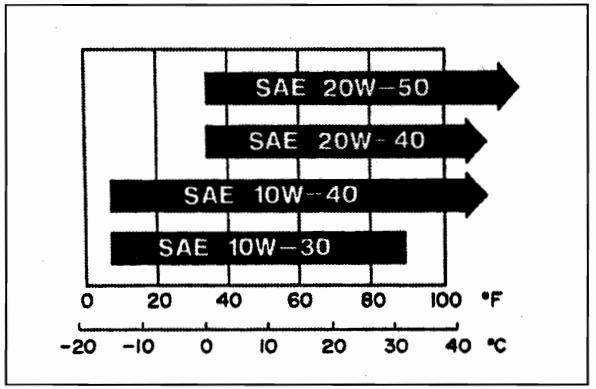
Parts Requiring Periodic Replacement

Item	Replacement Interval	Cause
Engine		
Plug cap	Every 1,000 km (600 mi) (clean every maintenance)	
Cylinder	Every 2,000 km (1,200 mi)	Damage or wear
Piston	Every 500 km (300 mi)	Damage or wear at skirt
Piston ring	Every 500 km (300 mi)	Damage at ends or wear
Piston pin	Every 500 km (300 mi)	Burning, damage or wear
Piston pin clip	Every 300 km (180 mi) (every reassembling)	
Connecting rod small end bearing	Every 500 km (300 mi)	Burning, damage or wear
Clutch outer/center	Every 2,000 km (1,200 mi)	Damage, wear or crack
Crankshaft oil seals	Every 2,000 km (1,200 mi)	Damage or wear
C1 gear needle bearing	Every 2,000 km (1,200 mi)	Damage or wear
Transmission oil	First 100 km (60 mi); thereafter, every race	Contamination or emulsification
Crankshaft	Every 2,000 km (1,200 mi)	Damage or distortion
Reed valve	Every 1,000 km (600 mi)	Fatigue or damage
Frame		
Drive chain	Every 500 km (300 mi)	Elongation or wear
Front fork fluid	First 100 km (60 mi); thereafter, every 3 races	
Brake fluid	Every 3 races (after riding in rain)	Contamination

- Intervals shown above are for sprint race.
- The repair or replacement of any components that are worn or damaged before the above intervals is not covered by the Warranty.

Fast Wearing/Expendable Parts

Item	Cause
Engine	
Clutch disc, plate	Wear or discoloration
Clutch spring	Fatigue
Drive sprocket	Wear or damage
Spark plug	Worn electrode or damaged insulator
Frame	
Front/rear tire	Wear
Brake pad	Wear
Chain slider	Wear
Driven sprocket	Wear or damage
Expansion chamber spring	Fatigue or damage
Silencer glass wool	Phone over



Transmission Oil

Recommended transmission oil:
Use HONDA 4-Stroke Oil (10W-30) or ELF HTX830.

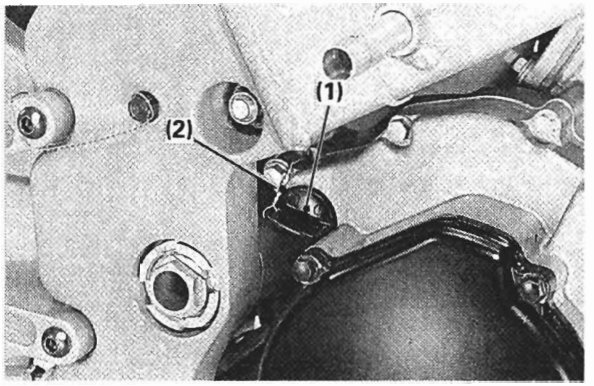
Use only high detergent, premium quality motor oil certified to meet or exceed US automobile manufacturer's requirement for Service Classification SE or SF.
Motor oil intended for Service SE or SF will show this designation on the container. The use of special oil additives is unnecessary and will only increase operating expenses.

NOTICE

Using the wrong oil can damage the transmission.

Oil is a major factor effecting the performance and service life of the transmission. Non-detergent, vegetable, or castor based racing oils are not recommended.

Recommended oil viscosity: SAE 10W-30

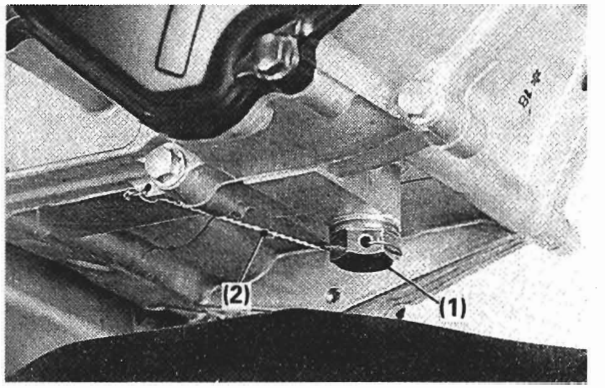


(1) FILLER CAP (2) LOCK WIRE

Oil Change

Change the transmission oil with the engine warm. Support the machine upright to assure complete and rapid draining.

1. Cut and remove the lock wire.
   Remove the oil filler cap.



(1) DRAIN BOLT (2) LOCK WIRE

2. Cut and remove the lock wire.
   Place an oil drain pan under the engine and remove the drain bolts.
3. After the oil has completely drained, make sure that the sealing washer is in good condition and reinstall the drain bolts. Tighten the drain bolt to the specified torque.

   Torque: 29 N·m (3.0 kgf·m, 22 lbf·ft)

   Secure the bolt with lock wire. See page 3-18.

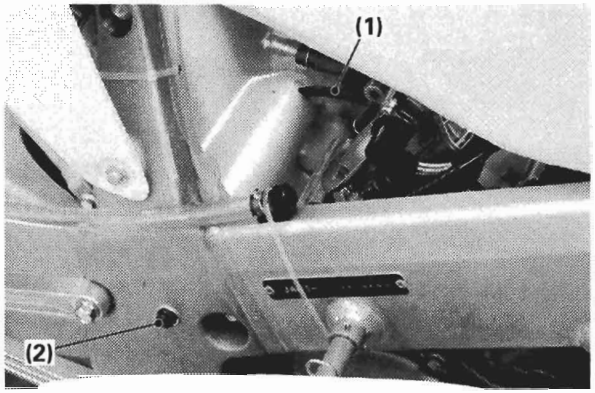
4. Pour the recommended transmission oil slowly through the oil filler hole.

   Capacity: 0.5 liter (0.53 US qt, 0.44 Imp qt)

   Install the oil filler cap.
   Secure the cap with lock wire.

NOTICE

The drain bolt is exclusive for '96, '97 RS125R. Use the genuine parts (P/No. 90081-NX4-700) only.
Using the other drain bolt may cause engine trouble.

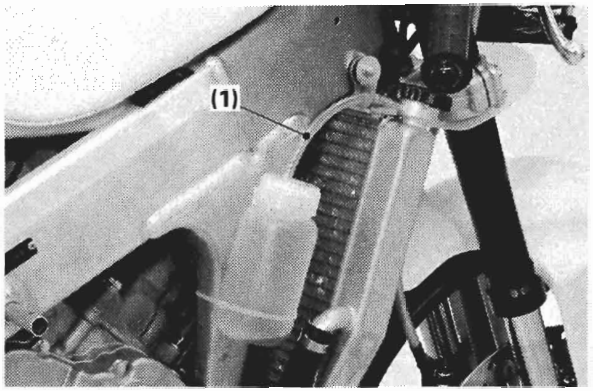


(1) BREATHER TUBE (2) DRAIN BOLT

Oil Catch Tank

The center cross pipe of the frame serves as an oil catch tank to trap oil bled from the crankcase through the breather tube.
Make sure that the end of the crankcase breather tube is inserted into the hole in the center cross pipe as shown.
Before starting, remove the drain bolt to drain oil from the cross pipe into a proper container.

After checking, be sure to tighten the drain bolt securely and lock wire it.

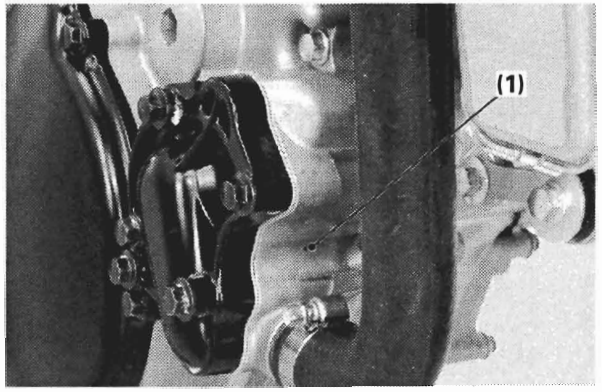


(1) OVERFLOW TUBE

Coolant

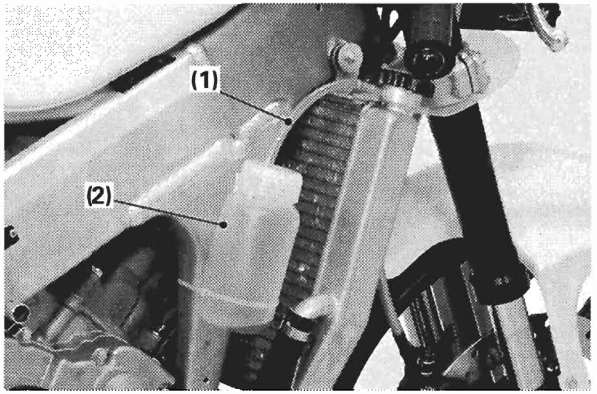
Cooling System Inspection

1. Check the cooling system for leaks.
2. Check water hoses for cracks, deterioration, and clamp bands for looseness.
3. Check the radiator mount for looseness.
4. Make sure the overflow tube is connected and not clogged.
5. Check radiator fins for obstructions or damage.



(1) INSPECTION HOLE

6. Check the water pump inspection hole front side of the water pump for leakage. Make sure the hole remains open.
   If water leaks through the check hole, the water seal is damaged.
   If oil leaks through the check hole, the oil seal is damaged.
   Replace the water seal or the oil seal (page 4-8).

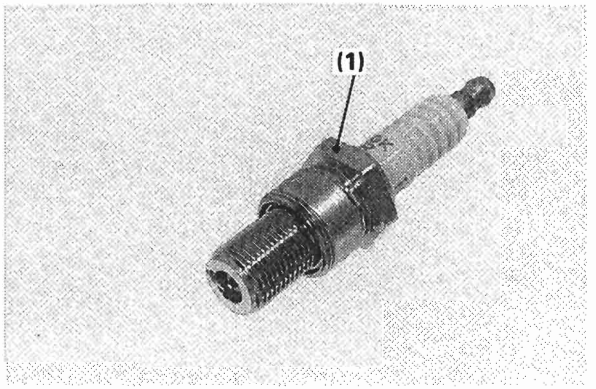


(1) OVERFLOW TUBE (2) OVERFLOW CATCH TANK

Coolant Overflow Catch Tank

The coolant overflow catch tanks trap coolant vapor from the radiator through the overflow tube.
Make sure that the end of the overflow tube is inserted into the hole in the catch tank as shown.

Before starting, drain coolant from the catch tank. Drain the coolant into a suitable container.



(1) SPARK PLUG

Spark Plug

Spark Plug

Standard plug: NGK: R6385-105P
Optional plugs: NGK: R6385-10P (hotter)
NGK: R6385-11P (colder)

Using a spark plug with the wrong heat range can damage the engine or cause the plugs to foul. Be careful to select the correct spark plug for the conditions.

Plug Gap

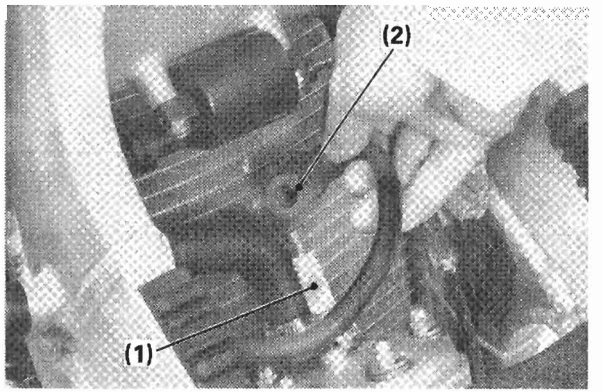
Remove the spark plug and measure the spark plug gap.

Standard: 0.5—0.6 mm (0.020—0.024 in)

Replace the spark plug if the spark plug gap is out of specification.

Part No. for the spark plug:

- **NGK: R6385-105P 31901-NX4-701**
- **NGK: R6385-10P 31903-NX4-701**
- **NGK: R6385-11P 31902-NX4-701**



(1) SPARK PLUG (2) SPARK PLUG CAP

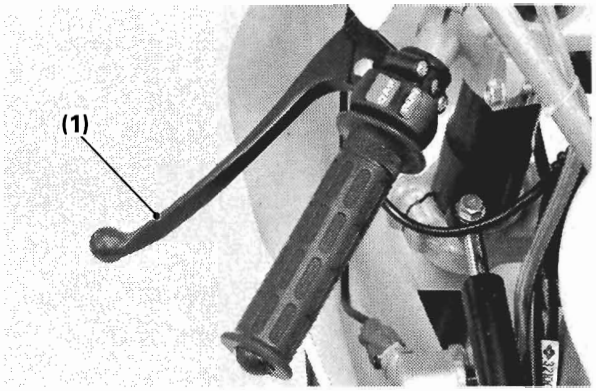
Flash Over (leaking of electricity between plug cap and plug)

If engine misfire occurs due to arcing, replace both the spark plug and the cap.

Spark Plug Cap

Remove the spark plug cap from the spark plug. Clean the inside of the plug cap with electrical contact cleaner to prevent misfire.

When replacing the spark plug cap, cut the spark plug wire end 10 mm (0.4 in), then install the cap.

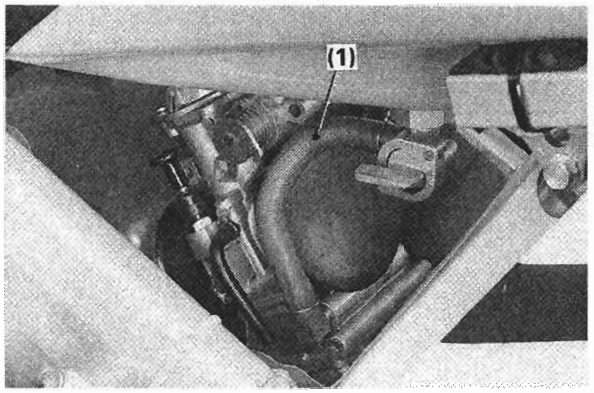


(1) CLUTCH LEVER

Clutch

Operation

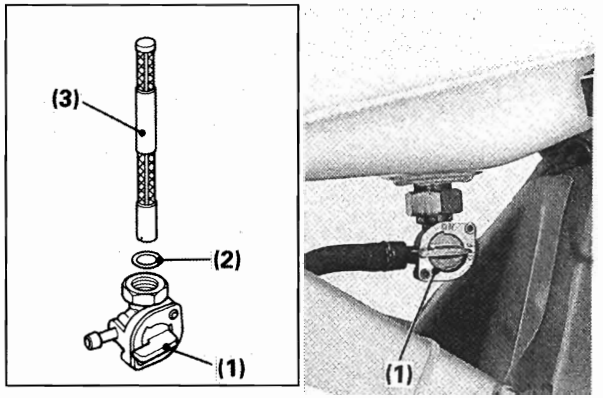
1. Check for smooth clutch lever operation.
   Lubricate the clutch lever pivot or clutch cable if operation is not smooth.
2. Check the clutch cable for deterioration, kinks or damage.



(1) FUEL TUBE

Fuel Tank/Fuel Filter

1. Check the fuel valve and fuel filter for contamination.
2. Check for leaks.
3. Check the fuel line for cracks, deterioration or leakage.



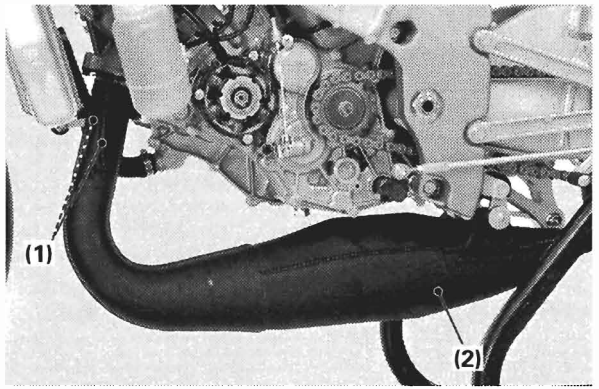
(1) FUEL VALVE (2) O-RING (3) FUEL FILTER

Fuel Filter

The fuel filter is incorporated in the fuel valve which is mounted on the bottom of the fuel tank.
Accumulation of dirt in the filter will restrict the flow of the fuel to the carburetor.

1. Drain the fuel from the fuel tank into an approved gasoline container. Disconnect the fuel line.
2. Remove the fuel valve by loosening the fuel valve nut. Wash the fuel filter in high flash-point cleaning solvent.
3. Reassemble the fuel valve in the reverse order of removal.
   Make sure the O-ring is in place.
   Install the fuel valve in the fuel tank, as shown.

   Torque: 19 N·m (1.9 kgf·m, 14 lbf·ft)



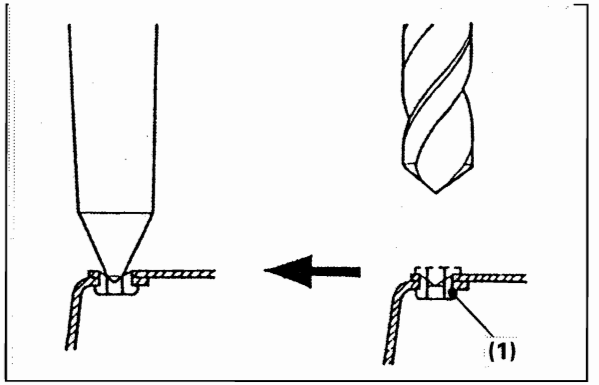
(1) SPRINGS (2) EXPANSION CHAMBER

Expansion Chamber

Inspection

Check the exhaust pipe springs for fatigue.
Check the expansion chamber for clogging.
Check for loose or missing bolts.
Check the expansion chamber for cracks or deformation.

Loss of power will result if the expansion chamber is broken.



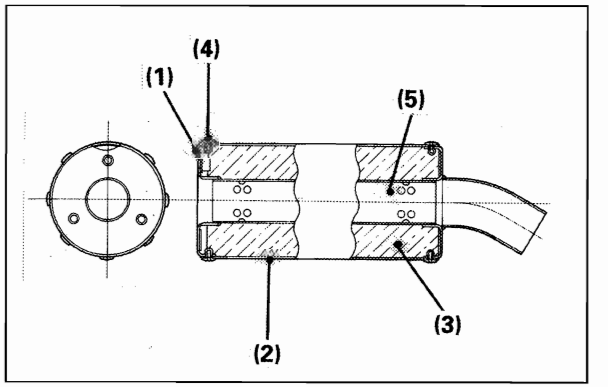
(1) RIVET

Silencer

Glass Wool Replacement

The silencer consists of an inner pipe, outer casing, and noise-absorbing glass wool as shown. To replace the glass wool:

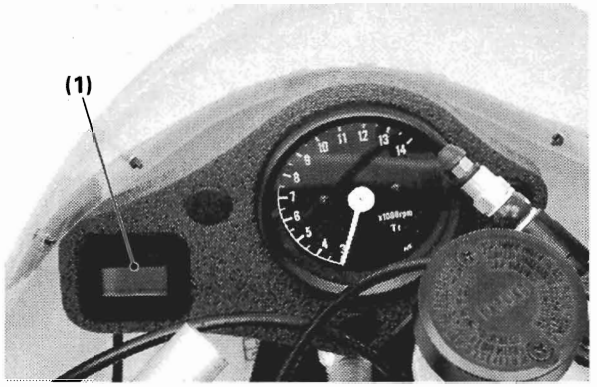
1. Remove the silencer from the silencer joint.
2. Drill off the heads of 8 rivets at the rear end of the outer casing. Press the rivets down into the casing using a 3 mm pin or rod.
3. Remove the inner pipe from the outer casing.



(1) MOUTH CAP (2) OUTER CASING
(3) GLASS WOOL (4) BLIND RIVET
(5) INNER PIPE

4. Remove the glass wool from the outer casing. Install the new glass wool onto the inner pipe.
5. Apply Three Bond 1207B or equivalent sealant to the mating surface between the inner pipe and mouth cap. Then slide the inner tube and glass wool into the outer casing.
   Install the mouth cap aligning the rivet holes between cap and outer casing.
6. Drive 8 stainless pop rivets (3.2 × 6.4) through the holes in the outer casing after applying epoxy based adhesive.
7. When installing the silencer on the silencer joint, apply silicone rubber (KE45) to the mating surface and socket bolts, and tighten the bolts gradually.

- **Part No. for the silicone rubber (KE45): 88883-NF4-000**



(1) WATER TEMPERATURE METER

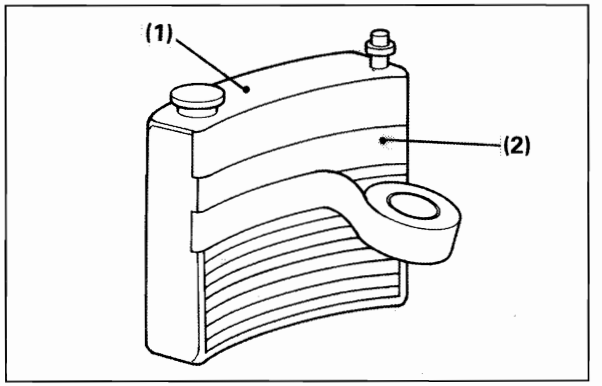
Water Temperature Meter

Block the air flow through the radiator, and adjust to ensure that the water temperature can be kept in a proper condition.

Water temperature: 50—60°C (122—140°F) (in running)

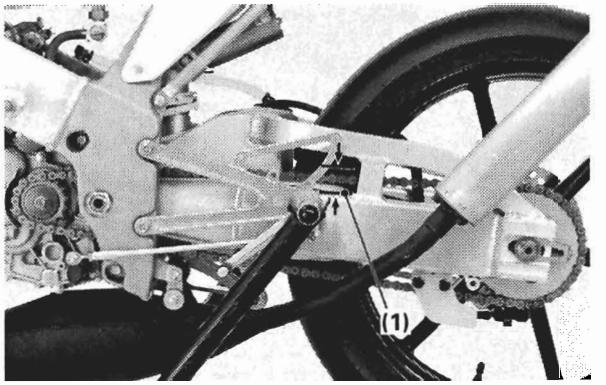
The water temperature will only display in a range from 25°C to 99°C (77°F to 210°F). The figure disappears within 30 minutes after the engine stop switch is turned off.

Water temperature	Indication
0—24°C (32—75°F)	—°C
25—99°C (77—210°F)	25 - 99°C
above 100°C (212°F)	—°C



(1) RADIATOR (2) COVERING

If the indication never changes from "—°C", check the radiator coolant level and temperature (25—99°C/77—210°F), and then inspect the water temperature sensor and harness.



(1) DRIVE CHAIN SLACK

Drive Chain

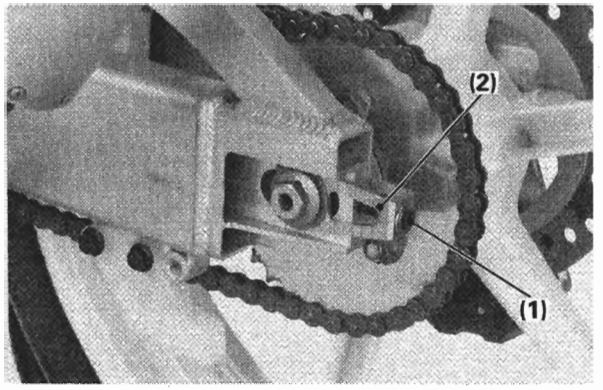
Drive Chain Slack Inspection

During the break-in period, drive chain slack should be checked and adjusted often. Also check the drive chain slack after the drive chain replacement.
Regular cleaning, lubrication, and proper adjustment will help to extend the service life of the drive chain.

Turn the engine off and place the machine on the maintenance stand.
With the transmission in neutral, measure chain slack at the upper section midway between the sprockets.

Drive chain slack: 25 ± 3 mm (1.0 ± 0.1 in)

Rotate the wheel and chain slack in several sections. If slack in one section increases beyond the standard measurement, this indicates the chain has stretched and needs to be replaced.
Take care to prevent catching your fingers between the chain and sprocket.



(1) ADJUSTING BOLT (2) REFERENCE MARKS

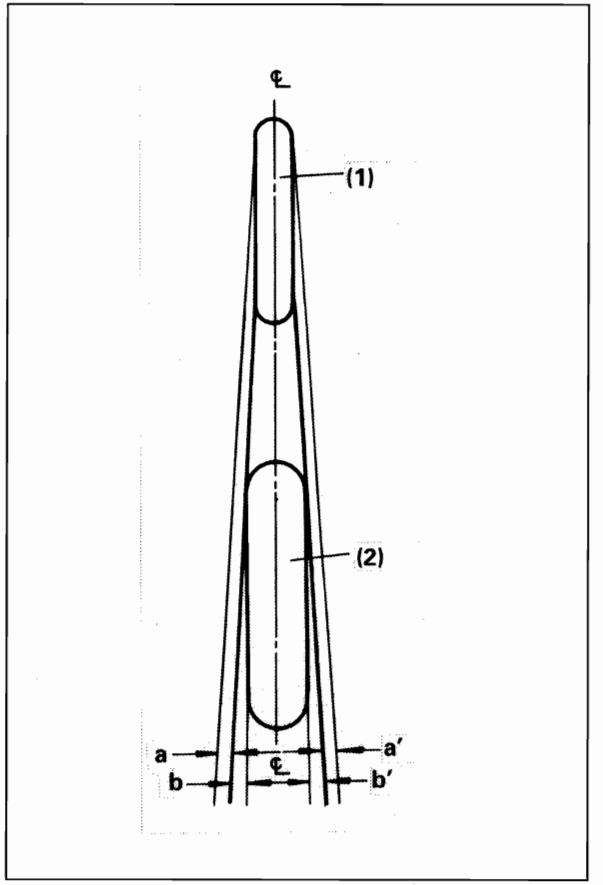
Drive Chain Slack Adjustment

Loosen the rear axle nut.
Turn the adjusting bolt clockwise to increase slack or counterclockwise to decrease slack.
Align the same reference marks on both side of the adjusters with the rear ends of the swingarm.

Check the wheel alignment.
Tighten the rear axle nut to the specified torque.

Torque: 69 N·m (7.0 kgf·m, 51 lbf·ft)

Recheck the drive chain slack and free wheel rotation.
Lubricate the drive chain.



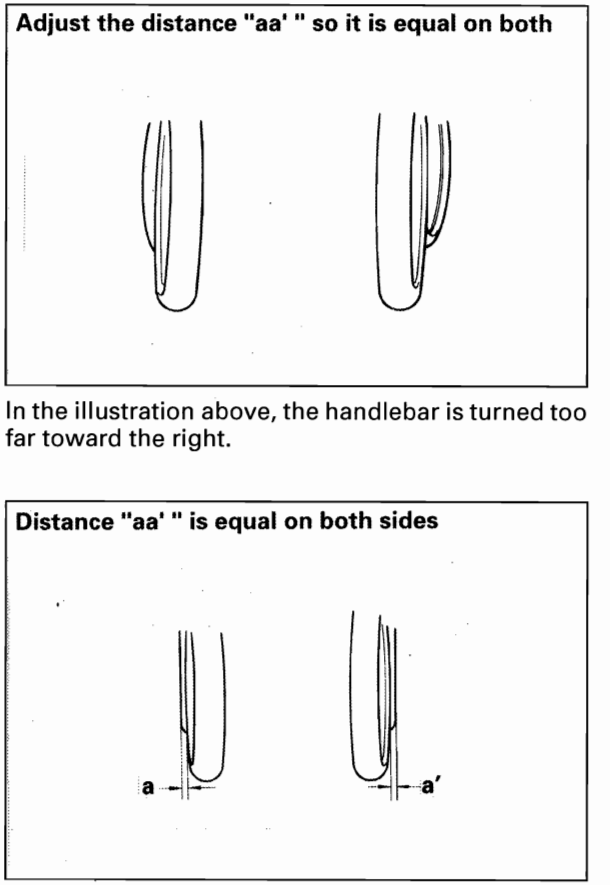
(1) FRONT TIRE (2) REAR TIRE

Wheel Alignment

After adjusting the drive chain slack, check the front and rear wheels for alignment.

1. Place the machine upright on firm, level ground.
2. Stand at a position 1—2 m from the rear end of the machine on either side; squat down.

Adjust the distance "aa' " so it is equal on both



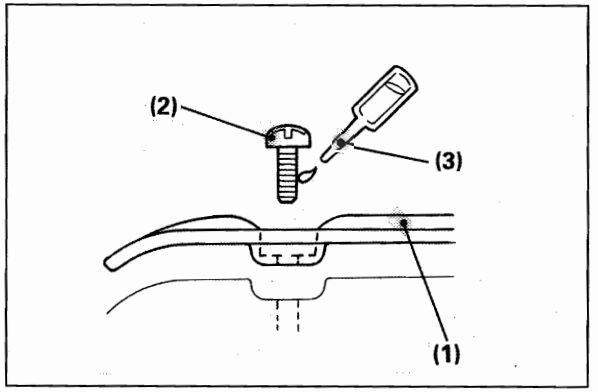
In the illustration above, the handlebar is turned too far toward the right.

Distance "aa' " is equal on both sides

In the illustration above, rear wheel is not yet aligned.

3. Position the front wheel straight-ahead by turning the handlebars and noting the distance between the outer edges of the front and rear wheel on that side.

Repeat steps 2 and 3 on the opposite side, being sure that the difference is equal on both sides.
Adjust by loosening the rear axle nut and turning the drive chain adjusting bolt.



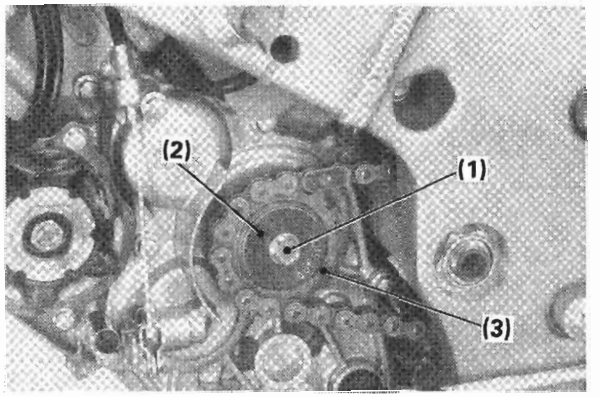
(1) DRIVE CHAIN SLIDER (2) SCREW
(3) LOCKING AGENT

Drive Chain Slider

Inspection/Replacement

Check the drive chain slider for wear or damage.
If the wear is 2.0 mm (0.08 in) or more, replace the slider.

At replacement, apply a locking agent to the drive chain slider mounting screw threads.
The screws must be retightened after break-in.



(1) BOLT (2) SPRING WASHER
(3) DRIVE SPROCKET

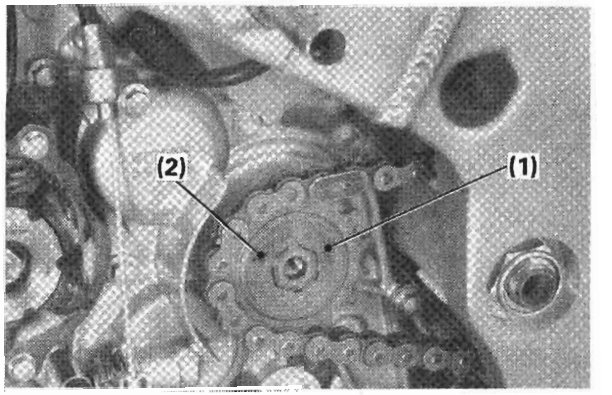
Sprockets

Drive Sprocket Replacement

Remove the lower cowl.
Loosen the drive chain (page 3-9).

Shift the transmission into low gear, apply the rear brake.

Remove the following:
- Drive sprocket bolt
- Spring washer
- Drive sprocket

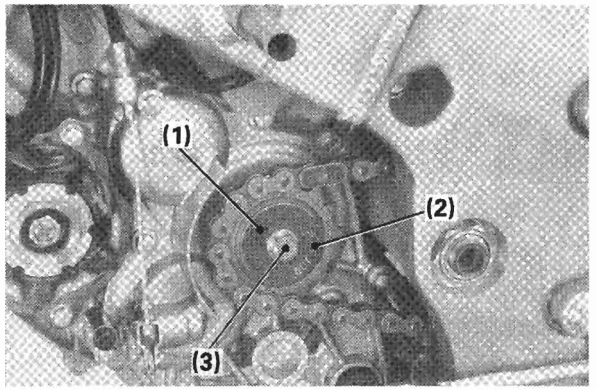


(1) DRIVE SPROCKET (2) NUMBER OF TEETH

Install the drive sprocket with its etched number (number of teeth) facing outward.

⚠ CAUTION

Check the surface and thread condition of countershaft end.
If necessary, remove burrs and clean it up.

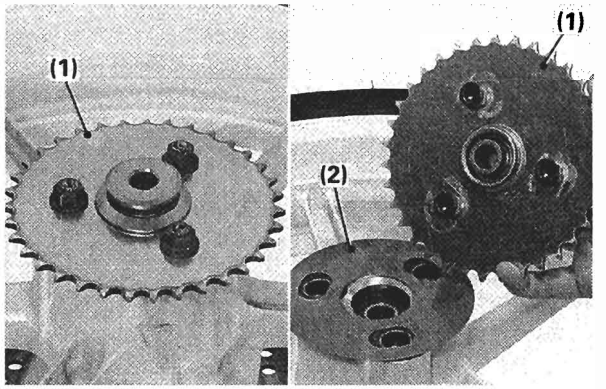


(1) SPRING WASHER (2) "OUTSIDE" MARK
(3) BOLT

Install the spring washer with its "OUT-SIDE" mark facing outward.

Shift the transmission into low gear, apply the rear brake.
Apply transmission oil to the drive sprocket bolt threads and seating surface.
Tighten the drive sprocket bolt to the specified torque.

Torque: 31 N·m (3.2 kgf·m, 24 lbf·ft)



(1) DRIVEN SPROCKET (2) SPROCKET WASHER

Driven Sprocket Replacement

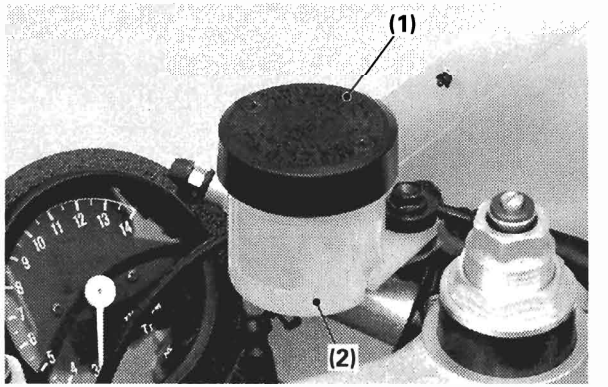
Remove the rear wheel (page 5-19).

Remove the driven sprocket collar, driven sprocket and spacer.

Install the driven sprocket in the reverse order of removal.

Adjust the drive chain slack (page 3-8).
Check the wheel alignment (page 3-9).

Take care to prevent damaging the 31 mm O-ring (P/No. 91357-964-006) when installing the driven sprocket.



(1) COVER (2) LOWER LEVEL

Brake Fluid

Front Brake Master Cylinder

Always inspect the brake fluid level, and relief the vacuum pressure in the reservoir.

Remove the master cylinder cover, set plate and diaphragm.

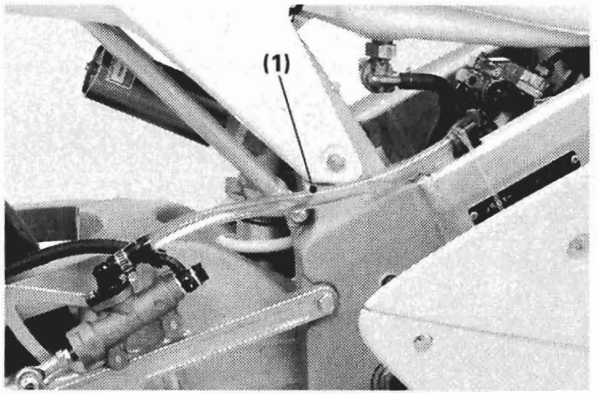
If the fluid level is lower than the lower level, check for the brake pad wear.
Replace the brake pad if necessary.
Refer to page 5-30 for brake pad replacement.

Also check the brake system for leaks.

Check that the brake hose do not bind or kink in all steering position, and is not pulled when the suspension is extended.

Replace the brake fluid after every three races. Do not service the brake system in high humidity.
Replace the brake fluid after riding in the rain.

Brake fluid: DOT 4 Only



(1) VINYL TUBE

Rear Master Cylinder

The rear master cylinder uses a vinyl tube in place of the reservoir.
Always inspect the brake fluid level, and relief vacuum pressure in the tube.

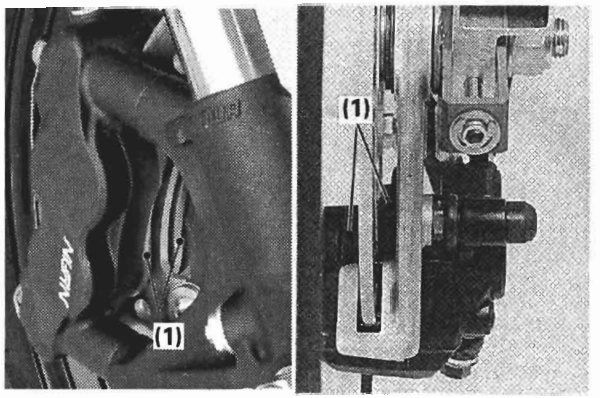
Fluid level: 40—50 mm (1.6—2.0 in) from the top of the tube

If the fluid level is low, check the brake pad for wear.
Replace the brake pads if necessary.
Refer to page 5-31 for brake pad replacement.

Replace the brake fluid after every race.
Do not service the brake system in high humidity.
Replace the brake fluid after riding in the rain.

Brake fluid: DOT 4 Only

The vinyl tube will harden over time so it should be replaced every 6 months.



(1) BRAKE PADS

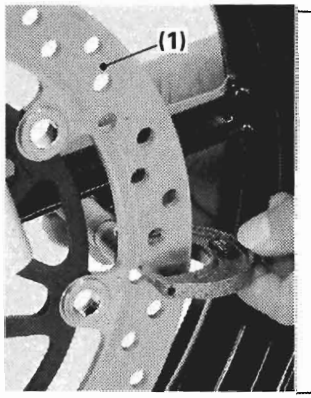
Brake Pad Wear

Inspect the brake pads visually to determine the pad wear.
If either pad is worn anywhere to a thickness of 1 mm, both pads must be replaced.

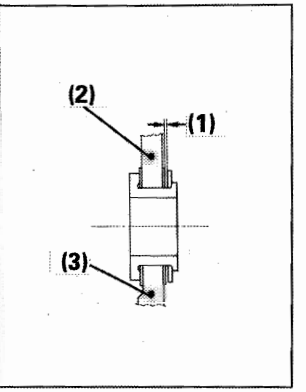
Use genuine parts specified by HRC (listed in the parts list at the end of this book) for the pads.

⚠ WARNING

Never use the '96 cast iron disc (45120-NX4-004) and '97 pads for stainless disc (45105-NX4-770) together.
If combined with the '96 disc and '97 pads, may damage or crack the disc.



(1) BRAKE DISC



(1) FLOATING CLEARANCE
(2) DISK
(3) HUB

Brake System

Refer to page 1-6 for Brake Lever Adjustment.
Refer to page 1-6 for Brake Pedal Height Adjustment.

Brake Discs

Measure the brake disc thickness.

Service limit: Front: 3.5 mm (0.14 in)
Rear: 3.5 mm (0.14 in)

Replace the brake disc if necessary.

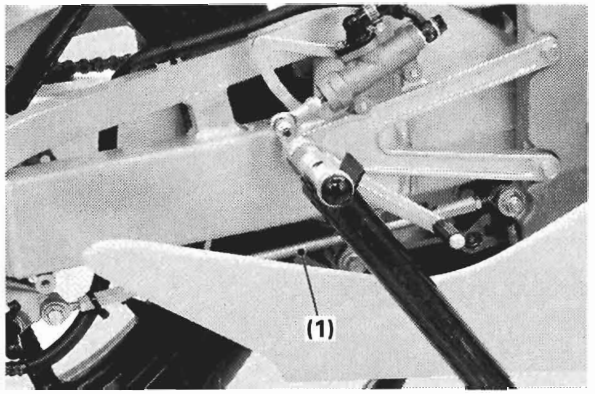
Measure the rear brake disc runout with a dial gauge.

Service limit: 0.3 mm (0.01 in)

Check the floating clearance by thickness gauge.

Service limit: 0.5 mm (0.02 in)

Replace the brake disc if the runout exceeds the service limit.
Refer to pages 5-1 and 5-19 for removal.



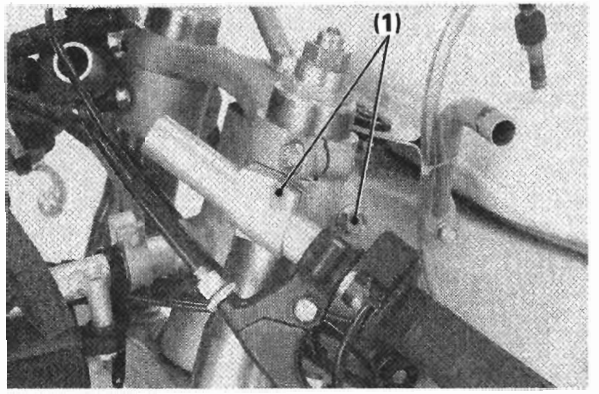
(1) TORQUE ROD

Rear Brake Torque Rod

A floating type torque rod is used for the rear brake. The rod should be adjusted so that its length is 370 mm (14.6 in).

Standard length: 370 mm (14.6 in)

The standard length refers to the distance between the centers of the spherical bearing at the ends of the rod.



(1) PINCH BOLTS

Handlebar And Steering Head Bearings

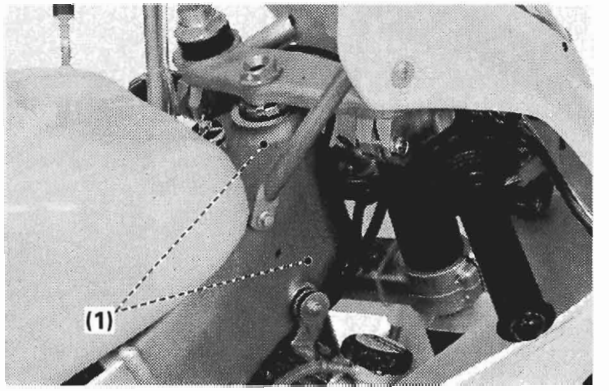
Handlebar

Check the handlebar for bends or cracks.

Check that the handlebar has not moved from its proper position.

Standard position: Contact with the bottom of top bridge
Adjustable range: –10 mm from standard position

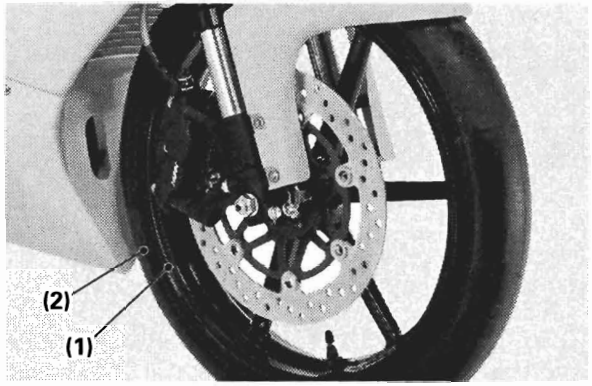
Check that the handlebar pinch bolts are torqued to
23 N·m (2.3 kgf·m, 17 lbf·ft). (8 mm BOLT)
10 N·m (1,0 kgf·m, 7 lbf·ft). (6 mm BOLT)



(1) STEERING HEAD BEARINGS

Steering Head Bearings

Support the machine with its front wheel off the ground.
Turn the handlebar to the right and left to check for roughness in the steering head bearings. Stand in front of the machine and grab the fork (at the axle), then push the fork in and out (toward the engine) to check for play in the steering head bearings. If any roughness or play is felt, adjust or replace the steering head bearings.



(1) WHEEL (2) TIRE

Wheels And Tires

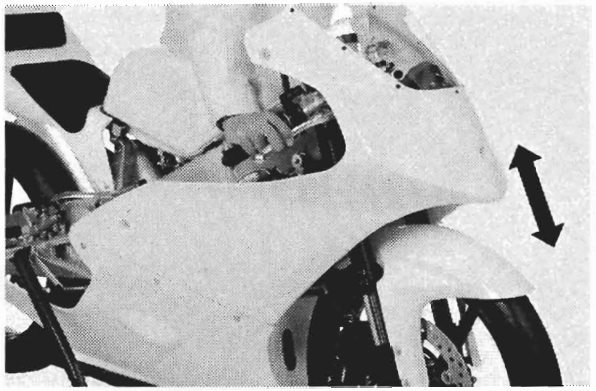
The wheels and tires should be selected for track condition and temperature.

Proper air pressure will provided maximum stability and tire life.
Check tire pressure frequently and adjust if necessary.
Tire air pressure should be checked when the tires are COLD.

Standard cold tire air pressure:
Front: 186 kPa (1.9 kgf/cm², 27 psi)
Rear: 177 kPa (1.8 kgf/cm², 26 psi)

Inspect the wheel for damage.
Check the wheel runout. If runout is noticeable, replace the wheel with a new one.

Check the axle for runout.
Check the condition of the front and rear wheel bearings.

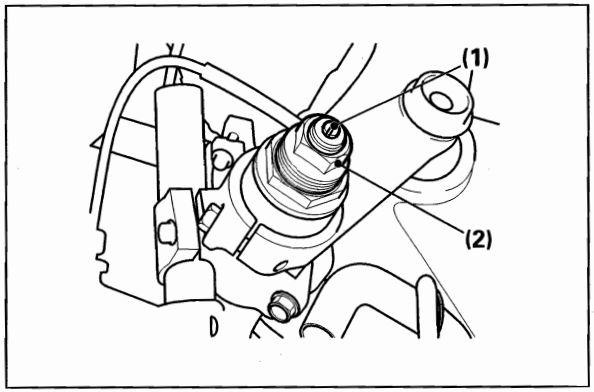


Front Suspension

Inspection

1. Make sure that the fork surfaces and oil seals are clean.
2. Check for signs of oil leakage. Damaged or leaking fork seals should be replaced before you ride the machine.
3. Make a quick check of fork operation by locking the front brake and pushing down on the handlebars several times.

- When your RS is new, break in your RS to ensure that the suspension has worked in.
- After break-in, test ride your RS with the front suspension at the standard setting before attempting any adjustments.



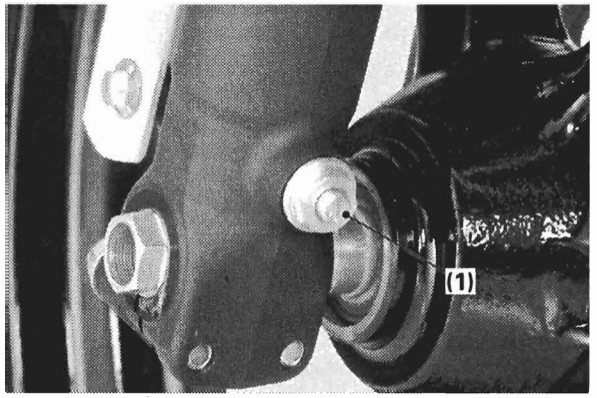
(1) REBOUND ADJUSTER
(2) PRELOAD ADJUSTER

Fork

The machine is shipped with a light coating of grease on the forks. This is not an indication of a leak.

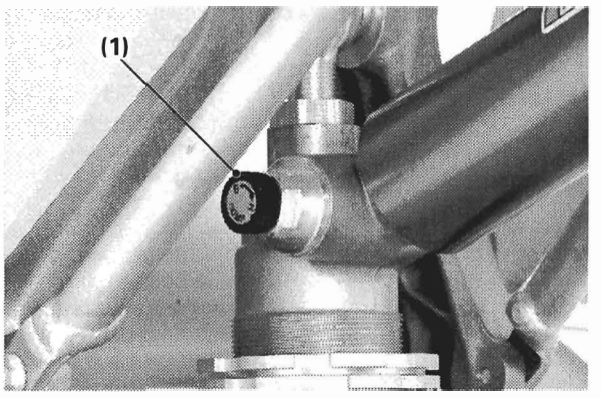
The fork should always be adjusted for the rider's weight and race track conditions by using one or more of the following methods.
Basically, there are five adjustments you can make to the front suspension:

- Rebound damping
  Turning the rebound damping screw adjusts how quickly the fork extends.
- Compression damping
  Turning the compression damping screw adjusts how quickly the fork compresses.
- Spring preload
  Turning the spring preload adjuster adjusts the spring initial preload length.
- Fork fluid volume
  The effects of higher or lower fork fluid level are only felt during final fork travel.
- Fork spring
  Optional stiffer and softer springs than the standard spring are available.



(1) COMPRESSION ADJUSTER

- For optimum fork performance, we recommended that you disassemble and clean the fork after riding your RS for three hours. See page 5-4 for fork disassembly/assembly.
- Replace the fork fluid every three races. See page 5-10 for oil level adjustment after changing the fork fluid.
- Use Honda Ultra Cushion Oil Special or equivalent with additives to assure maximum performance of your RS's front suspension.
- Periodically check and clean all front suspension parts to assure top performance. Check the oil seals for dust, dirt and foreign materials. Check the fluid for any contamination.
- Refer to page 7-12 for Suspension Adjustment information. Make all compression and rebound damping adjustments in one-click increments. Adjusting two or more clicks at a time may cause you to pass over the best adjustment. Test ride after each adjustment.
- If you become confused about adjustment settings, return to the standard position and start over.

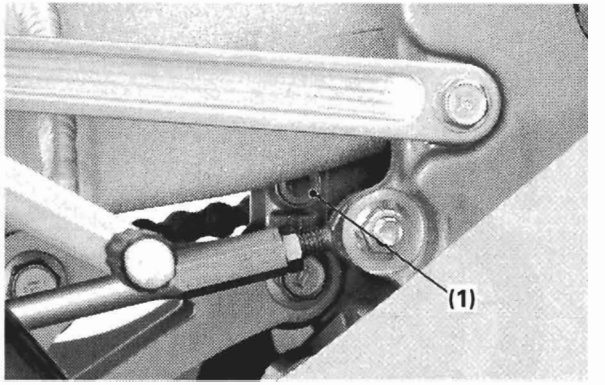


(1) COMPRESSION ADJUSTER

Rear Suspension

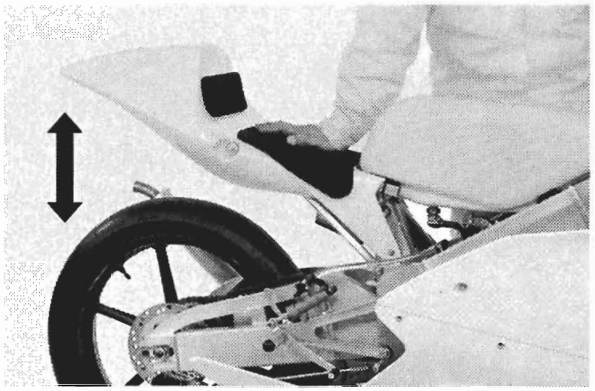
The swingarm is controlled by a hydraulic shock absorber with an aluminum reservoir for oil and nitrogen gas pressure. The gas pressure in the reservoir is contained within a rubber bladder.
The rear shock absorber should always be adjusted for the rider's weight and race track conditions by using one or more of the following methods.

- Rebound damping
  Turning the rebound damping screw adjusts how quickly the shock absorber extends.
- Compression damping
  Turning the compression damping screw adjusts how quickly the shock absorber compresses.
- Spring pre-load
  Turning the spring pre-load adjuster adjusts the spring initial pre-load length.
- Shock absorber spring
  Optional stiffer and softer springs than the standard spring are available.



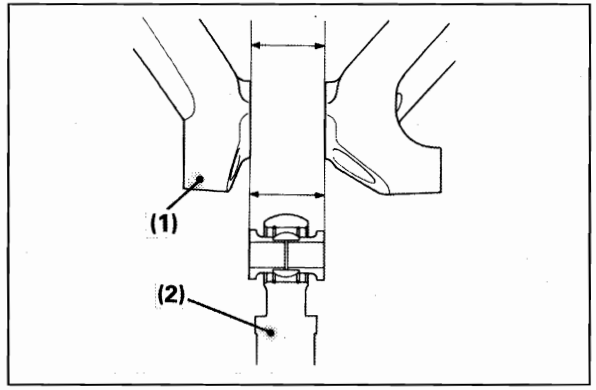
(1) REBOUND ADJUSTER

- When your RS is new, your suspension will break-in as you ride.
- After break-in is completed, test ride your RS with the rear suspension at the standard setting before attempting any adjustments.
- Refer to page 7-12 for Suspension Adjustment information. Make all compression and rebound damping adjustments in one-click increments. Adjusting two or more clicks at a time may cause you to pass over the best adjustment. Test ride after each adjustment.
- If you become confused about adjustment settings, return to the standard position and start over.



Inspection

1. Check for a broken or collapsed spring.
2. Bounce the rear of the machine up and down and check for smooth suspension action.
3. Check the rear shock absorber for a bent shaft or oil leaks.
4. Push the rear wheel sideways to check for worn or loose swingarm bearings. There should be no movement. If movement is felt, replace the pivot bearings (page 5-26).



(1) FRAME BODY (2) REAR SHOCK ABSORBER

Shim Adjustment

The shims must be used to compensate for machining tolerance. It should be adequate clearance between any two sliding or moving parts.

Rear Shock Absorber Upper Pivot

With the seat rail is installed, measure and record the clearance as indicated in the illustration.
Shim(s) may be inserted on either side but, when possible, there should be an equal amount on both side.

Shim: 0.2 mm: 90510-NX4-000
0.6 mm: 90511-NX4-000
1.0 mm: 90512-NX4-000
1.5 mm: 90513-NX4-000

Cleaning

Clean your RS regularly to protect the surface finishes and inspect damage, wear, and oil seepage. When washing your RS, always use water and a mild detergent (such as diswashing liquid) to avoid discoloring decals.

NOTICE

High pressure water (or air) can damage certain parts of the machine.
- Carburetor
- Clutch
- Wheel hubs
- Engine stop switch
- Expansion chamber outlet
- Electrical components
- Drive chain
- Brake master cylinder

1. After cleaning, rinse your RS thoroughly with plenty of clean water. Strong detergent residue can corrode alloy parts.
2. Dry your RS, start the engine, and let it run for several minutes.
3. Lubricate the drive chain immediately after washing and drying your RS.
4. Test the brakes before riding your RS. Several applications may be necessary to restore normal braking performance. Braking performance may be impaired immediately after washing your RS.

Storage

Extended storage, such as for winter, requires that you take certain steps to reduce the effects of non-use. In addition, necessary repairs should be made BEFORE storing your RS: otherwise, these repairs may be forgotten by the time your RS is removed from storage.

Preparing The Machine For Storage

1. Completely clean all parts of your RS. Wash with fresh water and wipe dry.
2. Drain the fuel tank and carburetor into an approved gasoline container.
   Turn the fuel valve OFF and remove the carburetor drain bolt. Drain gasoline into an approved container. Reinstall the drain bolt.

⚠ WARNING

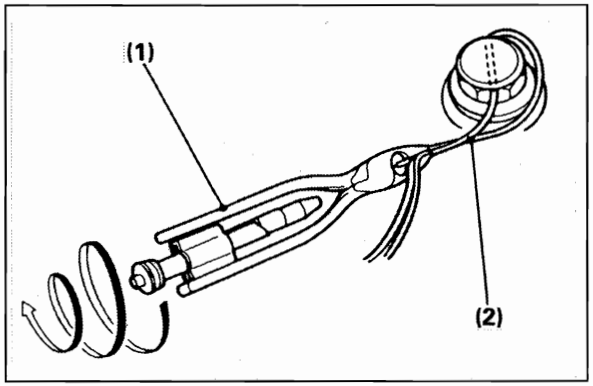
Gasoline is highly flammable and explosive. You can be burned or seriously injured when draining or refueling.

- **Stop engine and keep heat, sparks, and flame away.**
- **Drain or refuel only outdoors.**
- **Wipe up spills immediately.**

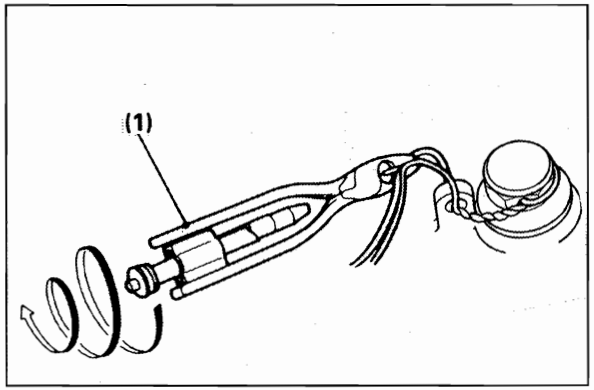
3. Remove the radiator-to-water pump hose to drain coolant (page 1-2).
4. Lubricate the drive chain.
5. Remove the spark plug and pour a table spoon (15—20 cm^3) of clean engine oil into the cylinder. With the spark plug grounded or the Engine Stop Switch OFF, crank the engine several times to distribute the oil, then reinstall the spark plug.
6. Seal the carburetor intake port using a piece of tape or equivalent.
7. Inflate the tires to their recommended pressure.
8. Place your RS on the maintenance stand or equivalent to raise both tires off the ground.
9. Stuff a rag into the silencer outlet. Then tie a plastic bag over the end of the silencer to prevent moisture from entering.
10. Cover your RS and store in a place which is free of humidity and dust.

Removal From Storage

1. Uncover and clean your RS.
   Change the transmission oil if more than 4 months have passed since the start of storage.
2. Uncover the end of the silencer and remove the rag from the silencer outlet.
3. Fill the fuel tank with pre-mixed fuel (page 1-1).
4. Pour the recommended coolant slowly into the radiator filler hole up to the filler neck.
   Bleed the air in the cooling system and install the radiator cap securely (page 1-1).
5. Perform the maintenance check (page 3-1).



(1) WIRE TWISTING TOOL (2) LOCKING WIRE

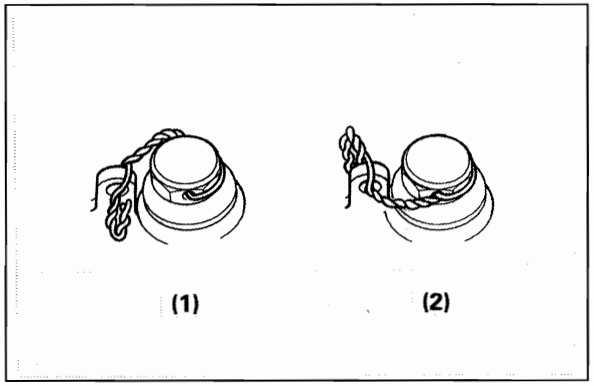


(1) WIRE TWISTING TOOL

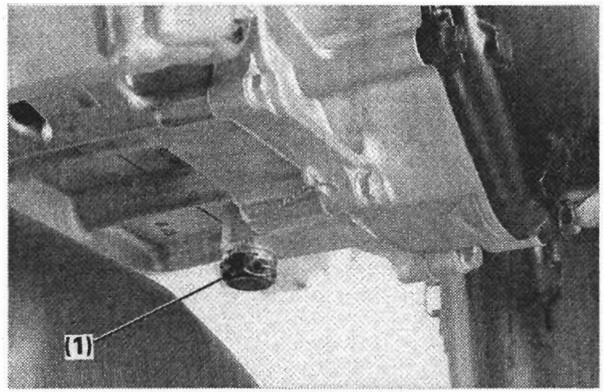
Wire Locking

Before starting the engine, secure the transmission oil drain bolt, oil filler cap, oil catch trank drain bolt and brake caliper bolt.

Insert the proper length locking wire to the bolt, footpeg holder or crankcase. Twist the wire using a commercially available wire twisting tool.
Insert the wire in the crankcase cover, drain bolt or filler cap.
Twist the wire and cut off any excess.

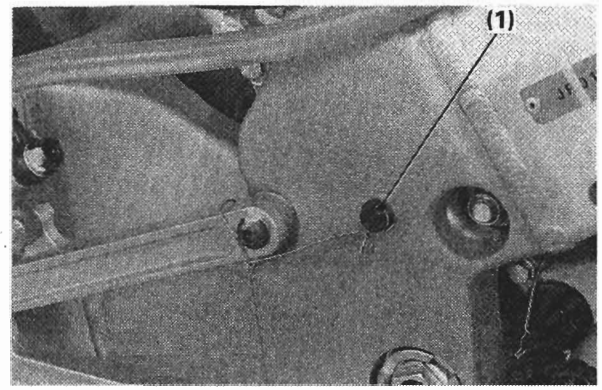


(1) INCORRECT (2) CORRECT

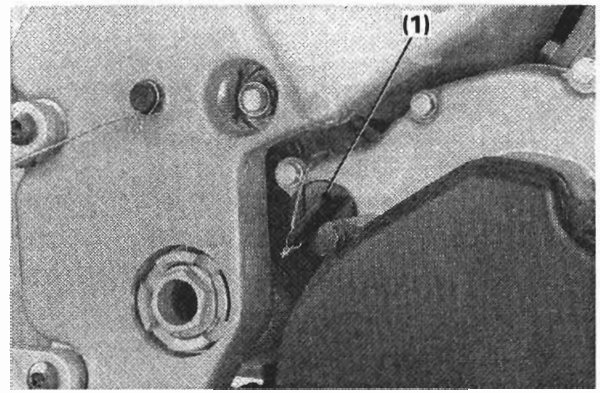


(1) TRANSMISSION OIL DRAIN BOLT

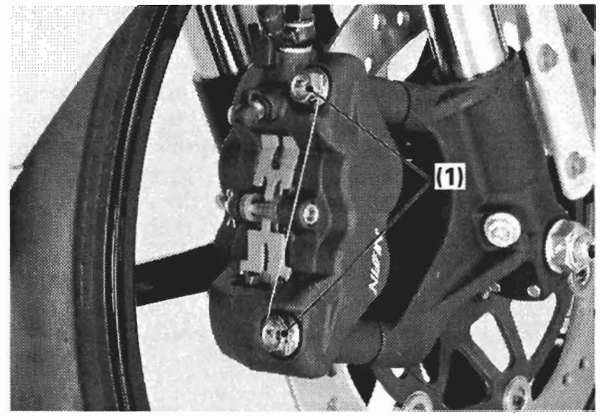
- Use new 0.8 mm (0.03 in) stainless steel wire.
- Secure the bolt as shown so that it cannot come loose.
- Twisting the wire too tightly will break the locking.



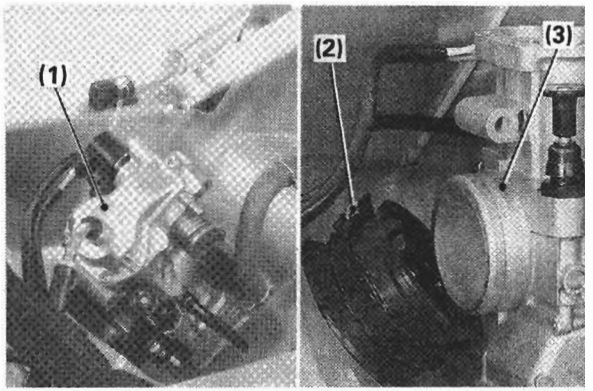
(1) OIL CATCH TANK DRAIN BOLT



(1) OIL FILLER CAP



(1) BRAKE CALIPER BOLT



(1) CARBURETOR TOP
(2) SCREW (3) CABURETOR

Carburetor

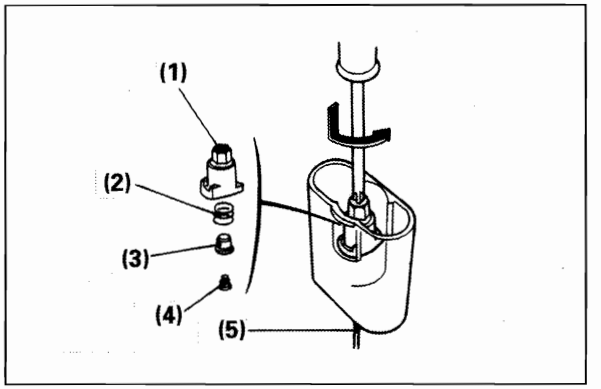
Removal

Turn the fuel valve OFF and remove the fuel tank.
Disconnect the throttle sensor and power jet solenoid connectors.

Remove the carburetor top and pull out the throttle valve.

Loosen the carburetor insulator clamp screw and remove the carburetor.

After removing the carburetor, wrap the intake port of the engine with a shop towel or cover it with piece of tape to prevent any foreign material from dropping into the engine.



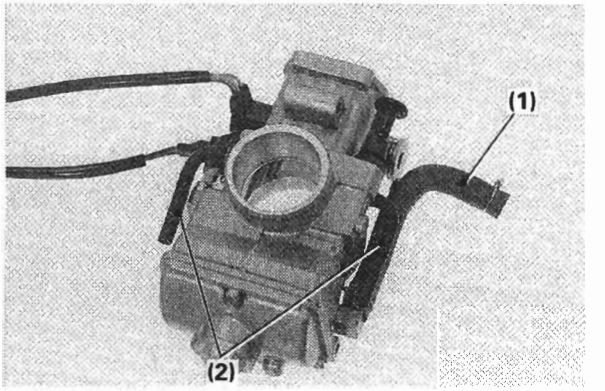
(1) CABLE HOLDER (2) SPRING (3) SEAT
(4) SPRING (5) JET NEEDLE

Disassembly

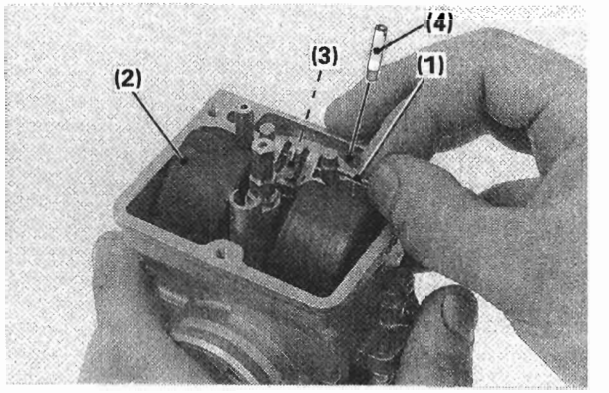
Remove the throttle cable from the cable holder.
Remove the throttle valve spring from the carburetor top.
Push down on the cable holder and turn it 90 degree.
Remove the cable holder, spring, spring seat, spring and jet needle.

Inspect the throttle valve for dirt, scratches or wear.

Inspect both the straight portion and tapered portion of the jet needle for wear and replace if necessary.
Inspect the jet needle clip groove for wear or damage and replace if necessary.
The jet needle should be replaced every season.



(1) FUEL TUBE (2) AIR VENT TUBES

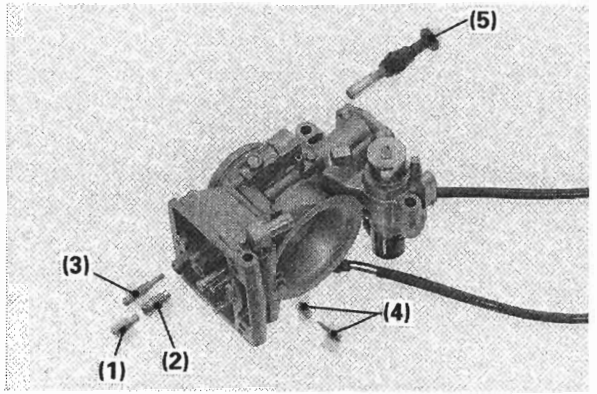


(1) PIN (2) FLOAT (3) FLOAT VALVE
(4) POWER JET

Remove the fuel tube and air vent tubes.

Remove the following:
– Float chamber
– Power jet
– Float pin/float/float valve

Check the valve and seat for wear or damage.
Replace the valve if there are signs of wear or damage.



(1) MAIN JET (2) MAIN JET HOLDER
(3) SLOW JET (4) AIR SCREW/SPRING
(5) STARTER VALVE

Remove the following:
- Main jet
- Main jet holder
- Slow jet
- Power jet

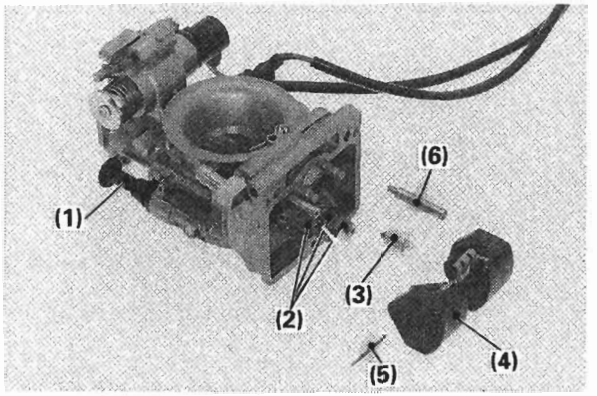
When removing the air screw, record the number of turns in until it seats lightly, so it can be returned to its original position.

Remove the air screw and spring.

Unscrew the lock nut and remove the starter valve.

Check the starter valve seat for damage.
Check each part for clogging.

Blow open all jets and body openings with compressed air.



(1) STARTER VALVE
(2) MAIN JET HOLDER/MAIN JET/SLOW JET
(3) FLOAT VALVE (4) FLOAT (5) FLOAT PIN
(6) POWER JET

Assembly

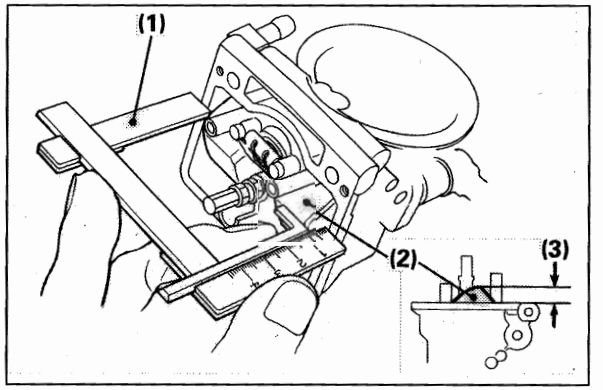
Install the following:
- Starter valve
- Air screw/spring

Install the air screw and return it to its original position as noted during removal.

Standard air screw opening: 1 3/4 turns out

- Main jet holder
- Main jet
- Slow jet
- Float valve
- Float
- Float pin
- Power jet

Unscrew the main jet holder lock nut.
Install the main jet holder until it seats, then tighten the lock nut.



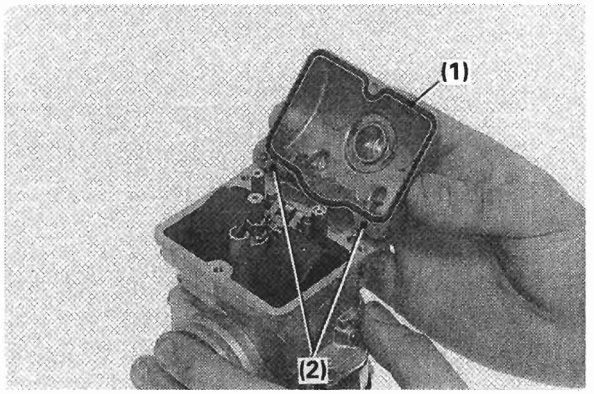
(1) FLOAT LEVEL GAUGE (2) FLOAT
(3) FLOAT LEVEL

Measure the float level.

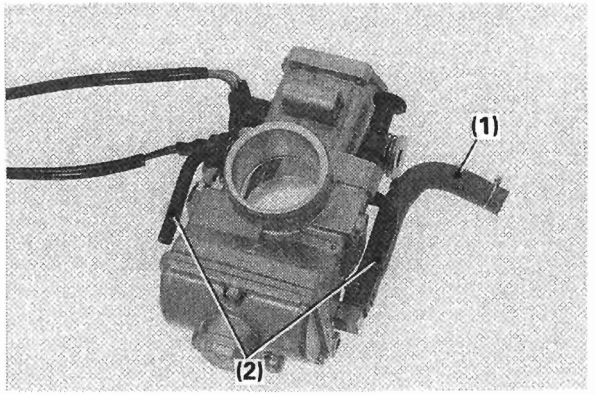
To adjust the float level, bend the float arm carefully until the float tip just contacts the float valve.

Float level: 8.0 mm (0.31 in)

TOOL:
Float level gauge **07401-0010000**



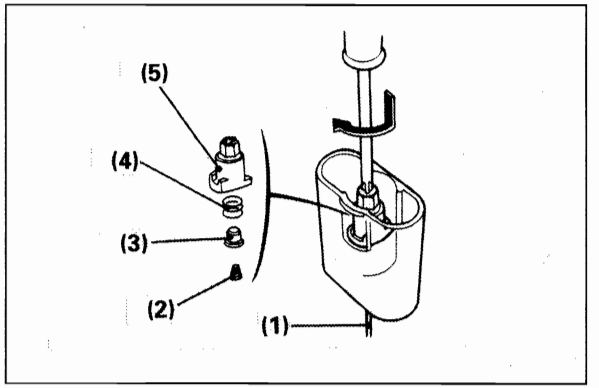
(1) O-RING (2) DOWEL PINS



(1) FUEL TUBE (2) AIR VENT TUBES

Install a new float chamber O-ring.
Install the float chamber.
Tighten the screws securely, starting with the two screws on the dowel pin side.

Install the air vent tubes and fuel tubes as shown.



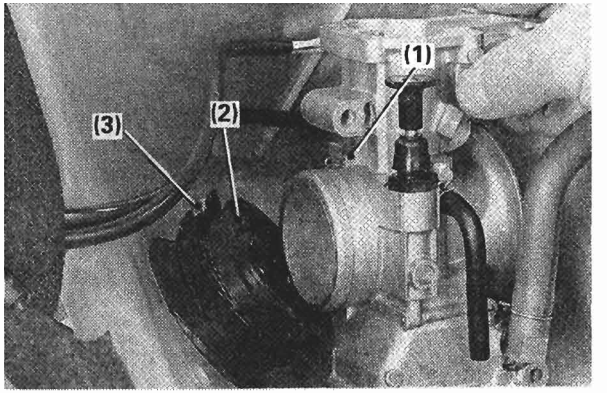
(1) JET NEEDLE (2) SPRING (3) SEAT
(4) SPRING (5) CABLE HOLDER

Install the needle clip on the jet needle.

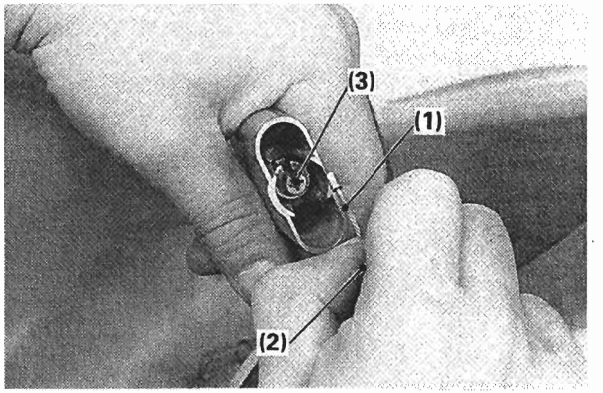
Standard position: 4th groove (From upper)

Assemble the spring, spring seat, spring and cable holder.
Install the jet needle into the throttle valve.
Install the spring seat over the jet needle and install the cable holder.

Push the cable holder in and turn it 90 degree.



(1) LUG (2) GROOVE (3) SCREW

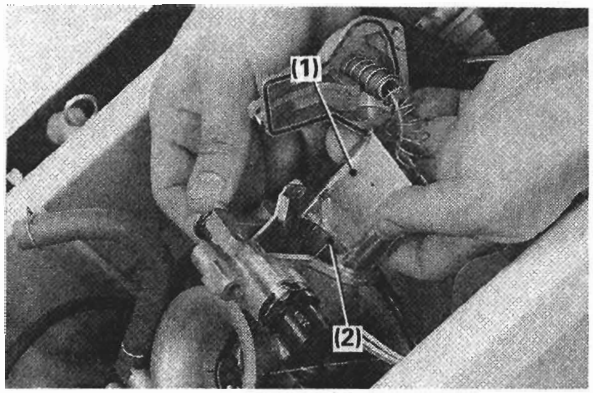


(1) CABLE (2) SPRING (3) CABLE HOLDER

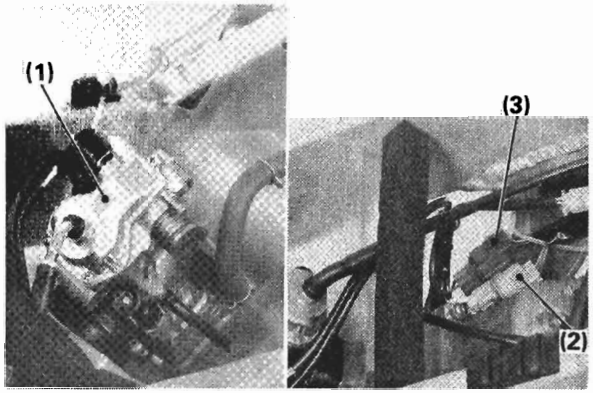
Installation

Align the lug on the carburetor with the groove of the carburetor insulator and install the carburetor.
Tighten the insulator clamp screw securely.

Assemble the throttle cable, carburetor top, rubber cap and throttle valve spring.
Compress the throttle valve spring and insert the throttle cable into the cable holder.



(1) THROTTLE VALVE (2)CUT-OUT



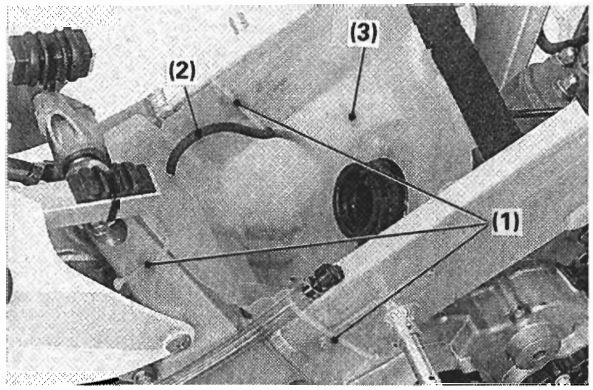
(1) CARBURETOR TOP
(2) THROTTLE SENSOR CONNECTOR
(3) POWER JET SOLENOID CONNECOR

Install the throttle valve assembly into the carburetor with the cut-out side facing rearward.
Tighten the carburetor top screws securely.

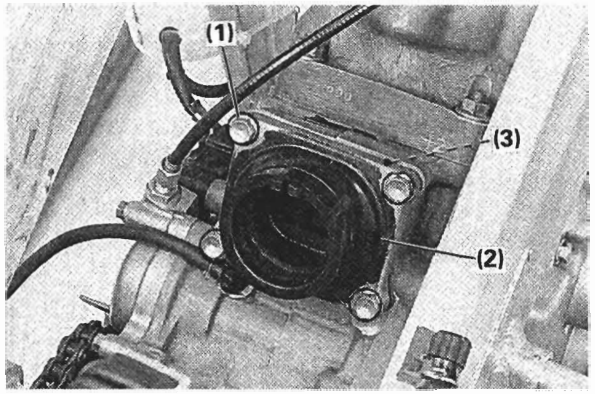
Connect the throttle sensor and power jet solenoid connectors.

Install the fuel tank and connect the fuel tube.

After installation, check the throttle grip free play (page 1-5).



(1) TIE-WRAPS (2) CRANKCASE BREATHER TUBE
(3) CARBURETOR BOX



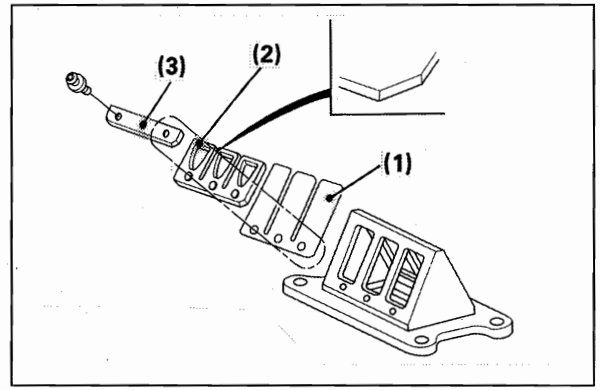
(1) BOLTS (2) INSULATOR
(3) REED VALVE BODY

Reed Valve

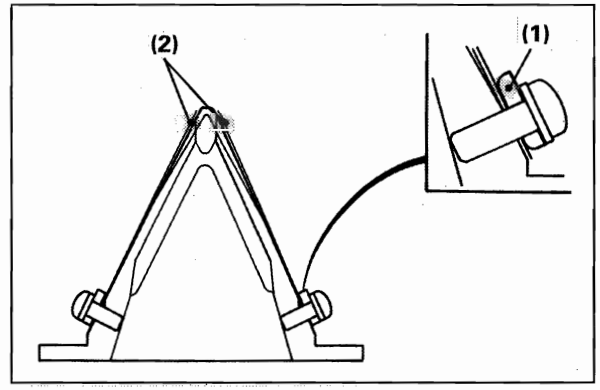
Removal

Remove the carburetor (page 4-1).
Disconnect the crankcase breather tube.
Remove the tie-wraps and carburetor box.

Remove the insulator mounting bolts and insulator.
Remove the reed valve body and gasket.



(1) REED VALVE (2) DAMPER REED VALVE
(3) REED VALVE STOPPER

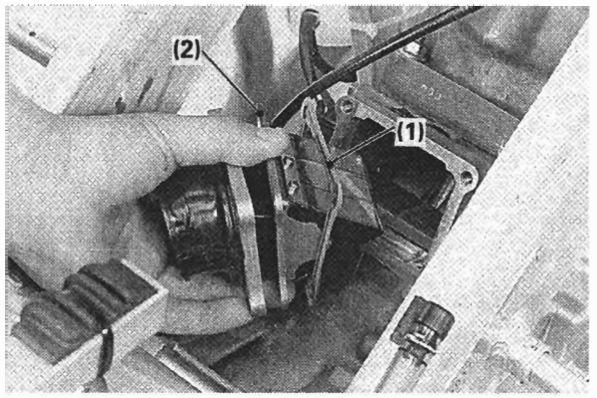


(1) REED VALVE STOPPER
(2) REED VALVES•DAMPER REED VALVE

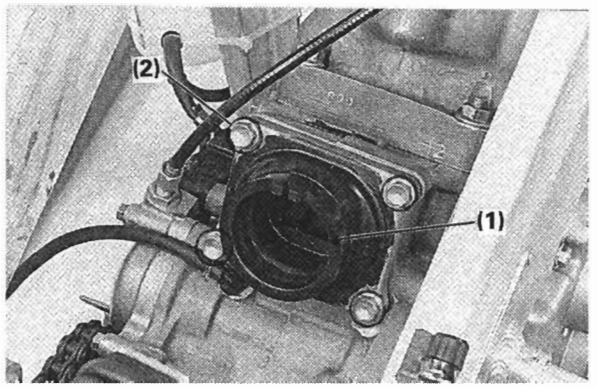
Inspection

Check the reed valves for damage or fatigue and replace if necessary.
Replace the reed valve with a new one if the seats are cracked or damaged.

Install the reed valves and reed valve stoppers as shown.



(1) GASKET (2) REED VALVE BODY

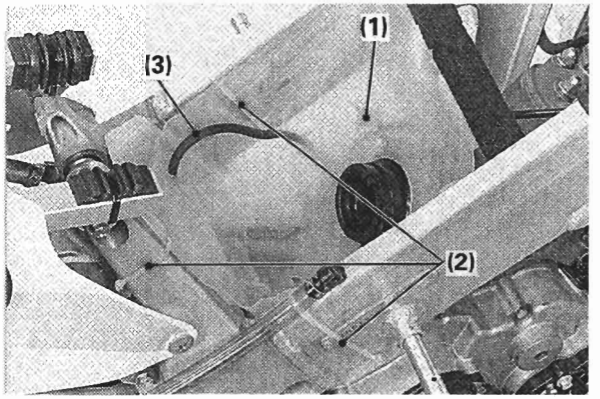


(1) INSULATOR (2) BOLTS

Installation

Install the new gasket and reed valve body.
Install the reed valve body onto the crankcase.

Install the insulator and tighten the mounting bolts.

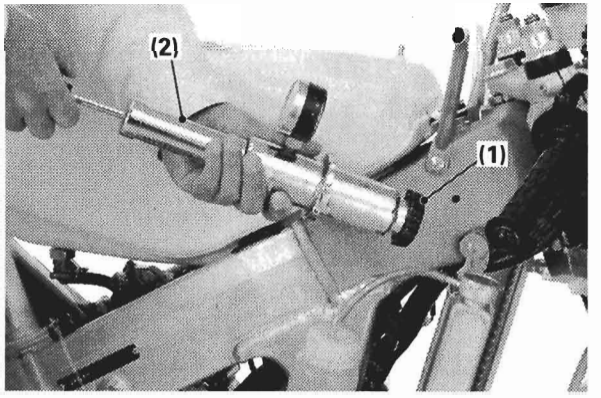


(1) CARBURETOR BOX (2) TIE-WRAPS
(3) CRANKCASE BREATHER TUBE

Route the crankcase breather tube properly (page 2-7).
Install the carburetor box and clamp the carburetor box onto the frame with the tie-wraps as shown.

Install the carburetor (page 4-3).

After installation, check for secondary air leaks around the reed cage and insulator.



(1) CAP (2) TESTER

Cooling System Inspection

⚠ WARNING

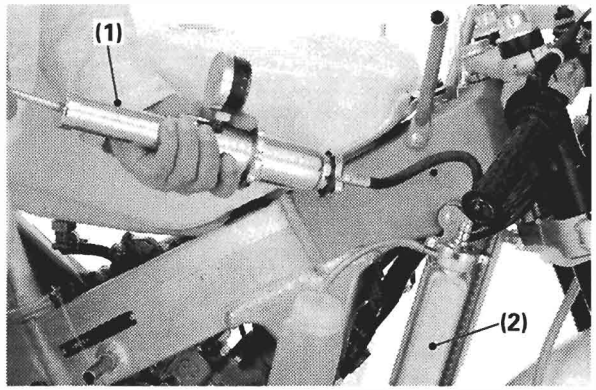
Removing the radiator cap while the engine is hot will allow the coolant to spray out, seriously scalding you.

Always let the engine and radiator cool down before removing the radiator cap.

Radiator Cap

Pressure test radiator cap.
Replace the radiator cap if it does not hold pressure, or if relief pressure is too high or too low.
Before installing the radiator cap on the tester, apply water to sealing surfaces.
It must hold specified pressure for at least six seconds.

Radiator cap relief pressure:
108—137 kPa (1.1—1.4 kgf/cm², 16—20 psi)



(1) TESTER (2) RADIATOR

Radiator

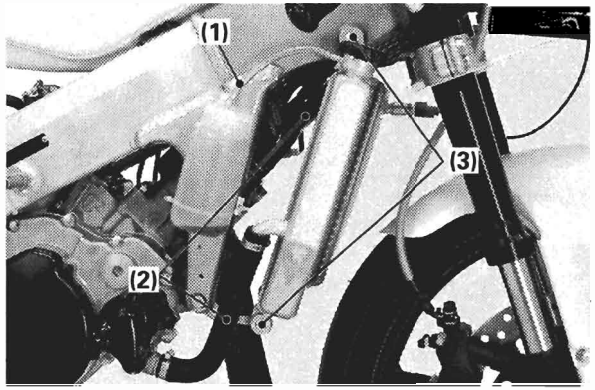
Pressurize the radiator, engine and hoses, and check for leaks.

Specified pressure: 118 kPa (1.2 kgf/cm², 17 psi)

NOTICE

Excessive pressure can damage the radiator. Do not exceed 118 kPa (2.0 kgf/cm², 28 psi).

Repair or replace components if the system will not hold specified pressure for at least six seconds.



(1) OVERFLOW TUBE (2) HOSES (3) BOLTS

Radiator

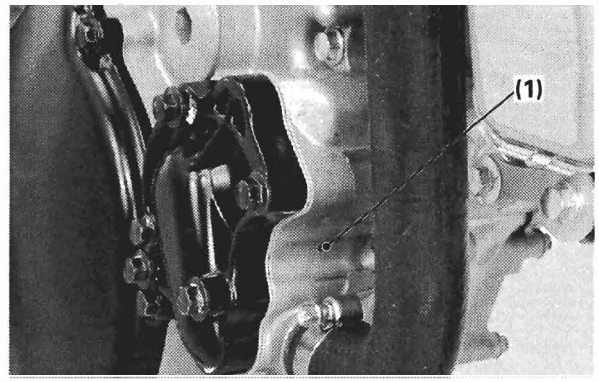
Removal

Remove the radiator overflow tube.
Disconnect the coolant temperature sensor connector.
Loosen the radiator hose clamp and remove the following hoses:
- Radiator-to-cylinder head hose
- Radiator-to-water pump hose

Remove the radiator mounting bolts and radiator.

Installation

Installation is essentially the reverse order of removal.
After installation, check the radiator and radiator hoses for leak.

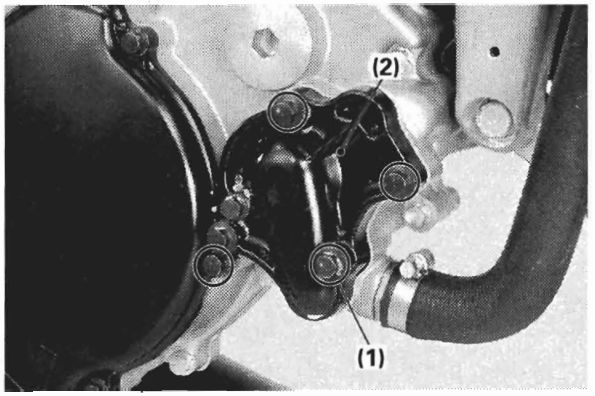


(1) INSPECTION HOLE

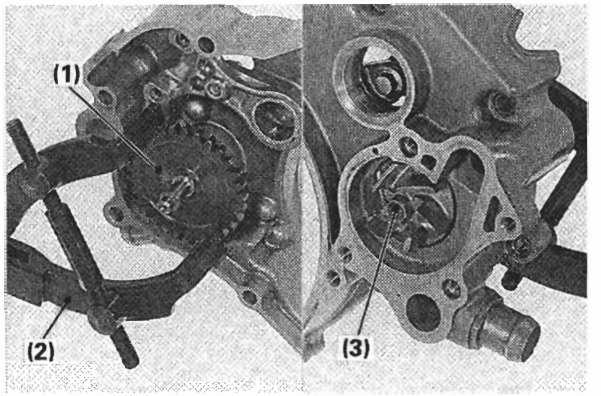
Water Pump

Water Seal Inspection

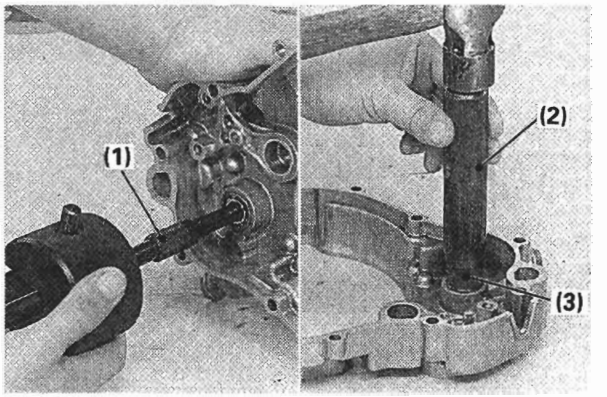
Check the inspection hole for signs of coolant leakage.
Replace the water seal if coolant is leaking (page 4-8).
Replace the oil seal if oil is leaking (page 4-8).



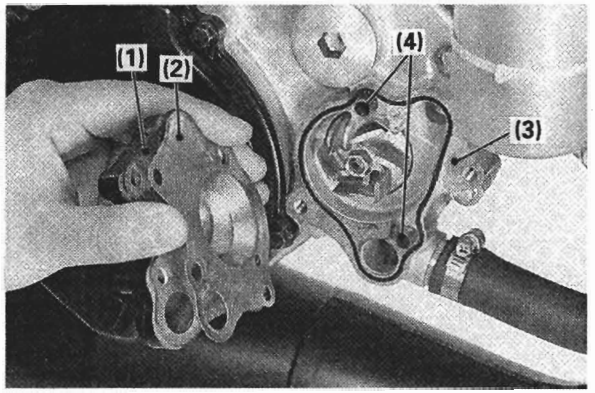
(1) BOLTS (2) COVER



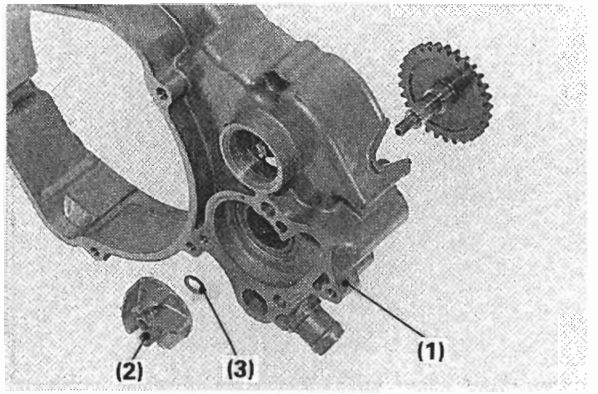
(1) WATER PUMP GEAR (2) SUITABLE TOOL
(3) IMPELLER



(1) BEARING REMOVER (2) DRIVER
(3) ATTACHMENT/PILOT



(1) OUTER GASKET (2) SEPARATOR
(3) INNER GASKET (4) DOWEL PINS



(1) RIGHT CRANKCASE COVER
(2) IMPELLER (3) WASHER

Disassembly

Drain the transmission oil (page 3-3).

Remove the following:
- Water pump cover bolts, cover
- Gaskets/separator
- Dowel pins

Remove the right crankcase cover (page 4-21).

Hold the water pump gear using a suitable tool and remove the impeller/washer.

Bearing Replacement

Check the water pump bearing for excessive play or damage.
Replace the bearing if necessary.

Remove the bearing using the special tools.

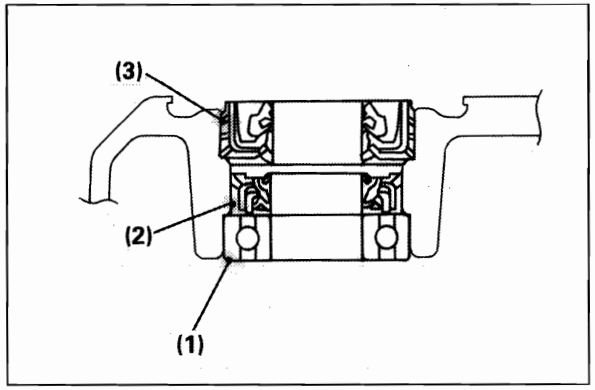
TOOLS:

Bearing remover set	**07936-1660001**
– Remover head	**07936-1660110**
– Remover shaft	**07936-1660120**
– Remover weight	**07741-0010201**

Drive in the new bearing into the right crankcase cover using the special tools.

TOOLS:

Driver	**07749-0010000**
Attachment, 24 × 26 mm	**07746-0010700**
Pilot, 12 mm	**07746-0040200**

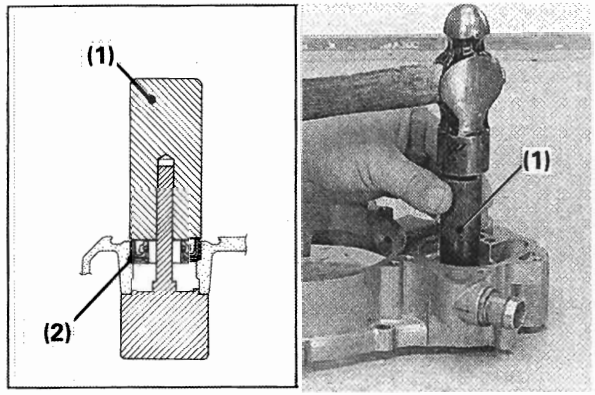


(1) BEARING (2) OIL SEAL (3) WATER SEAL

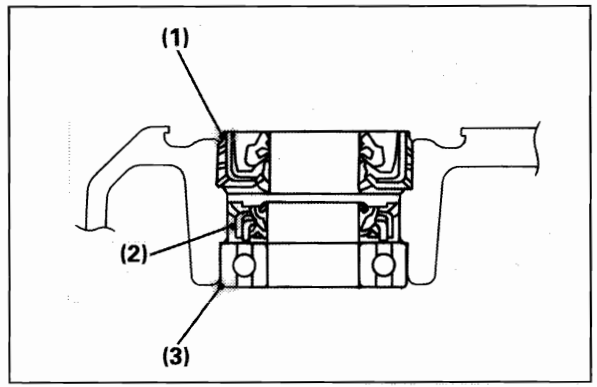
Water Seal/Oil Seal Replacement

Remove the water pump bearing from the pump body.

Remove the oil seal.
Remove the worn or damaged water seal from the right crankcase cover.



(1) WATER SEAL DRIVER (2) WATER SEAL

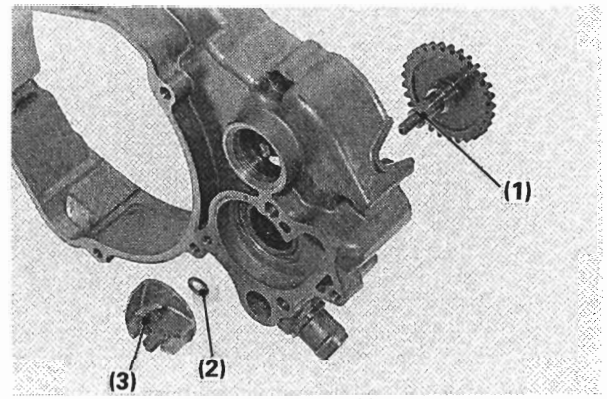


(1) WATER SEAL (2) OIL SEAL (3) BEARING

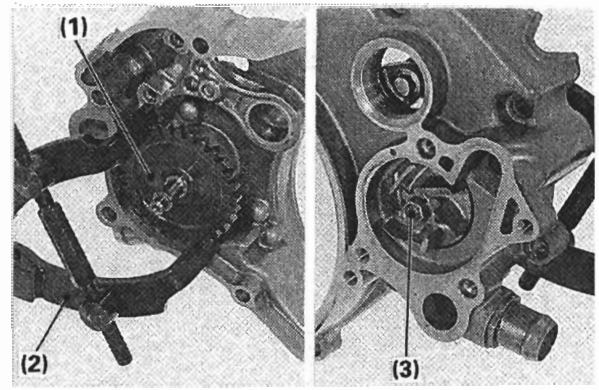
Drive the new water seal into the right crankcase cover in the direction shown in the illustration above.

TOOL:
Water seal driver **07945-KA30000**

Install a new oil seal in the direction shown in the illustration above.
Install the new bearing (page 4-7).



(1) WATER PUMP SHAFT (2) WASHER
(3) IMPELLER



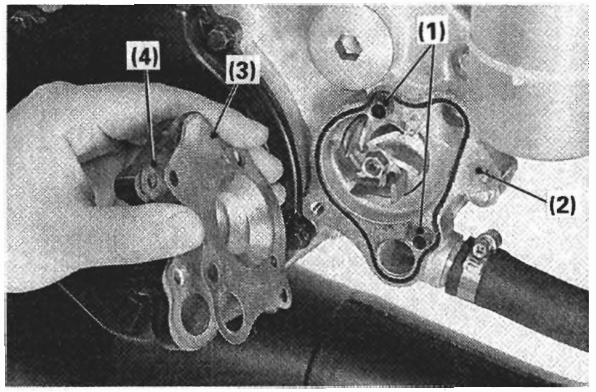
(1) WATER PUMP GEAR (2) SUITABLE TOOL
(3) IMPELLER

Assembly

Install the following:
– Water pump shaft into the right crankcase cover
– Washer/impeller

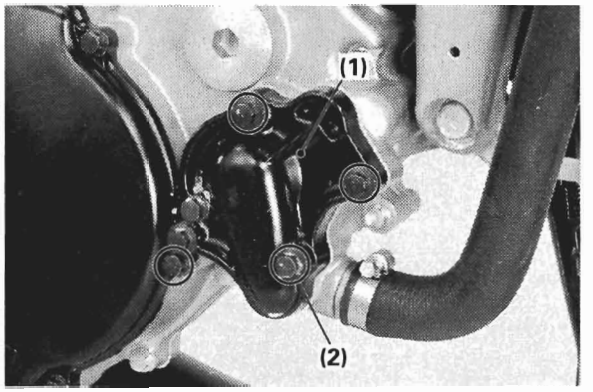
Hold the water pump gear using a suitable tool and tighten the impeller to the specified torque.

Torque: 12 N·m (1.2 kgf·m, 9 lbf·ft)

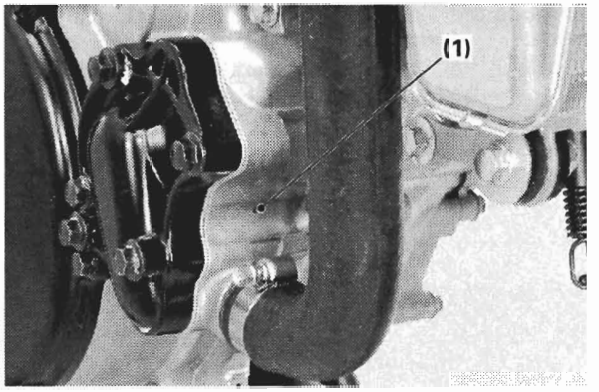


(1) DOWEL PINS (2) INNER GASKET
(3) SEPARATOR (4) OUTER GASKET

Install the following:
- Right crankcase cover (page 4-21)
- Dowel pins
- New inner gasket
- Separator
- New outer gasket
- Water pump cover



(1) WATER PUMP COVER (2) BOLTS

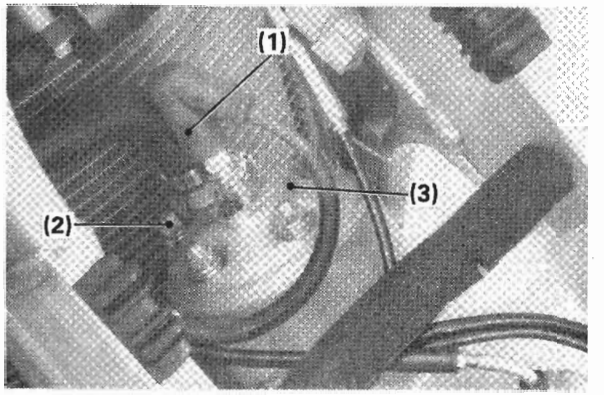


(1) INSPECTION HOLE

Install and tighten the water pump cover bolts.

Fill the transmission oil (page 3-3).
Fill the coolant and bleed air (page 1-1).

Check the inspection hole for signs of coolant leakage.



(1) SPARK PLUG/CAP
(2) CYLINDER HEAD NUT/SEALING WASHER
(3) CYLINDER HEAD

Cylinder Head/Cylinder/Piston

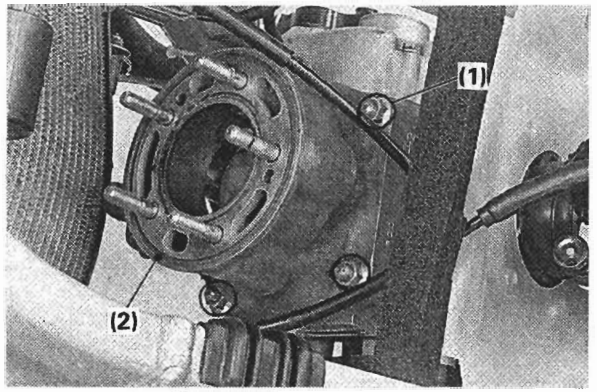
Removal

Drain the coolant.

Remove the following:
- Spark plug cap and spark plug
- Cylinder head nuts

To avoid warping the cylinder head cover, use a crisscross pattern to loosen each nut about 1/4 turn in 2—3 steps, then remove the nuts.

Remove the following:
- Sealing washers
- Cylinder head
- Dowel pins
- O-rings

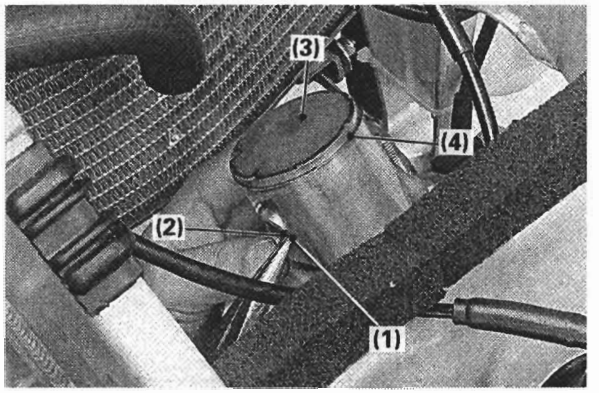


(1) CYLINDER NUTS (2) CYLINDER

Remove the expansion chamber.

Remove the cylinder nuts.
To avoid warping the cylinder, use a crisscross pattern to loosen each nut about 1/4 turn in 2—3 steps, then remove the nuts.

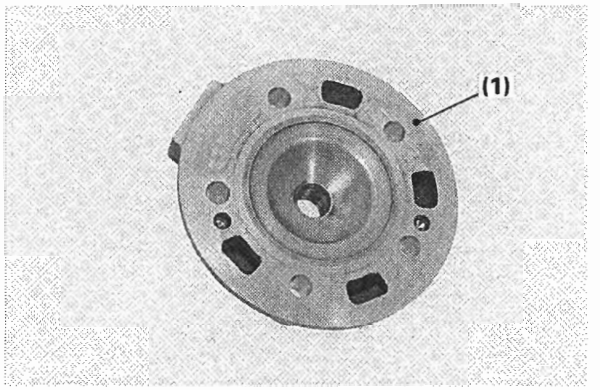
Remove the following:
- Cylinder
- Dowel pins
- Gasket



(1) CLIP (2) PISTON PIN (3) PISTON
(4) PISTON RING

Remove the piston pin clip. Do not let the clips fall into the crankcase.

Remove the following:
- Piston pin
- Piston
- Connecting rod bearing
- Piston ring



(1) CYLINDER HEAD

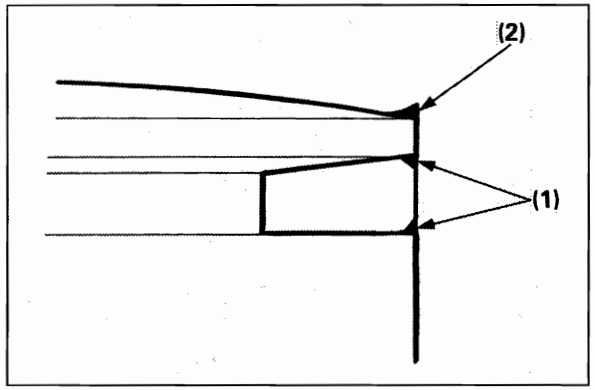
Inspection

Cylinder Head

Remove the carbon deposits from the combustion chamber using an emery cloth (#600) or rag dampened with alcohol or cleaning solvent.
Check for cracks or other faults.

Cylinder

Check for wear or damage at the cylinder bore.

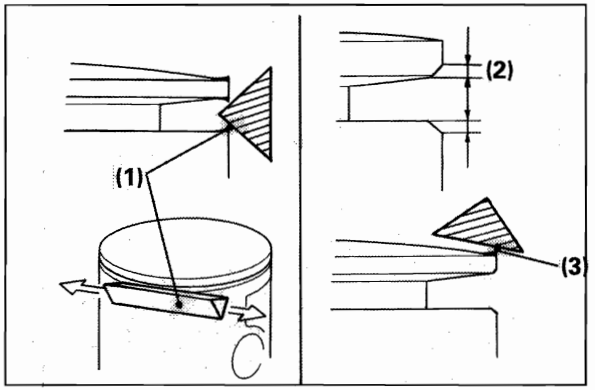


(1) RING STICK (2) BURRS

Piston/Piston Ring

The specified piston must be used for this model. Do not chamfer the new piston's ring groove. After breaking in and after the every race, check the piston and piston ring condition as follows.
— Piston ring sticking
— Piston crown for cracking or other damage
— Piston pin bore for cracking or other damage
— Burrs on edge of the piston crown

If there is any evidence of piston sticking or burrs on piston crown edge, observe the following procedures:

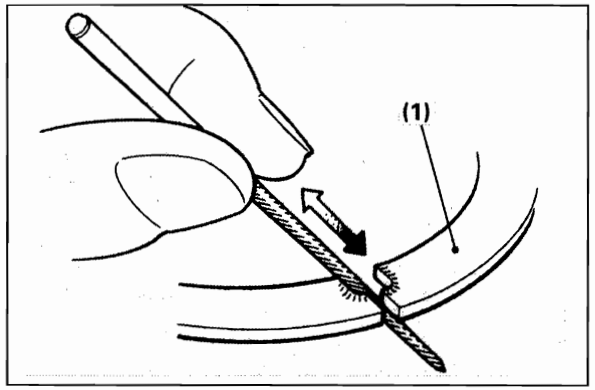


(1) OIL STONE (2) CHAMFER AREA
(3) BURR

1. Use cutting oil or engine oil to chamfer the ring groove or piston crown.
2. Carefully chamfer the upper and lower edges of sticking portion using a oil stone.

Chamfer amount: 0.1—0.3 mm (0.004—0.012 in)

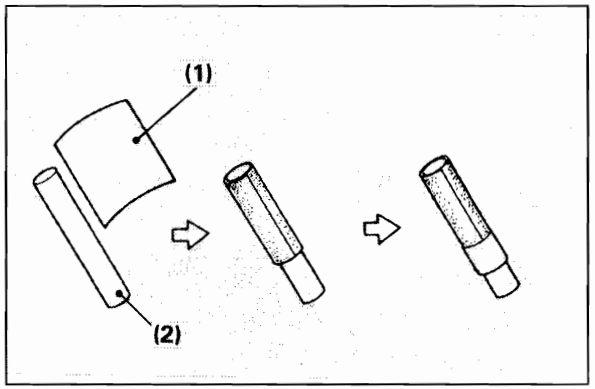
Remove burrs from piston crown edge as shown in the illustration above.



(1) PISTON RING

3. To prevent scuffing by the ring ends, dress the ends to about 0.2 mm with a round file.

Area to be chamfered: 0.2 mm (0.008 in) maximum

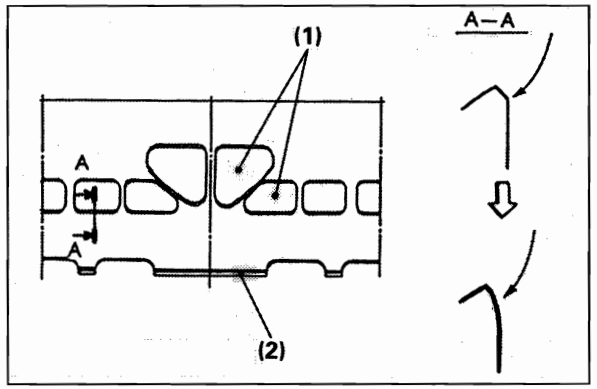


(1) EMERY CLOTH (2) DOWEL

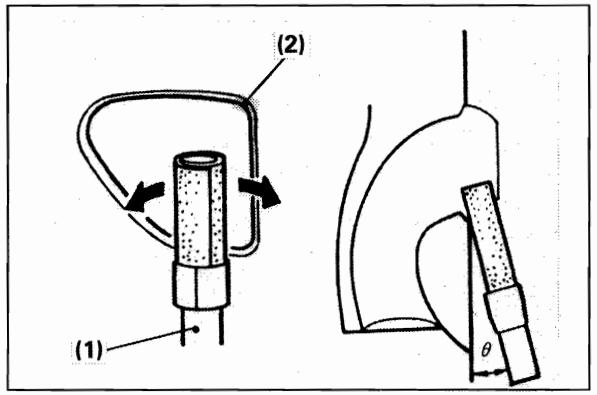
Cylinder Maintenance

We recommend the cylinder maintenance after the braking in.
Minor maintenance for the cylinder can reduce piston friction and minimize the trouble.

Warp the 25 × 60 mm piece of #600—800 emery cloth around a dowel and tape it in place.



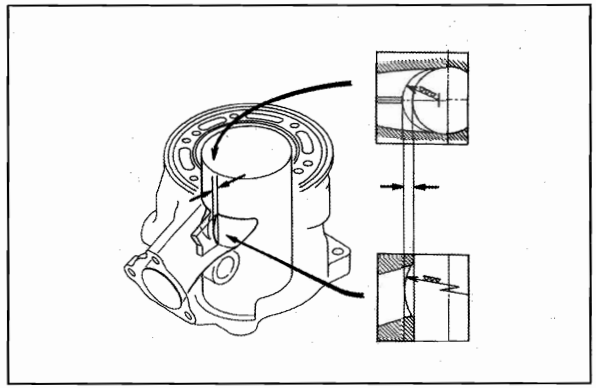
(1) CYLINDER PORT
(2) CYLINDER BORE AT CYLINDER SKIRT



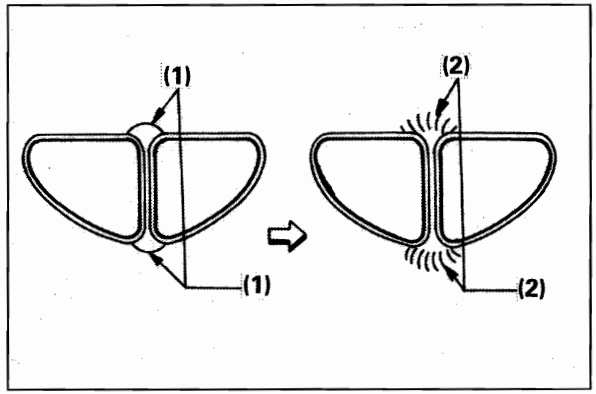
(1) DOWEL (2) PORT

port

Soak the emery cloth in clean machining oil.
Use the dowel to remove residue from the chamfered edge around the ports and cylinder bore at cylinder skirt.
Keep the slight angle between the dowel and cylinder bore.
Use a very gentle touch and rub the edge with a side to side motion.
In order to avoid cylinder damage, do not apply too much force to chamfer the edge.



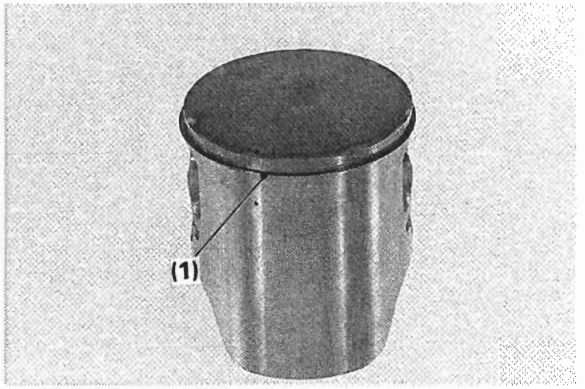
EXHAUST PORT



(1) EDGE (2) ROUND THE EDGE

Exhaust port

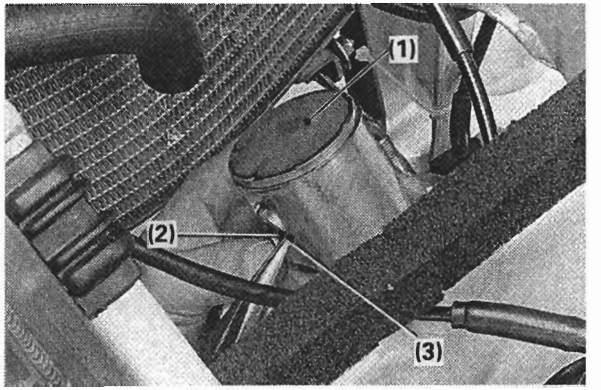
The bridge between the exhaust ports (see illustration) is recessed so that exhaust gas residue will be deposited in this area. If the edge line is appeared between the recessed portion and cylinder bore, use #600—800 emery cloth to round the edge until the cylinder horning cross hatch is disappeared.



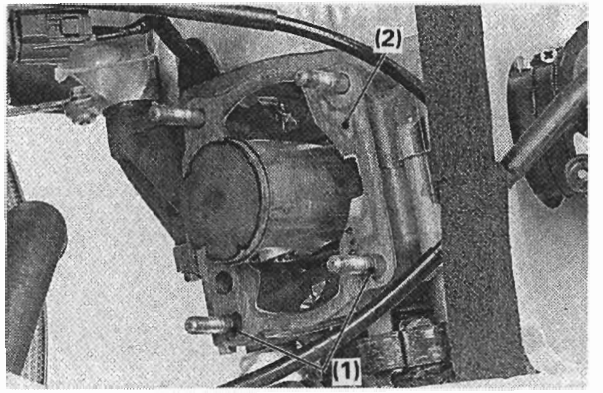
(1) PISTON RING END/STOPPER

Installation

Install the piston ring on the piston with the marked side facing up.
After installing the piston ring, align the piston ring end with the stopper of the piston.



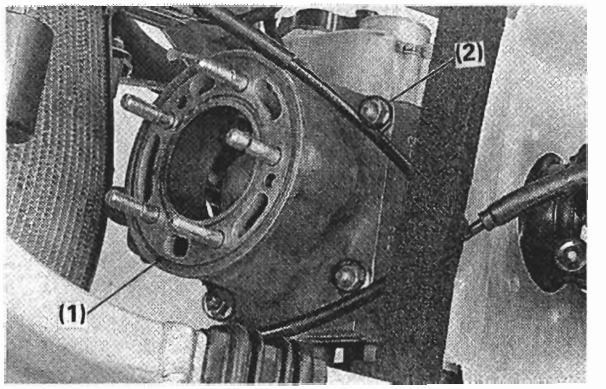
(1) PISTON (2) PISTON PIN (3) CLIP



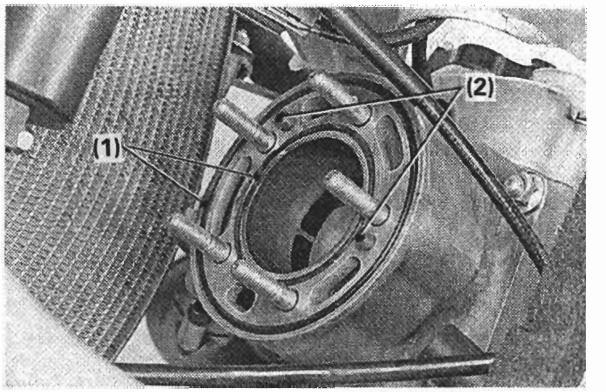
(1) DOWEL PINS (2) GASKET

Install the connecting rod bearing.
Install the piston with "IN" mark facing the intake side.
Install the piston pin and new piston pin clips.
Be careful not to drop the piston pin clips into the crankcase.

Install the dowel pins and new gasket.



(1) CYLINDER (2) CYLINDER NUTS



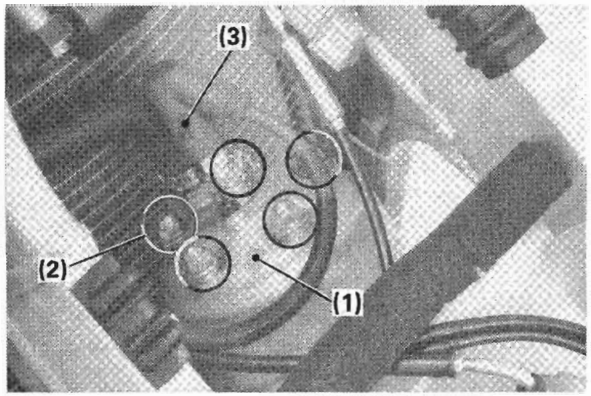
(1) O-RINGS (2) DOWEL PINS

Apply oil to the threads and seating surface of the cylinder mounting nut.
Install the cylinder and tighten the cylinder nuts.

Torque: 25 N·m (2.5 kgf·m, 18 lbf·ft)

Do not rotate the cylinder, since this may cause the piston rings to snag a cylinder port and break.

Install the new O-rings and dowel pins.



(1) CYLINDER HEAD
(2) CYLINDER HEAD NUTS/SEALING WASHERS
(3) SPARK PLUG/CAP

Install the following:
- Cylinder head
- Sealing washers
- Cylinder head nuts

To avoid warping the cylinder head, use a crisscross pattern to tighten each cylinder head nut about 1/4 turn in 2—3 steps.

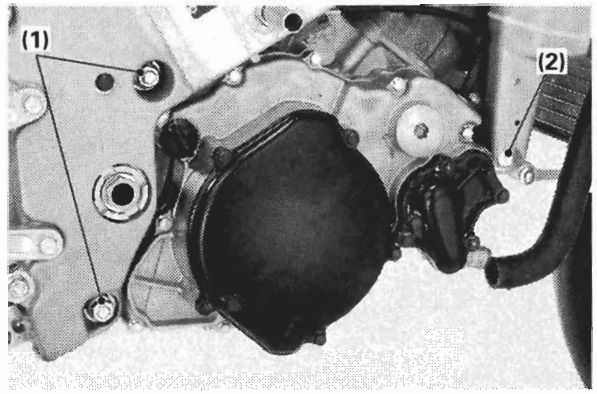
Torque: 23 N·m (2.3 kgf·m, 17 lbf·ft)

Install the spark plug.

Torque: 18 N·m (1.8 kgf·m, 13 lbf·ft)

Install the following:
- Spark plug cap
- Expansion chamber

Fill the coolant and bleed air (page 1-1).



(1) HANGER NUTS
(2) HANGER BOLTS (EACH SIDE)

Engine Removal

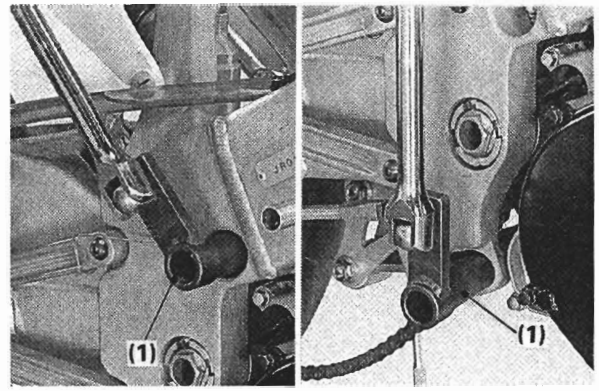
Support the machine using a safety stand or hoist.

Remove the following:
- Expansion chamber
- Carburetor
- Alternator wire connector
- Ignition pulse generator wire connector
- Drive sprocket
- Spark plug cap
- Radiator hoses
- Gearshift arm
- Clutch cable

Drain the transmission oil (page 3-3).
Use a floor jack or other adjustable support to carefully maneuver the engine.

Remove the upper and lower engine hanger nuts.
Remove the left engine hanger bolt and shim.
Remove the right engine hanger bolt and shim.

Mark and store the removed shims to ensure that they are reinstalled in their proper location.



(1) LOCK NUT WRENCH

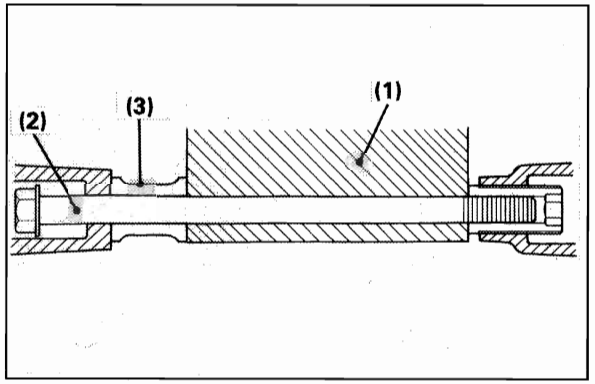
Loosen the upper lock nut for the engine adjusting bolt.
Loosen the lower lock nut for the engine adjusting bolt.

TOOL:
Lock nut wrench 07907-NX5-010

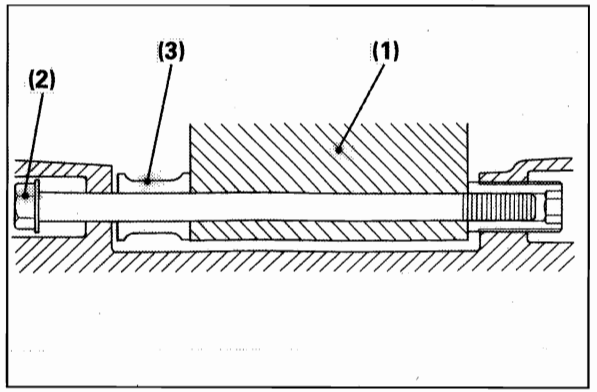
Gently tap the lower engine hanger bolt and turn the adjusting bolt counterclockwise to release the engine mounting from the frame, then remove the hanger bolt and distance collar.

Gently tap the upper engine hanger bolt and turn the adjusting bolt counterclockwise to release the engine mounting from the frame, then remove the hanger bolt and distance collar.

Carefully lower the engine to remove it from the frame.



(1) ENGINE (2) UPPER HANGER BOLT
(3) COLLAR



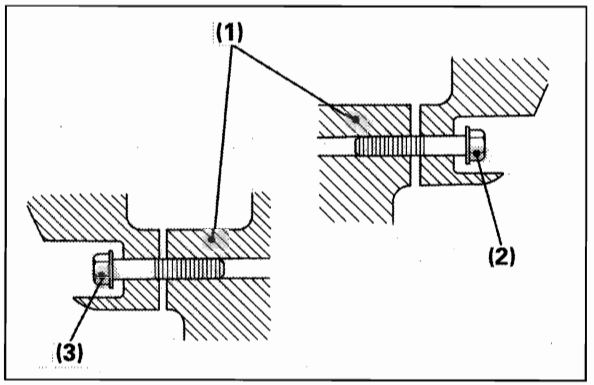
(1) ENGINE (2) LOWER HANGER BOLT
(3) COLLAR

Engine Installation

Use a floor jack or other adjustable support to carefully maneuver the engine into place.

Install the engine assembly.
Install the collar and upper engine hanger bolt.
Install the collar and lower engine hanger bolt.

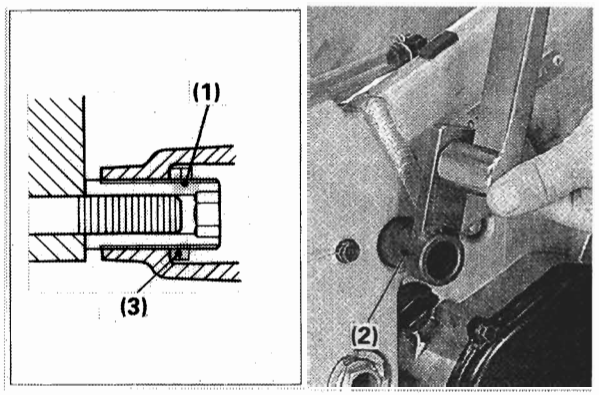
Do not tighten the adjusting bolts yet.



(1) ENGINE (2) RIGHT HANGER BOLT
(3) LEFT HANGER BOLT

Install the right engine hanger bolt.
Install the left engine hanger bolt.

Do not tighten the left and right hanger bolts yet.



(1) ADJUSTING BOLT (2) LOCK NUT WRENCH
(3) LOCK NUT

Use the left end of the hanger at the rear of the upper case as the base.

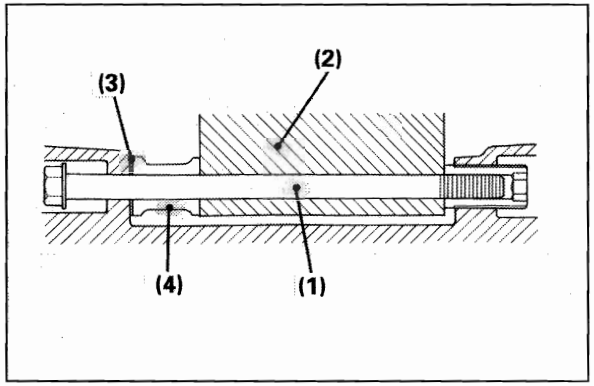
Adjust the clearance to zero (0) with the adjusting bolt on the right of the hanger at the rear of the upper side. Tighten the adjusting bolt to specified torque.

Torque: 15 N·m (1.5 kgf·m, 11 lbf·ft)

Tighten the lock nut to specified torque.

TOOL:
Lock nut wrench 07907-NX5-010

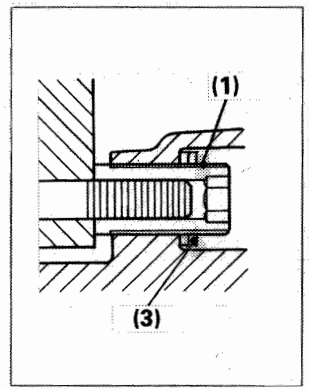
Torque: 39 N·m (4.0 kgf·m, 29 lbf·ft)

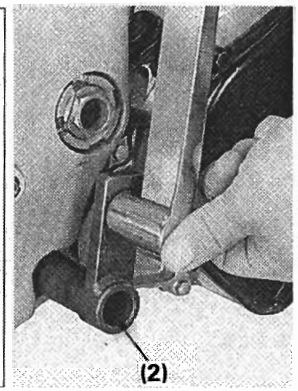


(1) LOWER HANGER BOLT (2) ENGINE
(3) SHIM (4) DISTANCE COLLAR

Adjust the clearance to zero (0) by inserting a feeler gauge between the lower left hanger on frame and distance collar.
Measure the old shim thickness and adjust the clearance zero (0) using shim.

Engine mount shim:
0.2 mm: 90510-NX4-000
0.6 mm: 90511-NX4-000
1.0 mm: 90512-NX4-000
1.5 mm: 90513-NX4-000





(1) ADJUSTING BOLT (2) LOCK NUT WRENCH
(3) LOCK NUT

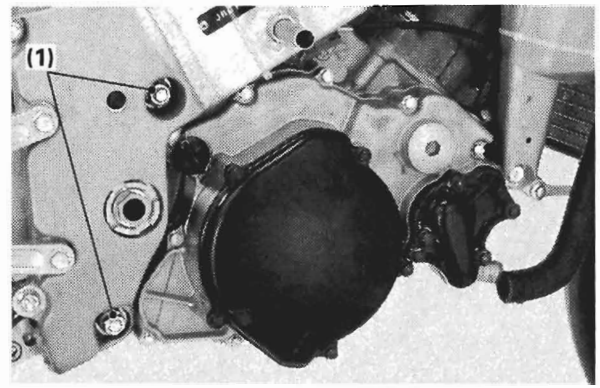
Adjust the clearance to zero (0) with the adjusting bolt on the right of the hanger at the rear of the lower side.
Tighten the adjusting bolt to specified torque.

Torque: 15 N·m (1.5 kgf·m, 11 lbf·ft)

Tighten the lock nut to specified torque.

TOOL:
Lock nut wrench 07907-NX5-010

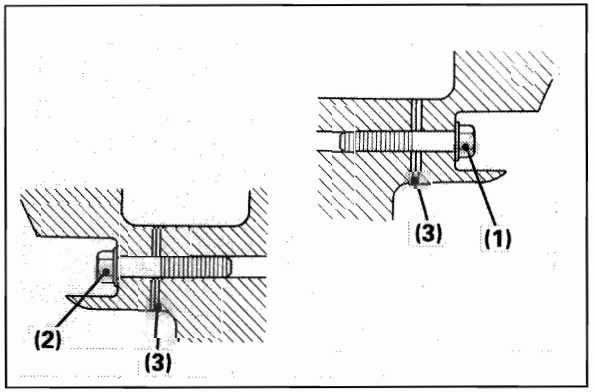
Torque: 39 N·m (4.0 kgf·m, 29 lbf·ft)



(1) HANGER NUTS

Tighten the upper engine hanger nut.

Tighten the lower engine hanger nut.



(1) RIGHT HANGER BOLT
(2) LEFT HANGER BOLT
(3) SHIM

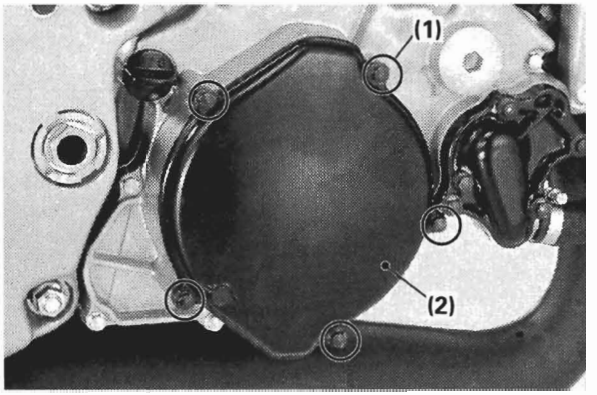
Measure the clearance by inserting a feeler gauge between the right hanger on the crankcase and frame. Measure the old shim thickness and adjust the clearance to zero (0) using shim.

Measure the clearance by inserting a feeler gauge between the left hanger on the crankcase and frame. Measure the old shim thickness and adjust the clearance to zero (0) using shim.

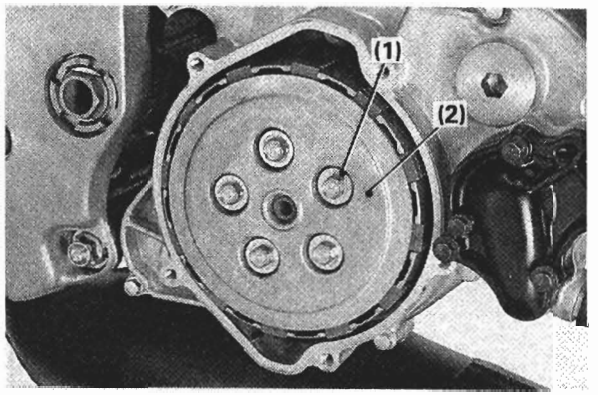
Engine mount shim:
0.2 mm: 90510-NX4-000
0.6 mm: 90511-NX4-000
1.0 mm: 90512-NX4-000
1.5 mm: 90513-NX4-000

Tighten the engine hanger bolts.

Install the parts in the reverse order of removal.



(1) BOLTS (2) CLUTCH COVER



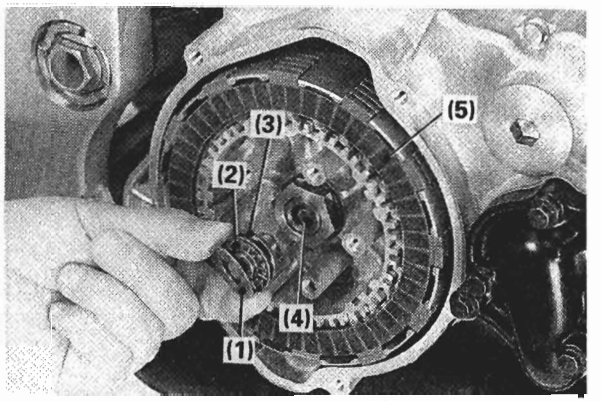
(1) BOLTS/SPRINGS (2) PRESSURE PLATE

Clutch

Removal

Drain the transmission oil (page 3-3).
Remove the bolts and clutch cover.

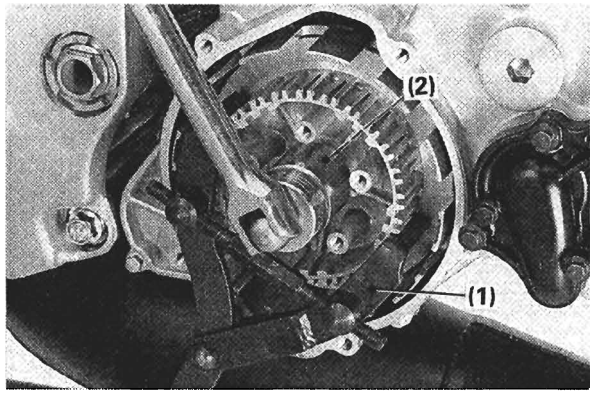
Gradually remove the five clutch spring bolts in a crisscross pattern and remove the clutch springs.
Remove the clutch pressure plate.



(1) THRUST WASHER (2) THRUST BEARING
(3) LIFTER (4) LIFTER ROD (5) DISCS/PLATES

Remove the thrust washer, thrust bearing, clutch lifter and clutch lifter rod.

Remove the clutch friction discs and clutch plates.

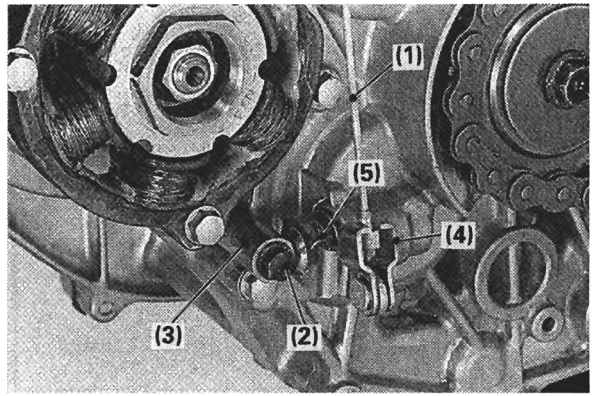


(1) CLUTCH CENTER HOLDER (2) LOCK NUT

Hold the clutch center with the clutch center holder.
Remove the lock nut.

TOOL:
Clutch center holder 07724-0050002

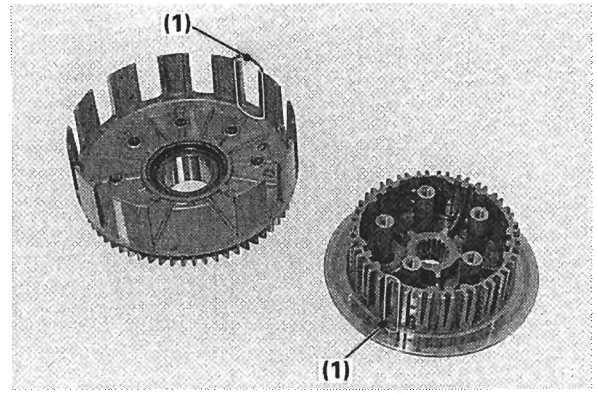
Remove the following:
- Lock washer
- Washer
- Clutch center
- Right crankcase cover (page 4-21)
- Thrust washer
- Clutch outer
- Needle bearing
- Distance collar



(1) CLUTCH CABLE (2) BOLT
(3) STOPPER COLLAR (4) LIFTER LEVER
(5) SPRING/WASHER

Disconnect the clutch cable from the clutch lifter lever.

Remove the bolt and stopper collar.
Remove the clutch lifter lever, return spring and washer.

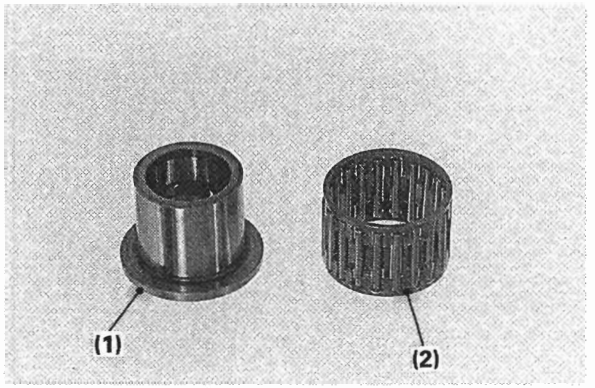


(1) SLOTS

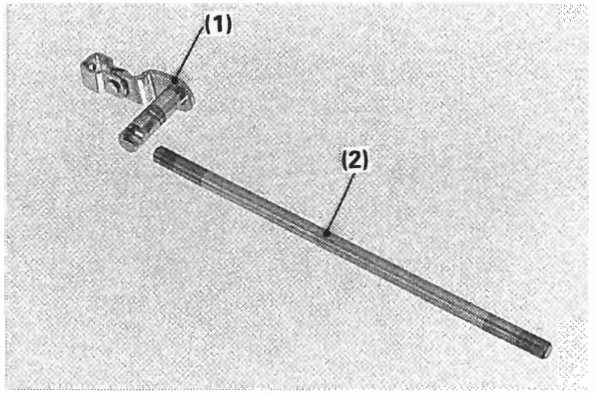
Inspection

Clutch Outer/Clutch Center

Check the slots in the clutch outer drum for nicks, cuts or indentations made by the friction discs.
Check the slots in the clutch center drum for nicks, cuts or indentations made by the clutch plates.



(1) DISTANCE COLLAR (2) NEEDLE BEARING



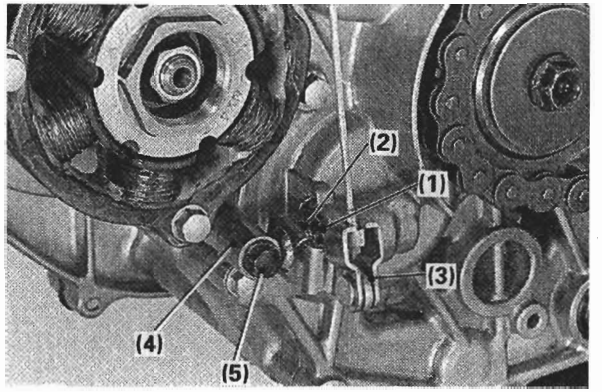
(1) LIFTER LEVER (2) ROD

Distance Collar/Needle Bearing

Check the clutch distance collar and needle bearing for wear or damage.

Clutch Lifter Lever/Clutch Lifter Rod

Check the lifter lever and lifter rod contact surface for nicks, cuts or indentations.
Check the oil seal and needle bearing for wear or damage.



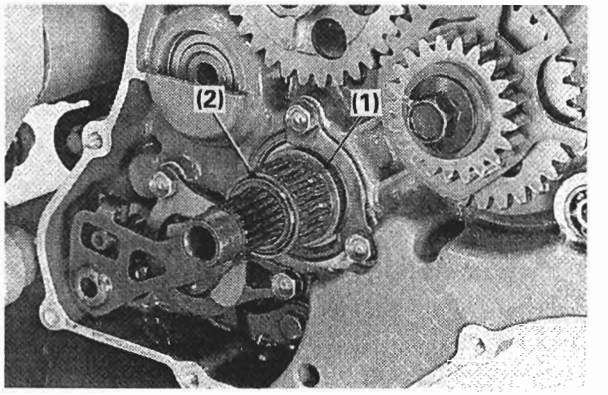
(1) WASHER (2) RETURN SPRING
(3) LIFTER LEVER (4) STOPPER COLLAR
(5) BOLT

Installation

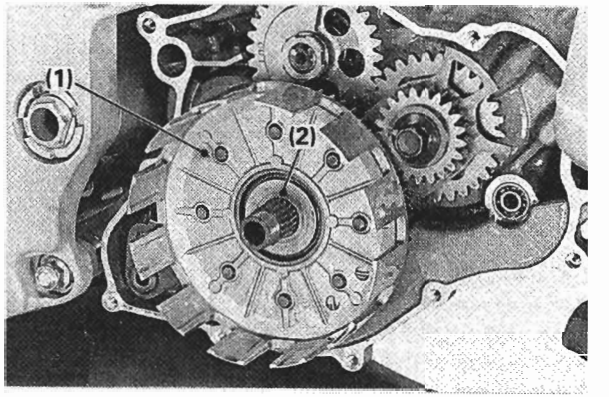
Coat the clutch lever with grease.
Install the clutch lifter lever, return spring and washer, aligning the return spring end with the hole in the left crankcase cover.

Clean and apply a locking agent to the clutch lever stopper collar bolt threads.
Install the stopper collar, tighten the bolt to the specified torque.

Torque: 10 N·m (1.0 kgf·m, 7 lbf·ft)



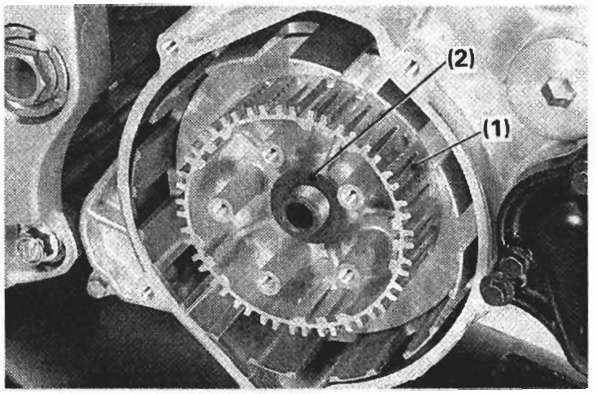
(1) DISTANCE COLLAR (2) NEEDLE BEARING



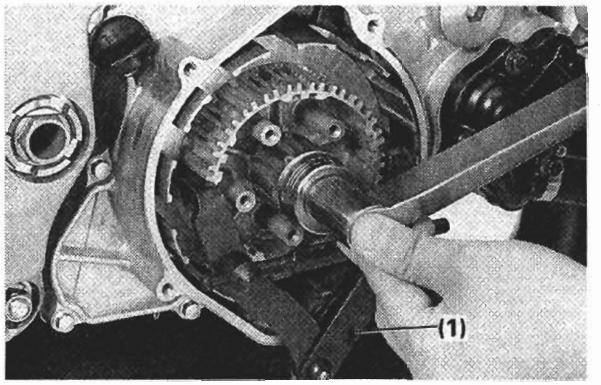
(1) CLUTCH OUTER (2) THRUST WASHER

Install the clutch distance collar and needle bearing onto the mainshaft.

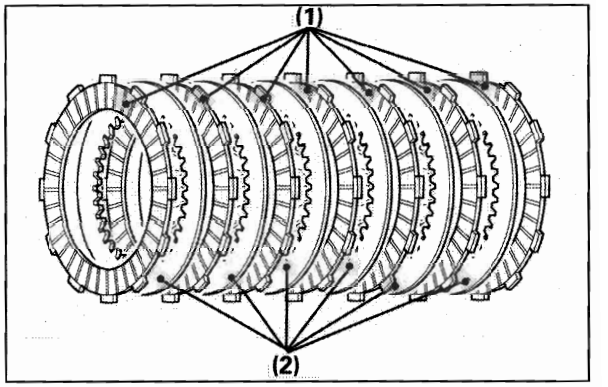
Install the clutch outer and thrust washer.
Install the right crankcase cover (page 4-21).



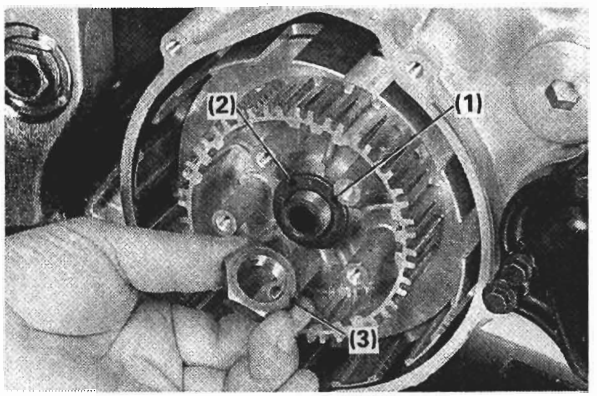
(1) CLUTCH CENTER (2) THRUST WASHER



(1) CLUTCH CENTER HOLDER



(1) DISCS (2) PLATES



(1) LOCK WASHER (2) "OUTSIDE" MARK
(3) LOCK NUT

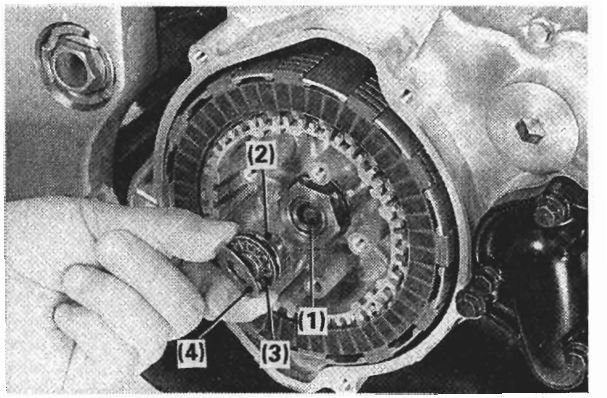
Install the clutch center and thrust washer.

Install the lock washer with its "OUTSIDE" mark facing out.
Install the clutch center lock nut.

Tighten the clutch center lock nut to the specified torque while holding the clutch center with clutch center holder.

TOOL:
Clutch center holder 07724-0050002

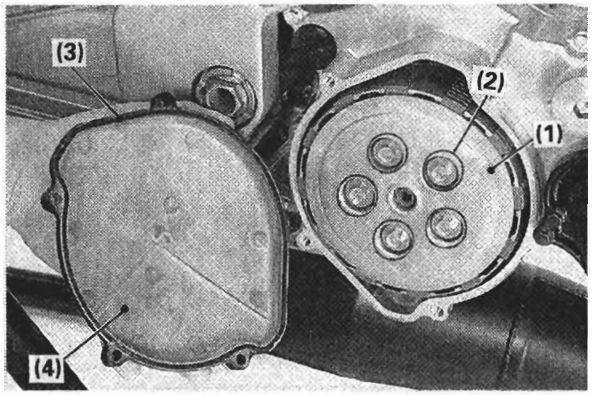
Torque: 54 N·m (5.5 kgf·m, 40 lbf·ft)



(1) LIFTER ROD (2) LIFTER (3) THRUST BEARING
(4) THRUST WASHER

Apply oil to the clutch friction disc surface.
Install the friction discs and clutch plates alternately as shown.

Install the clutch lifter rod into the mainshaft.
Install clutch lifter, thrust bearing and thrust washer.

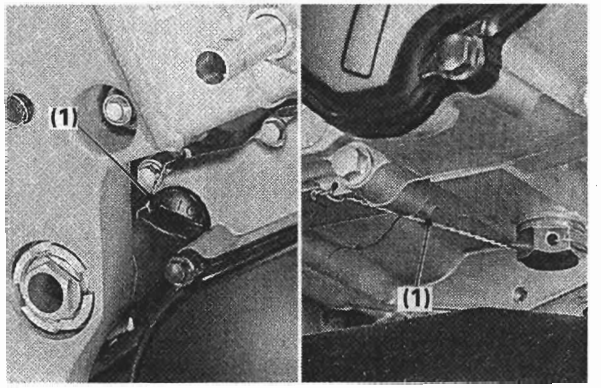


(1) PRESSURE PLATE (2) SPRING/BOLT
(3) O-RING (4) COVER

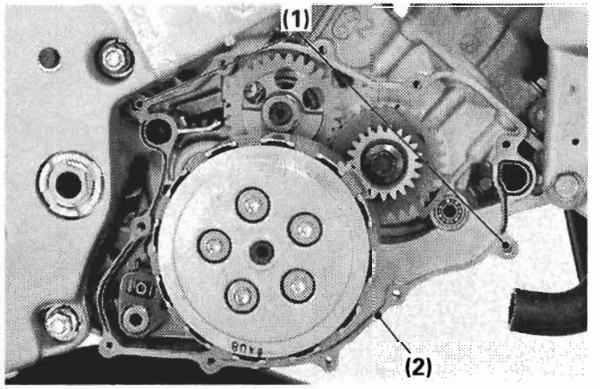
Install the clutch pressure plate.
Install the five springs and spring bolts.
Tighten the bolts in a crisscross pattern in 2 or 3 steps.

Check the O-ring is in good condition, install the clutch cover and tighten the bolts.

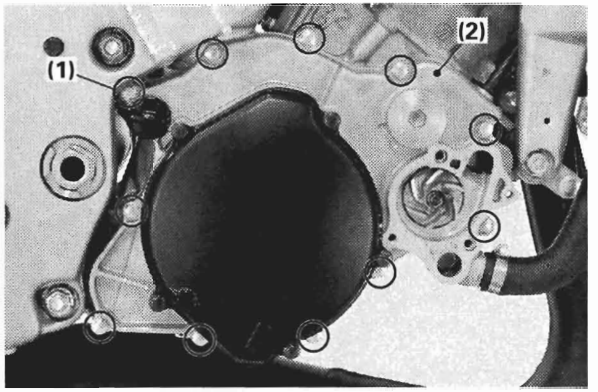
Check and adjust the clutch lever free play (page 1-5).



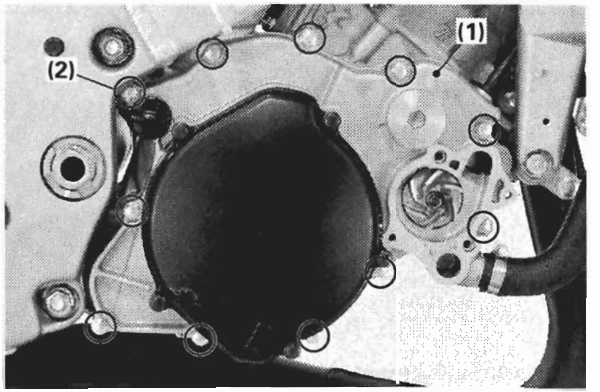
(1) LOCK WIRE



(1) DOWEL PINS (2) GASKET



(1) BOLTS (2) RIGHT CRANKCASE COVER



(1) RIGHT CRANKCASE COVER (2) BOLT

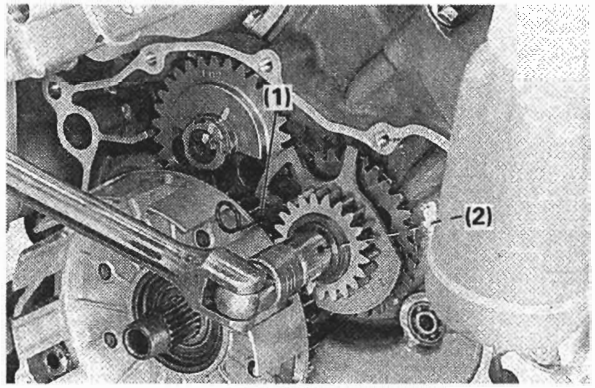
Right Crankcase Cover

Removal

Drain the transmission oil and coolant (Section 3).
Disconnect the ignition pulse generator connector.
Cut and remove the lock wire from the oil drain bolt and oil filler cap.
For installation, remove the water pump cover.
Remove the bolts and right crankcase cover.
Remove the gasket and dowel pins.

Installation

Install the dowel pins and a new gasket.
Install the right crankcase cover while turning the water pump impeller.
Install and tighten the bolts in a crisscross pattern in 2 or 3 steps.
Secure the oil drain bolt and filler cap using a lock wire.
Connect the ignition pulse generator connector.
Fill the transmission oil and coolant (Section 3).



(1) GEAR HOLDER
(2) PRIMARY DRIVE GEAR BOLT

Primary Drive Gear

Removal

Remove the right crankcase cover (page 4-21).

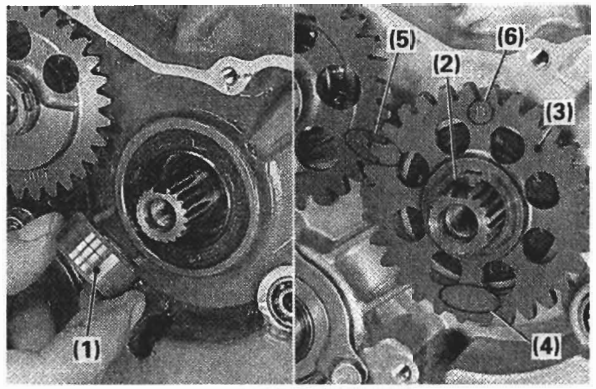
Insert the gear holder between the primary drive and driven gear.
Remove the primary drive gear bolt.

TOOL:
Gear holder **07724-0010100**

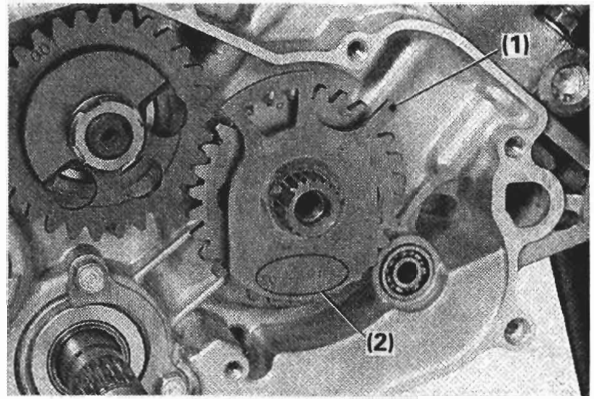
Remove the following:
- Washer
- Primary drive gear
- Ignition pulse generator plate
- Balancer drive gear
- Key
- Balancer drive gear collar

⚠ CAUTION

When remove the primary drive gear bolt, never insert the gear holder between the balancer drive and driven gear.



(1) COLLAR (2) KEY (3) BALANCE DRIVE GEAR
(4) "OUT" MARK (5) PUNCH MARKS (6) "B" MARK

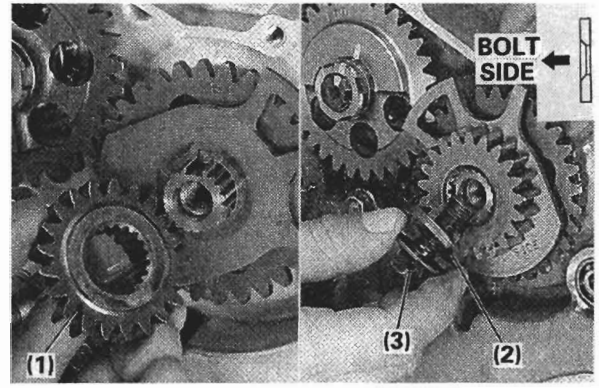


(1) IGNITION PULSE GENERATOR PLATE
(2) "OUT SIDE" MARK

Installation

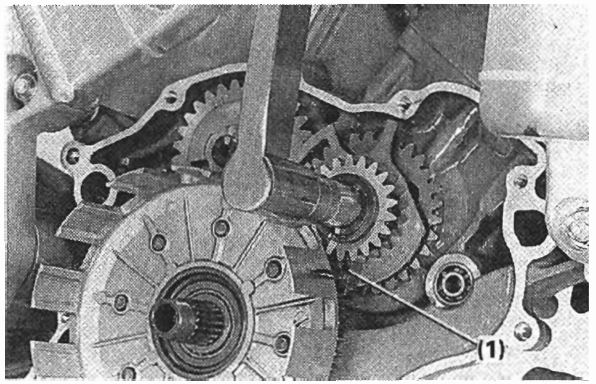
Install the collar and key onto the crankshaft.
Install the balancer drive gear with its "OUT" mark facing out, aligning the punch marks between the balancer drive and driven gear.

Install the ignition pulse generator plate with its "OUT SIDE" mark facing out.



(1) PRIMARY DRIVE GEAR (2) WASHER
(3) PRIMARY DRIVE GEAR BOLT

Install the primary drive gear with the projected side facing in.
Install the washer and primary drive gear bolt.
Note the direction of the washer as shown.



(1) GEAR HOLDER

Temporarily install the clutch outer guide, needle bearing and clutch outer.
Attach the gear holder between the primary drive and driven gear.
Tighten the primary drive gear bolt to the specified torque.

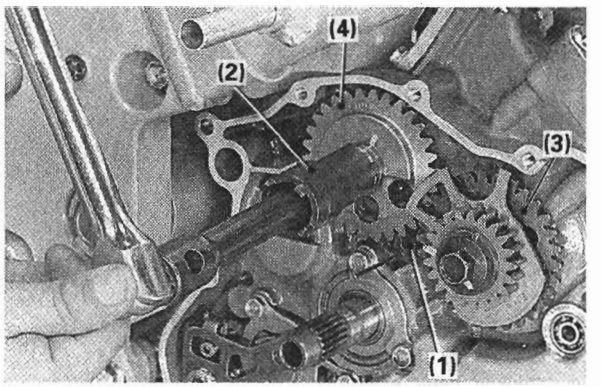
TOOL:
Gear holder 07724-0010100

Torque: 54 N·m (5.5 kgf·m, 40 lbf·ft)

Install the right crankcase cover (page 4-21).
Install the clutch (page 4-19).
Fill the transmission oil (page 3-3).

⚠ CAUTION

When tighen the primary drive gear, never attach the gear holder between balancer drive and driven gear.



(1) GEAR HOLDER (2) LOCK NUT WRENCH
(3) DRIVE GEAR (4) DRIVEN GEAR

Balancer

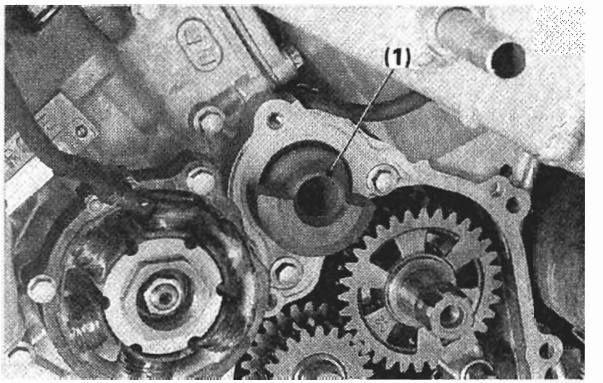
Removal

Remove the clutch (page 4-17).
Remove the left crankcase cover (page 4-27).

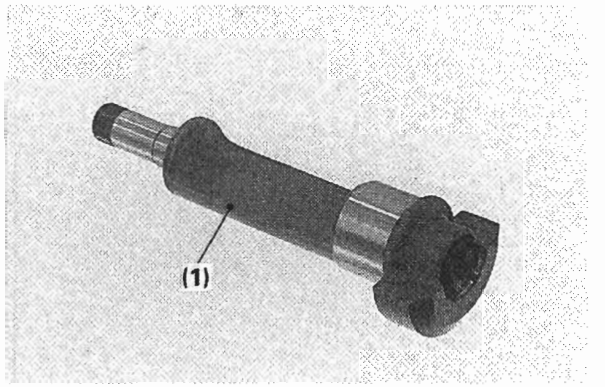
Insert the gear holder between the balancer drive and driven gear.
Remove the lock nut.

TOOLS:
Gear holder 07724-0010100
Lock nut wrench, 20 × 24 mm 07716-0020100

Remove the following:
- Washer
- Balancer driven gear
- key



(1) BALANCER SHAFT

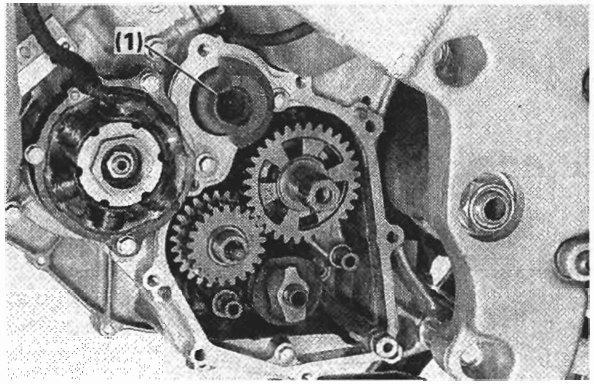


(1) BALANCER SHAFT

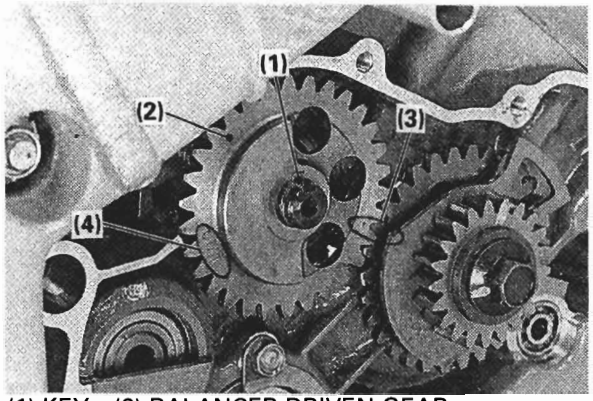
Remove the balancer shaft from the left side of the crankcase.

Turn the right balancer shaft bearing inner race with your finger.
The bearing should turn smoothly and quietly.
Replace the bearing if the race does not turn smoothly and quietly (page 4-33).

Check the balancer shaft for damage.



(1) BALANCER SHAFT

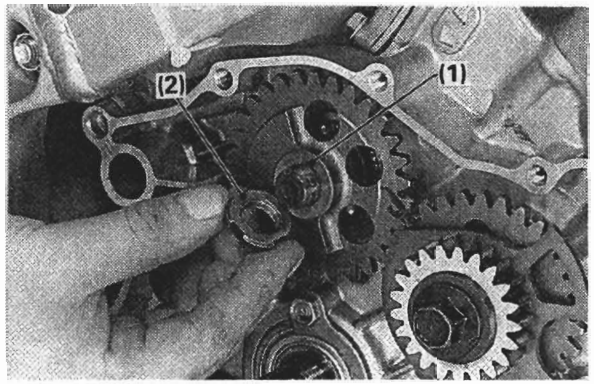


(1) KEY (2) BALANCER DRIVEN GEAR
(3) PUNCH MARKS (4) "OUT" MARK

Installation

Install the balancer shaft from the left side of the crankcase.

Install the key onto the balancer shaft.
Install the balancer driven gear with its "OUT" mark facing out, aligning the punch marks between the balancer drive and driven gear.

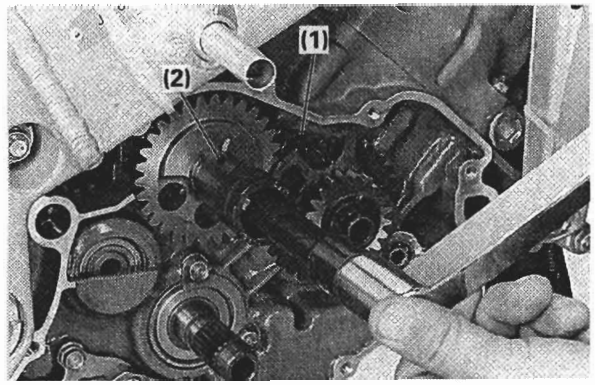


(1) WASHER (2) BALANCER GEAR LOCK NUT

Install the washer onto the balancer shaft.

Clean and apply a locking agent to the balancer lock nut threads.
Do not apply locking agent more than necessary.

Install a balancer driven gear lock nut.



(1) GEAR HOLDER (2) LOCK NUT WRENCH

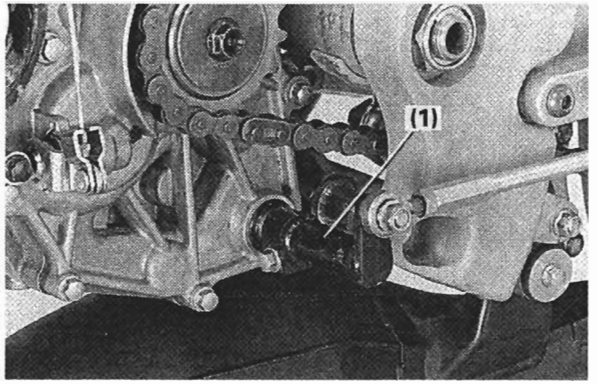
Attach a gear holder between the balancer drive and driven gear.
Tighten the balancer driven gear lock nut to the specified torque.

TOOL:

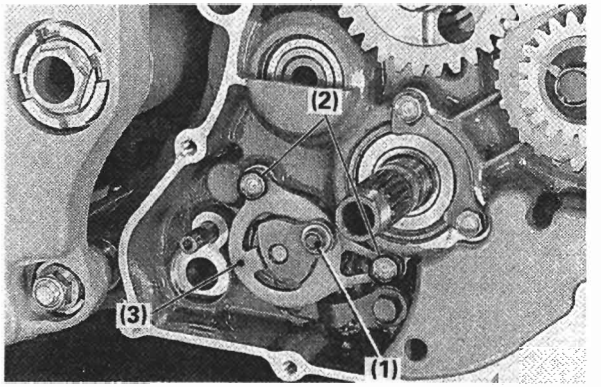
Gear holder	**07724-0010100**
Lock nut wrench, 20 × 24 mm	**07716-0020100**

Torque: 54 N·m (5.5 kgf·m, 40 lbf·ft)

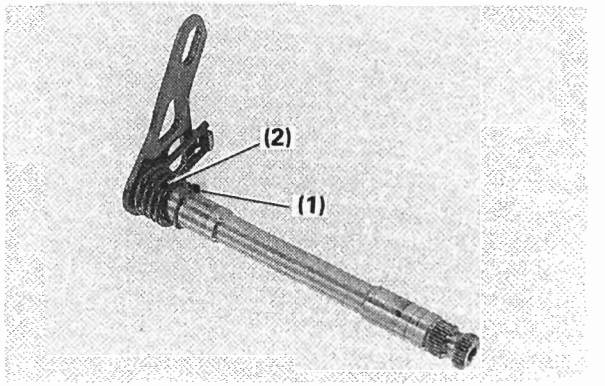
Install the clutch and right crankcase cover (page 4-21).
Install the left crankcase cover (page 4-30).
Fill the transmission oil (page 3-3).



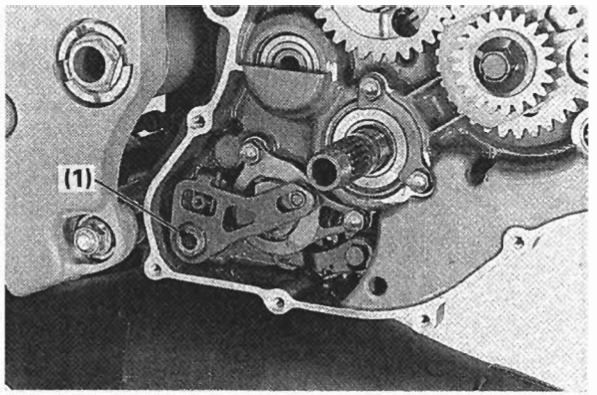
(1) GEARSHIFT ARM



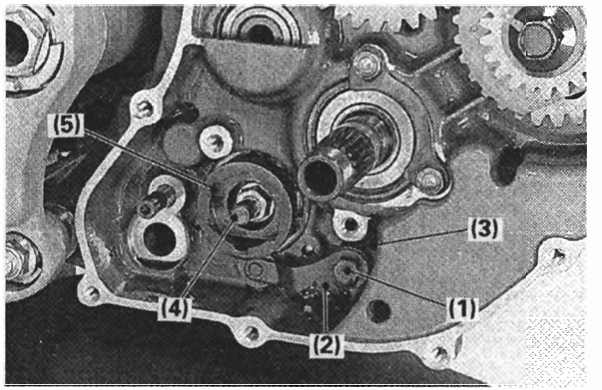
(1) SHIFTER COLLAR (2) BOLTS
(3) GUIDE PLATE/DRUM SHIFTER ASSEMBLY



(1) SNAP RING (2) RETURN SPRING



(1) GEARSHIFT SPINDLE



(1) BOLT (2) STOPPER ARM
(3) RETURN SPRING (4) SHIFTER PIN
(5) SHIFT DRUM CENTER

Gearshift Linkage

Removal

Remove the clutch (page 4-17)

Remove the bolt/nut and gearshift arm.

Pull the gearshift spindle and washer out.

Remove the shifter collar.
Remove the guide plate bolts, then remove the guide plate and drum shifter as an assembly.
Do not let the ratchet pawls fall when removing the guide plate and drum shifter.

Remove the stopper arm bolt, stopper arm, washer and return spring.
Remove the shifter pin and shift drum center.

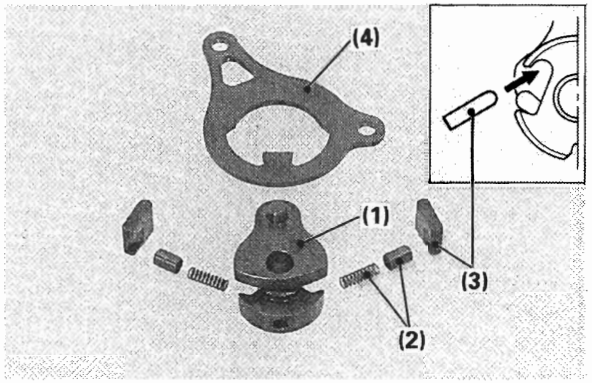
Inspection

Gearshift Spindle

Remove the washers, snap ring and return spring from gearshift spindle.

Inspect each part for damage or wear and replace if necessary.

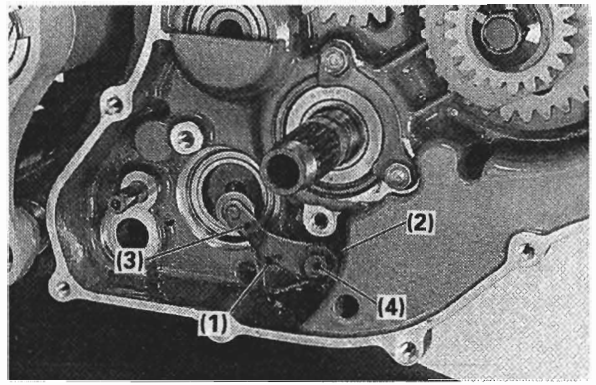
When installing the snap ring, seat the snap ring in the groove of the spindle with the chamfered edge facing toward the crankcase.



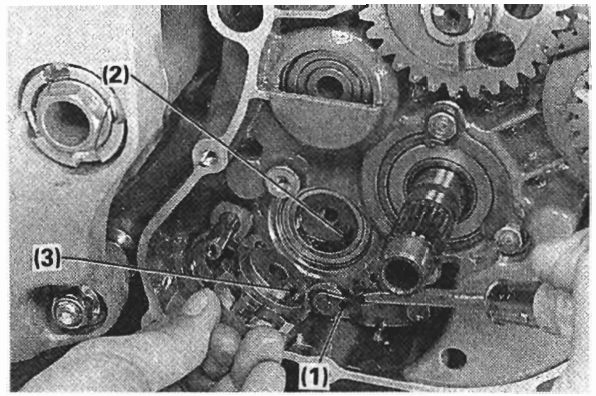
(1) DRUM SHIFTER (2) PLUNGERS/SPRINGS
(3) RATCHET PAWLS (4) GUIDE PLATE

Installation

Apply clean transmission oil to the ratchet pawls, springs and plungers. Assemble the drum shifter, springs, plungers and ratchet pawls in the guide plate as shown.



(1) RETURN SPRING (2) WASHER
(3) STOPPER ARM (4) BOLT

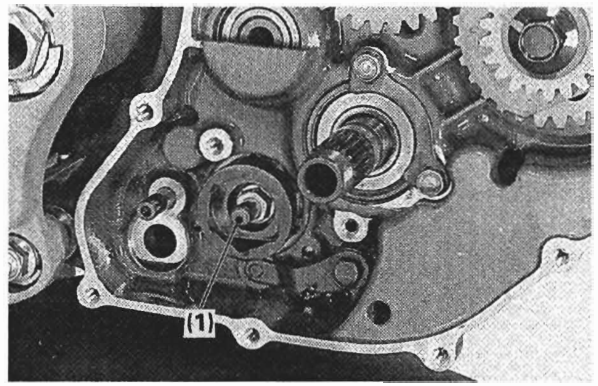


(1) STOPPER ARM (2) DOWEL PIN
(3) CUT-OUT

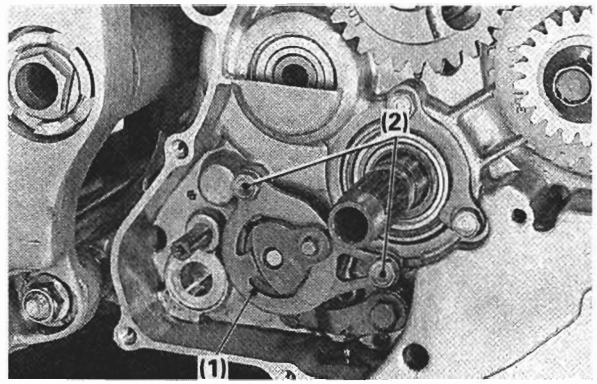
Install the return spring, washer and stopper arm and tighten the stopper arm bolt to the specified torque.

Torque: 12 N·m (1.2 kgf·m, 9 lbf·ft)

Check the stopper arm for proper operation.
Align the cut-out of the shift drum center with the dowel pin and slip it into place while holding the stopper arm out of the way using a screwdriver.



(1) SHIFTER PIN

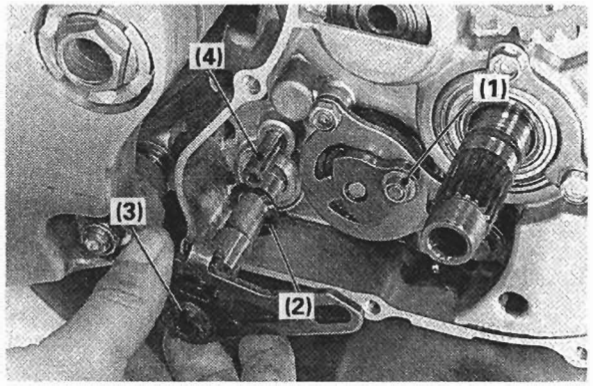


(1) GUIDE PLATE/DRUM SHIFTER ASSEMBLY
(2) BOLTS

Clean and apply a locking agent to the threads of the shifter pin and tighten the shifter pin.

Torque: 22 N·m (2.2 kgf·m, 16 lbf·ft)

Set the drum center in a position other than neutral. Holding the ratchet pawls in place in the guide plate and drum shifter, install the assembly onto the shifter pin.
Clean and apply a locking agent to the guide plate bolt threads and tighten the guide plate bolts.



(1) SHIFTER COLLAR (2) WASHER
(3) GEARSHIFT SPINDLE (4) STOPPER PIN

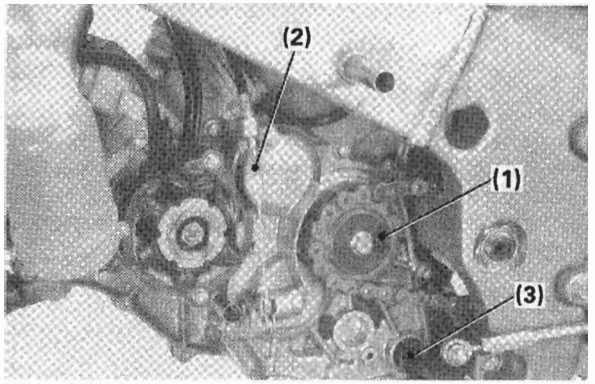
Install the shifter collar onto the drum shifter.

Install the gearshift spindle, aligning the return spring ends with the crankcase stopper pin.
Do not forget to install the washer onto the gearshift spindle.

Check that the shift drum turns smoothly.

Install the gearshift arm and tighten the pinch bolt/nut.

Install the clutch (page 4-19).
Fill the transmission oil (page 3-3).



(1) DRIVE SPROCKET (2) CLUTCH CABLE
(3) GEARSHIFT ARM

Left Crankcase Cover/Transmission

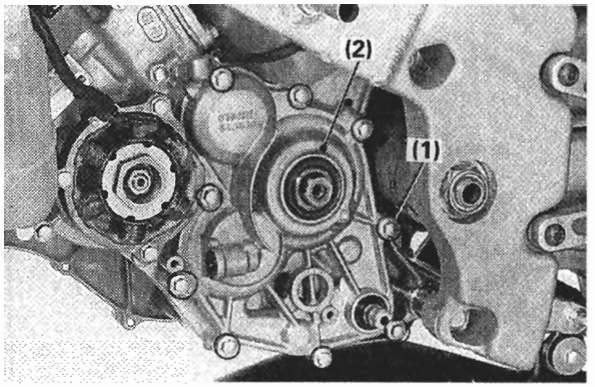
Removal

Drain the transmission oil (page 3-3).
Shift the transmission into low gear, apply rear brake.
Loosen the drive sprocket bolt.
Remove the washer, drive sprocket, countershaft collar and O-ring.
Remove the drive chain.

Disconnect the clutch cable from the lifter arm.

Remove the gearshift arm pinch bolt/nut and gearshift arm.

Remove the clutch/clutch lifter lever (page 4-17).

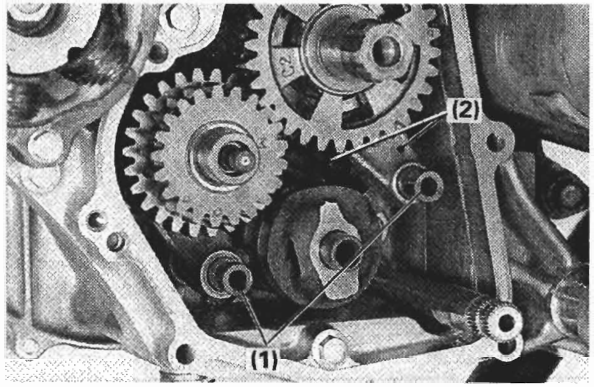


(1) BOLTS (2) LEFT CRANKCASE COVER

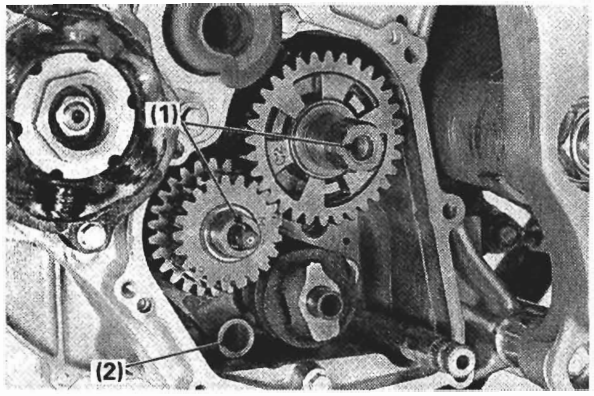
Remove the left crankcase cover mounting bolts.

While tapping the countershaft using a soft hammer, remove the left crankcase cover.

Remove the dowel pins and O-ring.



(1) FORK SHAFTS (2) RIGHT/LEFT SHIFT FORKS



(1) MAINSHAFT/COUNTERSHAFT ASSEMBLY
(2) CENTER SHIFT FORK

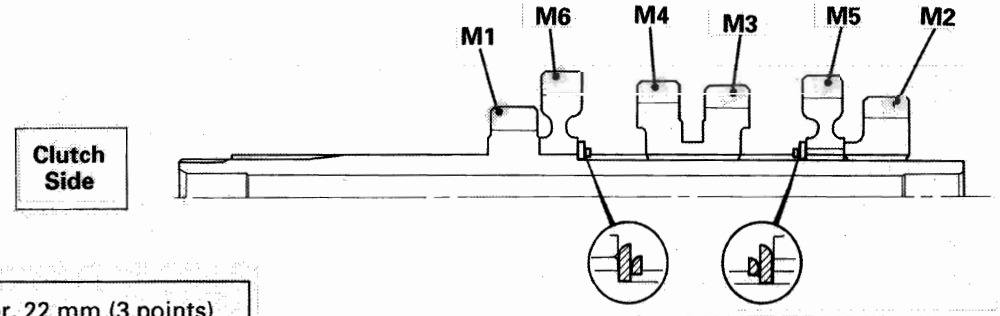
Remove the following:
- Shift fork shaft C, right shift fork, left shift fork
- Shift fork shaft M

Gently tap the mainshaft from the right side and remove the mainshaft, countershaft and center shift fork as an assembly.
If the gearshift drum service is required, remove the gearshift linkage (page 4-25), then remove the gearshift drum.

Transmission Disassembly/Assembly

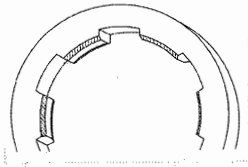
- Always install the thrust washers and snap rings with the chamfered (rolled) edge facing away from thrust load.
- After installing a snap ring, slightly open the ring and rotate it in its groove to be sure it is fully seated.
- Do not reuse the snap rings which could easily spin in the groove. They may be too loose to properly seat in groove. Align the gap in the snap ring with the spline groove.
- When installing the C5 and C6 gears to the countershaft, make sure to align the oil holes of the C5 • C6 gears and countershaft.
  Also align the oil hole of M5 collar and mainshaft.

Mainshaft:

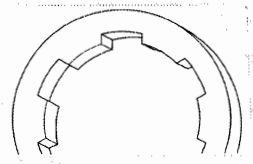


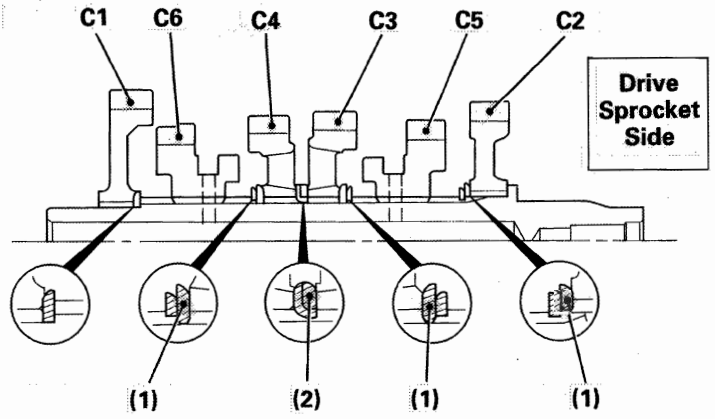
Countershaft:

(1) Spline washer, 22 mm (3 points) (90464-KZ4-730)
- Install the outside of the C3, C4 gear and C2 gear.
- This washer has the chamfered edges on the each side of I.D.



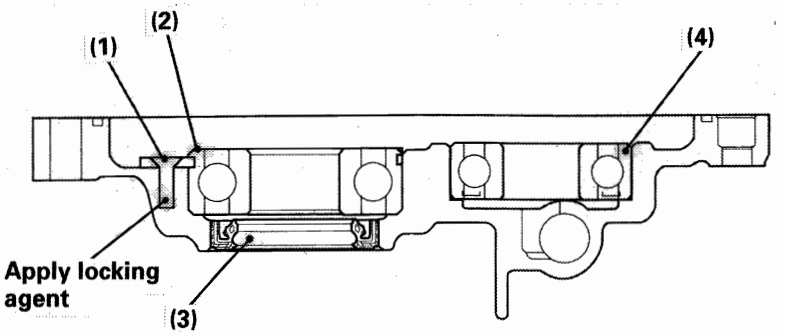
(2) Spline washer, 22mm (1 point) (90464-444-000)
Install between the C3 gear and C4 gear.

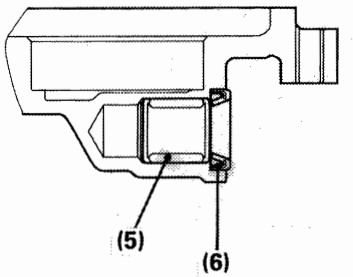




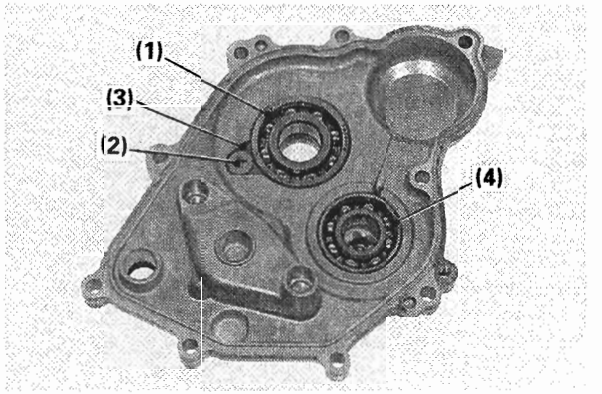
Left Crankcase Cover Bearing Replacement

- Drive the mainshaft bearing into the left crankcase cover with its sealed end facing in.





(1) SCREW/SET PLATE
(2) COUNTERSHAFT BEARING
(3) OIL SEAL (26 × 37 × 7 mm)
(4) MAINSHAFT BEARING
(5) CLUTCH LIFTER BEARING (10 × 14 × 15 mm)
(6) OIL SEAL (10 × 17 × 4 mm)



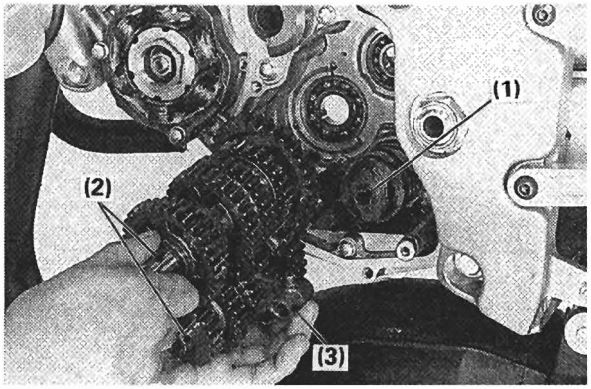
(1) COUNTERSHAFT BEARING
(2) SCREW (3) SET PLATE
(4) MAINSHAFT BEARING

Remove the screw and set plate.
Drive out the countershaft bearing.
Remove the mainshaft bearing.

Install the bearings using the following tools.

TOOLS:

Mainshaft bearing installation:	
Driver	**07749-0010000**
Attachment, 37 × 40 mm	**07746-0010200**
Pilot, 17 mm	**07746-0040400**
Countershaft bearing installation:	
Driver	**07749-0010000**
Attachment, 42 × 47 mm	**07746-0010300**
Pilot, 20 mm	**07746-0040500**



(1) SHIFT DRUM
(2) MAINSHAFT/COUNTERSHAFT ASSEMBLY
(3) CENTER SHIFT FORK

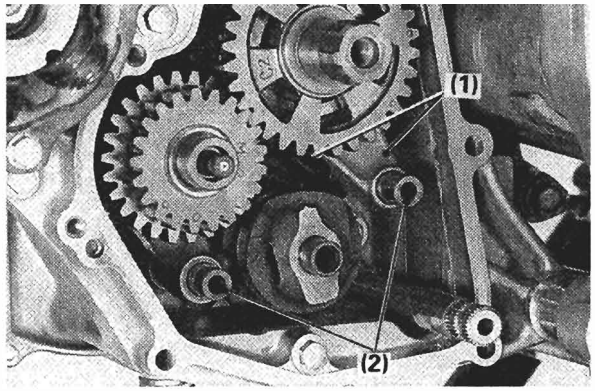
Installation

If the shift drum is removed, install the shift drum and gearshift linkage (page 4-26).

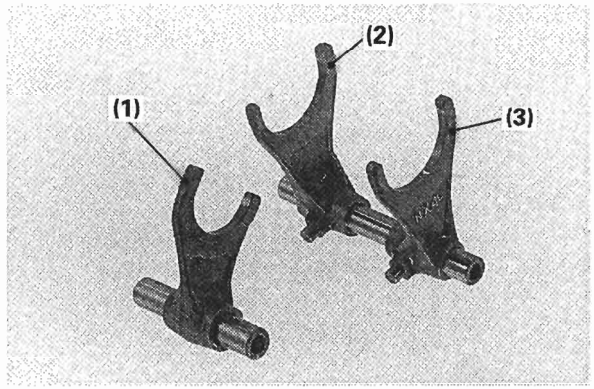
Coat each gear with clean transmission oil and check for smooth movement.

When installing the transmission, apply grease to the end of the countershaft to prevent the C1 gear and washer from falling off.

Install the center shift fork into the M3/4 shifter gear groove.
Engage the mainshaft and countershaft gears and place the transmission assembly into the crankcase.



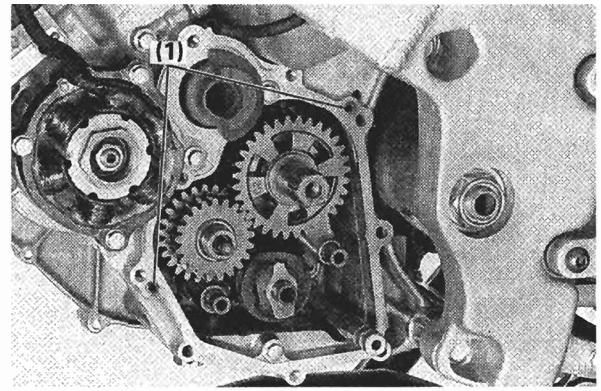
(1) RIGHT/LEFT SHIFT FORKS (2) FORK SHAFTS



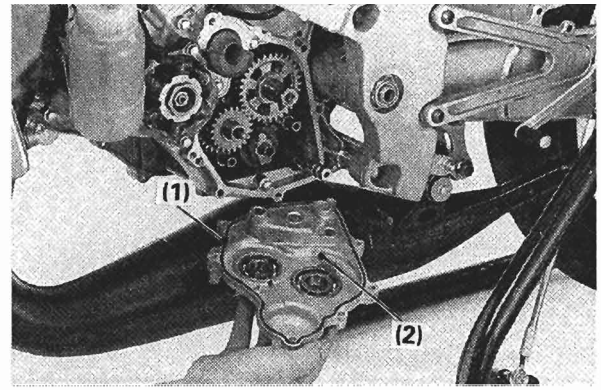
(1) CENTER SHIFT FORK (2) RIGHT SHIFT FORK
(3) LEFT SHIFT FORK

Install the right and left shift fork into the shifter gear grooves.

Slide the shift fork shafts through the shift forks, and into the crankcase.



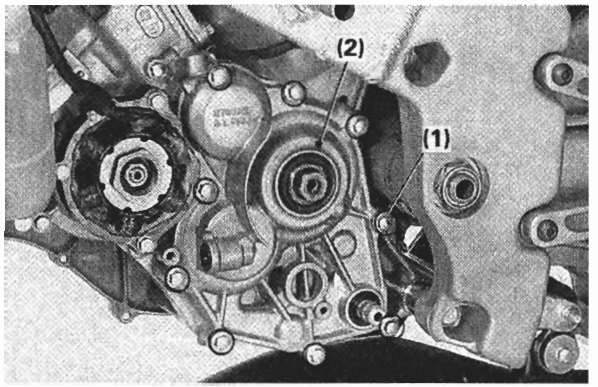
(1) DOWEL PINS



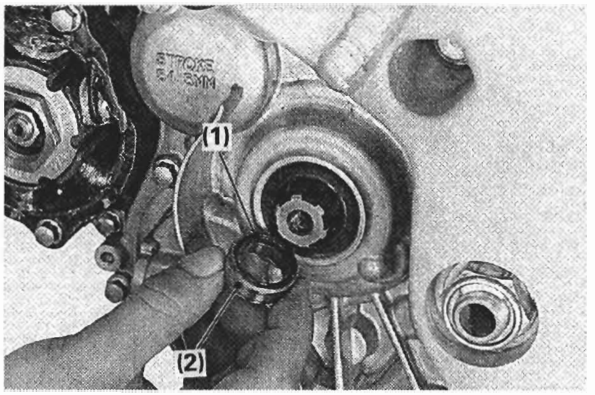
(1) O-RING
(2) LEFT CRANKCASE COVER

Install the dowel pins.

Install the O-ring into the left crankcase cover groove. Install the left crankcase cover onto the left crankcase.



(1) BOLTS (2) LEFT CRANKCASE COVER

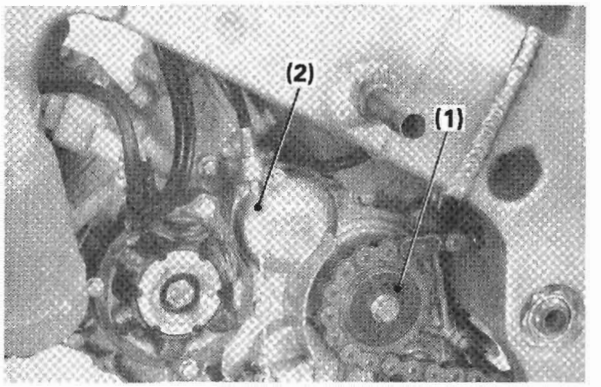


(1) O-RING (2) COUNTERSHAFT COLLAR

Apply transmission oil to the left crankcase cover bolt threads and seating surface.
Install and tighten the left crankcase cover mounting bolts in a crisscross pattern in 2 or 3 steps.

Torque: 10 N·m (1.0 kgf·m, 7 lbf·ft)

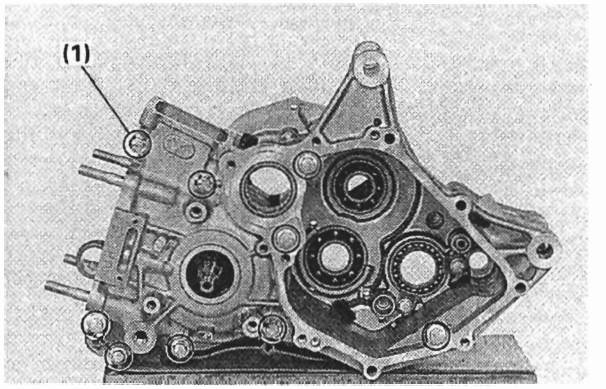
Coat the countershaft O-ring and the inside of the countershaft collar with grease.
Install the O-ring and collar onto the countershaft.



(1) DRIVE SPROCKET (2) CLUTCH CABLE

Install the following:
- Drive sprocket and drive chain (page 3-10)
- Clutch lifter lever and clutch (page 4-19)
- Right crankcase cover (page 4-21)

Install the gearshift arm and tighten the pinch bolt/nut securely.
Fill the transmission oil (page 3-3).

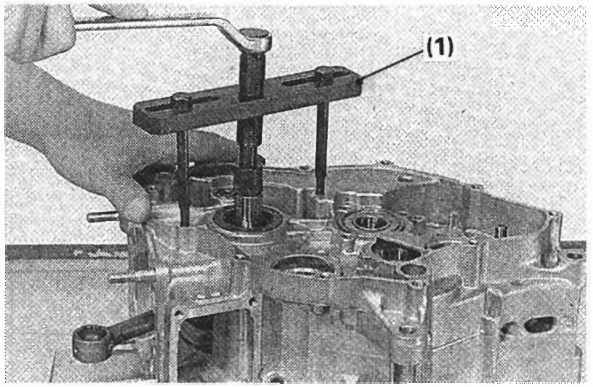


(1) BOLTS

Crankcase Separation

- The engine must be out of the frame for this service (page 4-14).
- The following parts must be removed before separating the crankcase.
  - Alternator/inner rotor (page 6-3)
  - Balancer (page 4-23)
  - Clutch/gearshift linkage (page 4-17)
  - Cylinder head/cylinder/piston (page 4-9)
  - Left crankcase cover/transmission (page 4-27)
  - Primary drive gear (page 4-22)

Loosen the crankcase bolts in a gradual, crisscross pattern.



(1) CRANKCASE PULLER

Attach the crankcase puller to the right crankcase.

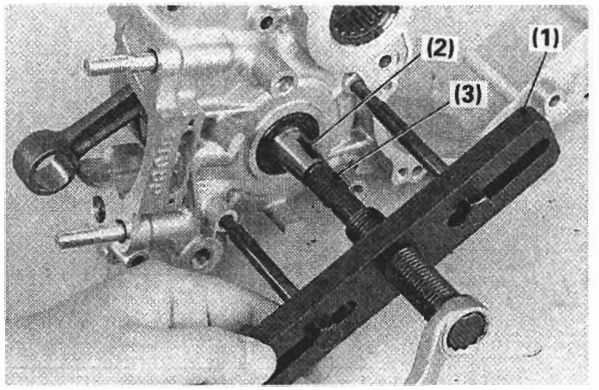
TOOLS:

Crankcase puller	**07937-4300001**
– Setting bolt (6 × 100 mm, 2, bolts)	**07PMC-KZ40100**

Remove the right crankcase while tapping the cases a few times with a soft hammer.
Separate the crankcase halves.

Do not pry the crankcase halves apart with a screwdriver.

Remove the dowel pins.



(1) CRANKCASE PULLER (2) CRANKSHAFT
(3) L. CRANKSHAFT CAP

When removing, installing and inspecting the crankshaft, be careful not to damage or nick the crank weights.
Remove the crankshaft using a crankcase puller.

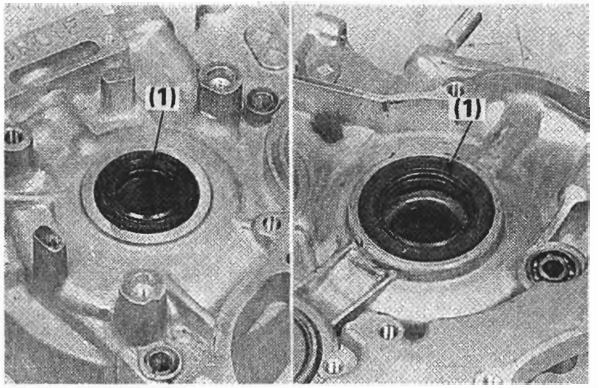
TOOLS:

Crankcase puller	**07937-4300001**
– Setting bolt (6 × 100 mm, 2, bolts)	**07PMC-KZ40100**
L. crankshaft cap	**89100-NX4-000**

If the bearing remains on the crankshaft, remove the bearing using a universal bearing puller.

TOOL:

Universal bearing puller	**07631-0010000**

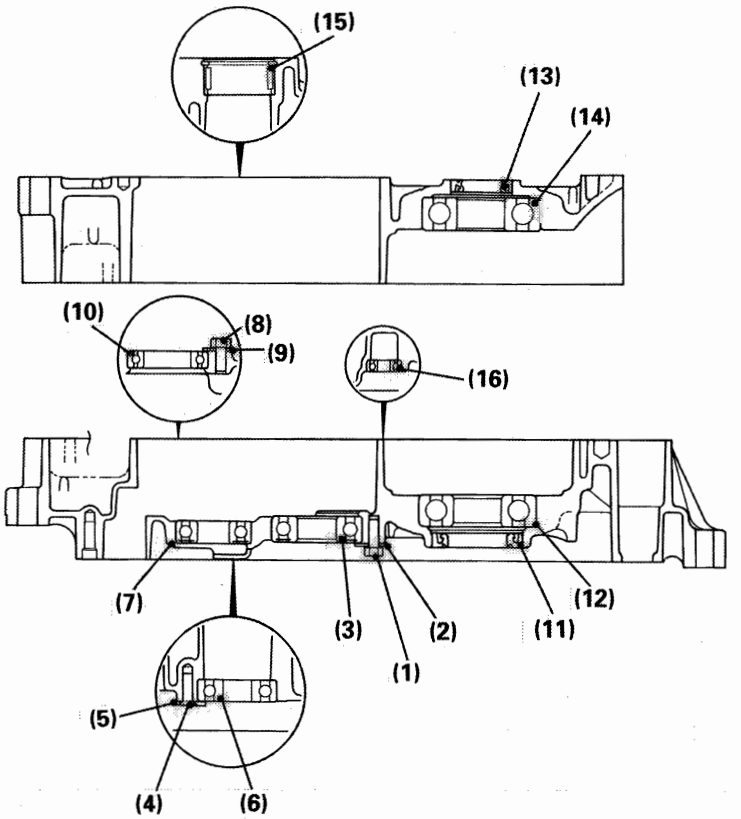


(1) OIL SEAL

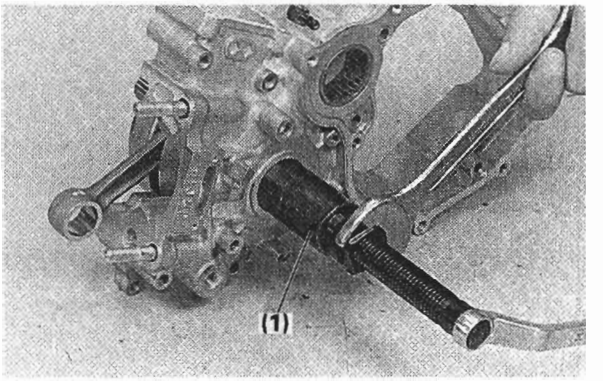
Remove the crankshaft oil seals.

Crankcase Bearing Locations

- Install the mainshaft and countershaft bearings with their sealed end facing to the right crankcase cover.



(1) BOLT
(2) SET PLATE
(3) MAINSHAFT BEARING (6204Z)
(4) SCREW
(5) SET PLATE
(6) RIGHT BALANCER BEARING (6302 SPECIAL)
(7) COUNTERSHAFT BEARING (6203Z)
(8) BOLT
(9) SET PLATE
(10) SHIFT DRUM BEARING (25 × 42 × 9 mm)
(11) OIL SEAL (32 × 42 × 8 mm)
(12) RIGHT CRANKSHAFT BEARING (63/22 SPECIAL)
(13) OIL SEAL (20 × 32 × 7 mm)
(14) LEFT CRANKSHAFT BEARING (63/22 SPECIAL)
(15) LEFT BALANCER NEEDLE BEARING (28 × 37 × 17 mm)
(16) WATER PUMP SHAFT BEARING (7 × 19 × 6 mm)



(1) ASSEMBLY TOOL

Crankcase Assembly

Clean the crankcase mating surfaces before assembling and check for wear or damage.

If there is minor roughness or irregularities on the crankcase mating surfaces, dress them with an oil stone.

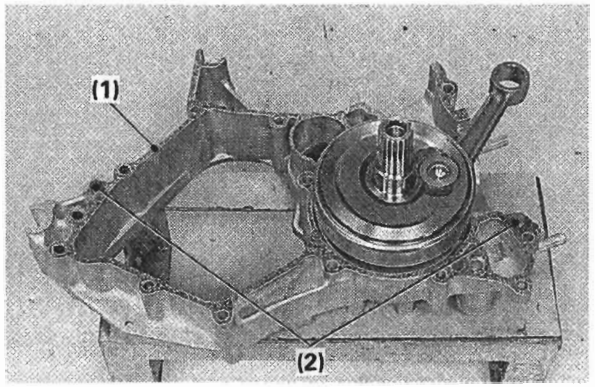
Install the both crankshaft bearings.
Lubricate the crankshaft bearings with clean specified engine oil.

Draw the crankshaft into the left crankcase using the special tool.

TOOL:

Crankcase assembly collar	**07965-GC70100**
Crankcase assembly shaft	**07965-GM00300**

Be careful not to damage the connecting rod.

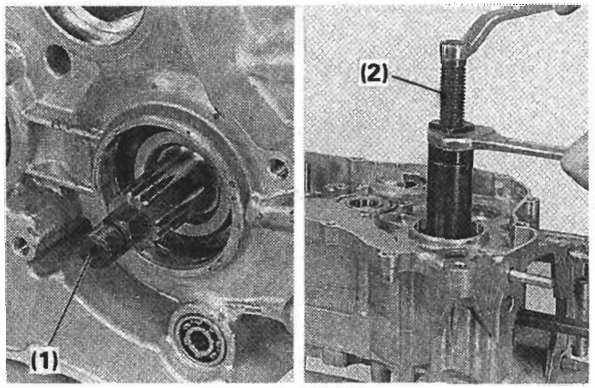


(1) LIQUID SEALANT APPLY AREA
(2) DOWEL PINS

Apply Three Bond 1207B or an equivalent commercially available liquid sealant to the mating surface of the crankcase as shown.
Do not apply sealant into the dowel pin holes.

Install the dowel pins.

- **Part No. for the liquid sealant: 88887-NX4-000**



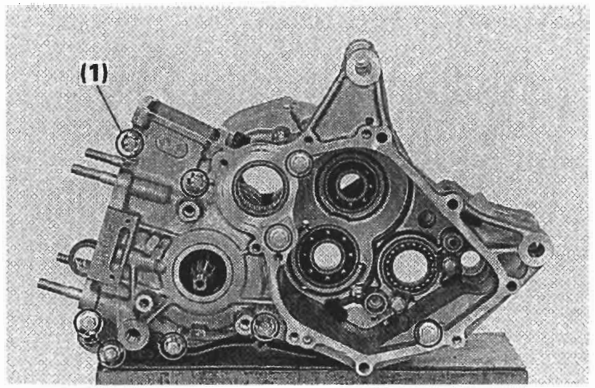
(1) THREADED ADAPTER
(2) ASSEMBLY TOOL

Place the right crankcase onto the left crankcase and assemble the crankcase halves as follows:

1. Install the threaded adapter onto the crankshaft. Set the special tool and carefully draw the crankshaft until the crankcase mating surfaces just touch. Stop drawing.

TOOLS:

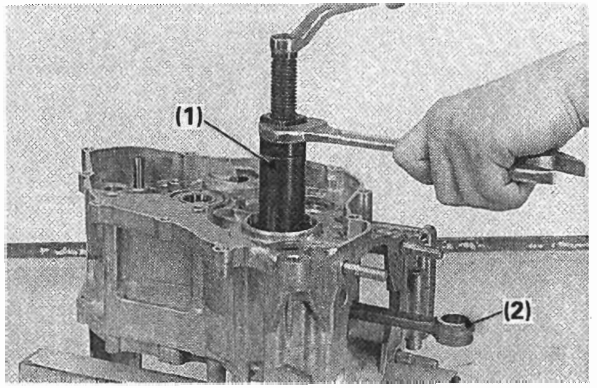
Crankcase assembly tool set	**89001-NX4-003**
– Assembly collar	**07965-GC70100**
– Assembly shaft	**07965-GM00300**
– Threaded adapter	**89002-NX4-003**



(1) BOLTS

2. Apply transmission oil to the crankcase bolt threads and seating surface.
   Install and tighten the crankcase bolts in a criss-cross pattern in 2 to 3 steps.

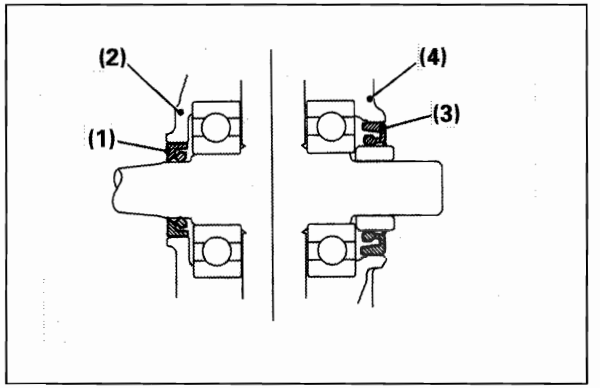
   Torque: 10 N·m (1.0 kgf·m, 7 lbf·ft)



(1) ASSEMBLY TOOL (2) CONNECTING ROD

3. Reinstall the assembly tool.
   While checking the crankshaft rotation by moving the connecting rod, carefully draw the crankshaft. Stop drawing when the crankshaft turns smoothly.

   If you feel binding, disassemble and reassemble it again.



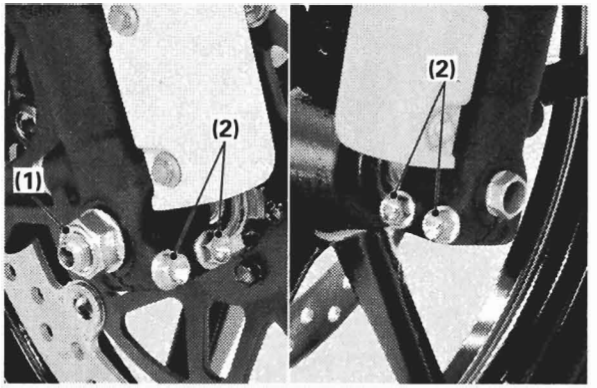
(1) LEFT OIL SEAL (2) LEFT CRANKCASE
(3) RIGHT OIL SEAL (4) RIGHT CRANKCASE

Pack grease into the cavity between the oil seal lips.

Carefully press the left side oil seal into the crankcase until it flush with the edges of the case.
Carefully press the right side oil seal into the crankcase until it flush with the edges of the case.

Install the removed parts in the reverse order of removal.

Memo



(1) AXLE NUT (2) AXLE PINCH BOLTS

Front Wheel

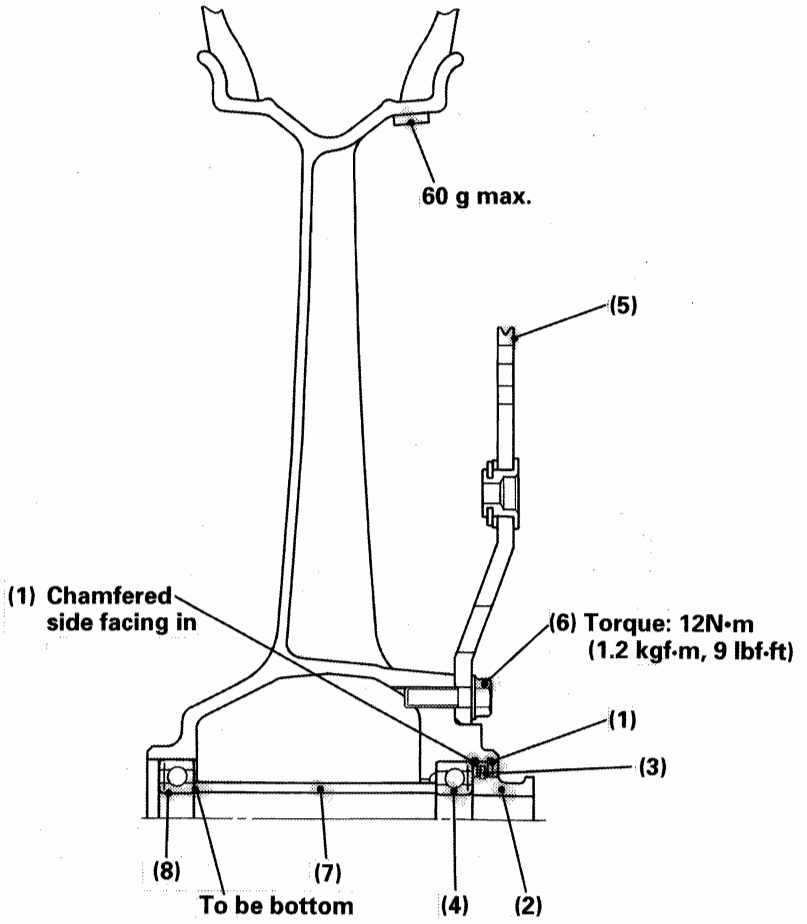
Removal

Remove the axle nut.
Loosen the axle pinch bolts.

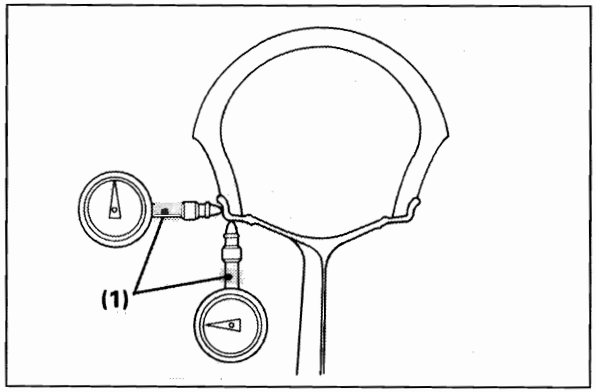
Support the machine and front wheel off the ground.
Remove the axle and front wheel.

Do not depress the brake lever after the front wheel is removed. The caliper pistons will move and make reassembly difficult.

Disassembly/Assembly



(1) SNAP RING (IN/35 mm)
(2) SIDE COLLAR
(3) SNAP RING (EX/26 mm)
(4) RIGHT WHEEL BEARING (6202U)
(5) BRAKE DISC
(6) FLANGE BOLT, 6 × 20 mm
(7) DISTANCE COLLAR
(8) LEFT WHEEL BEARING (6202U)



(1) DIAL GAUGE

Inspection

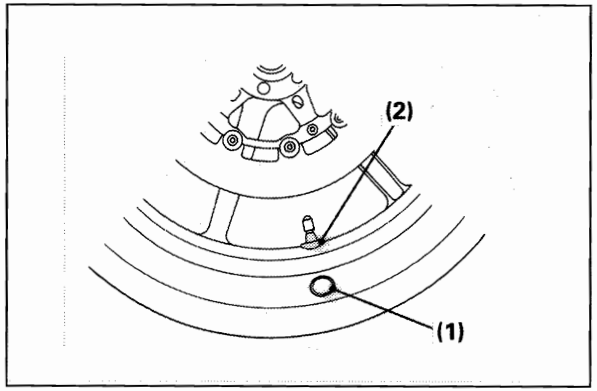
Wheel Rim

Spin the wheel slowly and measure the runout using a dial indicator.

The wheel cannot be repaired and must be replaced with a new one if the runout exceeds the service limit.

Service limit: 0.3 mm (0.01 in)

Check the wheel balance.

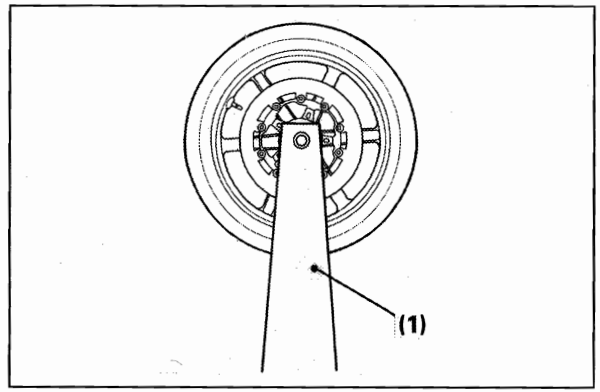


(1) BALANCE MARK (2) VALVE STEM

Wheel/Tire Balance

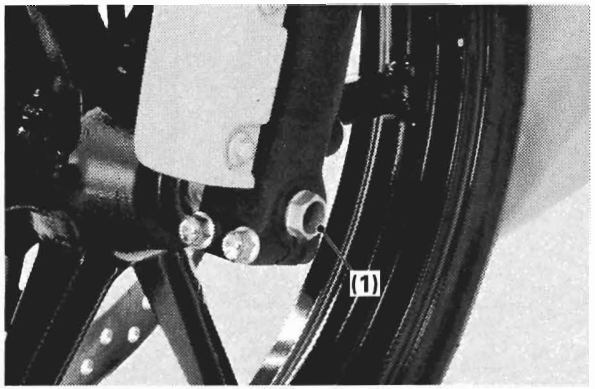
Wheel balance directly affects the stability, handling and overall safety of the machine. Always check the balance when the tire has been removed from the rim.

For optimum balance, the tire balance mark (a paint dot or circle on the side wall) must be located next to the valve stem. Remount the tire if necessary.

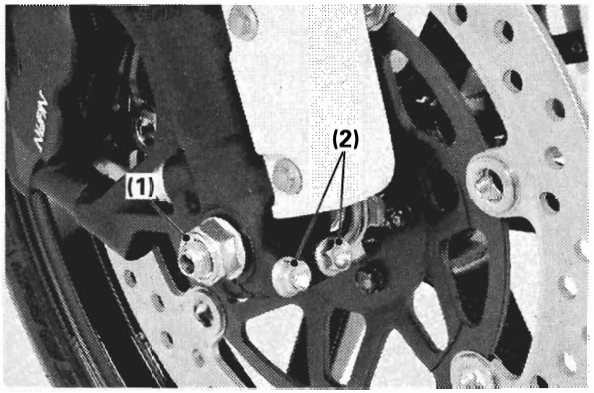


(1) INSPECTION STAND

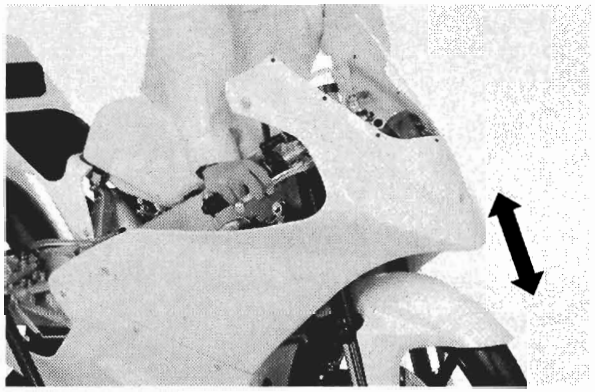
Mount the wheel, tire and brake disc assembly in an inspection stand.
Spin the wheel, allow it to stop, and mark the lowest (heaviest) part of the wheel with chalk.
Do this two or three times to verify the heaviest area.
If the wheel is balanced, it will not stop consistently in the same position.
To balance the wheel, install wheel weights on the upper most point of the rim, the opposite side of the chalk marks.
Add just enough weight so the wheel will no longer stop in the same position when it's spun.
Clean the wheel surface and attach the balance weight.
Do not add more than 60 grams per wheel.



(1) AXLE



(1) AXLE NUT (2) AXLE HOLDER BOLTS



Installation

Clean the surfaces where the axle and axle clamps contact each other.
Place the front wheel between the fork legs.

NOTICE

Use care to avoid damaging the brake pads.

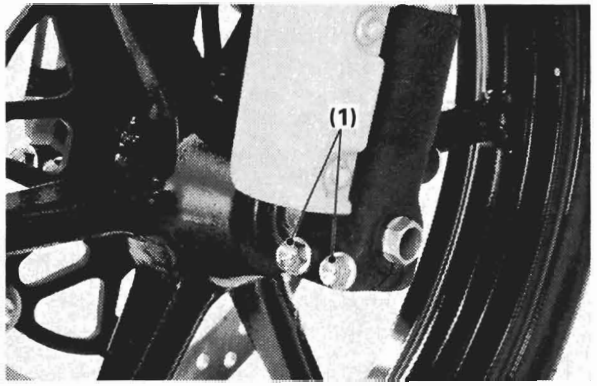
Apply a thin layer of grease to the axle.
Install the axle from the left side.

Hold the axle and tighten the axle nut to the specified torque.

Torque: 69 N·m (7.0 kgf·m, 51 lbf·ft)

Tighten the right axle holder bolts to the specified torque.

Torque: 22 N·m (2.2 kgf·m, 16 lbf·ft)

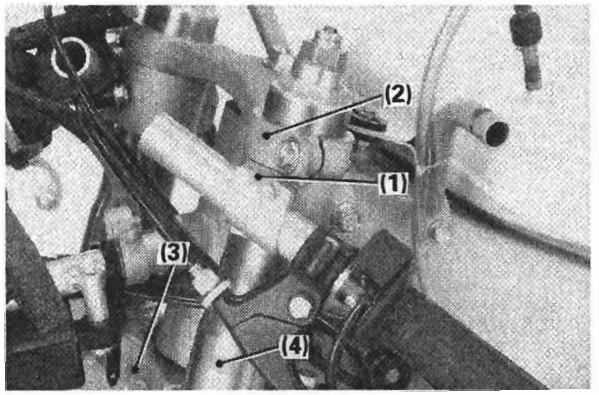


(1) AXLE HOLDER BOLTS

With the front brake applied, pump the fork up and down several times to seat the axle and check the front brake operation.

Tighten the left axle holder bolt to the specified torque.

Torque: 22 N·m (2.2 kgf·m, 16 lbf·ft)



(1) HANDLEBAR (2) TOP BRIDGE
(3) BOTTOM BRIDGE (4) FORK LEG

Fork

Removal

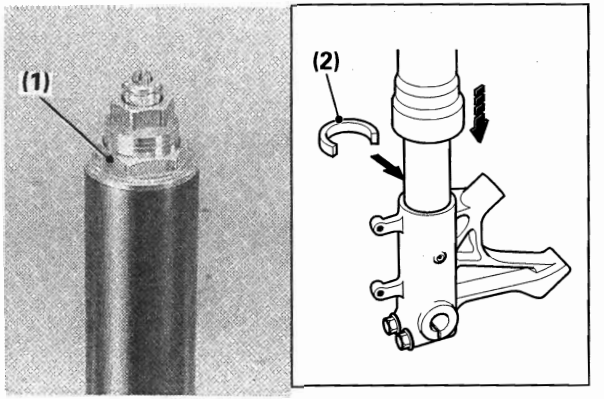
Remove the front wheel (page 5-1).
Remove the bolts and front fender.

Loosen the handlebar pinch bolt.
Loosen the top bridge pinch bolt.
If the fork legs are to be disassembled, loosen the fork bolt.

NOTICE

To avoid damaging the fork bolt threads, loosen the top bridge pinch bolt before loosening the fork bolt.

Loosen the bottom bridge pinch bolts, and pull the fork tube down and out.



(1) FORK BOLT (2) FORK SET COLLAR

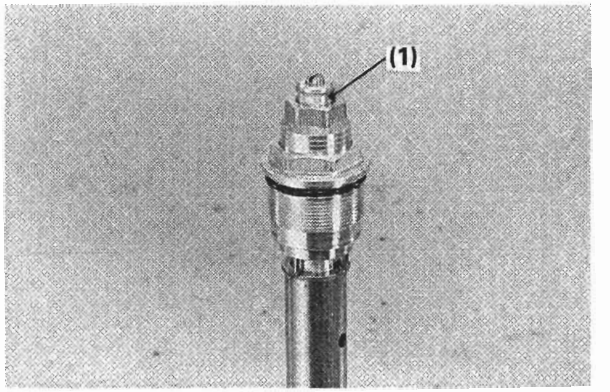
Disassembly

Before disassembling the fork, clean the entire sliding surface and around the bottom socket bolt.

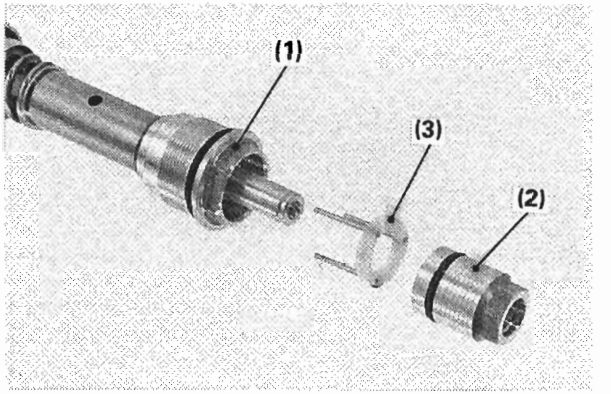
Be careful not to scratch the slider. A scratched slider will damage the seal, causing an oil leak.
To avoid damaging the outer tube, install the fork set collar on the axle holder.
Hold the outer tube, remove the fork bolt and slide the outer tube down onto the fork set collar.

TOOL:
Fork set collar **51481-NX4-610**

When the fork bolt is removed from the outer tube, the slider can move up and down freely in the outer tube.
Always hold both the slider pipe and outer tube with your hands after removing the fork bolt, or the guide bushings might be damaged and fork oil will leak from the slider.



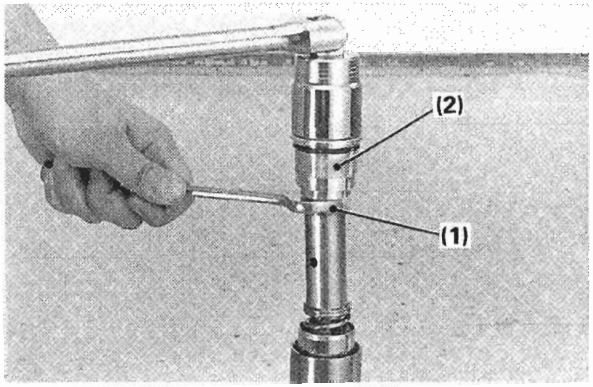
(1) STOP RING



(1) FORK BOLT (2) PRELOAD ADJUSTER
(3) SPRING ADJUSTING PLATE

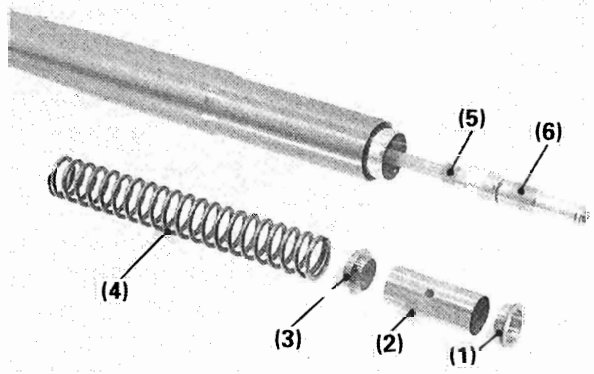
Remove the stop ring.

Hold the fork bolt and turn the spring preload adjuster counterclockwise.
Remove the preload adjuster.
Remove the spring adjusting plate.

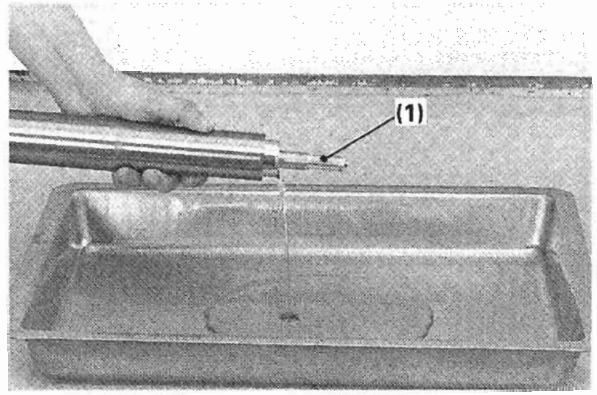


(1) SPRING SEAT STOPPER (2) FORK BOLT

Pull the fork spring seat stopper down to access the cut-out in the damping adjuster with an 17 mm open end wrench.
Hold the damper rod and remove the fork bolt from the rebound damping adjuster.



(1) SPRING SEAT STOPPER (2) SPRING COLLAR
(3) JOINT PLATE (4) FORK SPRING (5) LOCK NUT
(6) REBOUND ADJUSTER

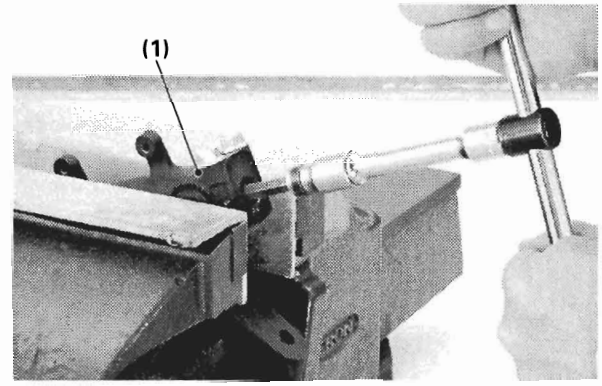


(1) DAMPER ROD

Remove the following:
- Spring seat stopper
- Spring collar
- Spring joint plate
- Fork spring

Pour out the fork fluid.
Empty the fork fluid from the fork damper by pumping the damper rod 8—10 times.

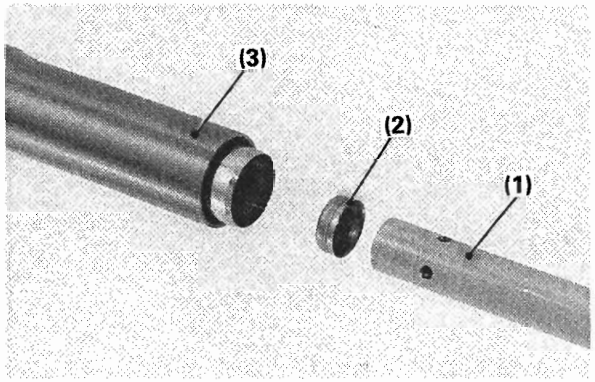
Do not loose the lock nut and remove the rebound damping adjuster from the damper rod.



(1) AXLE HOLDER

Hold the axle holder in a vise protected with a piece of wood or soft jaws to avoid damage.
Do not overtighten.

Loosen and remove the fork bottom socket bolt and sealing washer.
If the socket bolt turns together with the fork damper, temporarily install the fork spring, spacer and fork bolt.

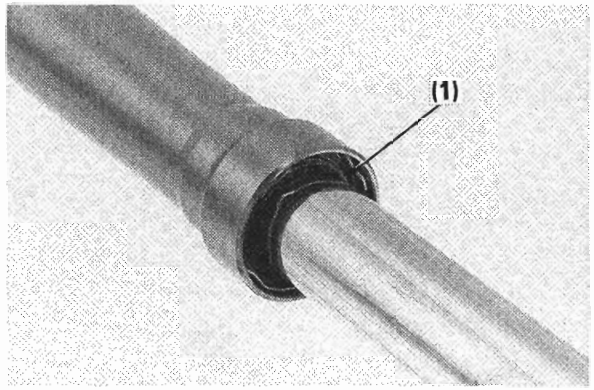


(1) FORK DAMPER (2) CENTERING PLATE
(3) SLIDER

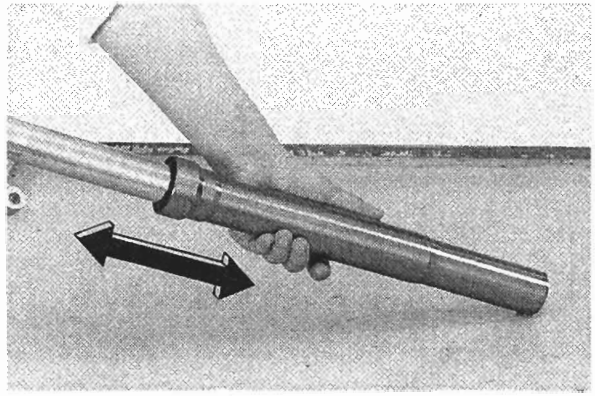
Remove the following:
- Fork damper
- Centering plate

Check that the slider moves smoothly in the outer tube. If it does not, check the slider bending or damage, and the bushings for wear or damage.
If the slider and bushing are normal, check the outer tube.

Remove the fork set collar.
Remove the slider from the outer tube.

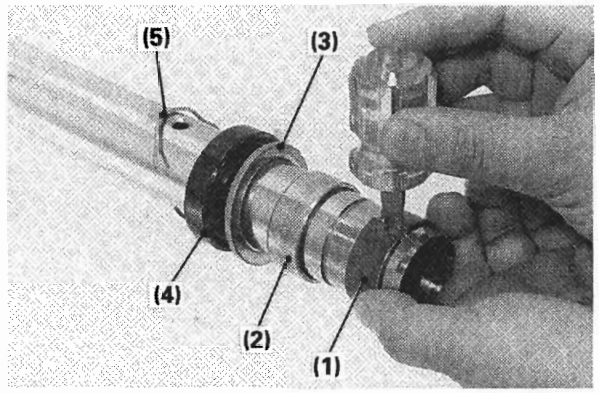


(1) STOP RING



Remove the oil seal stop ring.
Be careful not to scratch the slider.

In quick successive motions, pull the slider out of the outer tube.

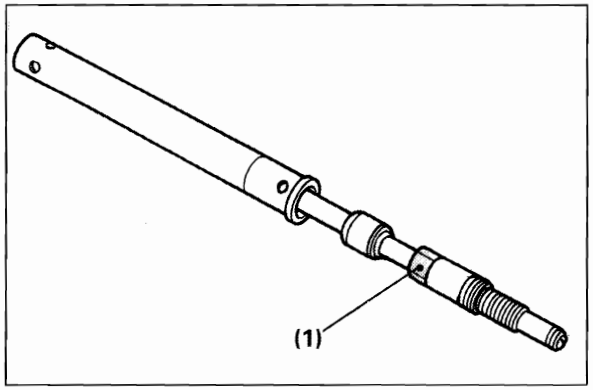


(1) SLIDER BUSHING (2) GUIDE BUSHING
(3) BACK-UP RING (4) OIL SEAL (5) STOP RING

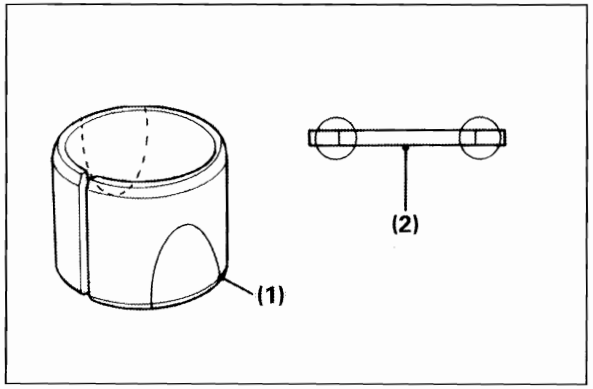
Remove the slider bushing by prying the slot with a screw driver until the bushing can be pulled off by hand.

Remove the following:
- Guide bushing
- Back-up ring
- Oil seal
- Stop ring

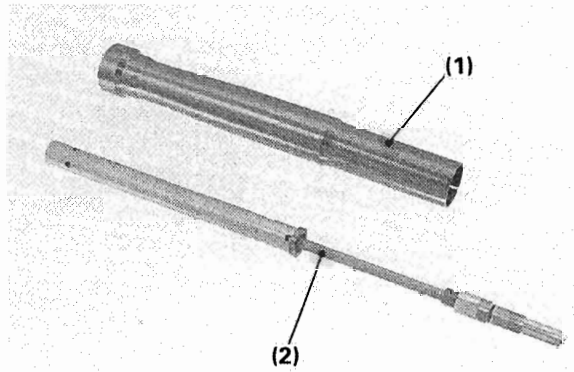
Be careful not to scratch the teflon coating of the guide bushing.



(1) REBOUND ADJUSTER LOCK NUT



(1) GUIDE BUSHING (2) BACK-UP RING



(1) OUTER TUBE (2) FORK DAMPER

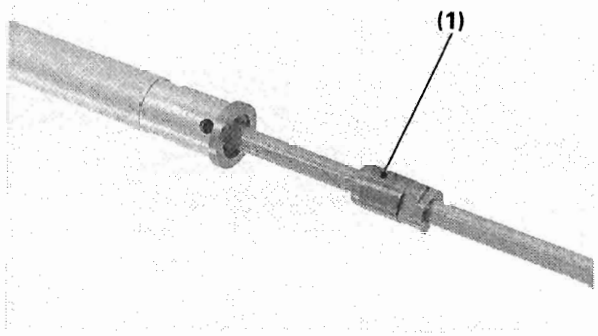
Inspection

- Do not disassemble the fork damper. Do not loose the rebound adjuster lock nut or remove the rebound adjuster.
- Inspect the fork slider sliding surfaces for damaging, whenever the oil seal is replaced due to oil leaks.

Guide Bushing/Back-up Ring

Check the guide bushings for excessive wear or scratches.
Remove any metal powder from the guide bushings with a nylon brush and fork fluid.
If copper appears on the entire surface, replace the bushing.

Replace the back-up ring if there is any distortion at the points shown.

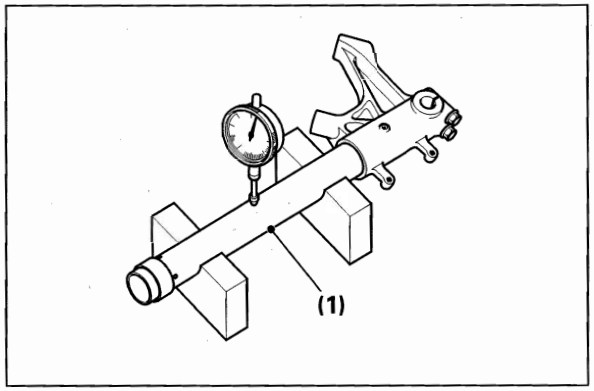


(1) OIL LOCK VALVE

Outer Tube/Fork Damper

Check the outer tube for damage or deformation.
Check the damper rod of the damper for wear or damage.

Check the oil lock valve for wear or damage.



(1) FORK SLIDER

Fork Slider

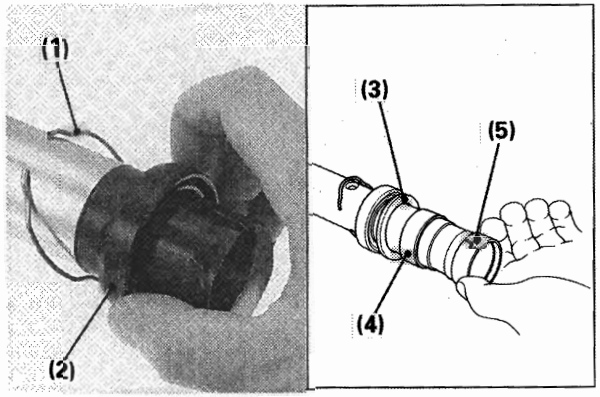
Check the slider for score marks, scratches and excessive or abnormal wear.

Set the slider on V-blocks and measure the runout. Take 1/2 the total indicator reading to determine the actual runout.

Service limit: 0.20 mm (0.008 in)

Assembly

- Clean the parts thoroughly with non-flammable or high flash point solvent before assembly.
- When the bushing, fork slider, outer tube are replaced, break in your RS at the standard setting.
- For optimum fork performance, the fork fluid should be used the Honda Ultra Cushion Oil Special (SAE 5W), Showa SS05 Operation Oil or equivalent.
- Vegetable oils is harmful to the oil seals, resulting in oil leaks.



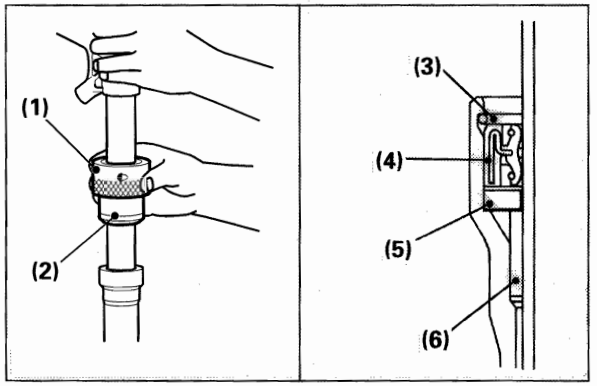
(1) NEW SLIDER BUSHING (2) GUIDE BUSHING
(3) BACK-UP RING (4) NEW OIL SEAL
(5) STOP RING

Wrap the end of the slider with a tape.
Install the stop ring.
Coat the new oil seal lips with recommended fork fluid and install with its seal mark facing the stop ring.

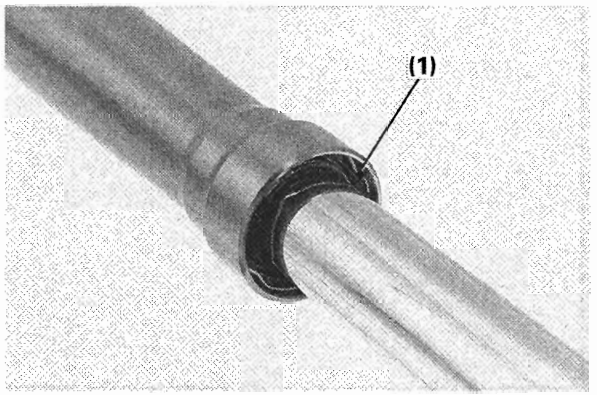
Remove the tape.
Install the back-up ring.

Be careful not to scratch the teflon coating of the bushings.
Coat the guide bushing with recommended fork fluid and install it.
Coat new slider bushing with recommended fork fluid.
Always replace the slider bushing when the fork is disassembled.
Carefully install the slider bushing by your finger.
Do not pry open the bushing more than necessary.

Coat the slider and guide bushings with recommended fork fluid.
Install the slider into the outer tube.



(1) OIL SEAL DRIVER (2) ATTACHMENT
(3) STOP RING (4) NEW OIL SEAL
(5) BACK-UP RING (6) GUIDE BUSHING



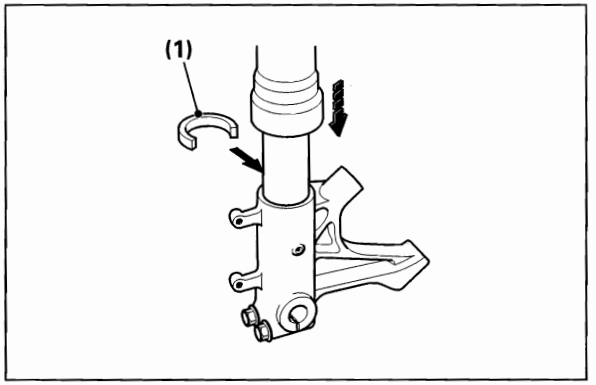
(1) STOP RING

Drive in the guide bushing into the outer tube with the back-up ring.
Drive in the oil seal until the stop ring groove visible.

TOOLS:

Fork seal driver	**07KMD-KZ30100**
Fork seal driver attachment	**07916-NX4-700**

Install the oil seal stop ring into the outer tube groove securely.



(1) FORK SET COLLAR

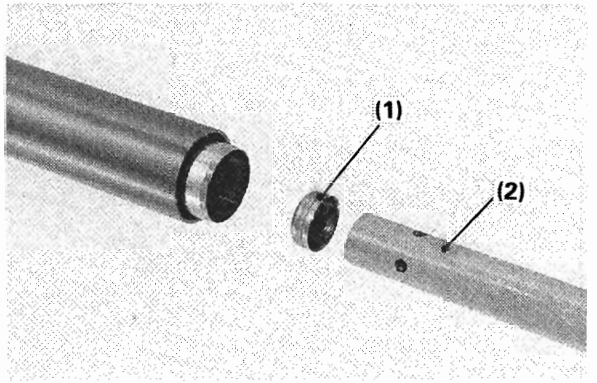
NOTICE

The slider can move up and down freely in the outer tube. Always hold both the slider pipe and outer tube with your hands, or the guide bushings might be damaged and fork oil will leak from the slider.

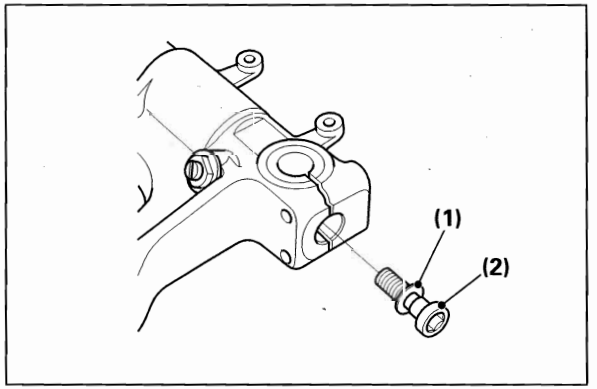
To avoid damaging the outer tube, install the fork set collar and lower the outer tube gently onto the tool.

TOOL:

Fork set collar	**51481-NX4-610**



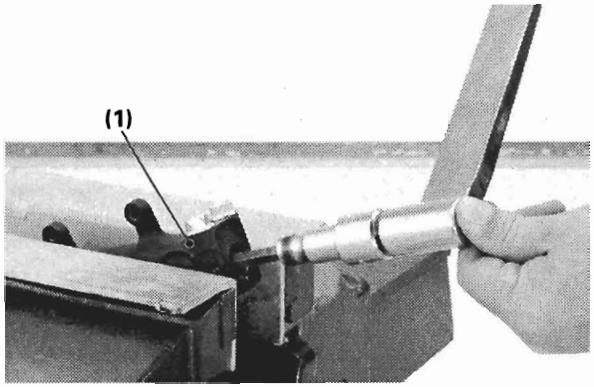
(1) CENTERING PLATE (2) FORK DAMPER



(1) NEW SEALING WASHER (2) SOCKET BOLT

Install the centering plate onto the fork damper.
Install the fork damper into the slider.

Install new sealing washer and socket bolt.



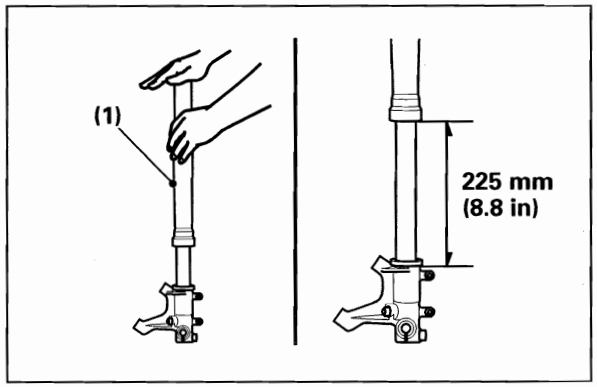
(1) AXLE HOLDER

Hold the axle holder in a vise protected with a piece of wood or soft jaws to avoid damage.
Do not overtighten the vise.

Tighten the fork bottom socket bolt to the specified torque.

Torque: 34 N·m (3.5 kgf·m, 25 lbf·ft)

If the socket bolt turns together with the fork damper, temporarily install the fork spring, spacer and fork bolt.



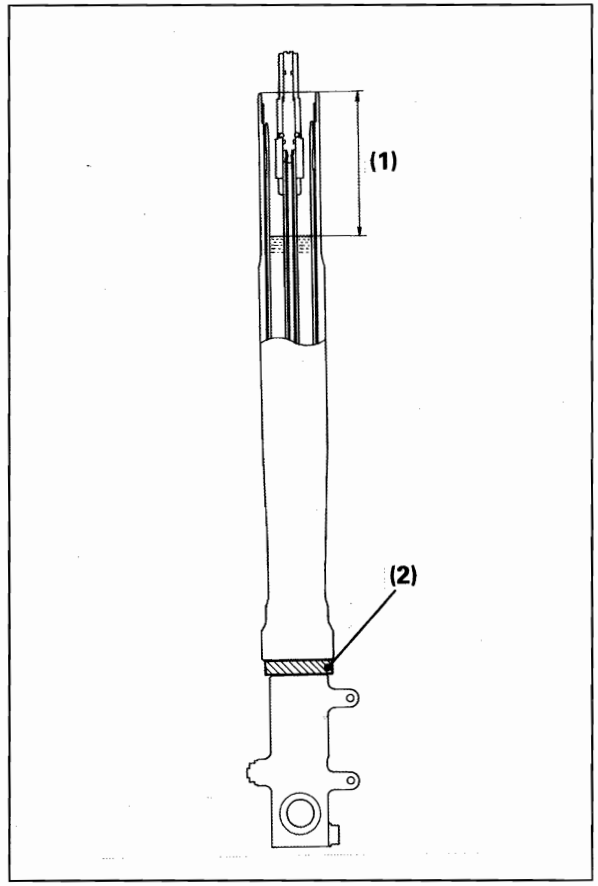
(1) OUTER TUBE

You must use the fork set collar for correct oil level adjustment.

Pour half the required amount of recommended fork fluid in the fork leg.

Recommended fork fluid:
Honda Ultra Cushion Oil Special (SAE 5W)
Showa SS05 Operation Oil or equivalent

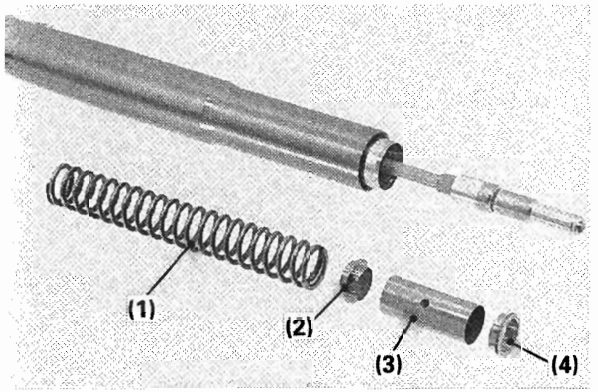
Bleed the air as follows:
1. Extend the fork. Cover the top of the outer tube with your hand and compress the fork slowly. The fork fluid will spill out of the oil hole in the slider. Do not pull up the outer tube more than 225 mm (8.8 in) from the axle holder to extend the fork.
2. Pump the outer tube and damper rod slowly 8—10 times.
3. Pour additional fluid to the specified capacity and repeat step 2. Compress the outer tube fully and leave it for 5 minutes to settle the oil level.



(1) OIL LEVEL (2) FORK SET COLLAR

Measure the oil level from the top of the slider.

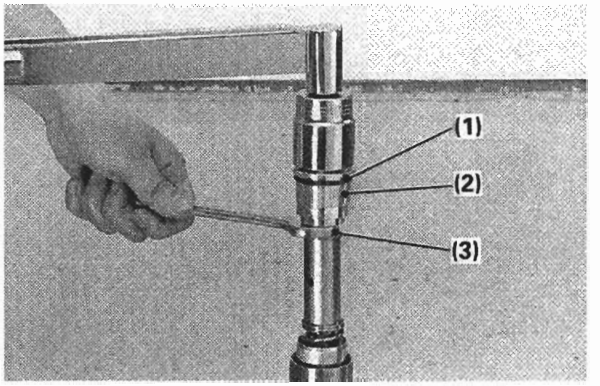
Standard oil level: **Right side 111 mm (4.37 in)**
Left side 106 mm (4.17 in)
Standard oil capacity: 233 cm³ (7.9 US oz, 8.2 Imp oz)



(1) FORK SPRING (2) JOINT PLATE
(3) SPRING COLLAR (4) SPRING SEAT STOPPER

Install the fork spring with the identification mark (number of coil) facing up.

Install the following:
- Spring joint plate
- Spring collar
- Spring seat stopper



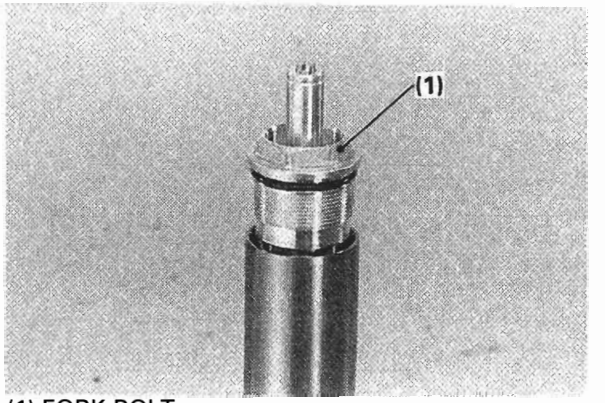
(1) NEW O-RING (2) FORK BOLT
(3) CUT-OUT

Install a new O-ring onto the fork bolt.
Install the fork bolt onto the rebound damping adjuster while holding the rebound damping adjuster and pulling down the spring seat stopper.

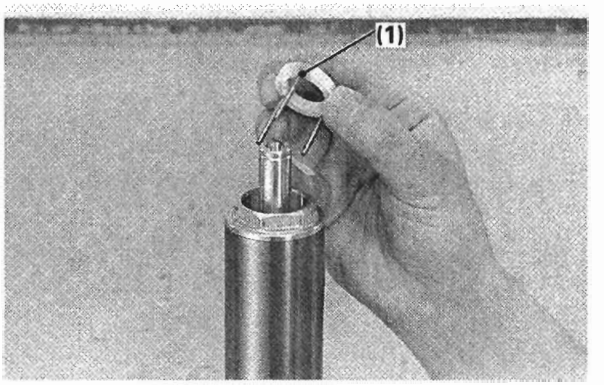
Place a 17 mm open end wrench on the cut-out of the rebound damping adjuster while holding the fork bolt and pulling down the spring seat stopper.

Hold the rebound adjuster and tighten the fork bolt to the specified torque.

Torque: 34 N·m (3.5 kgf·m, 25 lbf·ft)



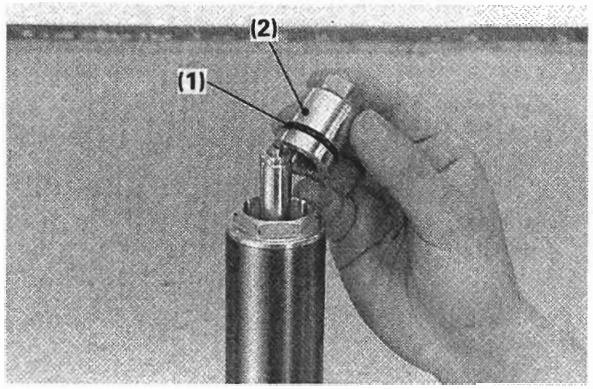
(1) FORK BOLT



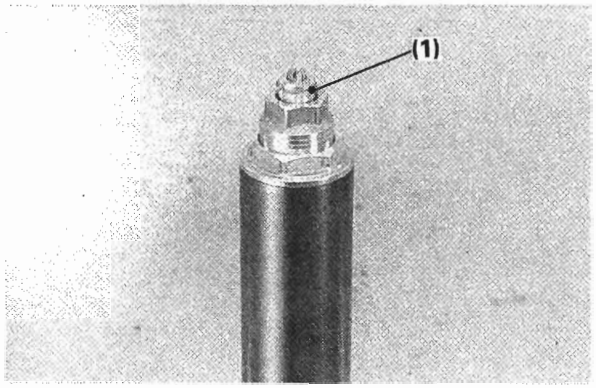
(1) SPRING ADJUSTING PLATE

Apply recommended fork fluid to the O-ring, then screw the fork bolt into the outer tube.

Install the spring adjusting plate, aligning its pins with the fork bolt holes.



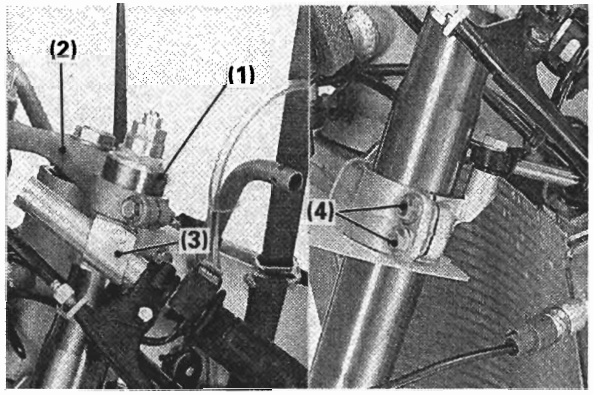
(1) NEW O-RING (2) PRELOAD ADJUSTER



(1) STOP RING

Apply the recommended fork fluid to the O-ring, then install it onto the spring preload adjuster.
Hold the fork bolt and turn the preload adjuster into the fork bolt.

Install the stop ring.



(1) OUTER TUBE (2) TOP BRIDGE
(3) HANDLEBAR
(4) BOTTOM BRIDGE PINCH BOLTS

Installation

Install the fork leg.
Raise the fork through the bottom bridge, handlebar and top bridge.

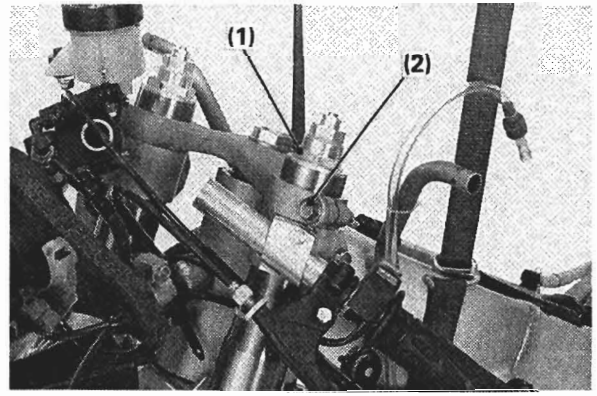
For standard setting, position the upper surface of the outer tube 13 mm (0.5 in) from top of the outer tube.

Tighten the bottom bridge pinch bolts to the specified torque.

Torque: 23 N·m (2.3 kgf·m, 17 lbf·ft)

NOTICE

Overtightening the pinch bolts can deform the outer tube. It may cause incorrect fork operation.
A deformed outer tube must be replaced.



(1) FORK BOLT (2) TOP BRIDGE PINCH BOLT

Tighten the fork bolt to the specified torque.

Torque: 34 N·m (3.5 kgf·m, 25 lbf·ft)

Tighten the top bridge pinch bolt to the specified torque.

Torque: 23 N·m (2.3 kgf·m, 17 lbf·ft)

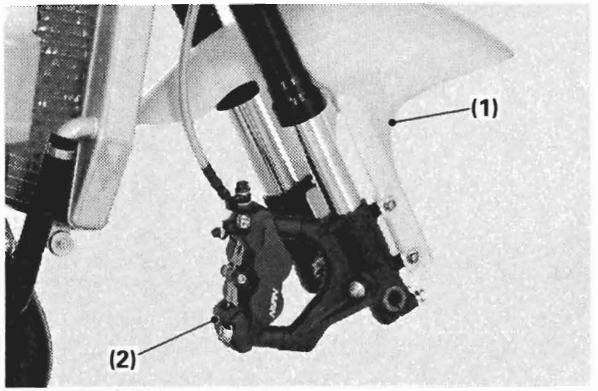
Adjust the handlebar position, tighten the pinch bolt to the specified torque.

Torque: 23 N·m (2.3 kgf·m, 17 lbf·ft)

NOTICE

Overtightening the top bridge and handlebar pinch bolts can deform the outer tube. It may cause incorrect fork operation.
A deformed outer tube must be replaced.

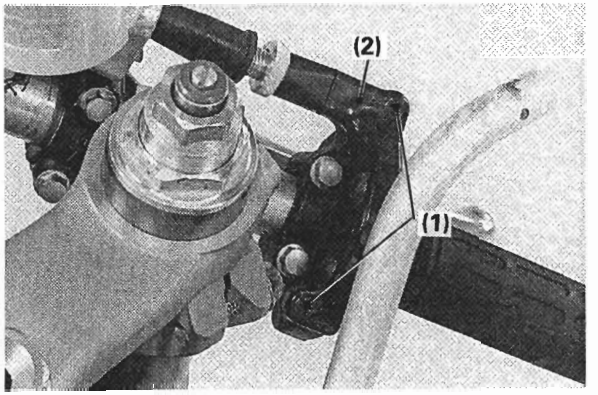
Return the spring preload/rebound/compression adjusters to their original positions as noted during removal.



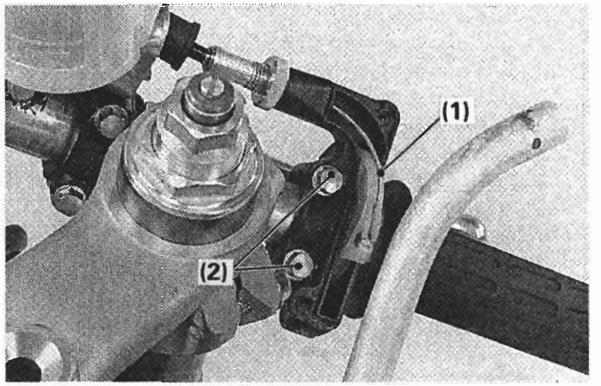
(1) FRONT FENDER (2) BRAKE CALIPER

Install the front fender and tighten the bolts.
Install the brake caliper and tighten the bolts.

Install the front wheel (page 5-3).



(1) SCREWS (2) COVER



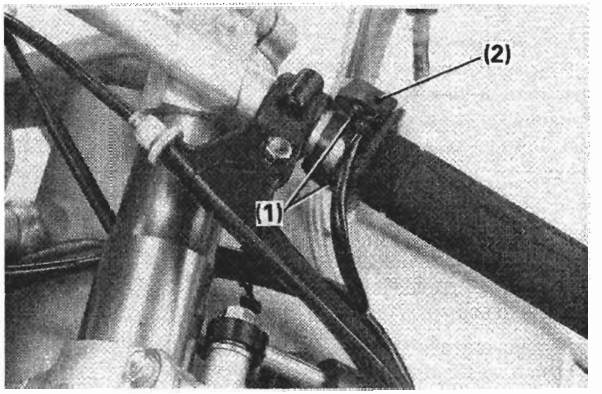
(1) THROTTLE CABLE (2) BOLTS

Handlebar

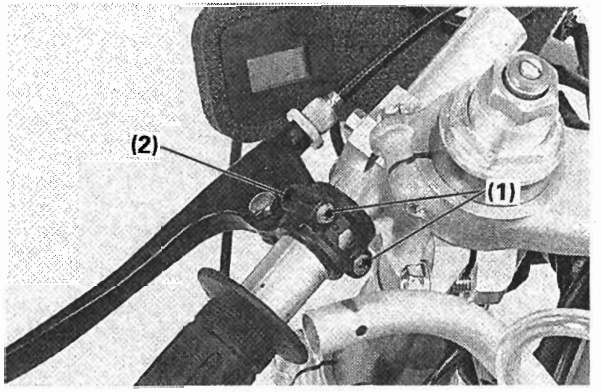
Removal

Remove the screws and throttle housing cover.

Disconnect the throttle cable from the throttle pipe.
Remove the bolts and throttle housing.
Remove the throttle pipe.
Remove the front brake master cylinder (page 5-35).



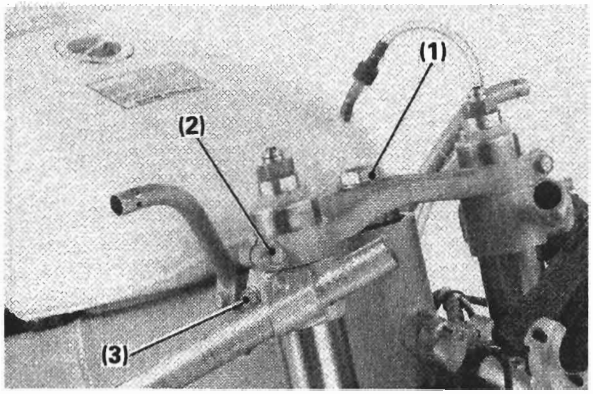
(1) SCREW (2) ENGINE STOP SWITCH



(1) SCREW (2) CLUTCH LEVER BRACKET

Remove the two screws and engine stop switch.

Remove the two screws and clutch lever bracket.



(1) STEM BOLT
(2) TOP BRIDGE PINCH BOLTS
(3) HANDLEBAR PINCH BOLTS

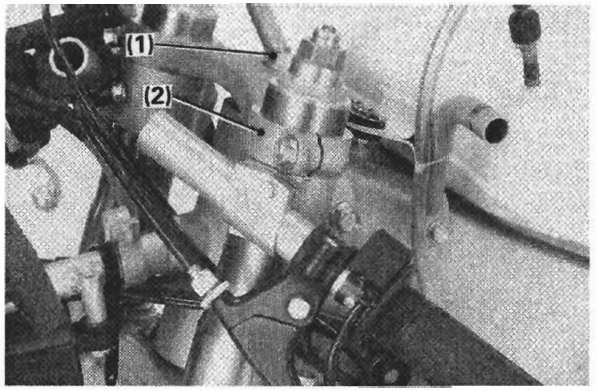
Remove the steering stem bolt.
Loosen the top bridge pinch bolts and remove the top bridge.

Loosen the handlebar pinch bolts and handlebar.

Installation is in the reverse order of removal.

Standard position: Contact with the top bridge

Torque:
Handlebar pinch bolt: 23 N·m (2.3 kgf·m, 17 lbf·ft)
Top bridge pinch bolt: 23 N·m (2.3 kgf·m, 17 lbf·ft)
Steering stem bolt: 59 N·m (6.0 kgf·m, 43 lbf·ft)

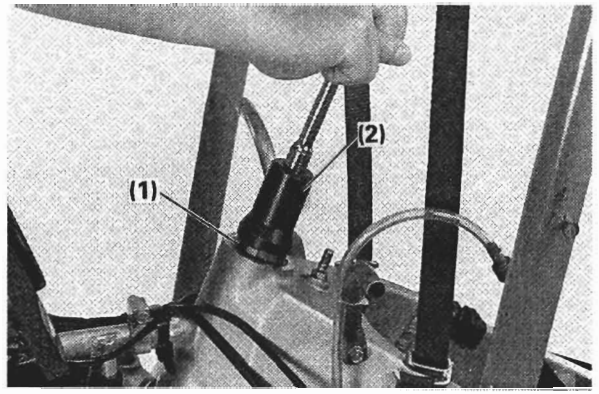


(1) STEM BOLT (2) TOP BRIDGE

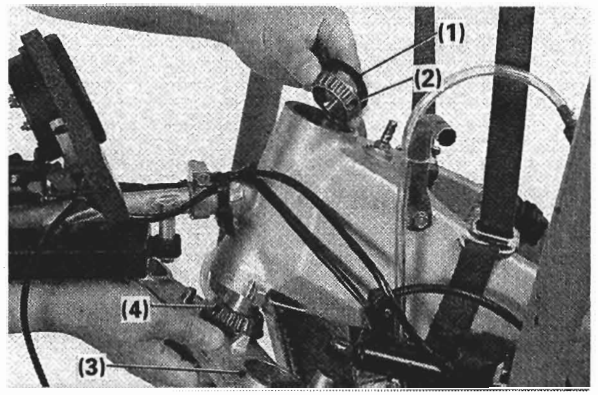
Steering Stem

Removal

Remove the following:
- Upper cowl
- Front wheel (page 5-1)
- Steering stem bolt
- Fork legs (page 5-4)
- Top bridge



(1) ADJUSTING NUT
(2) STEERING STEM SOCKET

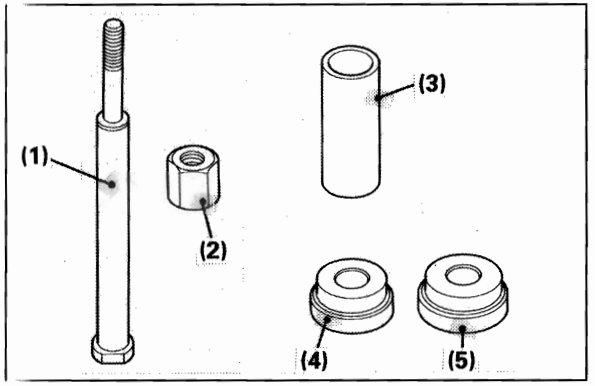


(1) DUST SEAL (2) UPPER BEARING
(3) STEERING STEM (4) LOWER BEARING

Remove the lock washer.
Remove the stem bearing adjusting nut.

TOOL:
Steering stem socket 07916-KA50100

Remove the following:
- Dust seal
- Upper bearing
- Steering stem/lower bearing



(1) DRIVER SHAFT (2) NUT
(3) COLLAR (4) ATTACHMENT, 47 mm
(5) ATTACHMENT, 51 mm

Outer Race Replacement

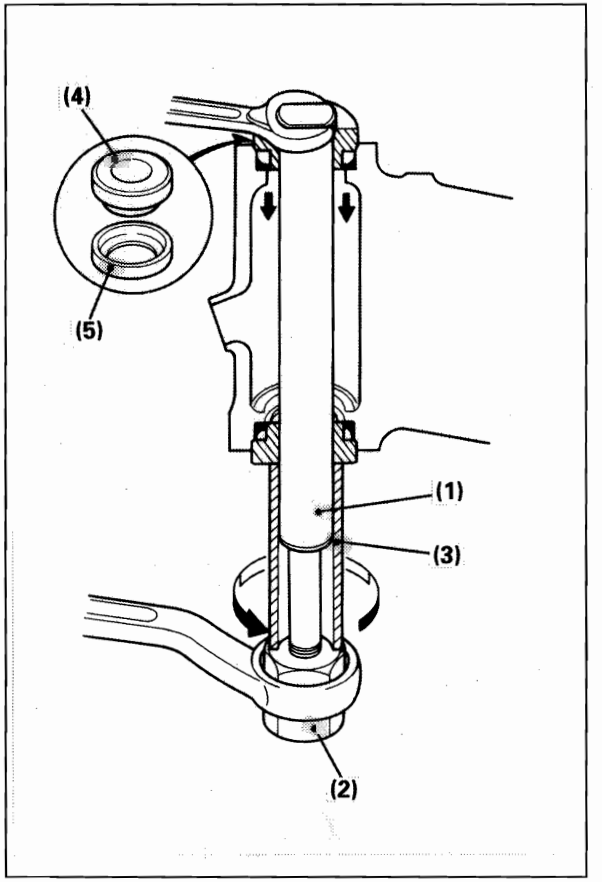
Always replace the steering bearings and races as a set.
If the machine has been involved in an accident, examine the steering stem and the area around the steering head for cracks.

Remove the outer races.

Install the new outer races using the Ball Race Driver Set as described in the following procedure.

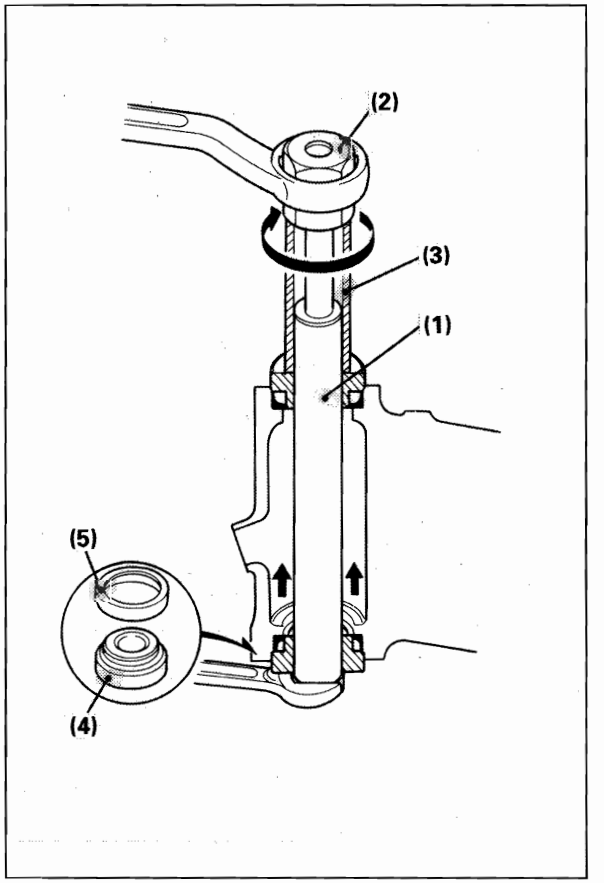
TOOLS:

Ball race driver set	**07910-NX4-003**
- Driver shaft nut	**07911-NX4-003**
- Assembly collar	**07912-NX4-003**
- Driver attachment, 47 mm	**07913-NX4-003**
- Driver attachment, 51 mm	**07914-NX4-003**
- Driver shaft	**07915-NX4-003**



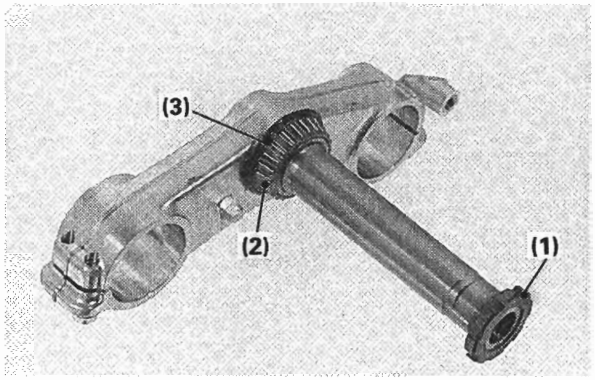
(1) DRIVER SHAFT (2) NUT (3) COLLAR
(4) DRIVER ATTACHMENT, 47 mm
(5) UPPER OUTER RACE

Install a new upper outer race and the ball race driver as shown.
Holding the driver shaft (1) with a wrench, turn nut (2) gradually until the groove in the driver attachment (4) aligns with the upper end of the steering head to install the upper outer race.



(1) DRIVER SHAFT (2) NUT (3) COLLAR
(4) DRIVER ATTACHMENT, 51 mm
(5) LOWER OUTER RACE

Install a new lower outer race and the ball race driver as shown.
Holding the driver shaft (1) with a wrench, turn nut (2) gradually until the groove in driver attachment (4) aligns with the upper end of the steering head to install the lower outer race.

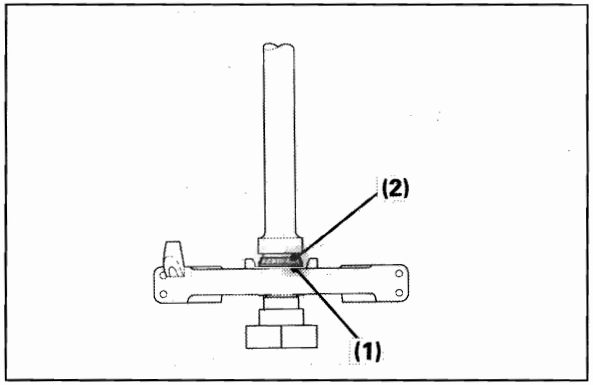


(1) STEERING THREAD (2) LOWER BEARING
(3) DUST SEAL

Lower Bearing Replacement

Temporarily install the stem bearing adjusting nut onto the steering stem to prevent damage to the threads.

Remove the lower bearing and dust seal, and discard them.

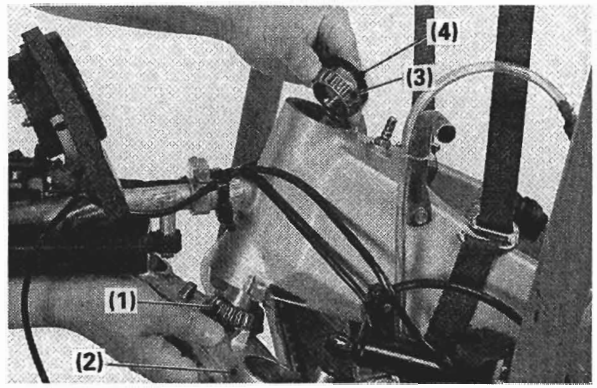


(1) NEW DUST SEAL
(2) NEW LOWER BEARING

Install the following:
– New dust seal
– New lower bearing

Press the lower bearing in, using the special tool and a hydraulic press.

TOOL:
Steering stem driver 07946-MB00000

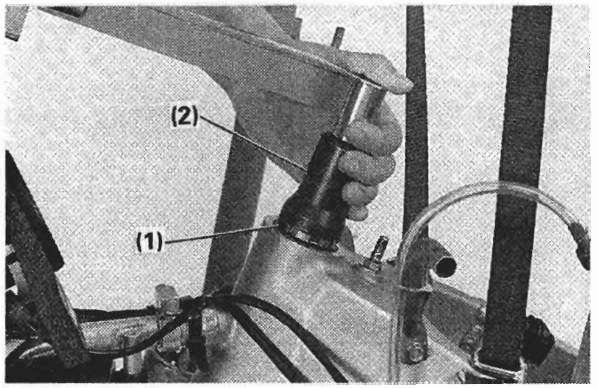


(1) LOWER BEARING (2) STEERING STEM
(3) NEW UPPER BEARING
(4) NEW DUST SEAL

Installation

Apply grease to the upper and lower bearings and races.

Slide the steering stem through the steering head from the bottom.
Install the new upper bearing and new dust seal.

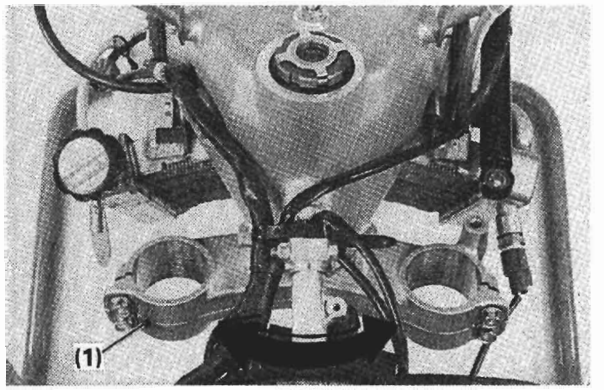


(1) ADJUSTING NUT
(2) STEERING STEM SOCKET

Install the steering stem as follows:
1. Apply oil to the stem bearing adjusting nut threads. Tighten the adjusting nut to the specified torque using the special tool.

TOOL:
Steering stem socket 07916-KA50100

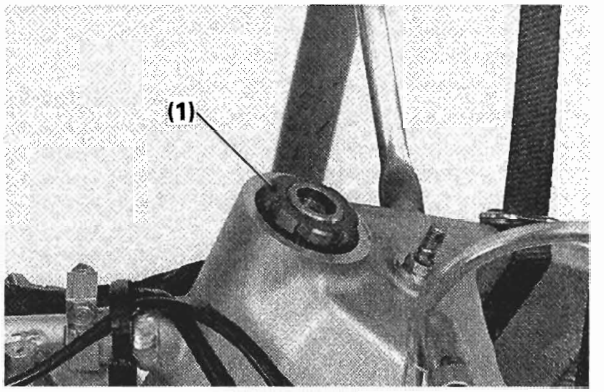
Torque: 15 N·m (1.5 kgf·m, 11 lbf·ft)



(1) STEERING STEM

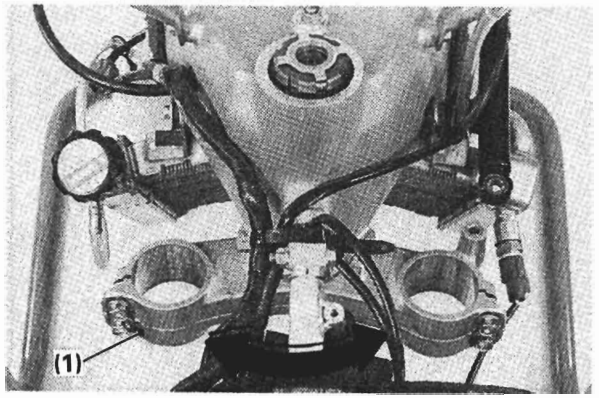
2. Move the steering stem right and left, lock-to-lock several times to seat the bearings.
   Make sure that the steering stem moves smoothly, without play or binding.

Above picture do not show correct wiring illustration see cable & harness routing (page 2-7, 8) for proper wiring.



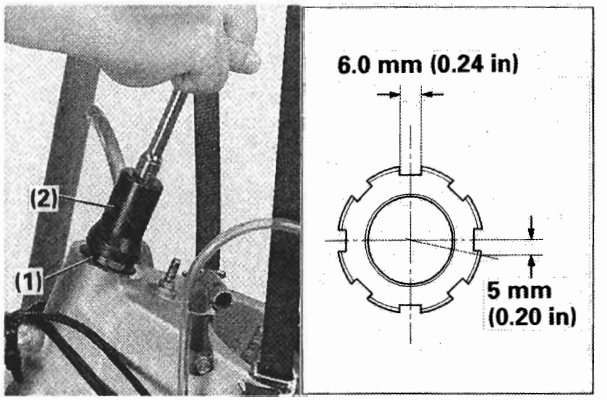
(1) BEARING ADJUSTING NUT

3. Loosen the bearing adjusting nut, so that the adjusting nut turns by hand.
   Do not loosen the adjusting nut more than necessary.
4. Retighten the stem bearing adjusting nut by hand.

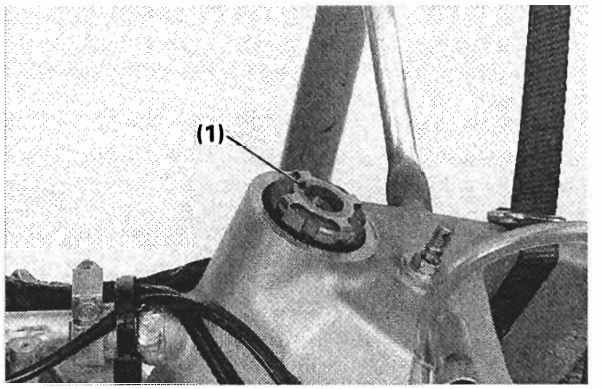


(1) STEERING STEM

5. Move the steering stem right and left, lock-to-lock several times to seat the bearings.
6. Retighten the adjusting nut by hand.
7. Repeat step 5—6 about 3 times.
   Then tighten the adjusting nut, so that the adjusting nut does not move by hand.



(1) ADJUSTING NUT
(2) STEERING STEM SOCKET



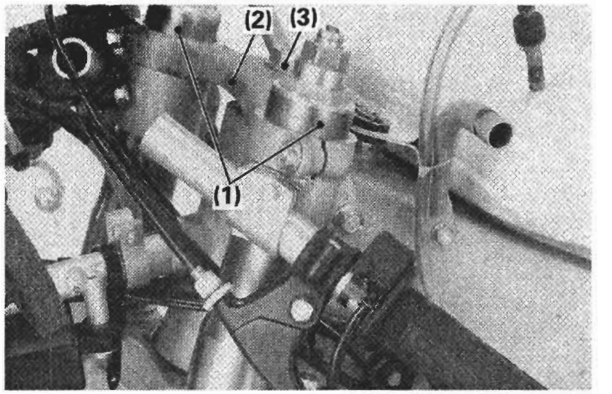
(1) LOCK WASHER

8. Further tighten the adjusting nut to the specified torque using the special tool.
   If a torque wrench is not available further tighten the nut about 5.0 mm (0.20 in) as shown.

TOOL:
Steering stem socket 07916-KA50100

Torque: 6 N·m (0.60 kgf·m, 4.3 lbf·ft)

9. Install the lock washer onto the adjusting nut.



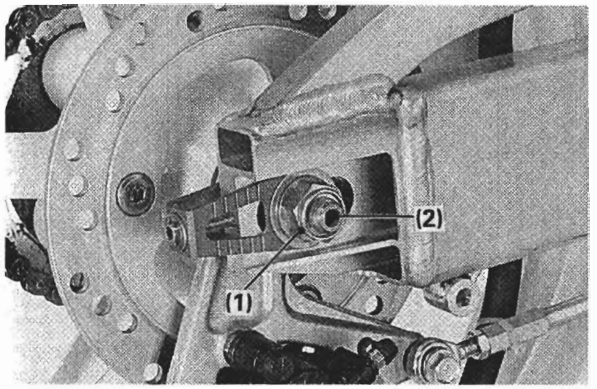
(1) FORK LEGS (2) TOP BRIDGE
(3) STEM BOLT

Install the following:
- Fork legs (page 5-12)
- Handlebar
- Top bridge
- Steering stem bolt

Apply grease to the steering stem bolt threads.
Tighten the steering stem bolt to the specified torque.

Torque: 59 N·m (6.0 kgf·m, 43 lbf·ft)

Install the front wheel (page 5-3).
Install the upper cowl.



(1) AXLE NUT (2) AXLE

Rear Wheel

Removal

Support the machine using the maintenance stand.

Loosen the axle nut.

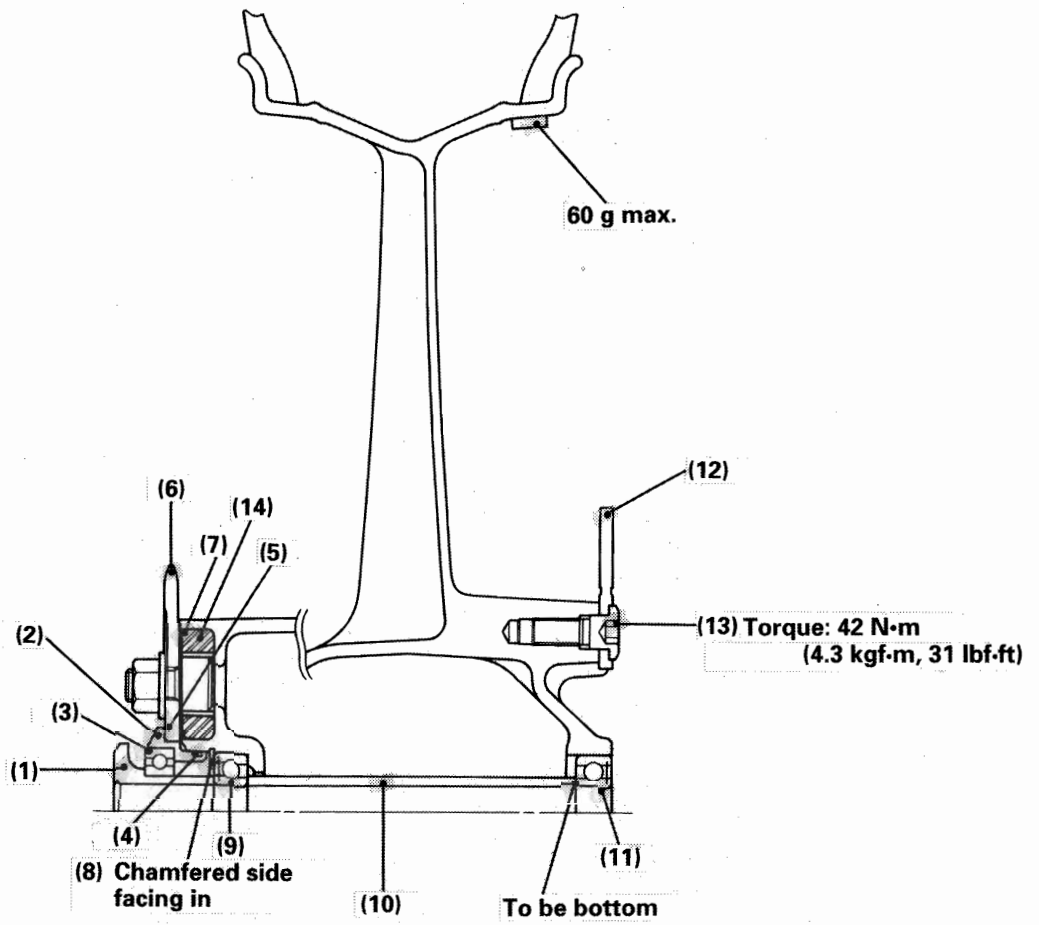
Hold the axle and remove the rear axle nut. Remove the axle and washers.

Derail the drive chain from the driven sprocket and remove the rear wheel.

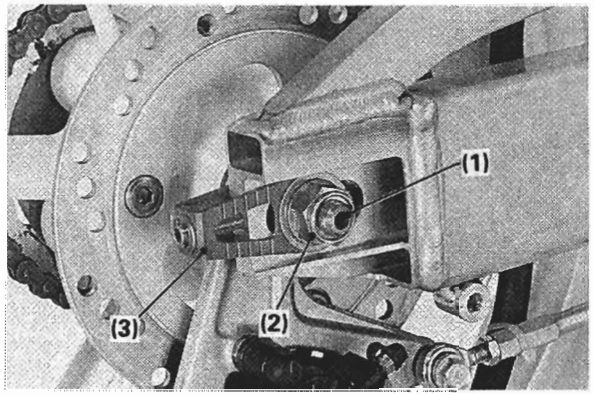
Do not depress the brake pedal after the rear wheel is removed. The caliper piston will move and make reassembly difficult.

See page 5-2 for inspection.

Disassembly/Assembly



(1) SIDE COLLAR
(2) SPROCKET COLLAR
(3) SPROCKET COLLAR BEARING (6904UU)
(4) O-RING
(5) SPROCKET COLLAR WASHER (OPTIONAL)
(6) DRIVEN SPROCKET
(7) SPROCKET WASHER
(8) SNAP RING
(9) LEFT WHEEL BEARING (6202U)
(10) DISTANCE COLLAR
(11) RIGHT WHEEL BEARING (6202U)
(12) BRAKE DISC
(13) BRAKE DISC BOLT
(14) DAMPER RUBBER



(1) AXLE (2) AXLE NUT
(3) DRIVE CHAIN ADJUSTER

Installation

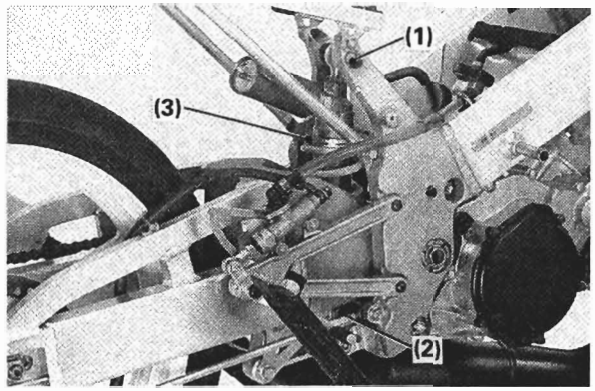
Place the rear wheel between the swingarm while aligning the brake disc between the brake pads.
Install the drive chain.

NOTICE

Use care to avoid damaging the brake pads.

Apply a thin layer of grease to the axle surface.
Install the washer and rear axle from the left side.
Install the washer and axle nut.
Check the drive chain slack (page 3-8).
Tighten the axle nut to the specified torque while holding the rear axle.

Torque: 69 N·m (7.0 kgf·m, 51 lbf·ft)



(1) UPPER MOUNTING BOLT/NUT
(2) LOWER MOUNTING BOLT/NUT
(3) REAR SHOCK ABSORBER

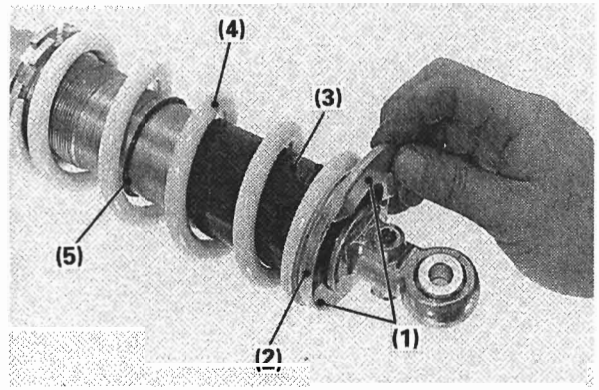
Rear Shock Absorber

Removal

Remove the seat cowl.
Support the machine using a maintenance stand.

If you will replace the spring, loosen the lock nut and adjuster before removing the rear shock absorber.

Remove the following:
- Upper mounting nut and bolt
- Lower mounting nut and bolt
- Rear shock absorber



(1) SPRING SEAT STOPPERS (2) SPRING SEAT
(3) SPRING GUIDE (4) SPRING (5) O-RING

Disassembly

Loosen the spring lock nut and adjuster.
Remove the following:
- Spring seat stoppers
- Spring seat
- Spring guide
- Spring
- O-ring

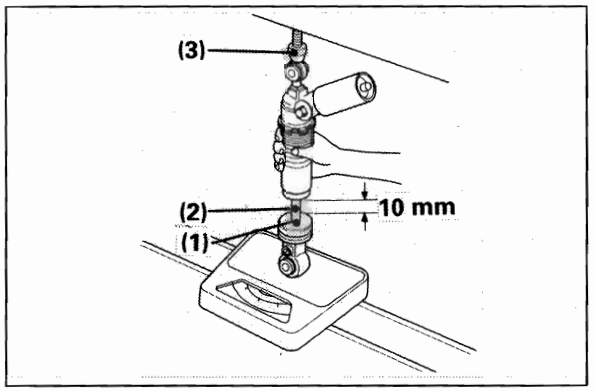
Inspection

Spring

Check the spring for fatigue or damage.

Spherical Bearings

Check the spherical bearings for smooth operation or damage.



(1) DAMPER ROD (2) MARK
(3) HYDRAULIC PRESS

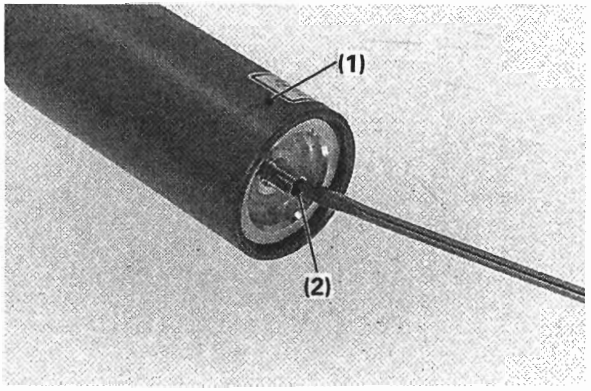
Damper

Check for oil leakage from the damper rod.
Replace the damper assembly if the oil is leaking.

Mark the damper rod at the first 10 mm (0.4 in) exposed from the damper body.
Place the damper rod on a scale and measure the force required to compress the damper until the 10 mm (0.4 in) mark is flush with the damper body.

Compression force: 150—195 N (15.4 —20.0 kgf)

If the force required is less than 150 N (15.4 kgf), nitrogen is leaking.
Fill the reservoir with 981—1,275 kPa (10.0—13.0 kgf/cm², 142—185 psi) of nitrogen gas.



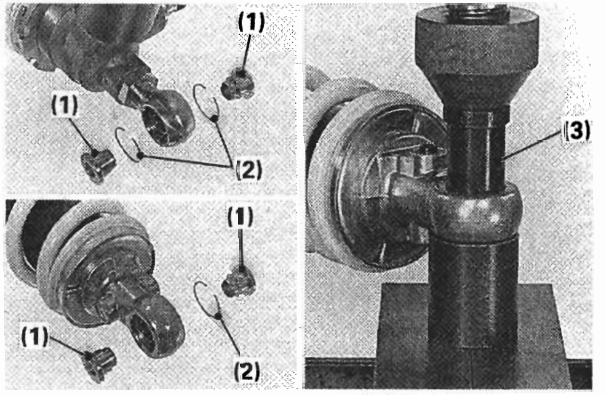
(1) RESERVOIR (2) VALVE CORE

Nitrogen Releasing Procedure

Wear adequate eye protection.
Point the valve away from you to prevent debris getting into your eyes.

Remove the reservoir valve cap.
Release the nitrogen from the reservoir by depressing the valve core until pressure is released.

Before disposal of the rear shock absorber, release the nitrogen from the reservoir and then remove the valve core.



(1) PIVOT COLLARS (2) STOP RINGS
(3) SPHERICAL BEARING DRIVER

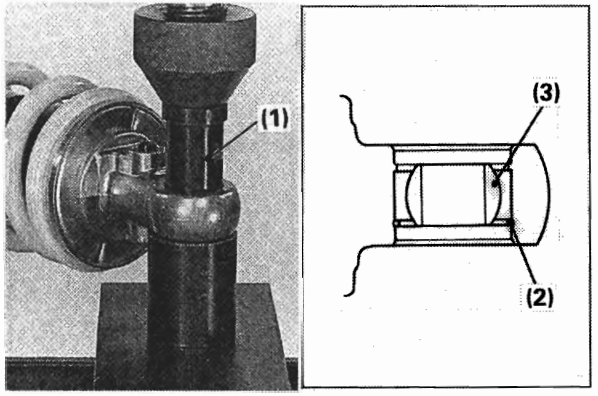
Spherical Bearing Replacement

Hold the shock absorber in a vise with a piece of wood or shop towel.
Ply the collars out from the spherical bearing using screwdrivers being careful not to damage the shock absorber.

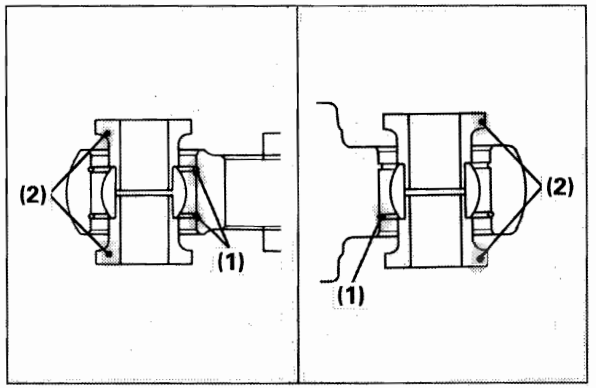
Remove the stop rings from the upper joint.
Remove the stop ring from the lower joint.

Press out the spherical bearing using the special tool.

TOOL:
Spherical bearing driver 07946-KA30200



(1) SPHERICAL BEARING DRIVER
(2) STOP RING (3) SPHERICAL BEARING

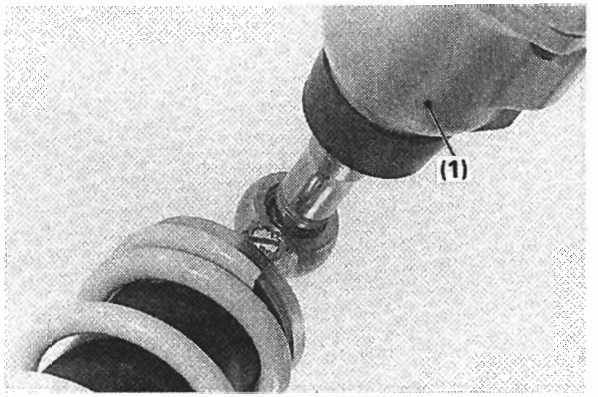


(1) STOP RINGS (2) PIVOT COLLARS

Install the stop ring into the groove.
Press the new spherical bearing using the special tool.

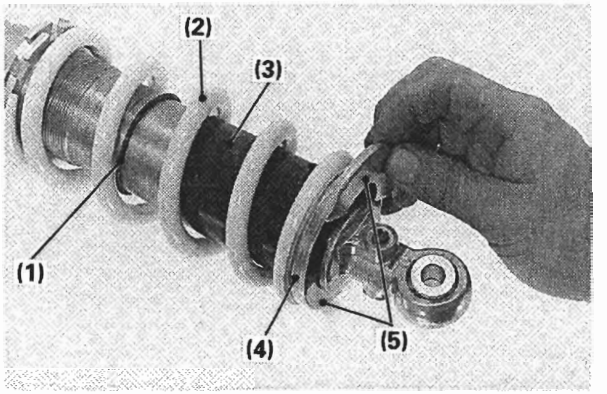
TOOL:
Spherical bearing driver 07946-KA30200

Install the opposite side stop ring into the upper joint groove securely.
Install the pivot collars.



(1) AIR TOOL

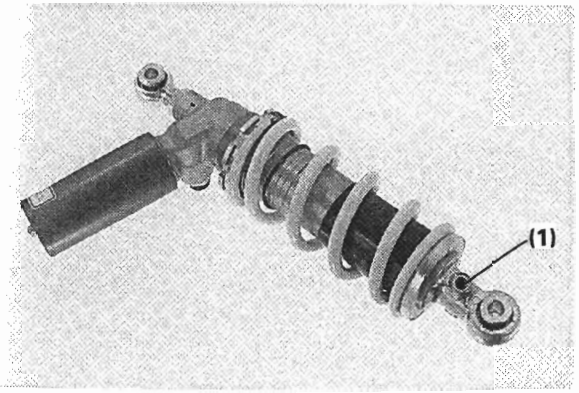
Inspect the spherical bearing prior to extensive use. If the movement is not smooth, be sure to perform braking-in procedures to the extent that the parts may be rotated by hand. Unless this precaution is taken, proper suspension setting cannot be done.
For the braking-in procedure, attach the bolt and nut to the bearing, and rotate with an air tool.
In order to avoid overheating, allow intervals in between rotations and apply oil.



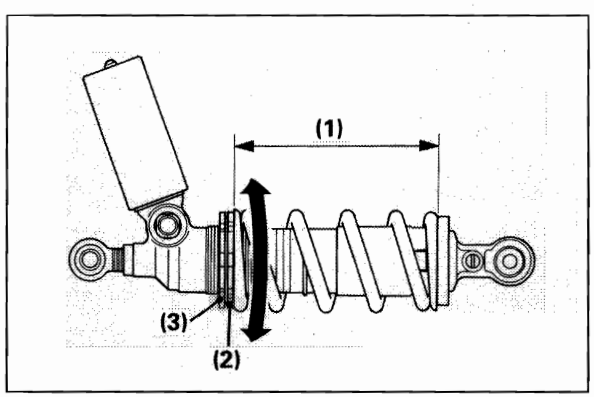
(1) O-RING (2) SPRING (3) SPRING GUIDE
(4) SPRING SEAT (5) SPRING SEAT STOPPERS

Assembly

Install the O-ring onto the damper case.
Install the shock absorber spring with tapered end facing down.
Install the following:
- Spring guide
- Spring seat
- Spring seat stoppers



(1) REBOUND ADJUSTER

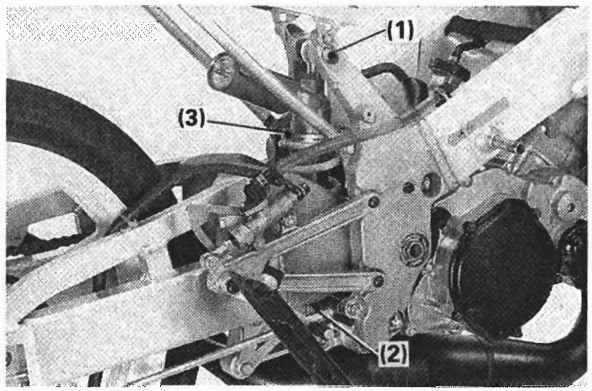


(1) PRELOAD LENGTH (2) ADJUSTER
(3) LOCK NUT

Note the direction of the rebound adjuster.

Adjust the spring preload length (page 7-17•18). Hold the spring adjuster and tighten the lock nut to the specified torque.

Torque: 49 N·m (5.0 kgf·m, 36 lbf·ft)



(1) UPPER MOUNTING BOLT/NUT
(2) LOWER MOUNTING BOLT/NUT
(3) REAR SHOCK ABSORBER

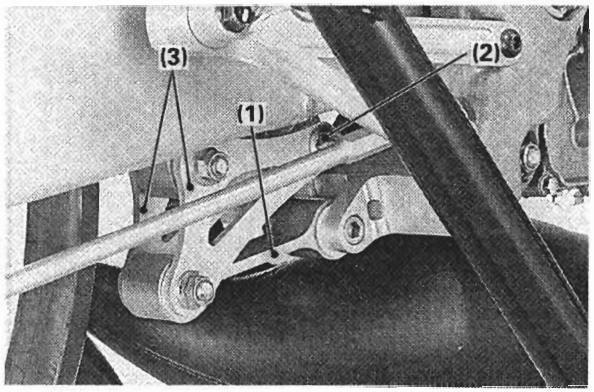
Installation

Install the rear shock absorber with its tension adjuster facing to the right.
Install the lower mounting bolt from the right side.

Move the swingarm aligning the upper mount, then install the upper mounting bolt from the right side.

Install and tighten the upper and lower mounting nuts.

Add a load (1G) when installing the rear shock absorber mounting nuts.



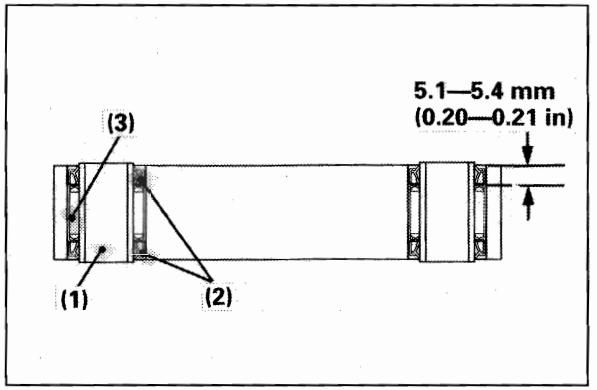
(1) SHOCK LINK
(2) LOWER MOUNTING BOLT/NUT
(3) SHOCK ARM PLATES

Shock Linkage

Removal

Support the machine using the maintenance stand.

Remove the following:
- Shock link-to-shock arm plate bolt/nut
- Shock link-to-frame bolt/nut
- Shock link
- Teflon washers
- Rear shock absorber lower mounting bolt/nut
- Shock arm plate-to-swingarm bolt/nut
- Shock arm plates
- Teflon washers



(1) PIVOT COLLAR
(2) DUST SEALS
(3) NEEDLE BEARING

Bearing Replacement

Remove the pivot collars and dust seals.
Remove the pivot bearing using the special tools and hydraulic press.

TOOLS:

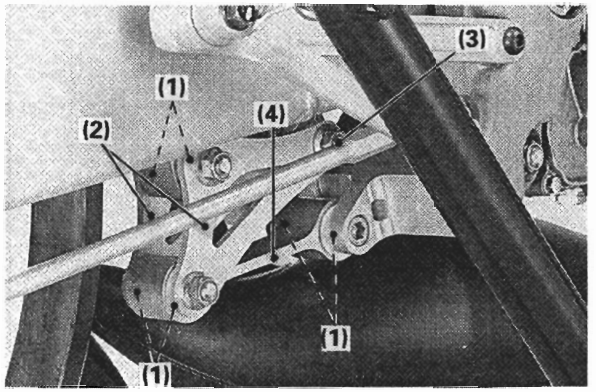
Needle bearing driver	**07946-MJ00000**
– Driver shaft	**07946-MJ00100**
– Driver head	**07946-MJ00200**

Apply grease to the bearing rollers, then press the bearing into the shock link so that it is 5.1—5.4 mm (0.20 – 0.21 in) below the shock arm end.
Press the bearings with their marked side.

TOOLS:

Driver	**07749-0010000**
Attachment, 24 × 26 mm	**07746-0010700**
Pilot, 17 mm	**07746-0040400**

Apply grease to the dust seal lips, install them.
Install the pivot collars.

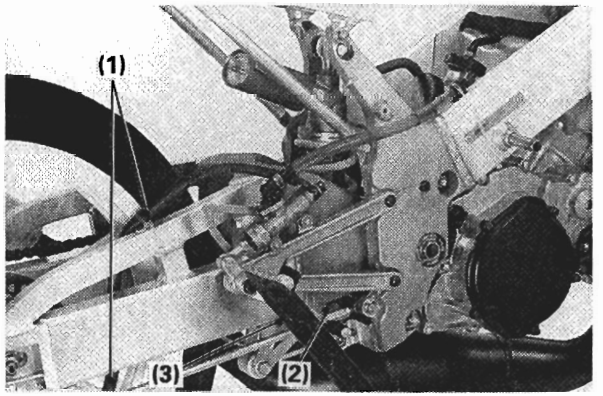


(1) TEFLON WASHERS (2) SHOCK ARM PLATES
(3) LOWER MOUNTING BOLT/NUT
(4) SHOCK LINK

Installation

Install the following:
– Teflon washers
– Shock arm plates
– Shock arm-to-swingarm bolt/nut
– Rear shock absorber lower mounting bolt/nut
– Teflon washers
– Shock link
– Shock link-to-shock arm plate bolt/nut
– Shock link-to-frame bolt/nut

Tighten the shock linkage mounting nuts.
Tighten the rear shock absorber lower mounting nut.
Add a load (1G) when installing the rear shock linkage parts.

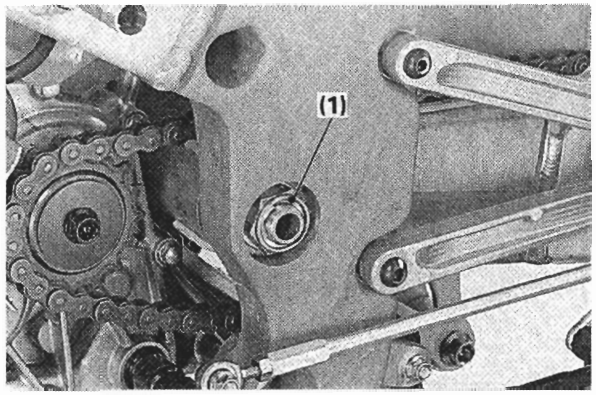


(1) TIE-WRAPS (2) LOWER MOUNTING BOLT
(3) SHOCK ARM PLATE BOLT

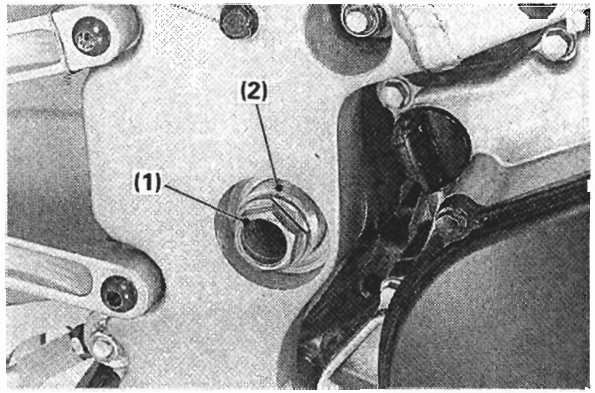
Swingarm

Removal

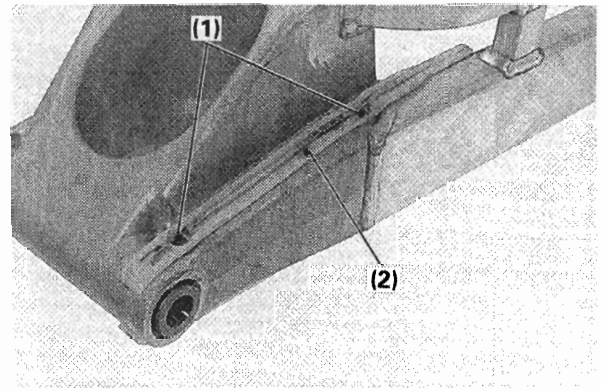
Remove the following:
– Rear wheel (page 5-19)
– Rear brake caliper bracket (page 5-33)
– Rear brake hose tie wraps
– Shock absorber lower mounting bolt/nut
– Shock arm plates-to-swingarm bolt/nut
– Teflon washers



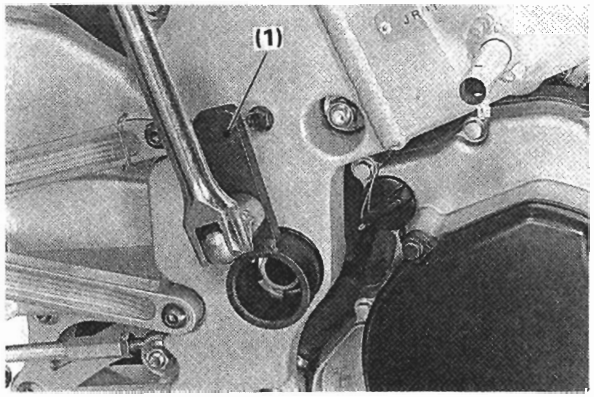
(1) PIVOT NUT



(1) PIVOT BOLT (2) ADJUSTING BOLT



(1) SCREWS (2) DRIVE CHAIN SLIDER



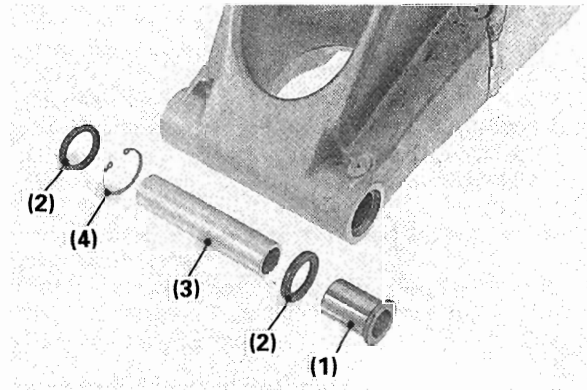
(1) LOCK NUT WRENCH

Remove the swingarm pivot nut.

Loosen the swingarm pivot lock nut.

TOOL:
Lock nut wrench **07908-4690002**

Turn the swingarm pivot bolt and loosen the pivot adjusting bolt.
Remove the swingarm pivot bolt and swingarm.



(1) PIVOT COLLAR B (2) DUST SEALS
(3) DISTANCE COLLAR (4) SNAP RING

Disassembly

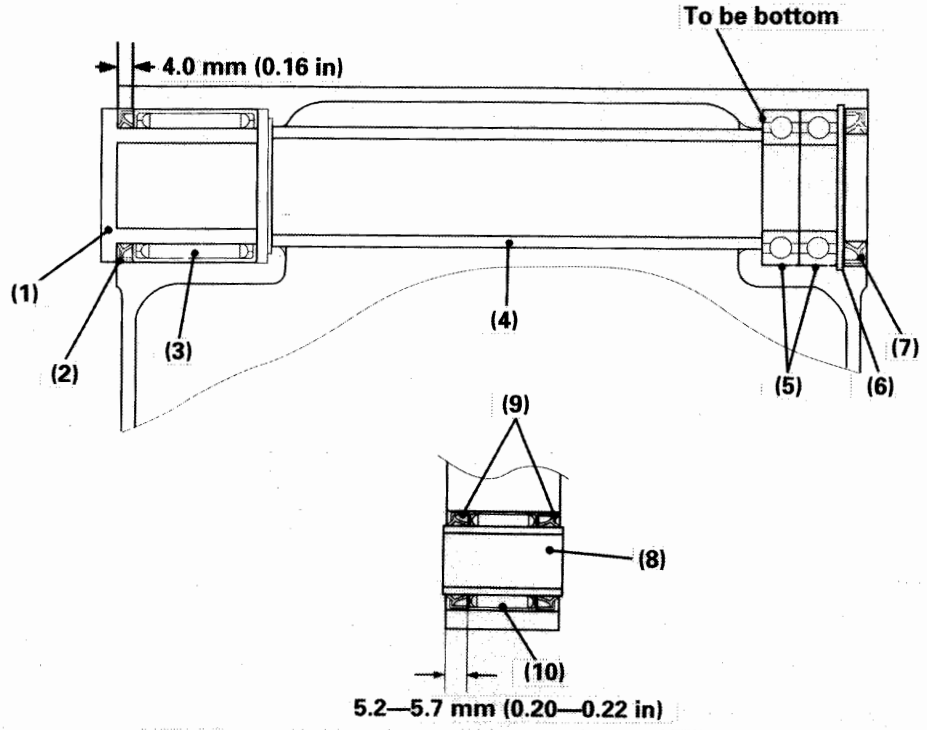
Remove the screws and drive chain sliders.

Remove pivot collar B.
Remove the dust seals and distance collar.

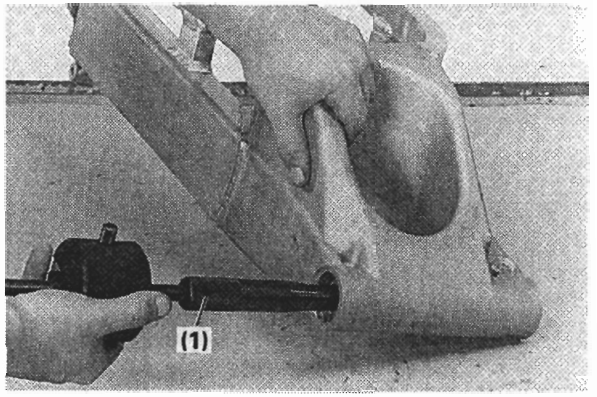
Remove the snap ring.

Swingarm Pivot Bearing Replacement

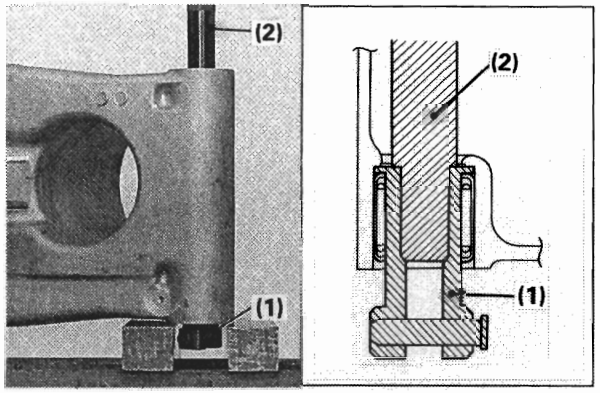
- Replace the swingarm bearings as a set.



(1) PIVOT COLLAR B
(2) LEFT DUST SEAL
(3) NEEDLE BEARING
(4) DISTANCE COLLAR
(5) RIGHT PIVOT BEARING (20 × 37 × 9 mm)
(6) SNAP RING
(7) RIGHT DUST SEAL
(8) SHOCK ARM PLATE PIVOT COLLAR
(9) DUST SEAL (17 × 24 × 5 mm)
(10) NEEDLE BEARING (17 × 24 × 17 mm)



(1) BEARING REMOVER SET



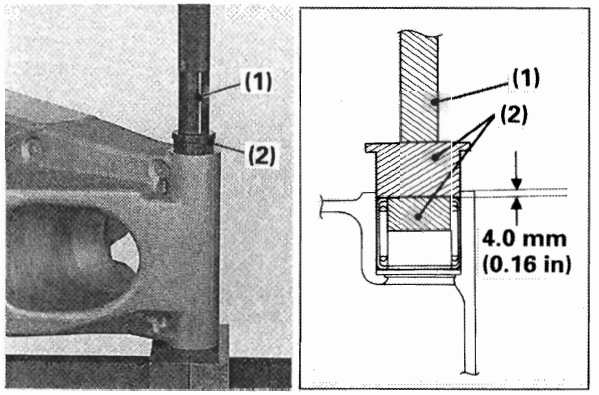
(1) NEEDLE BEARING REMOVER
(2) DRIVER SHAFT

Remove the right pivot bearings using the special tool.

TOOL:
Bearing remover set, 20 mm 07936-3710001

Remove the left pivot bearing using the special tools.

TOOLS:
Needle bearing remover 07HMC-MR70100
Driver shaft 07946-MJ00100



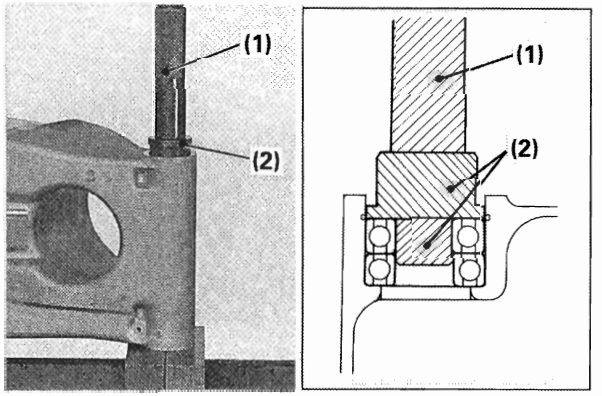
(1) DRIVER (2) ATTACHMENT/PILOT

Press a new left pivot bearing in using the special tools.

Face the bearing with its marked side facing out.
Press the needle bearing so that it is 4.0 mm (0.16 in) below the swingarm end.

TOOLS:

Driver	**07749-0010000**
Attachment, 37 × 40 mm	**07746-0010200**
Pilot, 28 mm	**07746-0041100**

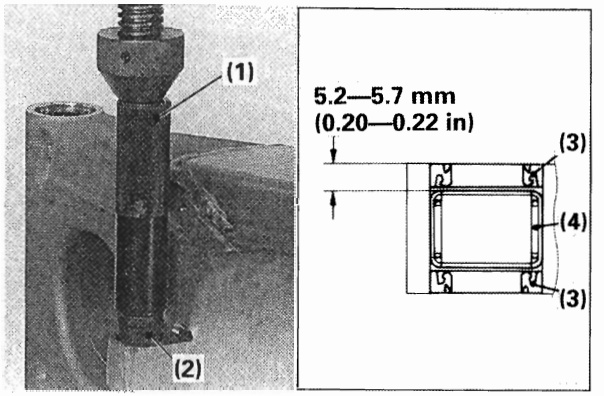


(1) DRIVER (2) ATTACHMENT/PILOT

Press the new right pivot bearings in using the special tools.

TOOLS:

Driver	**07749-0010000**
Attachment, 37 × 40 mm	**07746-0010200**
Pilot, 20 mm	**07746-0040500**



(1) DRIVER (2) ATTACHMENT/PILOT
(3) DUST SEALS (4) NEEDLE BEARING

Press the shock arm plate pivot needle bearing out using the special tools.

TOOLS:

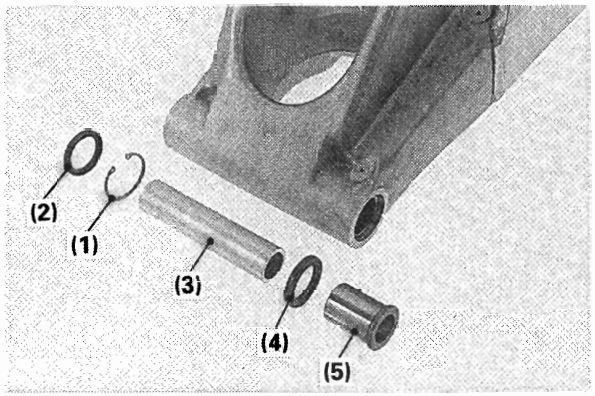
Needle bearing driver	**07946-MJ00000**
– Driver shaft	**07946-MJ00100**
– Driver head	**07946-MJ00200**

Press a new shock arm plate pivot bearing in using the special tools.
Face the bearing with its marked side facing out.
Press the needle bearing so that it is 5.2—5.7 mm (0.20—0.22 in) below the pivot end.

TOOLS:

Driver	**07749-0010000**
Attachment, 24 × 26 mm	**07746-0010700**
Pilot, 17 mm	**07746-0040400**

Apply grease to the dust seal lips, install them.
Install the pivot collars.

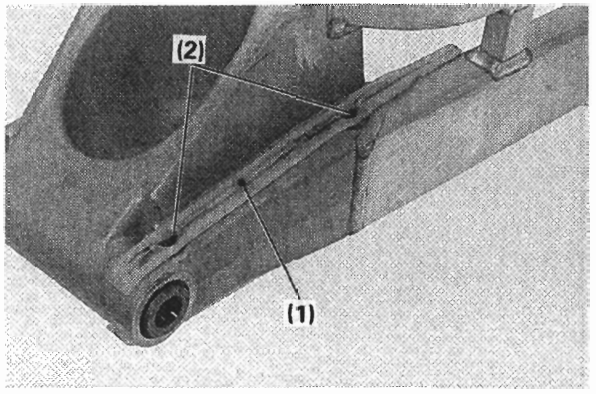


(1) SNAP RING (2) RIGHT DUST SEAL
(3) DISTANCE COLLAR (4) LEFT DUST SEAL
(5) PIVOT COLLAR B

Assembly

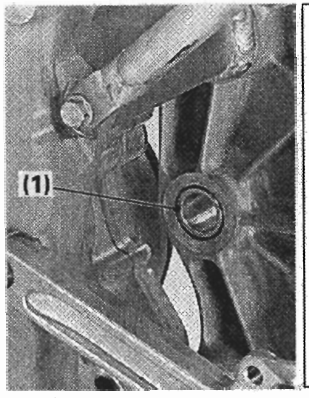
Install a snap ring into the swingarm groove securely.
Apply grease to the bearings and lips of a new dust seal, and install the dust seal into the right pivot.

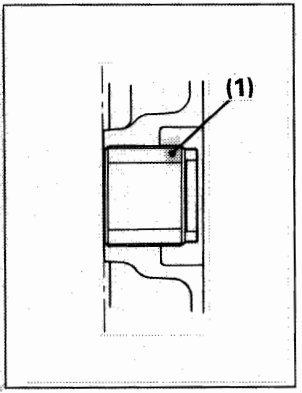
Install the distance collar.
Apply grease to the left pivot bearing and lips of a new dust seal, then install the dust seal into the left pivot.
Install pivot collar B.



(1) CHAIN SLIDER (2) SCREWS

Install the drive chain sliders onto the swingarm.
Apply a locking agent to the drive chain slider screw threads.
Install and tighten the screws.

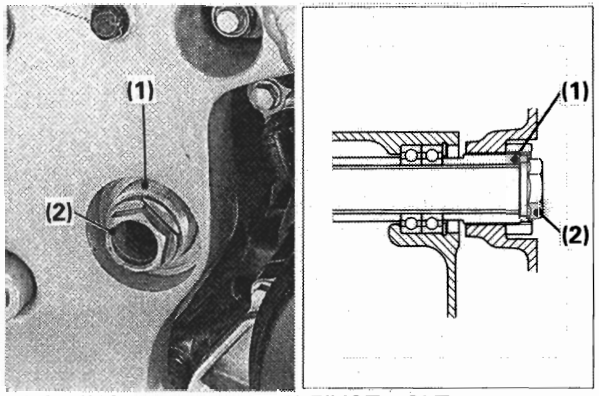




(1) ADJUSTING BOLT

Installation

Apply grease to the swingarm adjusting bolt threads.
Partially install the swingarm adjusting bolt so that the tip will not interfere with installation of the swingarm.

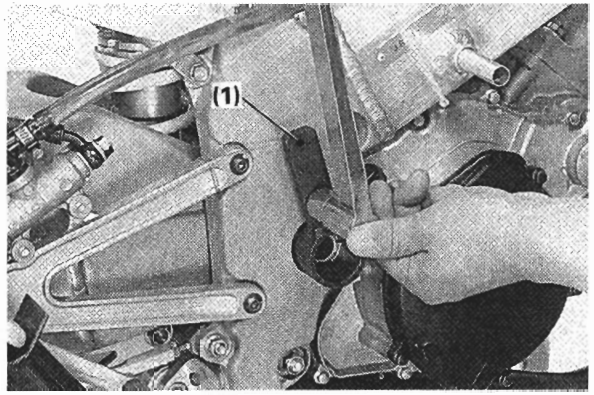


(1) ADJUSTING BOLT (2) PIVOT BOLT

Install the swingarm.
Apply a thin layer of grease to the swingarm pivot bolt surface.
Install the swingarm and pivot bolt.

Turn the pivot bolt and tighten the adjusting bolt to the specified torque.

Torque: 15 N·m (1.5 kgf·m, 11 lbf·ft)

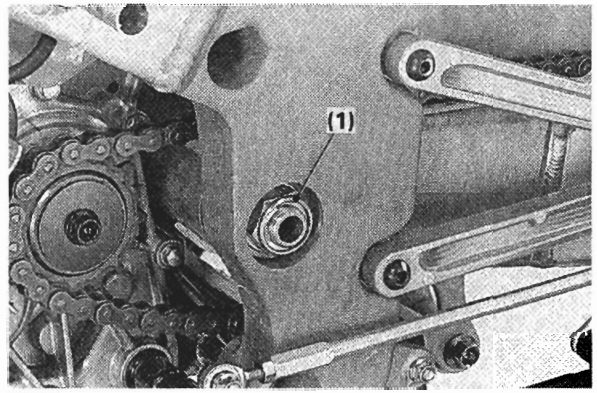


(1) LOCK NUT WRENCH

Install and tighten the swingarm adjusting bolt lock nut to the specified torque.

TOOL:
Lock nut wrench 07908-4690002

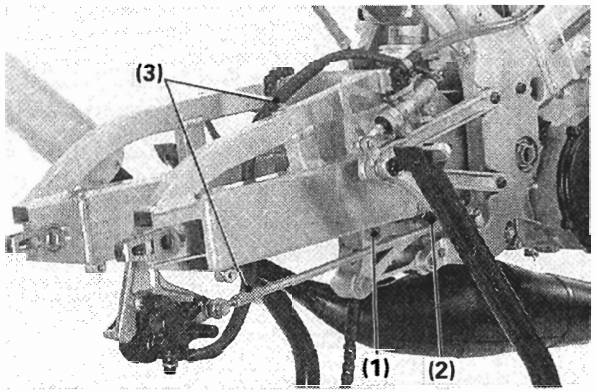
Torque: 44 N·m (4.5 kgf·m, 33 lbf·ft)



(1) PIVOT NUT

Hold the pivot bolt and install and tighten the swingarm pivot nut to the specified torque.

Torque: 95 N·m (9.7 kgf·m, 70 lbf·ft)



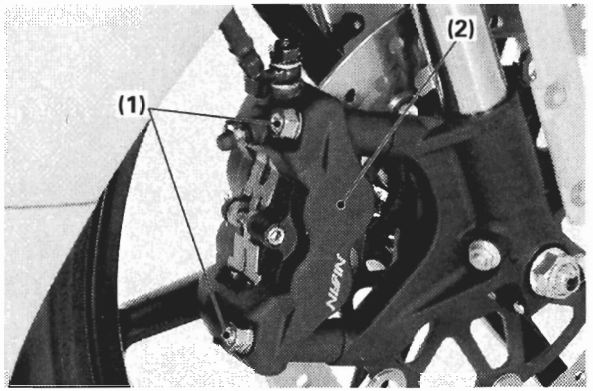
(1) SHOCK ARM PLATE BOLT
(2) LOWER MOUNTING BOLT (3) TIE-WRAPS

Install the following:
- Two teflon washers
- Shock arm plates-to-swingarm bolt/nut
- Rear shock absorber lower mounting bolt/nut

Tighten the shock arm plate bolt.
Tighten the rear shock absorber lower mounting bolt.

Route the brake hose properly, install the rear brake caliper bracket (page 5-35).
Secure the brake hose using the tie-wraps as shown.

Install the rear wheel (page 5-20).



(1) BOLTS (2) CALIPER

Brake Pad Replacement

Front Brake Pad Replacement

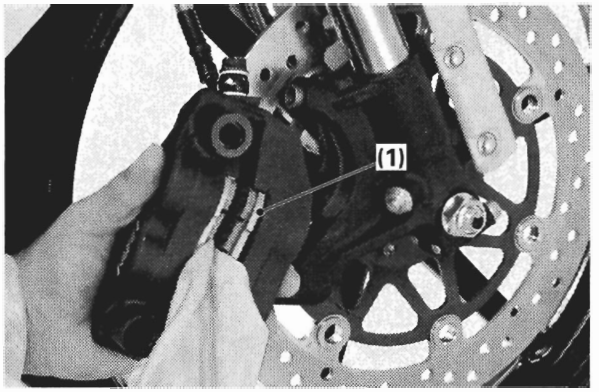
- Use genuine parts specified by HRC (listed in the parts list at the end of this book) for the pads.

⚠ WARNING

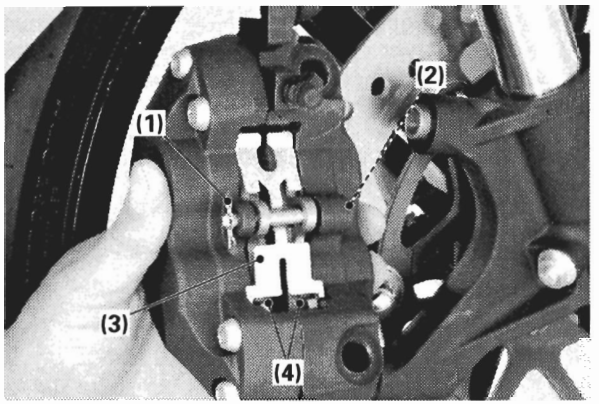
Never use the '96 cast iron disc (45120-NX4-004) and '97-'98 pads for stainless disc (45105-NX4-770) together.
If combined with the '96 disc and '97 pads, may damage or crack the disc.

Clean the brake disc or pads with a high quality degreasing agent if they are contaminated with oil or grease. If the pads can not be cleaned, replace them.

Remove the brake caliper mounting bolts and caliper.



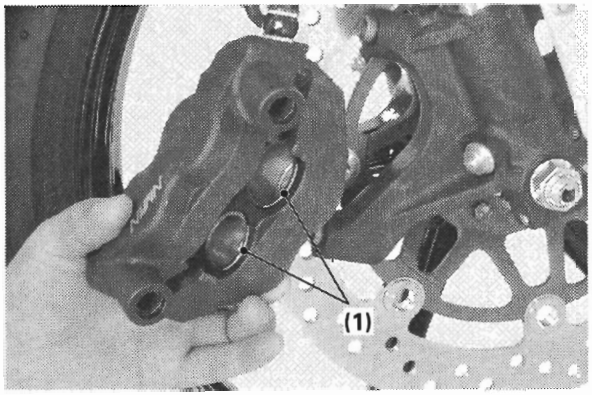
(1) BRAKE PADS



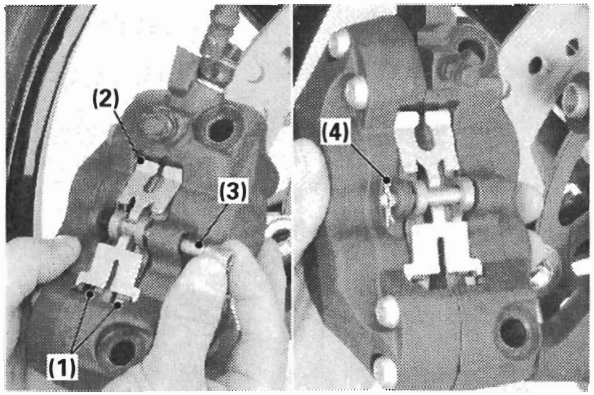
(1) B-CLIP (2) PAD PIN (3) PAD SPRING
(4) BRAKE PADS

Push the pistons all the way in to allow installation of new brake pads.
Check the brake fluid level in the reservoir as this operation causes the level to rise.

Remove the B-clip.
Remove the pad pin and pad spring.
Remove the brake pads.



(1) CALIPER PISTONS



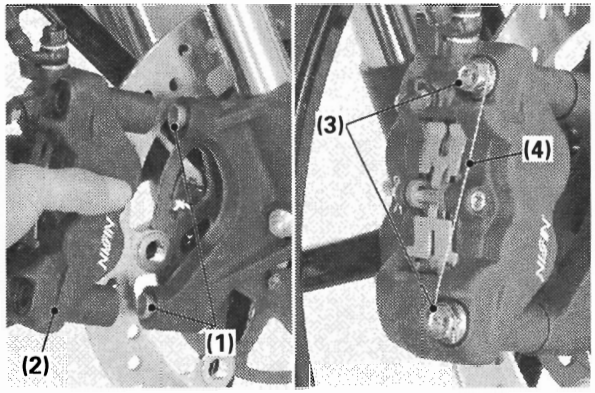
(1) NEW PADS (2) PAD SPRING (3) PAD PIN
(4) B-CLIP

Clean the brake caliper inside especially around the caliper pistons.

Install the new brake pads pad spring and pad pin. Tighten the pad pin to the specified torque.

Torque: 18 N·m (1.8 kgf·m, 13 lbf·ft)

Install the B-clip.



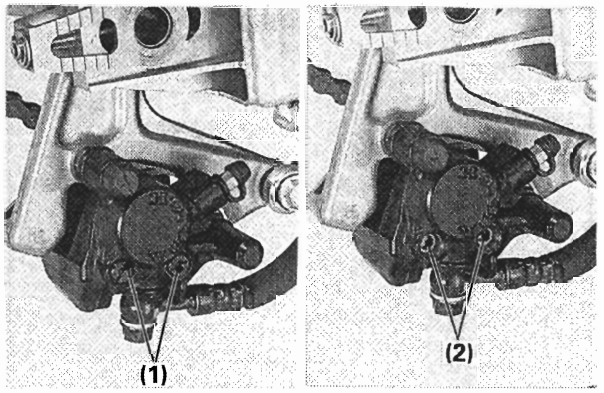
(1) DOWEL PINS (2) BRAKE CALIPER
(3) BOLTS (4) LOCK WIRE

Make sure the dowel pins in place, install the caliper to the fork slider so that the disc is positioned between the pads, being careful not to damage the pads.
Install and tighten the brake caliper mounting bolts.

Torque: 49 N·m (5.0 kgf·m, 36 lbf·ft)

Secure the bolts with lock wire (see page 3-18).

Operate the brake lever to seat the caliper pistons against the pads.



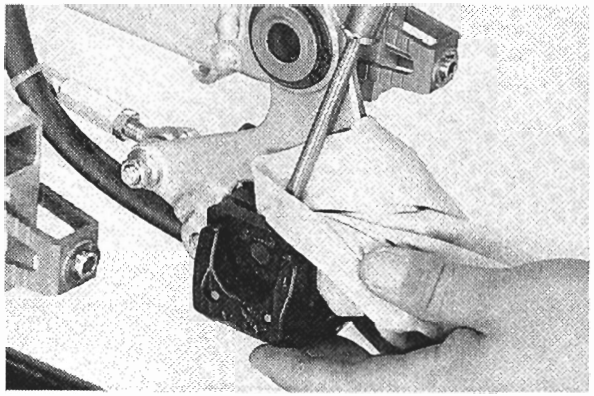
(1) PAD PIN PLUGS (2) PAD PINS

Rear Brake Pad Replacement

Clean the brake disc or pads with a high quality degreasing agent if they are contaminated with oil or grease. If the pads cannot be cleaned, replace then.

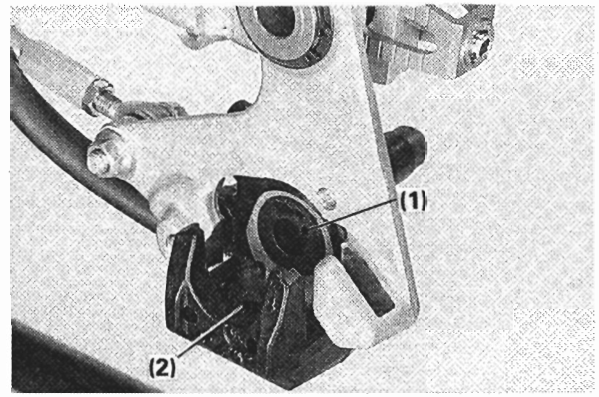
Remove the rear wheel (page 5-19).

Remove the brake pad pin plugs and loosen the pad pins.

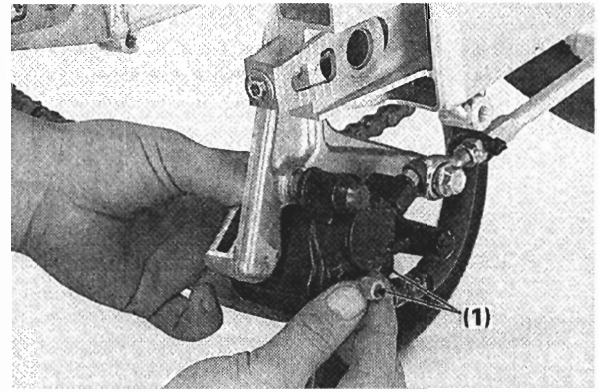


Push the piston all the way in to allow installation of new brake pads.
Check the brake fluid level in the vinyl tube as this operation causes the level to rise.

Remove the pad pins, pads and pad spring.



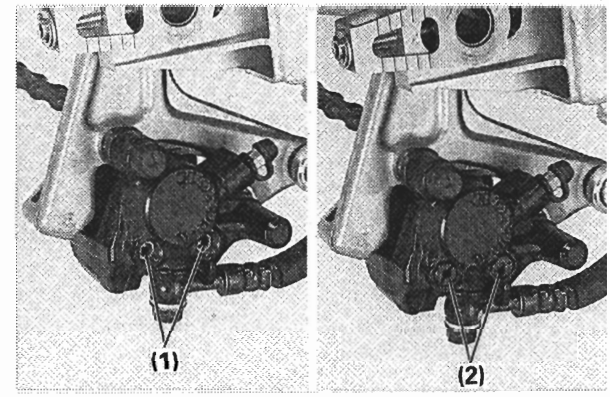
(1) CALIPER PISTON (2) PAD SPRING



(1) PAD PINS

Clean inside the brake caliper, especially around the caliper piston.
Position the pad spring in the caliper as shown.

Install the new pads by pushing the pads against the caliper to depress the pad spring.
Install the pad pins.



(1) PAD PINS (2) PAD PIN PLUGS

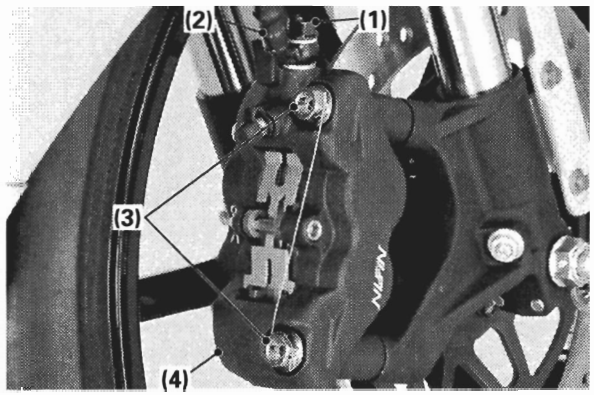
Tighten the pad pins.

Torque: 18 N·m (1.8 kgf·m, 13 lbf·ft)

Install and tighten the pad pin plugs.

Torque: 1.5 N·m (0.15 kgf·m, 1.1 lbf·ft)

Install the rear wheel (page 5-20).



(1) OIL BOLT (2) BRAKE HOSE
(3) BOLTS (4) BRAKE CALIPER

Front Brake Caliper

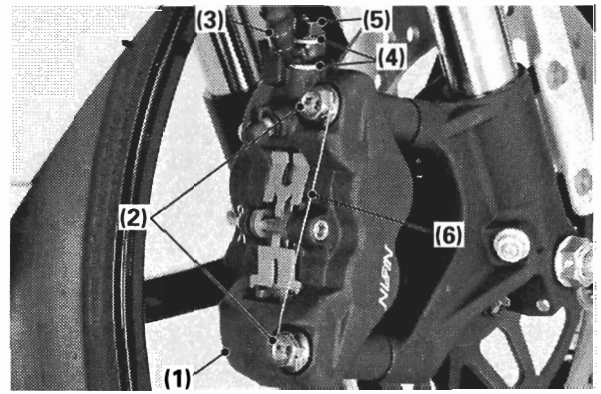
Removal

Drain the front brake system.
Place a clean container under the caliper.
Avoid spilling brake fluid on painted, plastic or rubber parts. Place a shop rag over these parts whenever the system is serviced.

NOTICE

Spilled brake fluid will damage painted, plastic or rubber parts. If fluid does get on these parts, wipe it off with a clean cloth.

Remove the following:
- Brake hose oil bolt/sealing washers
- Brake hose
- Caliper mounting bolts and caliper
- Brake pads (page 5-30)



(1) BRAKE CALIPER (2) BOLTS
(3) BRAKE HOSE (4) NEW SEALING WASHERS
(5) OIL BOLT (6) LOCK WIRE

Never disassemble the caliper. If the caliper is damaged, replace the caliper assembly.

NOTICE

Disassemble the caliper may damage it.

Installation

Install the caliper assembly over the brake disc so that the disc is positioned between the pads.
Be careful not to damage the brake pads.

Install and tighten the brake caliper mounting bolts to the specified torque.

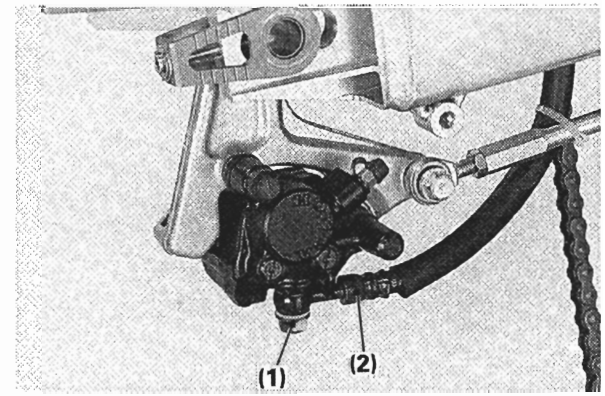
Torque: 49 N·m (5.0kgf·m, 36 lbf·ft)

Secure the bolts with lock wire. See page 3-18

Install the brake hose eyelet joint with new sealing washers.
Install and tighten the brake hose bolt to the specified torque.

Torque: 24 N·m (2.4 kgf·m, 17 lbf·ft)

Fill the brake fluid reservoir and bleed the system.



(1) OIL BOLT (2) BRAKE HOSE

Rear Brake Caliper

Removal

Drain the rear brake system.
Remove the rear wheel (page 5-19).

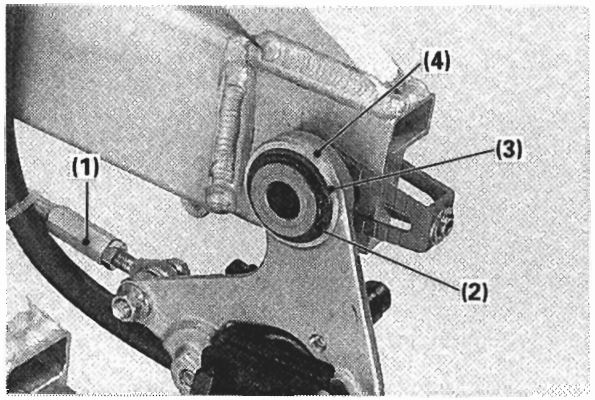
Place a clean container under the caliper.

Avoid spilling brake fluid on painted, plastic or rubber parts. Place a shop rag over these parts whenever the system is serviced.

NOTICE

Spilled brake fluid will damage painted, plastic or rubber parts. If fluid does get on these parts, wipe it off with a clean cloth.

Remove the oil bolt, sealing washers and brake hose.

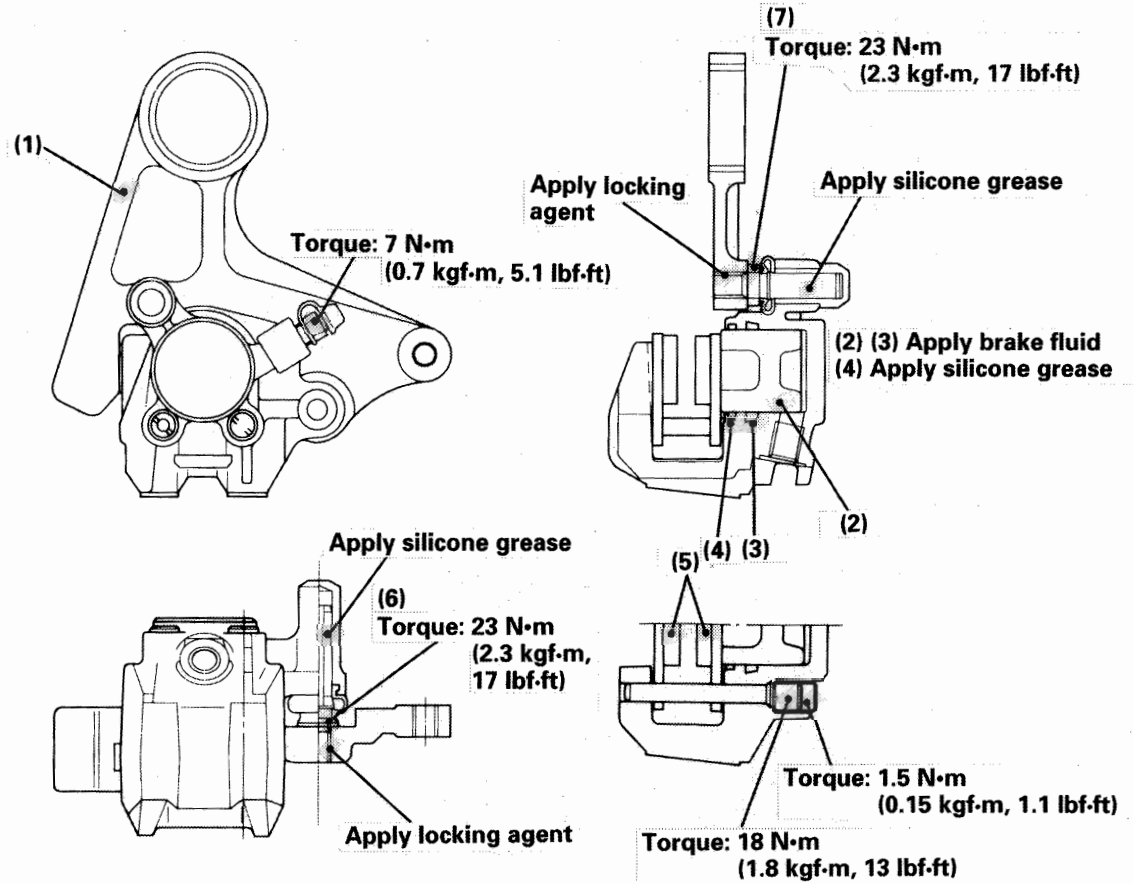


(1) TORQUE LINK (2) SNAP RING (3) WASHER
(4) BRACKET

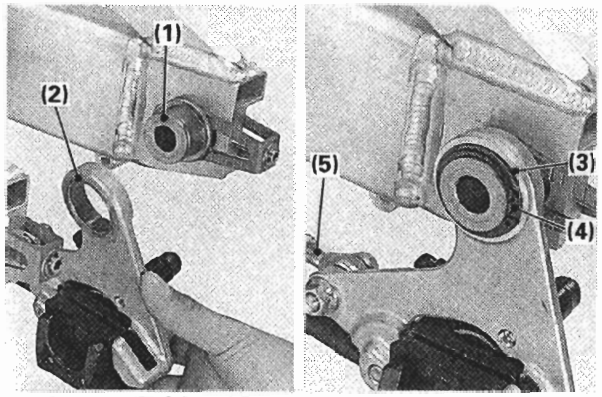
Remove the rear brake torque link bolt/nut.
Remove the snap ring, washer and brake caliper/bracket assembly.

Remove the brake pads (page 5-31).

Disassembly/Assembly



(1) CALIPER BRACKET
(2) CALIPER PISTON
(3) PISTON SEAL
(4) DUST SEAL
(5) BRAKE PADS
(6) PIN BOLT A
(7) PIN BOLT

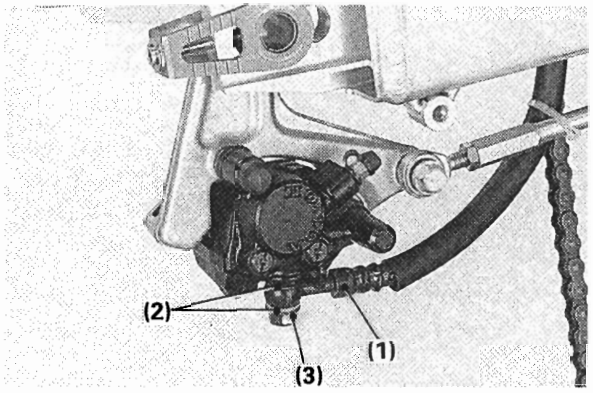


(1) BRACKET COLLAR
(2) CALIPER BRACKET ASSEMBLY
(3) WASHER (4) SNAP RING (5) TORQUE LINK

Installation

Install the caliper assembly onto the caliper bracket collar.
Install the washer with its chamfered side facing in.
Install the snap ring into the bracket collar groove securely.

Install the rear brake torque link and tighten the bolt/nut.

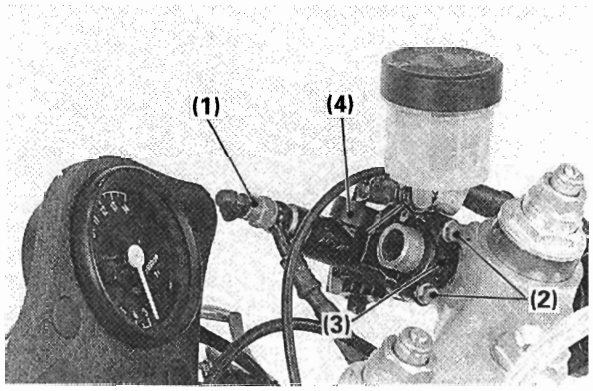


(1) BRAKE HOSE (2) NEW SEALING WASHERS
(3) OIL BOLT

Install the brake hose eyelet joint with new sealing washers.
Install and tighten the brake hose bolt to the specified torque.

Torque: 24 N·m (2.4 kgf·m, 17 lbf·ft)

Fill the brake fluid and bleed the system.



(1) OIL BOLT (2) BOLTS (3) HOLDER
(4) MASTER CYLINDER

Front Master Cylinder

Removal

Avoid spilling brake fluid on painted, plastic or rubber parts. Place a shop rag over these parts whenever the system is serviced.
When removing the brake hose bolt, cover the end of the hoses to prevent contamination. Secure the hoses to prevent fluid from leaking out.

NOTICE

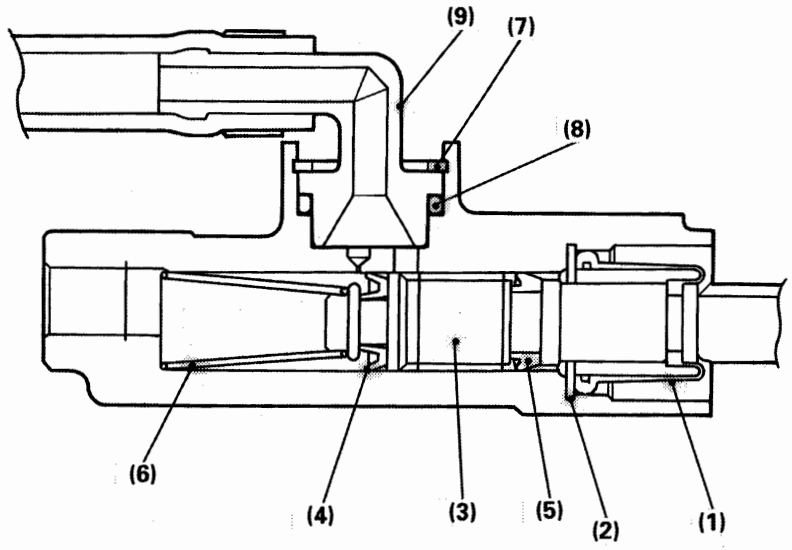
Spilled brake fluid will damage painted, plastic or rubber parts. If fluid does get on these parts, wipe it off with a clean cloth.

Drain the brake fluid from the hydraulic system into a suitable container.

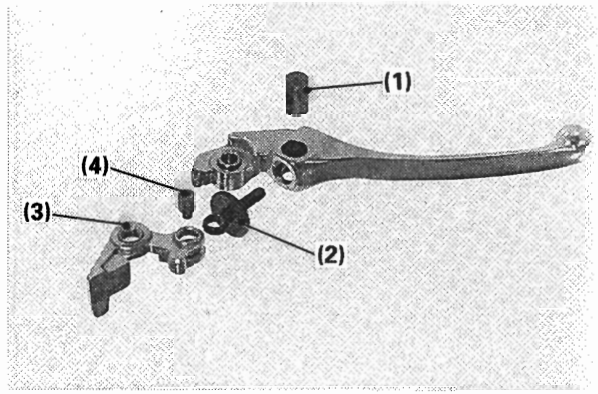
Remove the brake lever from the master cylinder.

Remove the following:
- Brake hose bolt and sealing washers
- Brake hose
- Master cylinder holder bolts and holder
- Master cylinder

Disassembly/Assembly



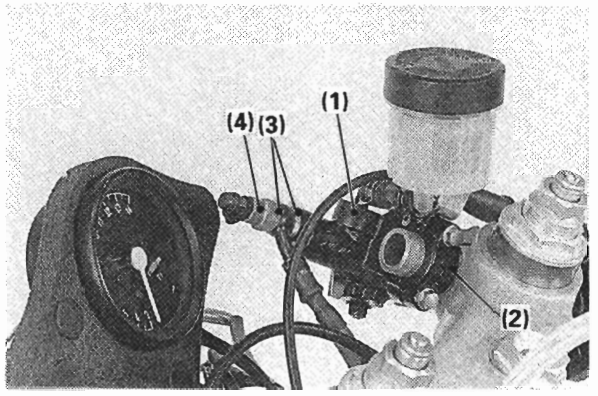
(1) BOOT
(2) SNAP RING
(3) MASTER PISTON
(4) PRIMARY CUP
(5) SECONDARY CUP
(6) SPRING
(7) SNAP RING
(8) O-RING
(9) RESERVOIR JOINT



(1) JOINT PIN (2) ADJUSTER
(3) ADJUSTER ARM (4) PIVOT SCREW

If the brake lever was disassembled, assemble as follows:

1. Install the joint pin with its arrow facing to the adjuster.
2. Apply silicone grease to the adjuster rod.
3. Apply a locking agent to the pivot screw threads. Assemble the adjuster arm and the brake lever, tighten the pivot screw.



(1) MASTER CYLINDER (2) UP MARK
(3) NEW SEALING WASHERS (4) OIL BOLT

Installation

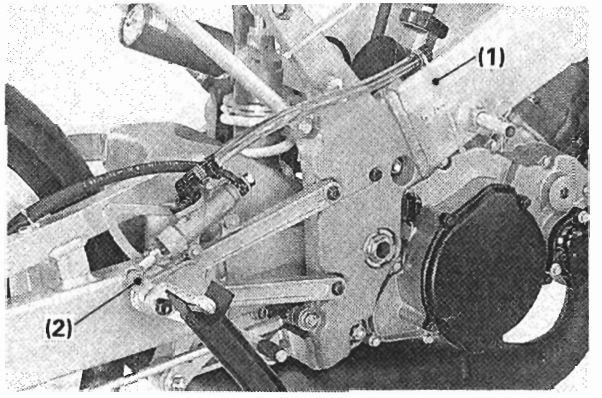
Place the master cylinder assembly onto the handlebar and install the holder with its "UP" mark facing up.
Install the holder bolts.

Tighten the upper bolt first, then the lower bolt.

Install the brake hose eyelet joints with new sealing washers.
Install the brake hose bolt.

Adjust the brake hose position and tighten the hose bolt to the specified torque.

Torque: 24 N·m (2.4 kgf·m, 17 lbf·ft)



(1) TIE-WRAP (2) JOINT BOLT/NUT

Rear Master Cylinder

Removal

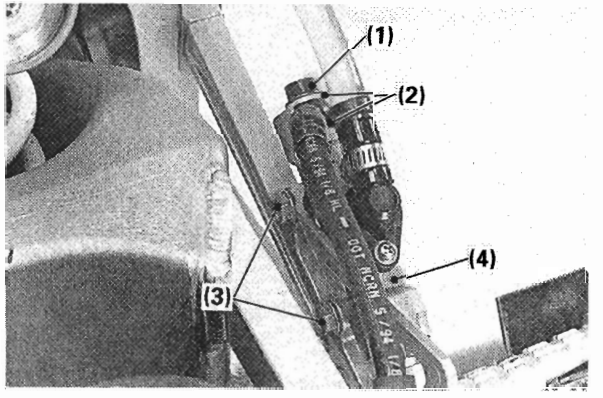
Avoid spilling brake fluid on painted, plastic or rubber parts. Place a shop rag over these parts whenever the system is serviced.

NOTICE

Spilled brake fluid will damage painted, plastic or rubber parts. If fluid does get on these parts, wipe it off with a clean cloth.

Drain the brake fluid from the hydraulic system into a suitable container.

Remove the tie-wrap from the vinyl tube.
Remove the push rod joint nut and bolt.

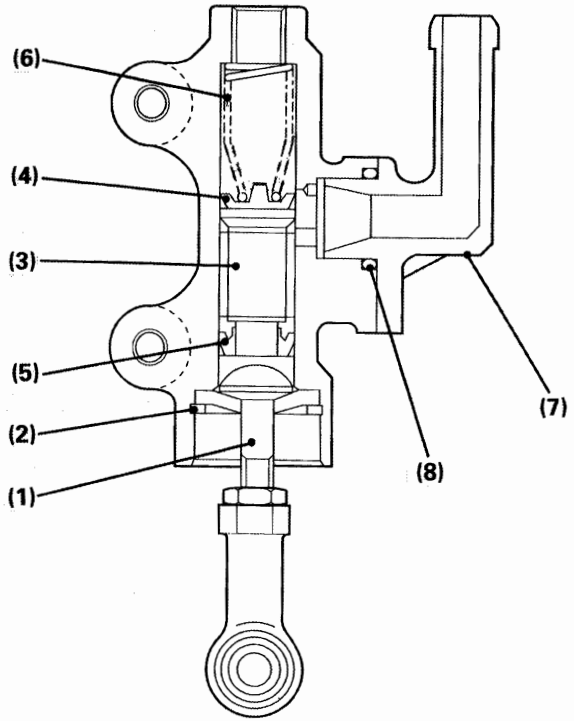


(1) OIL BOLT (2) SEALING WASHERS
(3) BOLTS (4) MASTER CYLINDER

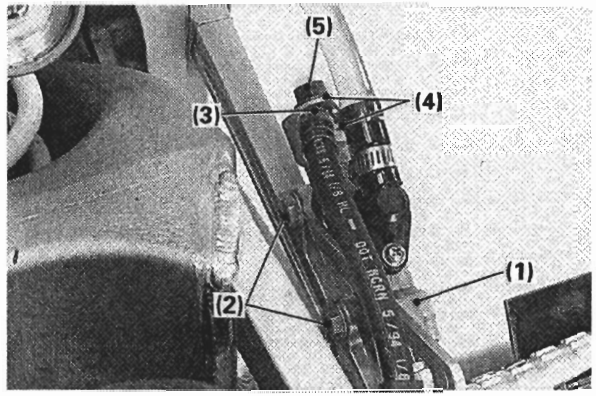
Remove the brake hose oil bolt and disconnect the brake hose eyelet joint.

Remove the mounting bolts and master cylinder.

Disassembly/Assembly



(1) PUSH ROD JOINT ASSEMBLY
(2) SNAP RING
(3) MASTER PISTON
(4) PRIMARY CUP
(5) SECONDARY CUP
(6) SPRING
(7) RESERVOIR JOINT
(8) O-RING



(1) MASTER CYLINDER (2) BOLTS
(3) EYELET JOINT (4) NEW SEALING WASHERS
(5) OIL BOLT

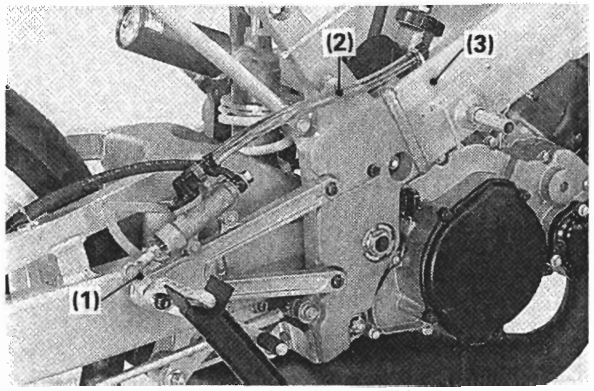
Installation

Install the master cylinder onto the bracket.

Install and tighten the mounting bolts.

Connect the brake hose eyelet joint with new sealing wahsers.
Install and tighten the brake hose oil bolt to the specified torque.

Torque: 24 N·m (2.4 kgf·m, 17 lbf·ft)



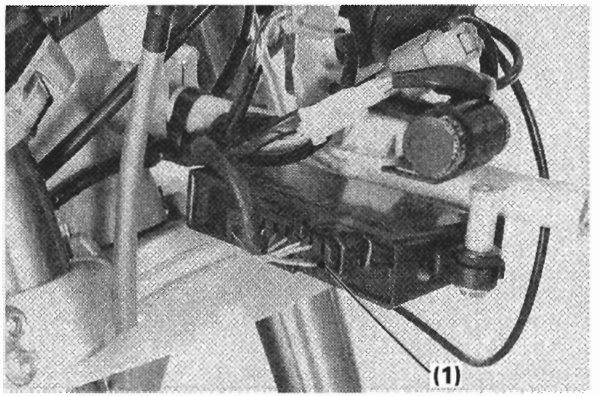
(1) JOINT BOLT/NUT (2) VINYL TUBE
(3) TIE-WRAP

Connect the joint with the brake pedal.
Install the washer and joint bolt/nut, then tighten the nut.

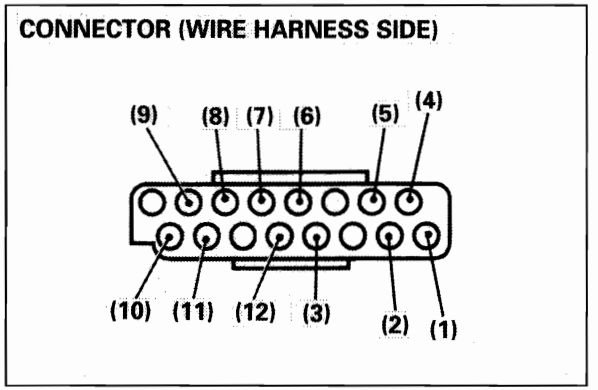
Secure the vinyl tube with a tie-wrap.

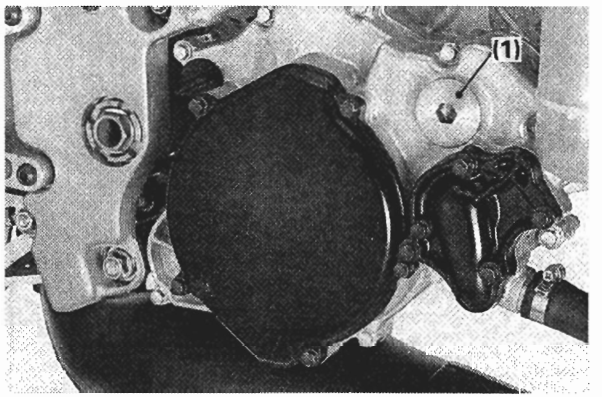
Fill the reservoir and bleed the system.

Memo



(1) MULTI-CONNECTOR





(1) TIMING HOLE CAP

System Inspection

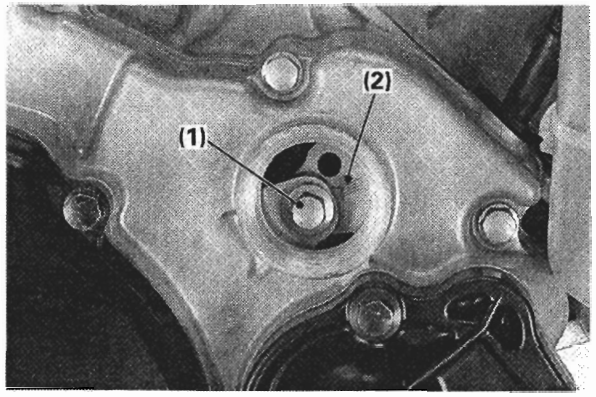
Disconnect the multi-connector from the ignition control module and conduct these tests.

Item	Terminal	Terminal No.	Standard
Ignition primary coil	Black/Yellow – Green/Yellow	1—3	0.45—0.55Ω (20°C/68°F)
Ignition secondary coil (Without plug cap)	Black/Yellow – Spark plug wire	1—Spark plug wire	8.64—10.56 kΩ (20°C/68°F)
Ignition pulse generator	White/Blue – White/Yellow	5—8	180—220Ω (20°C/68°F)
Throttle sensor	Yellow/Red – Green/Blue	10—11	4—6 kΩ (20°C/68°F)
	Yellow/Blue – Green/Blue	5—8	Throttle fully closed: 400—600Ω (20°C/68°F) Throttle fully open: 2.96—4.44 kΩ (20°C/68°F)
Power jet solenoid	Black – Gray	4—12	21.6—26.4Ω (20°C/68°F)
Ground	Green/Yellow – Frame ground	3—Frame	Continuity

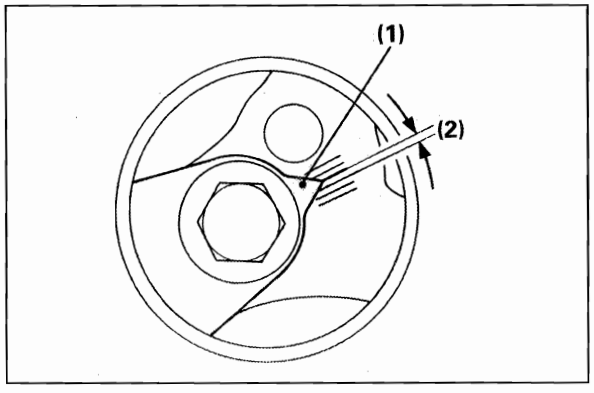
Ignition Timing Adjustment

- Your machine's exhaust contains poisonous carbon monoxide gas. High levels of carbon monoxide can collect rapidly in enclosed areas such as a garage. Do not run the engine with the garage door enclosed. Even with the door open, run the engine only long enough to move your machine out of the garage.
- The CDI unit system is factory pre-set so that ignition timing inspection is not necessary.

Remove the timing hole cap.



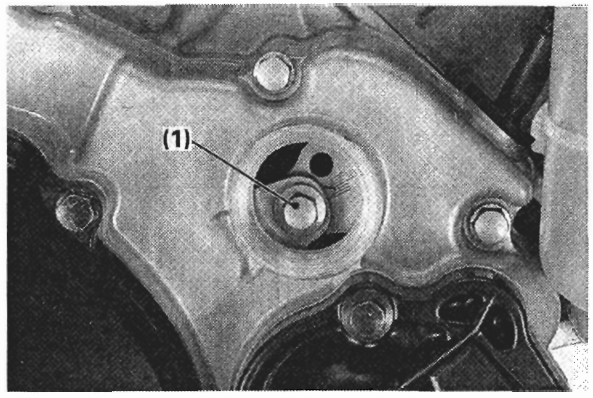
(1) FLANGE BOLT (2) INDEX ARROW



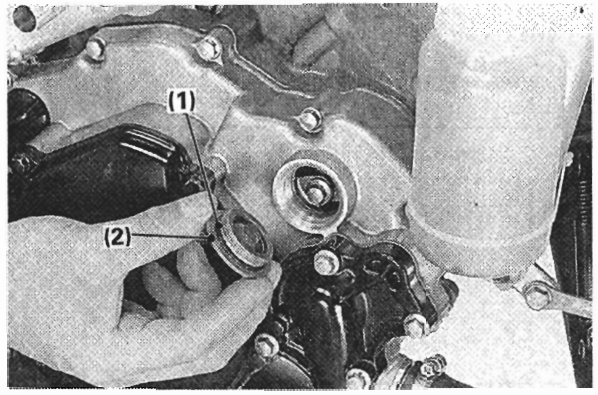
(1) INDEX ARROW (2) 1°

If you wish to adjust the ignition timing, adjust as follows:

1. Loose the ignition pulse generator base mounting bolt.
2. Adjust the ignition timing by moving the ignition pulse generator base.
   Move the base counterclockwise, advance the ignition timing.



(1) FLANGE BOLT

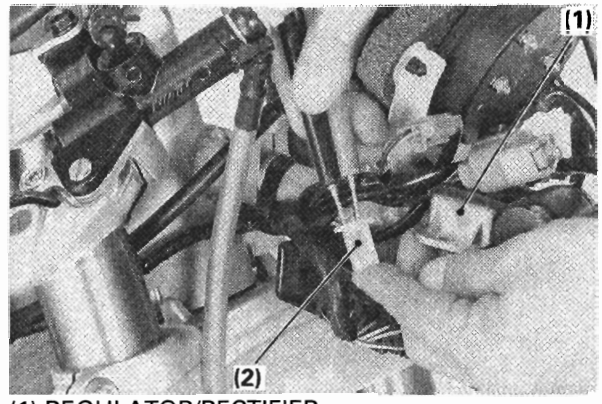


(1) O-RING (2) TIMING HOLE CAP

3. After adjustment, tighten the ignition pulse generator base bolt securely.

Check the O-ring is in good condition, replace if necessary.
Install the timing hole cap and tighten it securely.

Torque: 8 N·m (0.8 kgf·m, 5.8 lbf·ft)



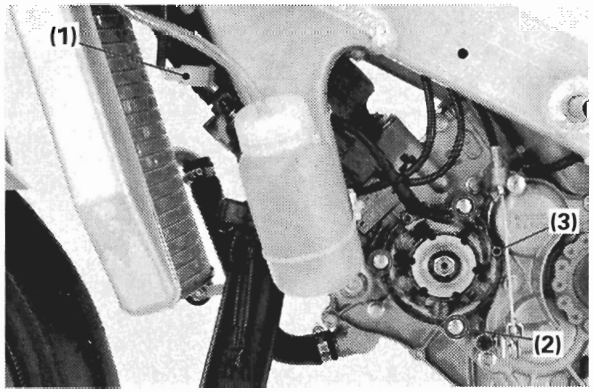
(1) REGULATOR/RECTIFIER
(2) 4P (NATURAL) CONNECTOR

Alternator

Inspection

Disconnect the regulator/rectifier 4P (Natural) connector, check the resistance between the yellow terminals.

Standard: 2.9 – 3.6 kΩ (20°C/68°F)

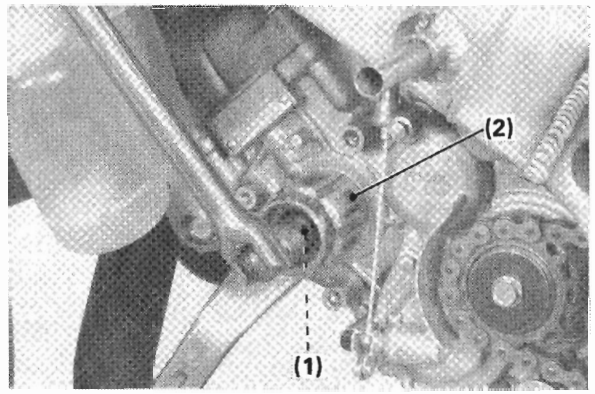


(1) 2P (NATURAL) CONNECTOR
(2) BOLTS (3) STATOR

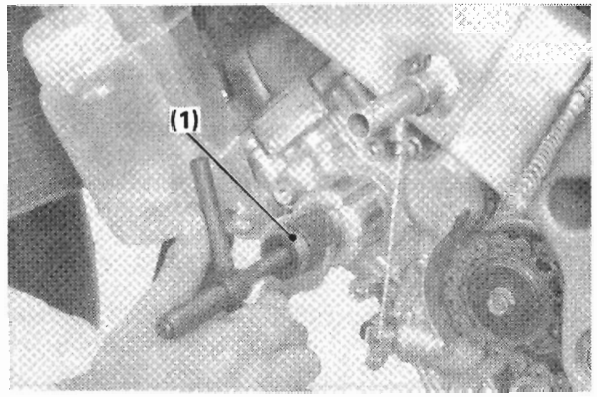
Stator Removal

Be careful not to damage the stator coil during removal/installation.

Disconnect the alternator 2P (Natural) connector. Remove the mounting bolts, stator and dowel pins, being careful no to damage the stator coil.



(1) NUT (2) INNER ROTOR



(1) ROTOR PULLER

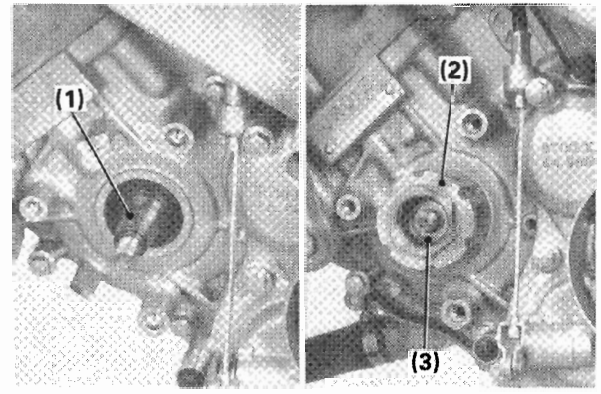
Inner Rotor Removal/Installation

Hold the inner rotor and remove the nut. Remove the inner rotor using the rotor puller.

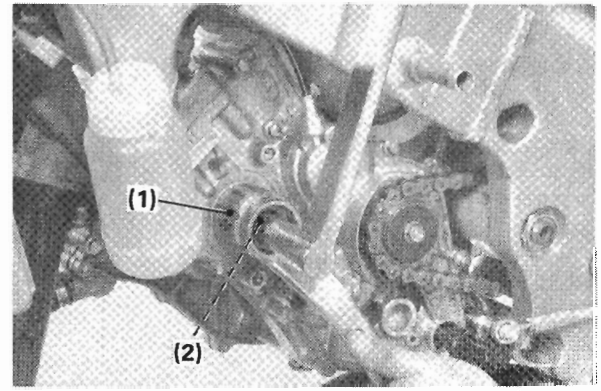
TOOLS:

Rotor puller	**07733-0010000**
L. crankshaft cap	**89100-NX4-000**

(Recommended tool to prevent the crankshaft thread damage.)



(1) KEY (2) INNER ROTOR (3) WASHER

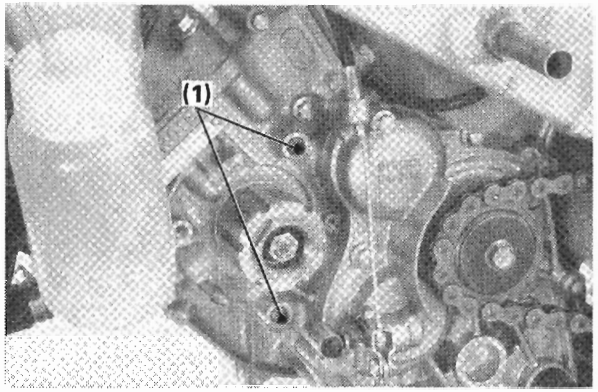


(1) INNER ROTOR (2) NUT

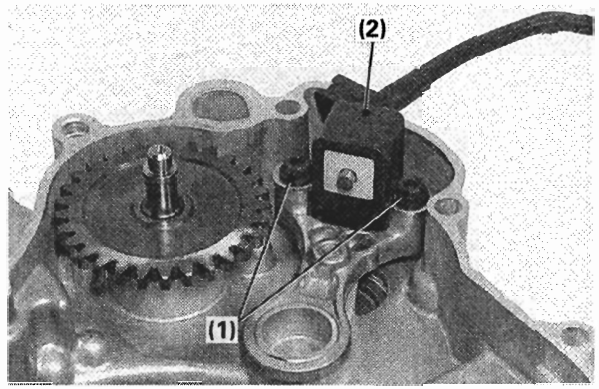
Install the key onto the crankshaft key way.

Apply a locking agent to the inner rotor nut threads. Hold the inner rotor and tighten the nut to the specified torque.

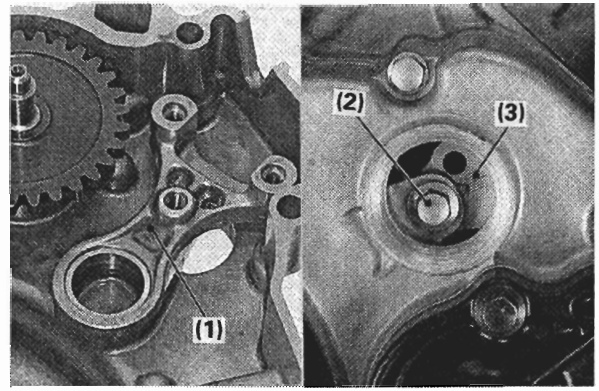
Torque: 39 N·m (4.0 kgf·m, 29 lbf·ft)



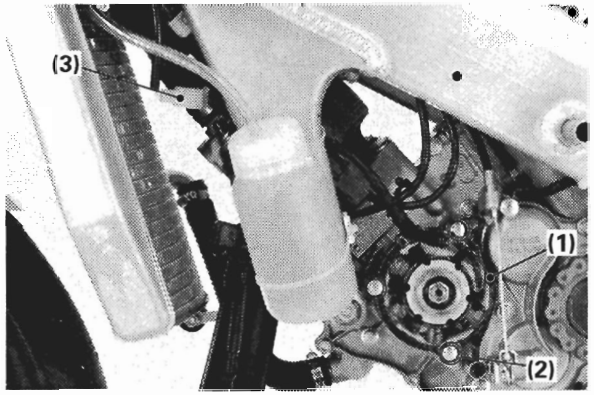
(1) DOWEL PINS



(1) SOCKET BOLT
(2) IGNITION PULSE GENERATOR



(1) BASE (2) BOLT (3) INDEX ARROW



(1) STATOR (2) BOLTS
(3) 2P (NATURAL) CONNECTOR

Stator Installation

Install the dowel pins.

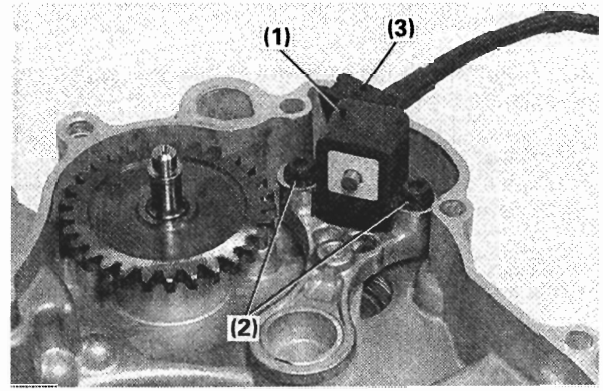
Install the stator and tighten the stator mounting bolts. Connect the stator 2P (Natural) connector.

Ignition Pulse Generator

Replacement

Remove the right crankcase cover (page 4-21).

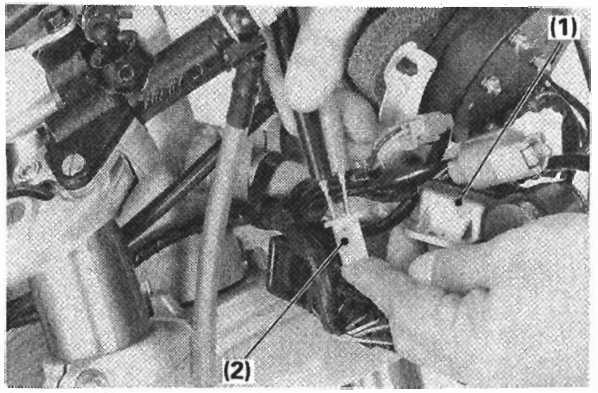
Remove the two screws and ignition pulse generator.



(1) IGNITION PULSE GENERATOR
(2) SOCKET BOLT (3) GROMMET

If the ignition pulse generator base is removed, align the index mark with the arrow on the base, then tighten the mounting bolt securely.

Apply a locking agent to the ignition pulse generator screw threads.
Install the ignition pulse generator in the reverse order of removal.
Apply sealant to the grommet and install it into the groove securely.



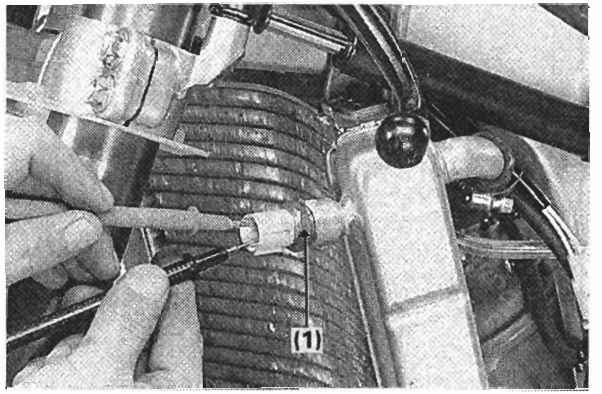
(1) REGULATOR/RECTIFIER
(2) 4P (NATURAL) CONNECTOR

Regulator/Rectifier

Inspection

Disconnect the regulator/rectifier 4P (Natural) connector.
Check the alternator resistance between the yellow terminal of the wire harness side (page 6-2).
Check the continuity of the wire harness between the regulator/rectifier and ignition control module.

Alternator resistance and wire harness are normal, replace the regulator/rectifier.



(1) WATER TEMPERATURE SENSOR

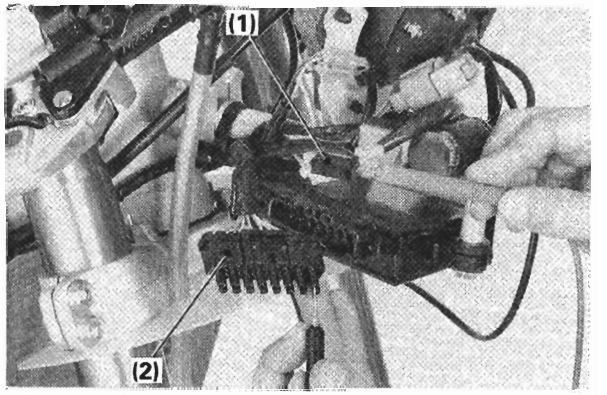
Water Temperature Sensor

Sensor Inspection

Disconnect the water temperature sensor 2P connector.
Measure the resistance between the water temperature sensor connector terminals.

Standard: 47.02 – 53.02 kΩ (25°C/77°F)

Replace the water temperature sensor if the resistance is out of specification.



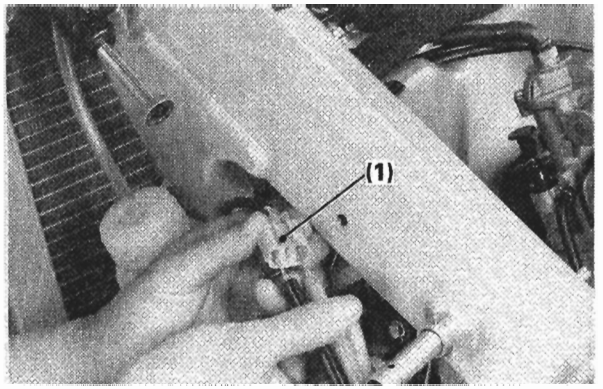
(1) 2P (BLACK) CONNECTOR
(2) MULTI-CONNECTOR

Meter Inspection

If the water temperature meter does not display, inspect the following:
Disconnect the ignition control module multi-connector and water temperature meter 2P (Black) connector. Check the continuity of the green terminal between the ignition control module and water temperature meter connector.

Disconnect the regulator/rectifier 4P natural connector. Check the continuity between the red terminal of the regulator/rectifier and the black terminal of the water temperature sensor.

If there is no continuity, check the wire harness.
If there is continuity, check the water temperature sensor.
If the water temperature sensor is normal, replace the meter.



(1) 3P (ORANGE) CONNECTOR

Throttle Sensor

Disconnect the throttle sensor 3P (Orange) connector.

Measure the resistance between the following terminals at the sensor side connector.

Connection: Yellow/Red – Green/Blue
Standard: 4 – 6 kΩ (20°C/68°F)

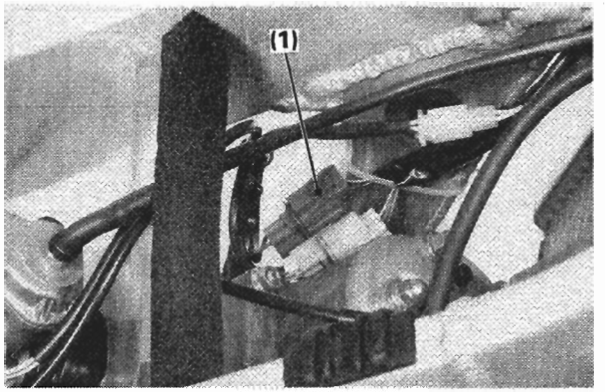
Measure value is out of specification, replace the throttle sensor.

Measure the resistance between the following terminals at the sensor side connector with the throttle fully open and fully closed.

Connection: Yellow/Blue – Green/Blue
Standard:

With the throttle fully closed:	**400 – 600Ω (20°C/68°F)**
With the throttle fully open:	**2.96–4.44kΩ(20°C/68°F)**

Resistance is gradually raise but the measurement values are out of specification, it may incorrect throttle sensor installation position.
Contact your HRC service shop.



(1) 3P (GRAY) CONNECTOR

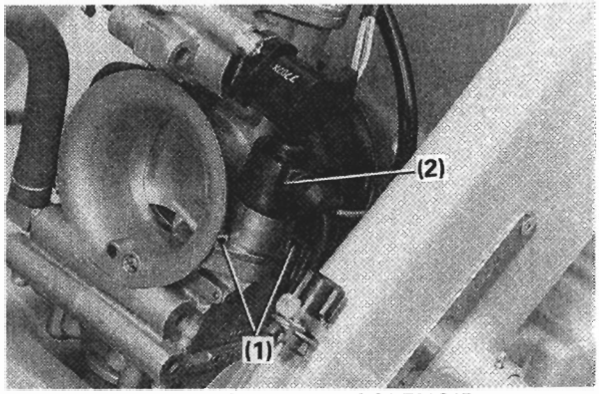
Power Jet Solenoid

Disconnect the power jet solenoid 3P (Gray) connector.

Measure the resistance between the following terminals at the power jet solenoid side connector.

Connection: Black – Gray
Standard: 21.6 – 26.4 Ω (20°C/68°F)

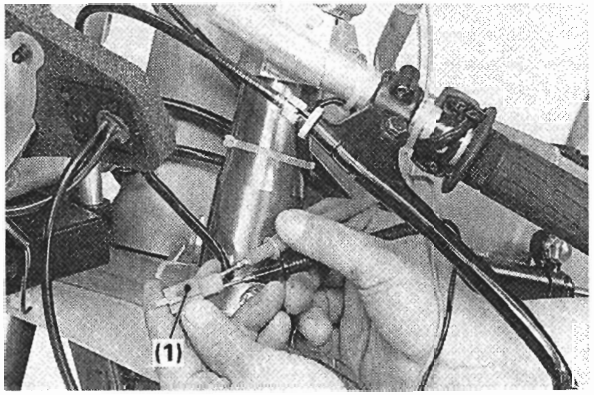
Measurement value is out of specification, replace the power jet solenoid.



(1) SCREWS (2) POWER JET SOLENOID

Remove the screws and power jet solenoid.

Check the rubber of the top of the needle for fatigue or other damage, replace if necessary.



(1) 2P (RED) CONNECTOR

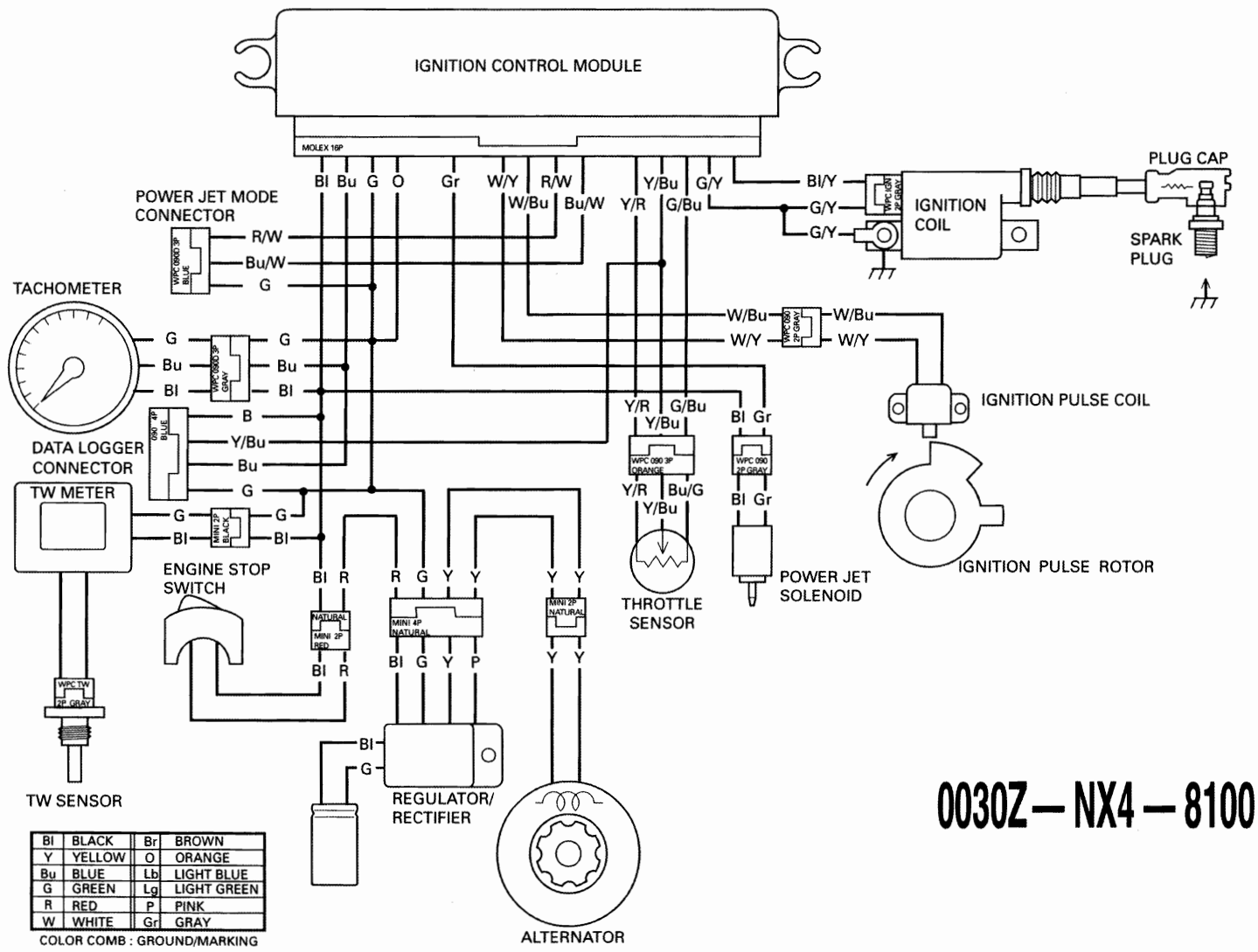
Engine Stop Switch

Inspection

Disconnect the engine stop switch 2P (RED) connector. Check the engine stop switch for continuity with the switch at RUN. There should be continuity.
Turn the switch to OFF, there should be no continuity.

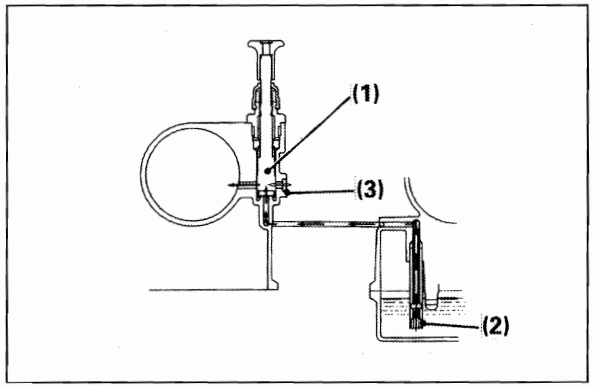
Replace the switch if it is out of specification.

Wiring Diagram



Bl	BLACK	Br	BROWN
Y	YELLOW	O	ORANGE
Bu	BLUE	Lb	LIGHT BLUE
G	GREEN	Lg	LIGHT GREEN
R	RED	P	PINK
W	WHITE	Gr	GRAY

COLOR COMB : GROUND/MARKING



(1) STARTER VALVE (2) STARTER JET
(3) STARTER AIR JET

Carburetor Adjustment

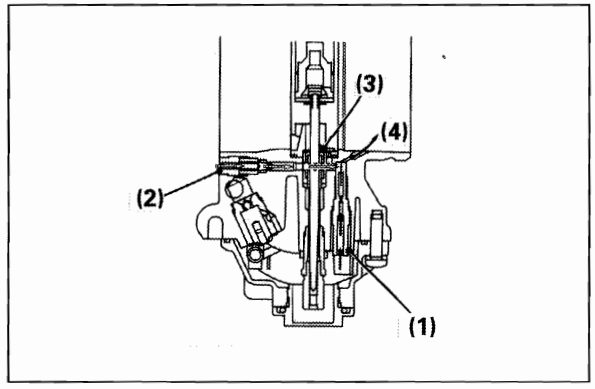
The standard carburetor settings are ideal for the following conditions: 30-to-1 premix ratio using ELF HTX 976 or CASTROL A747, sea level altitude, and 20°C (68°F) air temperature.
If your conditions are different, you may need to adjust the carburetor settings. Confirm if your settings are correct before proceeding.

The carburetor used on your RS125R will seldom experience trouble with the standard settings under average load, climactic and barometric conditions. However, to fine tune the engine's power output, the carburetor may require adjustments for specific racing conditions. To change the carburetor settings, observe the following instructions.

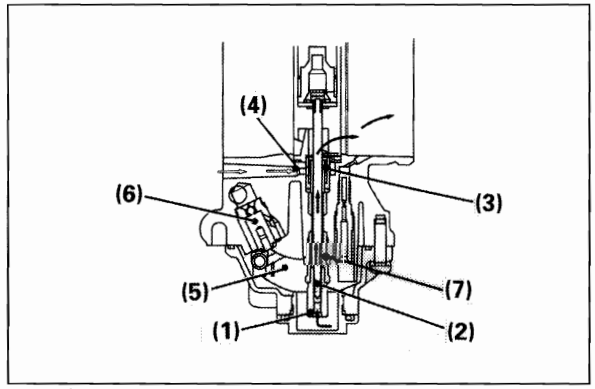
Construction

Starting circuit (cold engine)

The engine requires a rich air/fuel mixture for starting. When the starter valve knob is raised, fuel is metered by the starter jet and is mixed with air from the starter air jet. This mixture is drawn into the cylinders.



(1) SLOW JET (2) AIR SCREW (3) BYPASS
(4) PILOT OUTLET



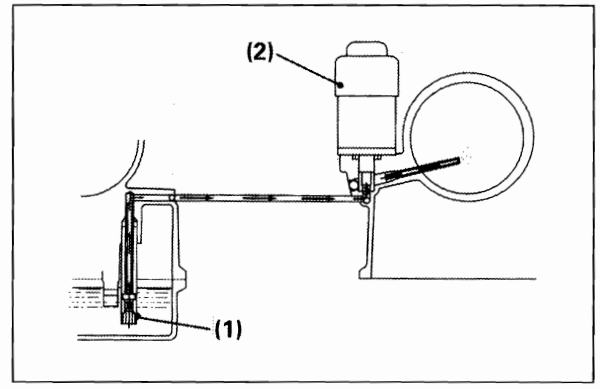
(1) MAIN JET (2) JET NEEDLE (3) NEEDLE JET
(4) AIR JET (5) FLOAT (6) FLOAT VALVE
(7) MAIN JET HOLDER

Slow circuit

Fuel is metered by the slow jet and is mixed with air that has been metered by the air screw. Then, the mixture enters the venturi through the bypass and pilot outlet.

Main circuit

As the throttle valve is opened, fuel is metered by the main jet. It flows through the passage between the jet needle and the needle jet and is then mixed with air from the air jet on the inlet side. The mixture then enters the venturi through the needle jet.



(1) POWER JET (2) POWER JET SOLENOID

Float chamber

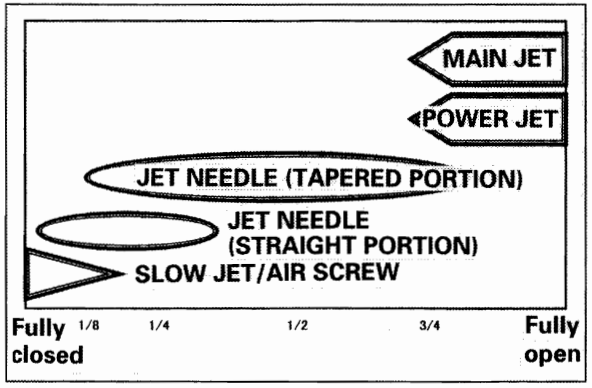
The float chamber maintains a constant fuel level. A spring built into the float valve aids the valve in maintaining a seated position at the correct fuel level and helps prevent wear of the float valve and seat.

Power jet

Power jet solenoid is controlled by the throttle angle sensor and engine revolution.
When the power jet solenoid is opened, the fuel which is metered by the power jet is drawn into the throttle bore.
The power jet is injected by following conditions.
① Below 4000 min^{-1} (rpm) ..... Always injection
② Above 4000 min^{-1} (rpm) ..... Injection by over 75% throttle opening.

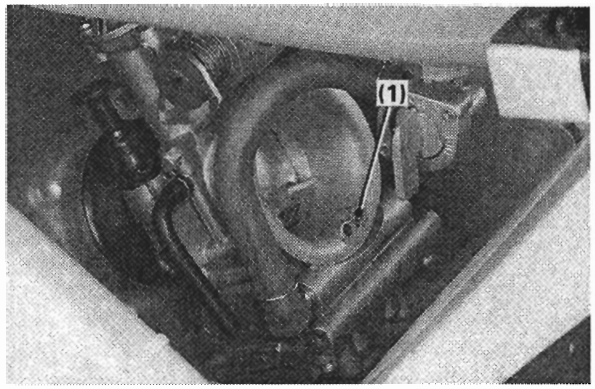
Main jet holder

The main jet holder is controlled the amount of fuel between the main jet holder bore and jet needle. This amount of fuel affects at the throttle opening.



Adjustment

Carburetor operation is broken into three segments. Each of the metering units is responsible for one segment.
There is always overlap from one segment to the next, so any change will always affect the next segment up or down. Because of this, making carburetor adjustments for altitude or temperature should be done very methodically.
The illustration shows the relationship the main jet, jet needle, power jet, and slow jet and air screw.



(1) AIR SCREW

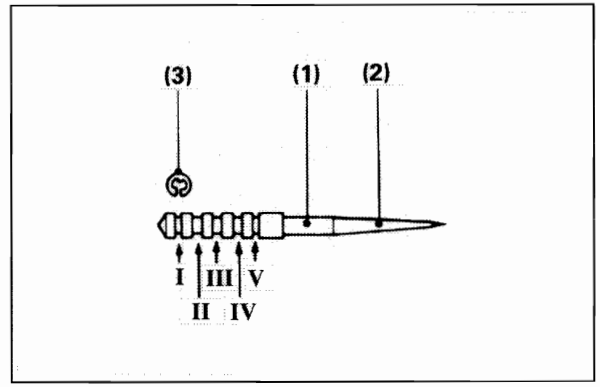
Slow jet and air screw

The air screw meters air that is mixed with fuel metered by the slow jet.
Turning the air screw clockwise enriches the mixture; counterclockwise leans the mixture.
After warming up the engine, turn the air screw in until it lightly seats, then back it out to specs. (1—1/2 turn).
Further adjustments may be necessary to obtain on optimum air-fuel ratio.

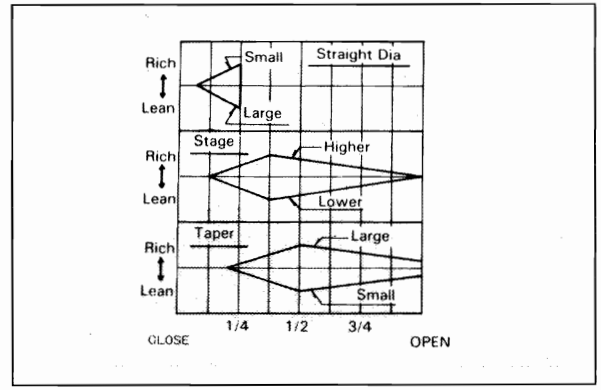
Main jet holder

The main jet holder controll the store fuel quantity between the main jet holder bore and jet needle.
This store fuel level affects at the throttle opening.

The ø3.7 optional holder is provided leaner fuel than standard (ø3.9).

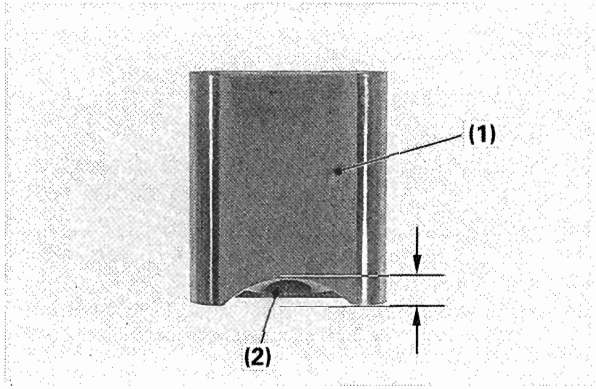


(1) STRAIGHT (2) TAPER (3) CLIP

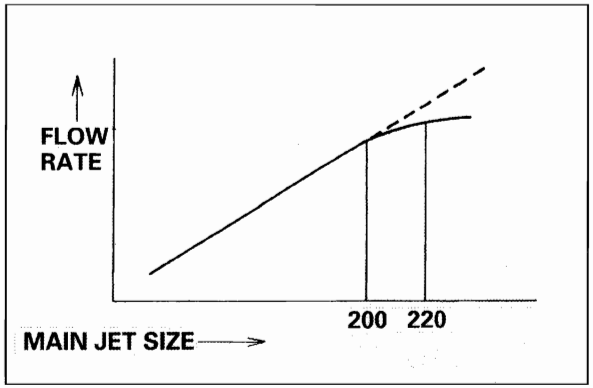


Jet needle

The jet needle affects the mixture through the first 1/8 to 3/4 of the throttle range. The straight portion of the needle affects acceleration from low rpm, and the tapered portion affects medium and high speed range.
The position of the clip on the needle affects fuel metering at medium throttle range.
Eight jet needles with different straight diameter are available.



(1) THROTTLE VALVE (2) CUTAWAY



Throttle valve

Four throttle valves with different cutaways are available: (#5.0, #5.5, #6.5 and #6.0 standard).
The throttle valve's cutaway regulates the flow of air at throttle openings of 1/16 to 3/4.
The higher the throttle valve marking, the leaner the mixture.

- Poor engine response to throttle:
  Install a throttle valve with larger number.
- Over engine response to throttle:
  Install a throttle valve with smaller number.

Main jet

The main jet affects the mixture from 3/4 to the full throttle range.
The gasoline flow rate varies due to changes in main jet size above/below #200. For example; altering the flow rate by 1 step results in #5 for that above #200 and #2 or #3 below 200.

Tuning the carburetor

The RS125R is shipped with rich condition carburetor setting.
Therefore, please make your suitable setting refer to the following setting chart.

Example of carburetor setting:
The carburetor setting is influenced by atmospheric pressure, the humidity, and course condition.
You would better to start richer condition as first step for your safety.

	Deliverd setting	Temperature		
		10°C (50°F) or less	15°~25°C (59°~77°F)	30°C (86°F) or more
Main jet	#195	#195~#190	#185~#175	#170
Slow jet	#45	#45	#45	#45
Jet needle	1268-34	1267-34	1268-34	1269-33
Jet needle clip position	4	4	4	3
Power jet	#40	#48	#48	#48
Throttle valve	#6.0	#6.0	#6.0	#6.0
Air screw initial opening	1 3/4	1 3/4	1 3/4	1 3/4
Main jet holder	ø3.9	ø3.9	ø3.9	ø3.9

1. Start the engine and warm it up to operating temperature. Make 2 laps of riding with the engine running at 7,000 min^{-1}(rpm) to 12,000 min^{-1}(rpm). Make sure that water temperature is between 60°C and 65°C while running. If necessary, mask the radiator to control the water temperature.
   After running, check the spark plug and piston head burn condition.
2. Before turning the carburetor, check the differences due to changes in water temperature.
3. Start carburetor adjustment after adjusting the water temperature accurately.
4. Record throttle openings in relation to engine speeds particularly at points where the carburetor needs refinement. For better results, also record which gear the machine was in.
5. Once the carburetor has been tuned satisfactorily, the only changes made should be for track conditions (weather, altitude etc.) using the main jet or air screw.

Troubleshooting

For difficulty in tuning the carburetor, check the following:

1. Make sure the carburetor is mounted securely and there are no air leaks.
2. Check fuel flow. Make sure the carburetor is not flooded.
3. Check the spark plug, spark plug cap, ignition coil, and ignition timing.
4. Make sure the air intake is not blocked or restricted.
5. Listen to the engine. Check for abnormal sounds.

Weather vs. Carburetor Setting

Condition	Mixture	Setting	Major part to be changed
Cold weather	Leaned	Enrich	Main jet/jet needle stage
Hot weather	Enriched	Lean	
Dry	Leaned	Enrich	
In high humidity	Enriched	Lean	
High altitude	Enriched	Lean	

Power Jet Solenoid Setting

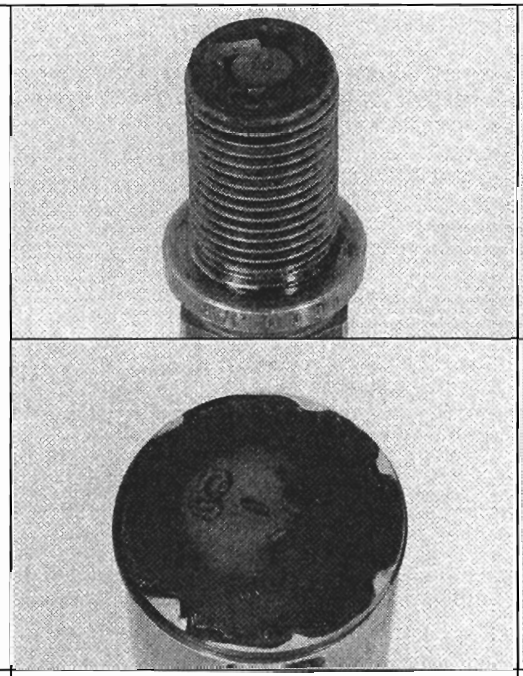
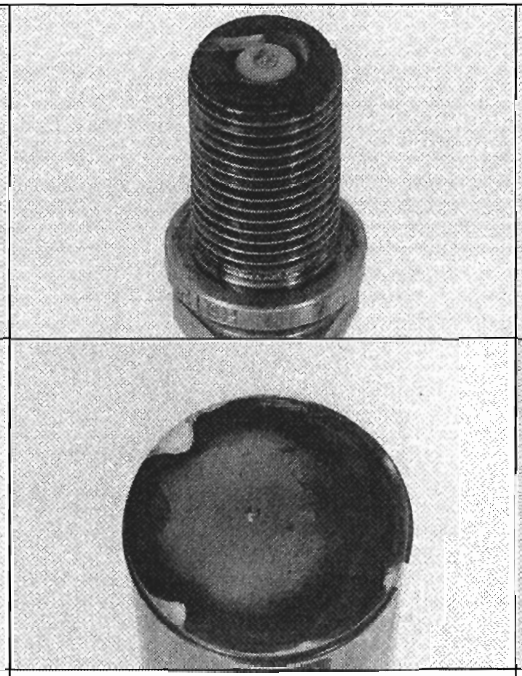
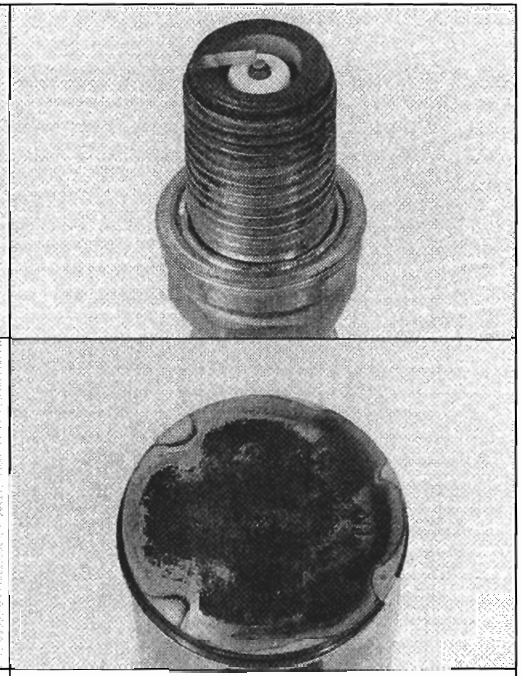
Power jet solenoid must be selected with the course condition.

Mode	Code	Power jet cut rev	Remarks
1	–	12,200	Standard
2	Blue	12,400	(30412-NX5-790)
3	Yellow	12,600	(30413-NX5-790)

The mode 2 and 3 of the power jet cut rev are higher than the mode 1.
If the mode 1 is selected at the high speed course, the detonation will occur frequently.
The mode 1 of the power jet cut rev must be selected with the course.
Especially, the mode 1 is not used at the high speed course because its for the lower speed course.

Carburetor settings and trouble diagnosis

Symptom	Remedy	Remarks
Mixture lean at full throttle: • rpm rising and falling • Detonation • White spark plug insulator • Poor acceleration	• Try with higher number main jet. • Adjustment is normal if there are rust brown to grayish-tan powder deposits on spark plug electrodes and insulator.	• Check for advanced timing. • Check for air leak.
Mixture rich at full throttle: • Poor acceleration • Lack of power • Sooty deposits on spark plug electrodes and insulator	• Replace with lower main jet. • Adjustment is normal if there are rust brown to grayish-tan powder deposits on spark plug electrodes and insulator.	• Check for carburetor flooding. • Check that starter valve knob is set properly.
Hesitation or stalling at 1/4—1/2 throttle: • Lack power	• Lower jet needle clip position by 1 groove (enrich mixture).	• See page 7-2
Hesitation or poor acceleration at 1/4—1/2 throttle	• Raise jet needle clip position by 1 groove (lean mixture).	• See page 7-2
Hesitation or poor acceleration at 0—1/4 throttle	• Try with narrow straight dia. jet needle (enrich mixture). • Screw air screw/in as necessary (enrich mixture).	
Poor engine response to throttle, or sudden response to throttle at 0—1/4 throttle	• Replace with larger straight dia. jet needle (lean mixture). • Turn air screw/out (lean mixture). • If symptom still persists, replace with smaller slow jet.	• This symptom is likely to occur in rainy weather. • Note coolant temperature.
Poor engine performance at low speed • Detonation • Poor engine response to throttle	• Replace with narrow straight dia. jet needle (enrich mixture). • Turn air screw/in (enrich mixture).	• Check carburetor insulator for air leak. • Check reed valves for crack or other damage.
Engine does not accelerate smoothly at small throttle opening or engine is vibrated	• Turn air screw/out (lean mixture). • Replace with larger straight dia. jet needle (lean mixture).	
Engine does not react to sudden throttle opening	• Confirm overall carburetor setting. • Turn air screw/in (enrich mixture). • Lower jet needle clip position by 1 groove (enrich mixture).	• Check carburetor insulator for air leak. • Check reed valves for cracks or other damage.
A stiff feel at throttle opening	• Try with lower number of main jet holder.	
Poor torque feel at throttle opening	• Try with higher number of main jet holder.	

Burn condition			
Standards for determining the burn condition	Over rich: engine setting is incorrect	Good	Overburned; engine setting is incorrect (lean mixture)
Gasoline type	Premium unleaded gasoline (research octane number of 100 or higher)		

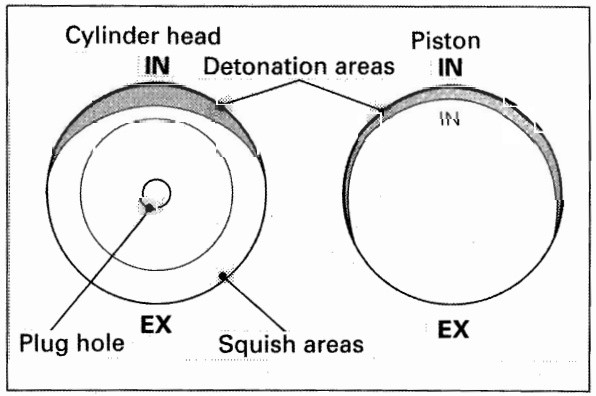
Appraisal Of The Burn Condition

Piston head and spark plug burn condition varies according to several conditions, engine performance, course type, running distance, fuel, oil and weather. Also, the burn condition is in a state of constant flux according to conditions so it will vary depending on when the plug is removed.
When looking at the head's and plug's burn condition, it may be an oversimplification to conclude that it is overburned because is white, or sooty because it is black. Such conclusions are not always justified. If you misjudge, not only will your time be poor, it may actually cause engine trouble and force you to retire from the race.

How to ascertain the unleaded gasoline's burn condition

The burn condition is determined from both the piston head and spark plug.
* Piston head: Check the coloration and detonation.
* Insulater: Check the coloration.
* Ground electrode: Check the dimensions of the portion that is burned white.

Also, the burn condition refers to the condition immediately before the engine was stopped, so you must check the burn condition by turning the engine off while running with the throttle wide open and then gliding into the pit stop through inertia.



Optional Transmission Gears

Optional transmission gears are available for use in the transmission. Care should be taken when substituting optional gears for the standard gears. The optional low gear/mainshaft has marking etched on the shaft end for identification. Identification for other gears is aided by a marking located on the side of the gear. Find your gear ratio in accordance with your experience and select proper optional transmission gears in the following list.

Gears		Marking And Parts Number				No. of Teeth		
		Main		Counter		M	C	Ratio
1st	STD	No mark	23211-NX4-000	C1	23411-NX4-000	16	30	1.875
	OP	No mark	23211-NX4-000	C1-P2	23412-NX4-000	16	31	1.938
	OP	3 grooves	23213-NX4-000	C1-P3	23413-NX4-000	16	32	2.000
	OP	4 grooves	23214-NX4-000	C1-P4	23414-NX4-000	17	30	1.765
	OP	5 grooves	23215-NX4-000	C1-P5	23415-NX4-000	16	29	1.813
2nd	STD	M2	23421-NX4-000	C2	23431-NX4-700	21	32	1.524
	OP	M2-P2	23422-NX4-000	C2-P2	23432-NX4-700	18	29	1.611
	OP	M2-P3	23423-NX4-000	C2-P3	23433-NX4-700	19	28	1.474
	OP	M2-P4	23424-NX4-000	C2-P4	23434-NX4-700	17	29	1.706
	OP	M2-P5	23425-NX4-000	C2-P5	23435-NX4-700	18	28	1.556
	OP	M2-P5	23425-NX4-000	C2-P6	23436-NX4-700	18	27	1.500
3rd/4th	STD	M3	23441-NX4-000	C3	23451-NX4-000	23	30	1.304
		M4		C4	23461-NX4-000	24	28	1.167
	OP	M3	23441-NX4-000	C3	23451-NX4-000	23	30	1.304
		M4		C4-P2	23462-NX4-000	24	29	1.208
	OP	M3	23443-NX4-000	C3	23451-NX4-000	23	30	1.304
		M4-P3		C4-P3	23463-NX4-000	22	25	1.136
	OP	M3-P2	23442-NX4-000	C3-P2	23452-NX4-000	20	27	1.350
		M4		C4	23461-NX4-000	24	28	1.167
	OP	M3-P2	23442-NX4-000	C3-P2	23452-NX4-000	20	27	1.350
		M4		C4-P2	23462-NX4-000	24	29	1.208
	OP	M3-P2	23444-NX4-000	C3-P2	23452-NX4-000	20	27	1.350
		M4-P3		C4-P3	23463-NX4-000	22	25	1.136
	OP	M3	23441-NX4-000	C3-P3	23453-NX4-000	23	29	1.261
		M4		C4	23461-NX4-000	24	28	1.167
	OP	M3	23441-NX4-000	C3-P3	23453-NX4-000	23	29	1.261
		M4		C4-P2	23462-NX4-000	24	29	1.208
	OP	M3	23443-NX4-000	C3-P3	23453-NX4-000	23	29	1.261
		M4-P3		C4-P3	23463-NX4-000	22	25	1.136

Gears		Marking And Parts Number				No. of Teeth		
		Main		Counter		M	C	Ratio
3rd/4th	OP	M3 M4-P4	23445-NX4-000	C3 C4-P4	23451-NX4-000 23464-NX4-000	23 21	30 26	1.304 1.238
	OP	M3 M4-P4	23445-NX4-000	C3 C4-P5	23451-NX4-000 23465-NX4-000	23 21	30 25	1.304 1.190
	OP	M3 M4-P6	23446-NX4-000	C3 C4-P6	23451-NX4-000 23466-NX4-000	23 20	30 23	1.304 1.150
	OP	M3-P2 M4-P4	23447-NX4-000	C3-P2 C4-P4	23452-NX4-000 23464-NX4-000	20 21	27 26	1.350 1.238
	OP	M3-P2 M4-P4	23447-NX4-000	C3-P2 C4-P5	23452-NX4-000 23465-NX4-000	20 21	27 25	1.350 1.190
	OP	M3-P2 M4-P6	23448-NX4-000	C3-P2 C4-P6	23452-NX4-000 23466-NX4-000	20 20	27 23	1.350 1.150
	OP	M3 M4-P4	23445-NX4-000	C3-P3 C4-P4	23453-NX4-000 23464-NX4-000	23 21	29 26	1.261 1.238
	OP	M3 M4-P4	23445-NX4-000	C3-P3 C4-P5	23453-NX4-000 23465-NX4-000	23 21	29 25	1.261 1.190
	OP	M3 M4-P6	23446-NX4-000	C3-P3 C4-P6	23453-NX4-000 23466-NX4-000	23 20	29 23	1.261 1.150
	OP	M3-P4 M4	23449-NX4-000	C3-P4 C4	23454-NX4-000 23461-NX4-000	22 24	31 28	1.409 1.167
	OP	M3-P4 M4	23449-NX4-000	C3-P4 C4-P2	23454-NX4-000 23462-NX4-000	22 24	31 29	1.409 1.208
	OP	M3-P4 M4-P3	23441-NX4-610	C3-P4 C4-P3	23454-NX4-000 23463-NX4-000	22 22	31 25	1.409 1.136
	OP	M3-P4 M4-P4	23442-NX4-610	C3-P4 C4-P4	23454-NX4-000 23464-NX4-000	22 21	31 26	1.409 1.238
	OP	M3-P4 M4-P4	23442-NX4-610	C3-P4 C4-P5	23454-NX4-000 23465-NX4-000	22 21	31 25	1.409 1.190
	OP	M3-P4 M4-P6	23443-NX4-610	C3-P4 C4-P6	23454-NX4-000 23466-NX4-000	22 20	31 23	1.409 1.150
	OP	M3-P4 M4	23449-NX4-000	C3-P5 C4	23455-NX4-000 23461-NX4-000	22 24	29 28	1.318 1.167
	OP	M3-P4 M4	23449-NX4-000	C3-P5 C4-P2	23455-NX4-000 23462-NX4-000	22 24	29 29	1.318 1.208

Gears		Marking And Parts Number				No. of Teeth		
		Main		Counter		M	C	Ratio
3rd/4th	OP	M3-P4 M4-P3	23441-NX4-610	C3-P5 C4-P3	23455-NX4-000 23463-NX4-000	22 22	29 25	1.318 1.136
	OP	M3-P4 M4-P4	23442-NX4-610	C3-P5 C4-P4	23455-NX4-000 23464-NX4-000	22 21	29 26	1.318 1.238
	OP	M3-P4 M4-P4	23442-NX4-610	C3-P5 C4-P5	23455-NX4-000 23465-NX4-000	22 21	29 25	1.318 1.190
	OP	M3-P4 M4-P6	23443-NX4-610	C3-P5 C4-P6	23455-NX4-000 23466-NX4-000	22 20	29 23	1.318 1.150
	OP	M3-P6 M4	23444-NX4-610	C3-P6 C4	23456-NX4-000 23461-NX4-000	21 24	27 28	1.286 1.167
	OP	M3-P6 M4	23444-NX4-610	C3-P6 C4-P2	23456-NX4-000 23462-NX4-000	21 24	27 29	1.286 1.208
	OP	M3-P6 M4-P3	23445-NX4-610	C3-P6 C4-P3	23456-NX4-000 23463-NX4-000	21 22	27 25	1.286 1.136
	OP	M3-P6 M4-P4	23446-NX4-610	C3-P6 C4-P4	23456-NX4-000 23464-NX4-000	21 21	27 26	1.286 1.238
	OP	M3-P6 M4-P4	23446-NX4-610	C3-P6 C4-P5	23456-NX4-000 23465-NX4-000	21 21	27 25	1.286 1.190
	OP	M3-P6 M4-P6	23447-NX4-610	C3-P6 C4-P6	23456-NX4-000 23466-NX4-000	21 20	27 23	1.286 1.150
5th	STD OP OP OP	M5 M5-P2 M5-P3 M5-P4	23471-NX4-000 23472-NX4-000 23473-NX4-000 23474-NX4-000	C5 C5-P2 C5-P3 C5-P4	23481-NX4-000 23482-NX4-000 23483-NX4-000 23484-NX4-000	26 25 23 20	28 28 24 22	1.077 1.120 1.043 1.100
6th	STD OP OP OP	M6 M6-P2 M6-P3 M6-P4	23491-NX4-000 23492-NX4-000 23493-NX4-000 23494-NX4-000	C6 C6-P2 C6-P3 C6	23501-NX4-000 23502-NX4-000 23503-NX4-000 23501-NX4-000	24 26 27 23	24 27 26 24	1.000 1.038 0.963 1.043

Speed List (12,000 rpm) Primary reduction: 21/62 Tire: R = 294 mm

Gears	No. of Teeth		Gear ratio	15	15	15	16	15	16	15	Drive
	M	C		40	39	38	40	37	39	36	Driven
1st	16	32	2.000	84	87	89	90	91	92	94	
	16	31	1.938	87	89	92	93	94	95	97	
	16	30	1.875	90	92	95	96	97	99	100	
	16	29	1.813	93	96	98	99	101	102	104	
	17	30	1.765	96	98	101	102	103	105	106	
2nd	17	29	1.706	99	102	104	106	107	108	110	
	18	29	1.611	105	108	110	112	113	115	117	
	18	28	1.556	109	111	114	116	117	119	121	
	21	32	1.524	111	114	117	118	120	121	123	
	18	27	1.500	113	116	119	120	122	123	125	
	19	28	1.474	115	118	121	122	124	125	127	
3rd	22	31	1.409	120	123	126	128	130	131	133	
	20	27	1.350	125	128	132	133	135	137	139	
	22	29	1.318	128	131	135	137	139	140	142	
	23	30	1.304	130	133	136	138	140	142	144	
	21	27	1.286	131	135	138	140	142	144	146	
	23	29	1.261	134	137	141	143	145	147	149	
4th	21	26	1.238	136	140	144	146	148	149	152	
	24	29	1.208	140	143	147	149	151	153	155	
	21	25	1.190	142	146	149	151	153	155	158	
	24	28	1.167	145	149	152	154	157	158	161	
	20	23	1.150	147	151	155	157	159	161	163	
	22	25	1.136	149	152	156	159	161	163	165	
5th	25	28	1.120	151	155	159	161	163	165	168	
	20	22	1.100	154	158	162	164	166	168	171	
	26	28	1.077	157	161	165	167	170	172	174	
	23	24	1.043	162	166	170	173	175	177	180	
6th	23	24	1.043	162	166	170	173	175	177	180	
	26	27	1.038	163	167	171	174	176	178	181	
	24	24	1.000	169	173	178	180	183	185	188	
	27	26	0.963	175	180	185	187	190	192	195	
				2.667	2.600	2.533	2.500	2.467	2.438	2.400	Final ratio

Speed List (12,000 rpm) Primary reduction: 21/62 Tire: R = 294 mm

Gears	No. of Teeth		Gear ratio	16	17	15	16	17	15	16	17	15	16	Drive
	M	C		38	40	35	37	39	34	36	38	33	35	Driven
1st	16	32	2.000	95	96	97	97	98	99	100	101	102	103	
	16	31	1.938	98	99	100	101	101	103	103	104	106	106	
	16	30	1.875	101	102	103	104	105	106	107	107	109	110	
	16	29	1.813	105	106	107	107	108	110	110	111	113	114	
	17	30	1.765	107	108	109	110	111	113	113	114	116	117	
2nd	17	29	1.706	111	112	113	114	115	117	117	118	120	121	
	18	29	1.611	118	119	120	121	122	123	124	125	127	128	
	18	28	1.556	122	123	124	125	126	128	129	130	132	132	
	21	32	1.524	124	126	127	128	129	130	131	132	134	135	
	18	27	1.500	126	128	129	130	131	132	133	134	137	137	
	19	28	1.474	129	130	131	132	133	135	136	137	139	140	
3rd	22	31	1.409	135	136	137	138	139	141	142	143	145	146	
	20	27	1.350	141	142	143	144	145	147	148	149	152	153	
	22	29	1.318	144	145	146	148	149	151	152	153	155	156	
	23	30	1.304	145	147	148	149	151	152	154	155	157	158	
	21	27	1.286	148	149	150	152	153	155	156	157	159	160	
	23	29	1.261	150	152	153	155	156	158	159	160	162	163	
4th	21	26	1.238	153	155	156	157	159	161	162	163	165	166	
	24	29	1.208	157	158	160	161	163	164	166	167	169	170	
	21	25	1.190	159	161	162	164	165	167	168	169	172	173	
	24	28	1.167	163	164	165	167	168	170	172	173	176	177	
	20	23	1.150	165	166	168	169	171	173	174	175	178	179	
	22	25	1.136	167	168	170	171	173	175	176	177	180	181	
5th	25	28	1.120	169	171	172	174	175	177	179	180	183	184	
	20	22	1.100	172	174	176	177	179	181	182	183	186	187	
	26	28	1.077	176	178	179	181	182	185	186	187	190	191	
	23	24	1.043	182	183	185	187	188	190	192	193	196	197	
6th	23	24	1.043	182	183	185	187	188	190	192	193	196	197	
	26	27	1.038	183	184	186	188	189	191	193	194	197	198	
	24	24	1.000	190	191	193	195	196	199	200	202	205	206	
	27	26	0.963	197	199	200	202	204	206	208	209	213	214	
				2.375	2.353	2.333	2.313	2.294	2.267	2.250	2.235	2.200	2.188	Final ratio

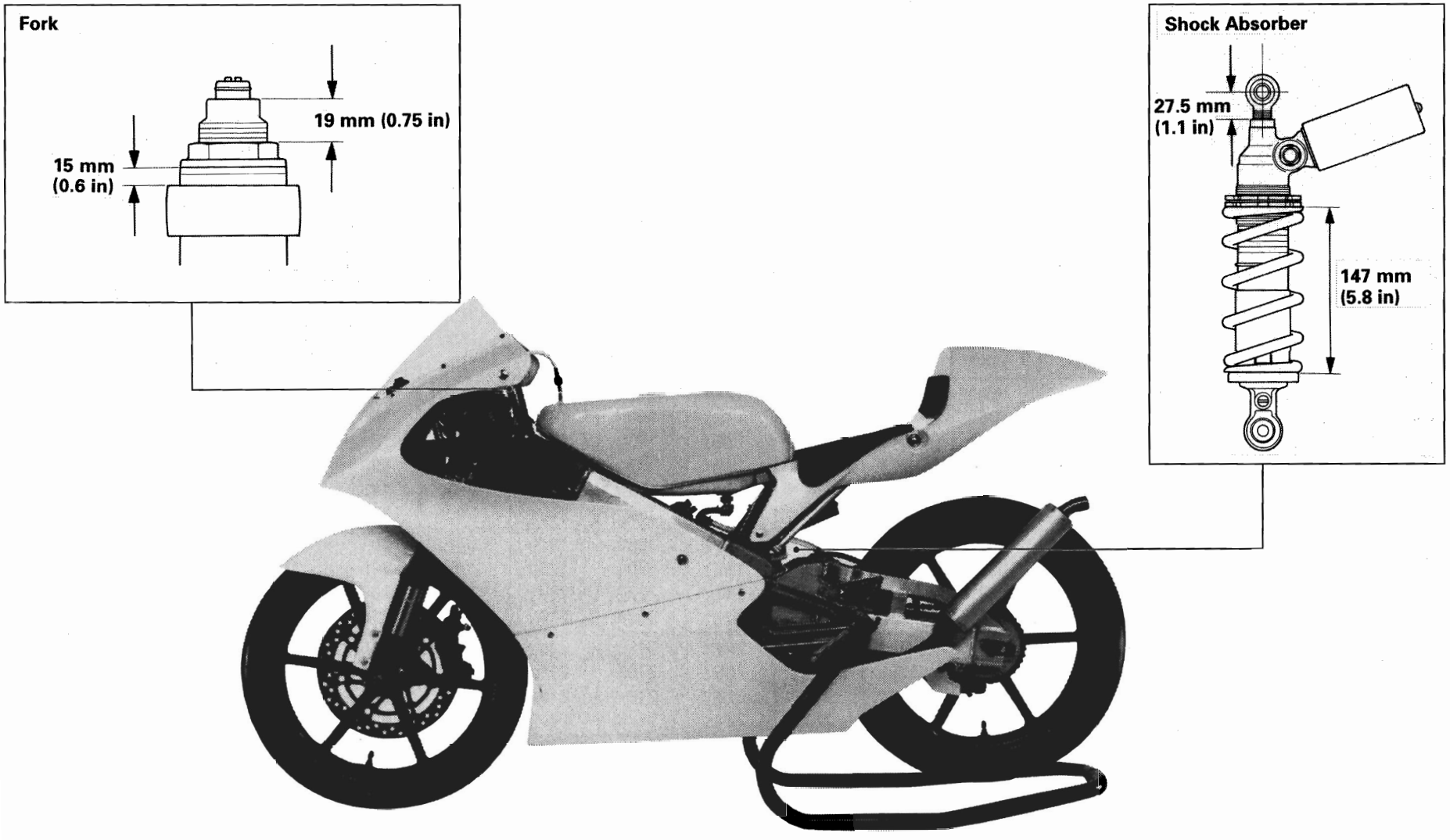
Speed List (12,000 rpm) Primary reduction: 21/62 Tire: R = 294 mm

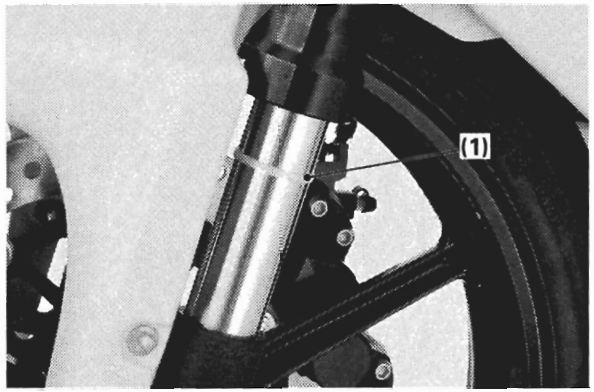
Gears	No. of Teeth		Gear ratio	17	15	16	17	16	17	16	17	17	17	Drive
	M	C		37	32	34	36	33	35	32	34	33	32	Driven
1st	16	32	2.000	103	106	106	106	109	109	113	113	116	120	
	16	31	1.938	107	109	109	110	113	113	116	116	120	124	
	16	30	1.875	110	113	113	113	116	117	120	120	124	128	
	16	29	1.813	114	117	117	117	121	121	124	124	128	132	
	17	30	1.765	117	120	120	121	124	124	128	128	132	136	
2nd	17	29	1.706	121	124	124	125	128	128	132	132	136	140	
	18	29	1.611	128	131	132	132	136	136	140	140	144	149	
	18	28	1.556	133	136	136	137	140	141	145	145	149	154	
	21	32	1.524	136	139	139	140	143	144	148	148	152	157	
	18	27	1.500	138	141	141	142	146	146	150	150	155	160	
	19	28	1.474	140	143	144	144	148	148	153	153	157	162	
3rd	22	31	1.409	147	150	150	151	155	155	160	160	165	170	
	20	27	1.350	153	156	157	158	162	162	167	167	172	177	
	22	29	1.318	157	160	161	161	166	166	171	171	176	182	
	23	30	1.304	159	162	163	163	167	168	173	173	178	183	
	21	27	1.286	161	164	165	165	170	170	175	175	181	186	
	23	29	1.261	164	167	168	169	173	174	179	179	184	190	
4th	21	26	1.238	167	171	171	172	176	177	182	182	187	193	
	24	29	1.208	171	175	175	176	181	181	186	186	192	198	
	21	25	1.190	174	177	178	179	183	184	189	189	195	201	
	24	28	1.167	177	181	182	182	187	188	193	193	199	205	
	20	23	1.150	180	184	184	185	190	190	196	196	202	208	
	22	25	1.136	182	186	187	187	192	193	198	198	204	211	
5th	25	28	1.120	185	189	189	190	195	195	201	201	207	214	
	20	22	1.100	188	192	193	193	199	199	205	205	211	218	
	26	28	1.077	192	196	197	198	203	203	209	209	215	222	
	23	24	1.043	198	202	203	204	209	210	216	216	222	229	
6th	23	24	1.043	198	202	203	204	209	210	216	216	222	229	
	26	27	1.038	199	203	204	205	210	211	217	217	223	230	
	24	24	1.000	207	211	212	213	218	219	225	225	232	239	
	27	26	0.963	215	219	220	221	227	227	234	234	241	249	
				2.176	2.133	2.125	2.118	2.063	2.059	2.000	2.000	1.941	1.882	Final ratio

Suspension Adjustment

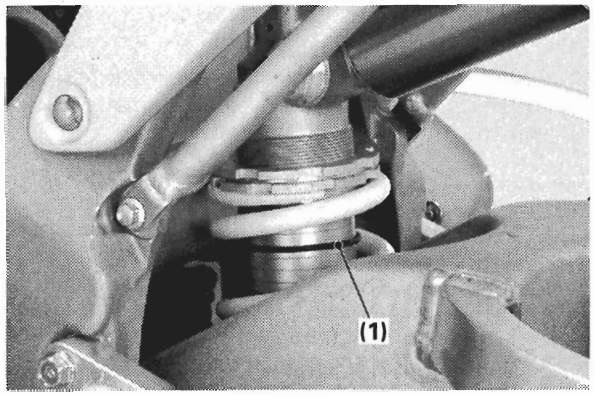
Standard Setting

Always start from standard setting when adjusting the suspension.
If you become confused about adjustment settings, return to the standard setting and start over.





(1) TIE-WRAP

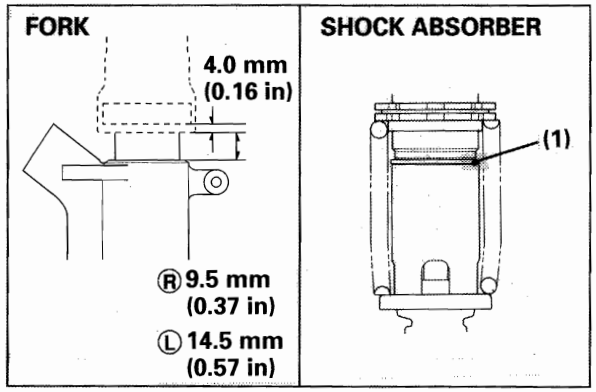


(1) O-RING

How To Obtain The Correct Suspension Stroke

As the first step in setting the suspension, be sure to know the range of the suspension stroke.
For the front suspension, a tie-wrap should be wrapped around the fork pipe.

On the rear suspension use, the installed O-ring.



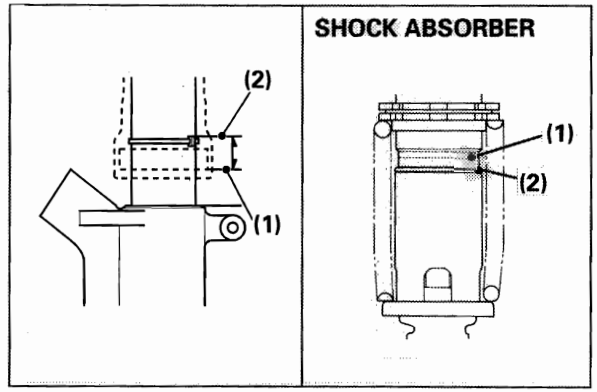
(1) SUSPENSION STOPS POSITION

Suspension stroke is affected by lap times, tire grip, temperature, and many other factors. Test ride your machine as close to your racing speed and pattern as possible.

To get the correct stroke, measure the distance from the suspension stops to the full stroke position with your test ride.
Suspension stops are shown in the illustration above.

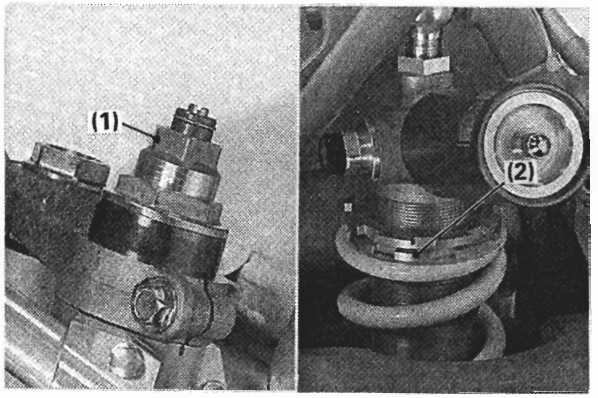
Front: • 9.5 mm (0.37 in) --Right side
• 14.5 mm (0.57 in) --Left side from the axle holder

Rear: Top indicator groove of the damper case



(1) SUSPENSION STOPS POSITION
(2) FULLY STROKE POSITION

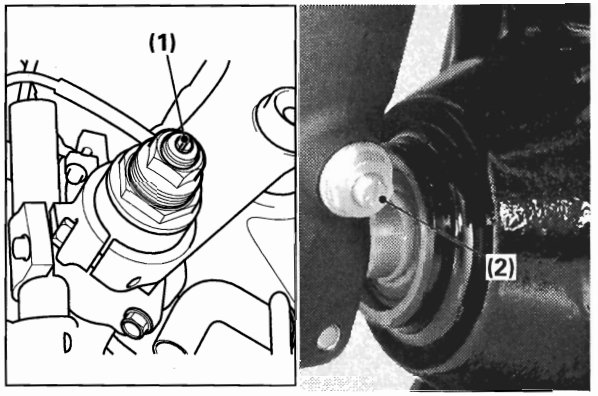
Inspect the stroke from stop position.
Set the full stroke position depending upon test runs so that it is near but not at the stop position.



(1) FORK PRE-LOAD ADJUSTER
(2) REAR SHOCK ABSORBER PRELOAD ADJUSTER

Adjust the suspension stroke using the spring preload adjuster.
If the stroke is shorter than the standard, increase spring preload.
If the stroke is longer than the standard, decrease spring preload.

Adjust the fork preload adjuster in one-groove increments and the rear spring adjuster in one-turn increment.



(1) REBOUND ADJUSTER
(2) COMPRESSION ADJUSTER

Front Suspension Adjustment

Rebound Damping Adjustment

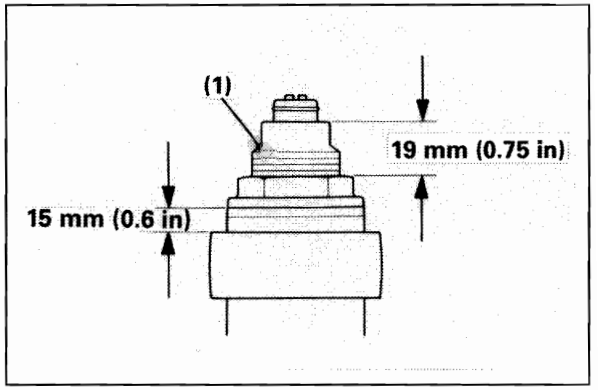
The adjuster is located at the center of the fork bolt. Using a flathead screwdriver, turn the adjuster clockwise to increase damping, counterclockwise to decrease damping. There are 12 notches between minimum and maximum. Do not force the adjuster past its limits.

Standard setting: 6th notch back from maximum

Compression Damping Adjustment

The adjuster is located at the bottom of the axle holder. Using a flathead screwdriver, turn the adjuster clockwise to increase damping, counterclockwise to decrease damping. There are 12 notches between minimum and maximum. Do not force the adjuster past its limits.

Standard setting: 10th notch back from maximum



(1) PRELOAD ADJUSTER

Spring Preload Adjustment

Turn the preload adjuster clockwise to increase preload and counterclockwise to decrease preload. One complete turn of the preload adjuster corresponds to 1 mm variation in preload.

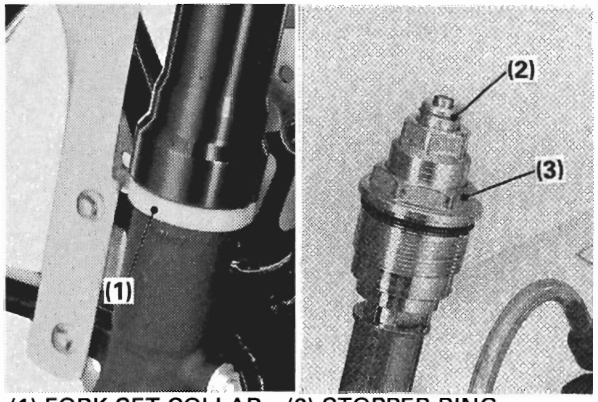
Adjustment range: 10—25 mm (0.4—1.0 in)
Standard setting: 19 mm (0.75 in)

The height of the machine will change when spring preload is changed. You can maintain the correct ride height with a fork tube adjustment.

Fork Tube Height Adjustment

The fork tubes can be adjusted to maintain correct ride height when spring preload is changed.

Adjustment range: 0—25 mm (0—1.0 in)
Standard setting: 13 mm (0.5 in)



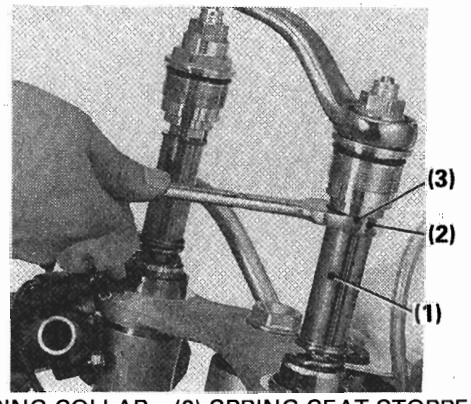
(1) FORK SET COLLAR (2) STOPPER RING
(3) FORK BOLT

Fork Spring Replacement
Support the machine using the maintenance stand.
Remove the bolts and front fender.

Remove the lower radiator mounting bolt to avoid damaging the radiator, the front tire will interfere with the radiator.

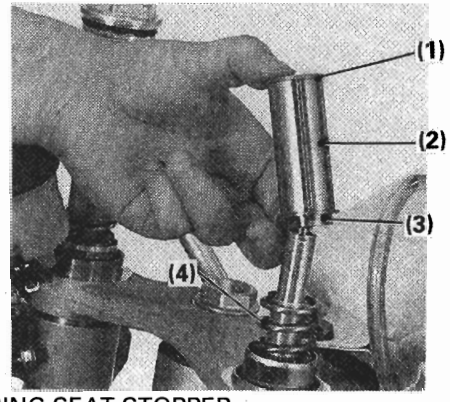
Remove the stop rings.
Avoid damaging the fork cap threads, loosen the top bridge pinch bolts.
If the fork bolts in both right and left forks are removed from the outer tube, the fork will bottom suddenly. Hold the machine and loosen the fork bolt, lower the machine slowly until the bottom bridge contacts the tire.

Installing the Fork Set Collar (51481-NX4-610) onto the axle holder.
Record the fork tube height.
Loosen the bottom bridge pinch bolts and pull the outer tube down onto the fork set collar.



(1) SPRING COLLAR (2) SPRING SEAT STOPPER
(3) CUT-OUT

Push down on the spring collar and spring seat stopper and hook them under lock nut.
Hold the cut-out of the rebound adjuster with a 17 mm spanner, then loosen the fork bolt.
Do not loose the rebound adjuster lock nut or remove the rebound adjuster.



(1) SPRING SEAT STOPPER
(2) SPRING COLLAR (3) JOINT PLATE
(4) FORK SPRING

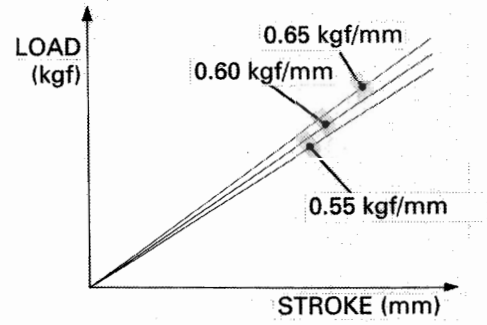
Remove the following:
- Spring seat stopper
- Spring collar
- Spring joint plate
- Fork spring

Install the spring with its identification mark (number of coils) facing up.

Install the parts in the reverse order of removal.
Pull the outer tube up as much as the fork tube height recorded during removal and tighten the bottom bridge pinch bolts.

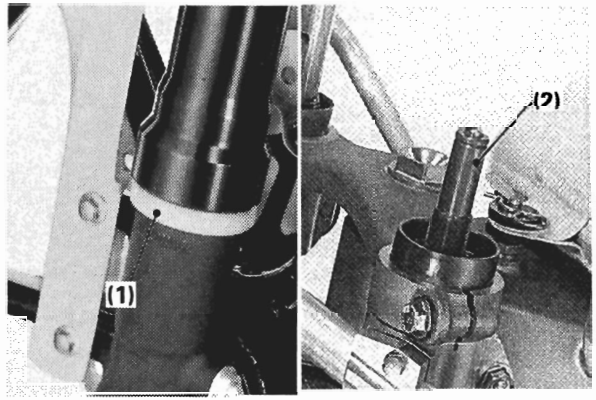
Torque:
Bottom bridge pinch bolt:
23 N·m (2.3 kgf·m, 17 lbf·ft)
Fork bolt: **34 N·m (3.5 kgf·m, 25 lbf·ft)**
Top bridge pinch bolt: **23 N·m (2.3 kgf·m, 17 lbf·ft)**

Optional Spring Characteristics



Spring Identification

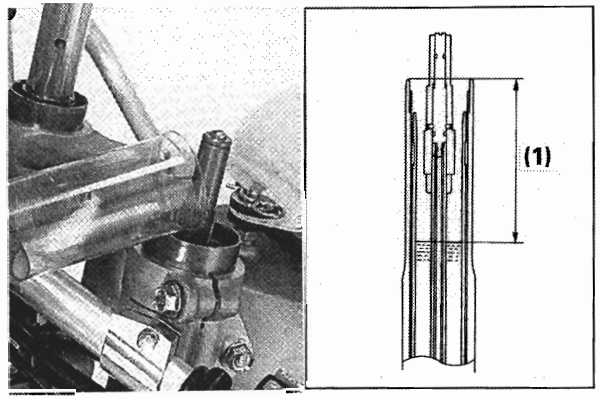
Spring rate	Identification
0.55 kgf/mm	2 coils
0.60 kgf/mm	1 coil
0.65 kgf/mm	3 coils



(1) FORK SET COLLAR (2) DAMPER ROD

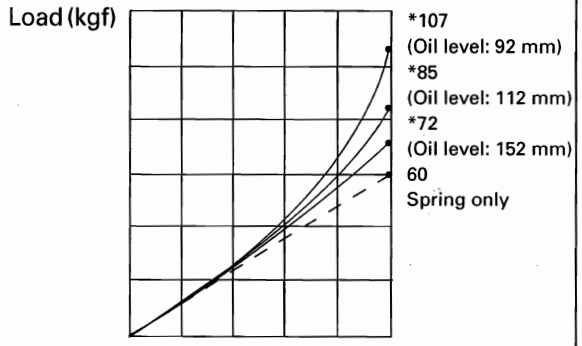
Fluid Level Adjustment

Fork fluid level should be checked with the Fork Set Collar installed.
Remove the fork bolt, spring seat stopper, spring collar, spring joint plate and spring from the fork (see fork spring replacement).
Press the damper rod down until it comes into contact with the bottom of the fork tube.



(1) OIL LEVEL

Oil Level Characteristics

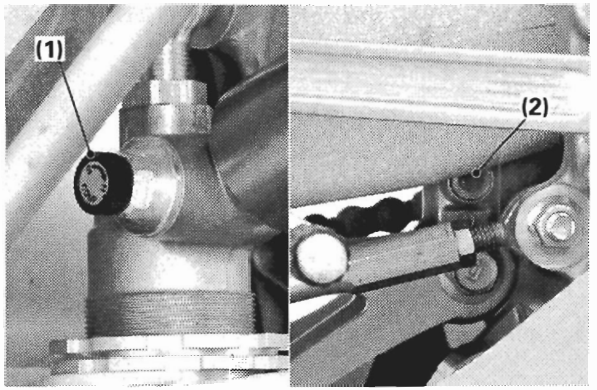


*: Spring load + Air spring load at each oil level

Measure the distance between the top of the fluid and the top of the fork slider.

Standard fluid level:
Right side 111 mm (4.37 in), (233 cm³)
Left side 106 mm (4.17 in), (233 cm³)
Recommended fork fluid:
Honda Ultra Cushion Oil Special (SAE5W)
Showa SS05 Operation Oil or equivalent

Fork fluid replacement is required for fork removal and installation. See section 5 for detail.



(1) COMPRESSION ADJUSTER
(2) REBOUND ADJUSTER

Rear Suspension adjustment

Make sure the rear shock reservoir is facing rearward and can not interfere with other parts of the machine (frame, seat rails, chain, etc.) throughout its full stroke.

Compression Damping Adjustment

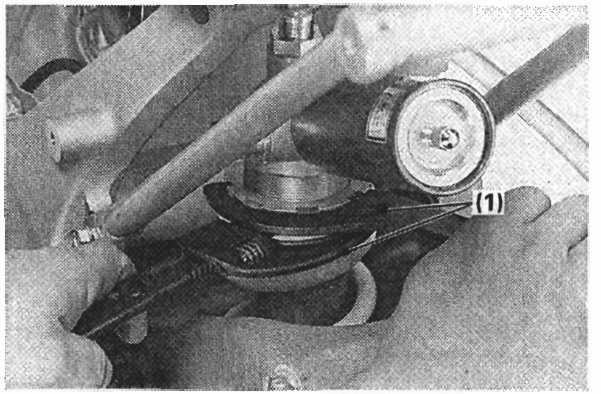
The compression damping adjuster is on the left side of the reservoir.
Turn the knob toward the H mark to increase damping.
Turn the knob toward the S mark to decrease damping.
The knob has 24 notches with 10 notches for one full turn.

Standard position: 6th notch back from full hard

Rebound Damping Adjustment

The rebound damping adjuster is at the base of the shock absorber.
Turn the dial toward the H mark to increase damping.
Turn the dial toward the S mark to decrease damping.
The dial has 12 notches with a detent every 60 degree.

Standard position: 10th notch back from full hard



(1) PIN SPANNERS

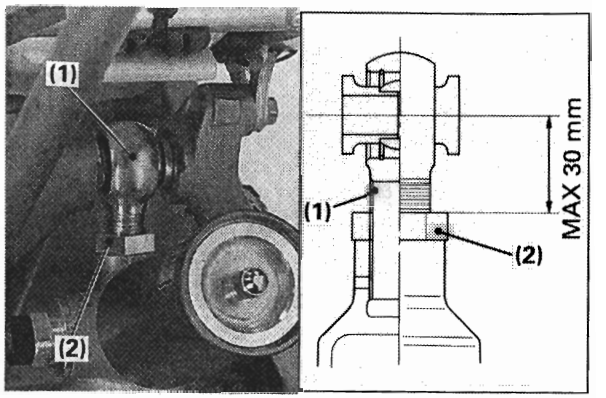
Spring Preload Adjustment

Loosen the lock nut and turn the spring preload adjuster. One full turn changes the length of the spring by 1.5 mm and ride height changes 3 mm.
To prevent damage to the shock mounts and to assure the lock nut is properly tightened, use two wrenches to tighten the lock nut.

Standard preload length: 147 mm (5.8 in)

TOOL:
Pin spanner (upper) **07702-0020001**

Do not force to turn the adjuster past its limits.



(1) UPPER JOINT (2) LOCK NUT

Ride Height Adjustment

Make sure the suspension is not loaded when checking the ride height.

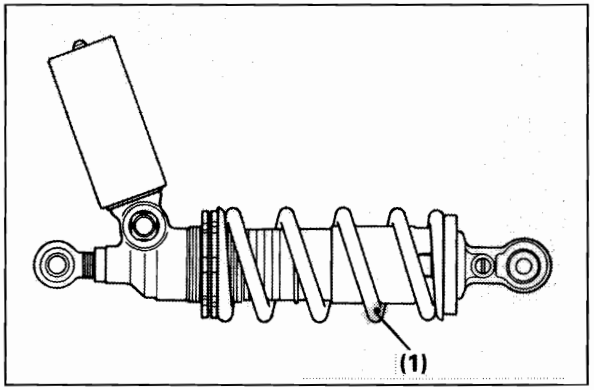
Always adjust the ride height from the standard setting (page 7-12).

To adjust ride height, loosen the lock nut at the rear shock absorber upper joint and turn the upper joint to the desired position. Each complete turn is 1.5 mm and change the ride height 3 mm.

Standard length: 27.5 mm (1.1 in)
Adjustment range: $^{+2.5}_{-7.5}$ mm ($^{+0.1}_{-0.3}$ in) from standard length

The limit on the + side is 30 mm. If extended any further, the upper joint may slip out while riding.

After adjustment, tighten the lock to 64 N·m (6.5 kgf-m, 47 lbf-ft).



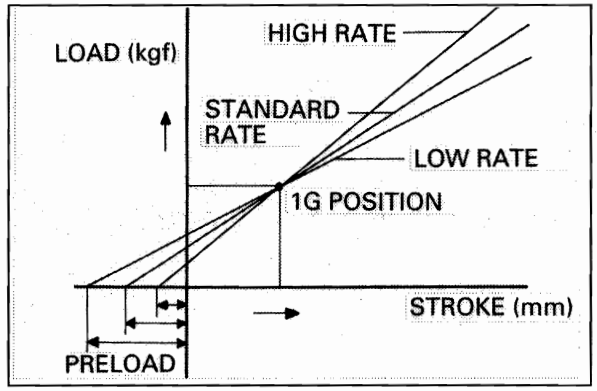
(1) SPRING

Spring Replacement

Remove the rear shock absorber, then remove the spring (page 5-20).

Spring specifications

Spring rate	Identification color
6.5 kgf/mm	Black
7.0 kgf/mm	Green
7.5 kgf/mm	Blue
8.0 kgf/mm	Yellow
8.5 kgf/mm	Red

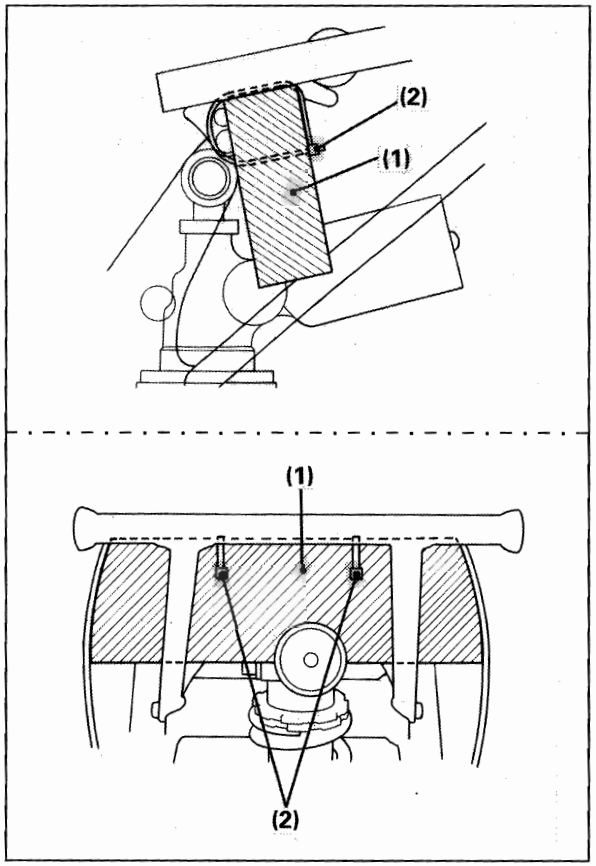


Install the rear shock absorber spring (page 5-22).

The ride height changes if you replace the different rate spring.
After spring replacement, check the ride height with the machine is not loaded.
Adjust the ride height with the preload adjuster (page 7-17).

Troubleshooting Suspension Set-up

Symptom	Suspected Causes	Countermeasures
Bottoming (a hitting feeling)	Poor performance	• Check fork and rear shock absorber assembly performance. Confirm that the fork pipe and rod are not bent, If there is such trouble, modify or exchange the defective part. • Check to see if the center shifted during tightening of the front axle shaft and whether the fork has been twisted.
	Excessive load (initial) on the spring set	• Lower initial load • Change to a softer spring • Reduce the amount of oil (front suspension only)
	Hitting bottom (full stroke)	• Increase initial load • Change to stiffer spring • Increase the amount of oil (front suspension only)
	Excessive damping force	• Reduce the damping force (front: adjuster or oil viscosity. rear: adjuster)
	Excessive tire rigidity	• Review the selection, and reduce air pressure
Chattering	Poor matching between body, suspension and tires.	• Shift the resonance point by either increasing or reducing the initial load (be sure to confirm the stroke when doing so). • Shift resonance point by increasing or decreasing damping force.
	Others 1. Loosening of area adjacent to head pipe and others. 2. Loss of balance or deformation of tire rim. 3. Misselected tire or misadjusted air pressure.	• Check the bolts and bearings to see if they are tight and properly secured. • Rebalance and confirm whether or not the rim is deformed. • Raise or lower the air pressure.
Excessive movement of the steering	In cases experienced when the throttle is ON: Lack of rebound stroke (From 1G) of the front fork.	• Lower initial preload. • Increase front distribution load (either increase the rear ride height or front fork projected length).
	In cases experienced when the throttle is OFF. 1. Insufficient stroke due to excessively stiff properties of front spring. 2. Excessive stroke due to overly soft spring properties.	• Lower initial load. • Change to a softer spring. • Increase initial load. • Change to a stiffer spring.
Does not turn-in easily at corners	Caster angle is too large	• Raise rear ride height (with ride height adjuster). • Increase initial load of rear spring. • Lower initial load of front. • Increase front fork projected length. • Reduce rear damping force (rebound).
Floating feeling	Lack of damping force	• Increase damping force.
Hopping (rear)	Resonance under spring die to inadequate damping force.	• Either increase or reduce damping force (rebound) to shift resonance point. Lower initial load.



(1) BAFFLE SPONGE (2) TIE-WRAPS

Other Setting

Baffle Sponge

For correct carburetor setting, always install the baffle sponge when you riding in rain.

Cut the baffle sponge in half (40 × 100 × 200 mm). Install the baffle sponge between the seat rail and secure it with tie-wraps as shown in the illustration.

2004-RS125R PARTS LIST

CONTENTS

INSTRUCTIONS FOR USE OF PARTS LIST

This parts list is to be used when ordering replacement parts; it contains all parts for model 2004-RS125R.

Ⅰ. How to order parts

●Information required

Replacement parts orders must contain both the part number and the stamped number(s) as described below. This is because any changes and modifications of parts are registered at Honda with the pertinent parts and stamped numbers.

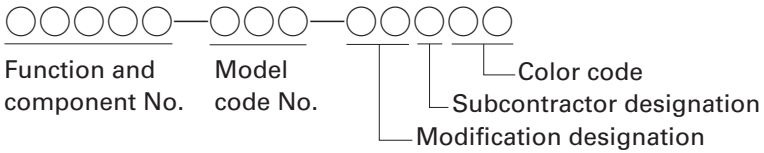
• If quantities are shown in ( ), the parts are optional.

• If "N" is indicated in the quantity column, the parts quantity is to be determined as required.

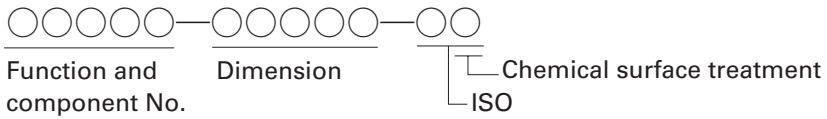
Ⅱ. How to read this parts list

●Make-up of the part number

(Example) General parts



(Example) Bolts, nuts and other standard parts



●Abbreviations

The following abbreviations are used in this parts list.

A.C.····· Alternating current	M. ····· Middle
ASSY.····· Assembly	mm····· Millimeter
C.····· Center	R.····· Right
COMP. ····· Complete	STD. ····· Standard
G····· Gram	T(22T)····· Tooth（22 Teeth）
L.····· Left	T.W. ····· Thermo Water
L(100L) ····· Link（100Links）	

IMPORTANT INFORMATION

• The parts which have a dot "•" on the left side of the "Ref. No." are exclusive for HRC products. To purchase these parts, consult your Honda dealer.

• The parts which have no dot are Honda products and can be purchased from your nearest Honda motorcycle dealer, or from HRC-JAPAN/ EUROPE if you can,t obtain the parts locally.

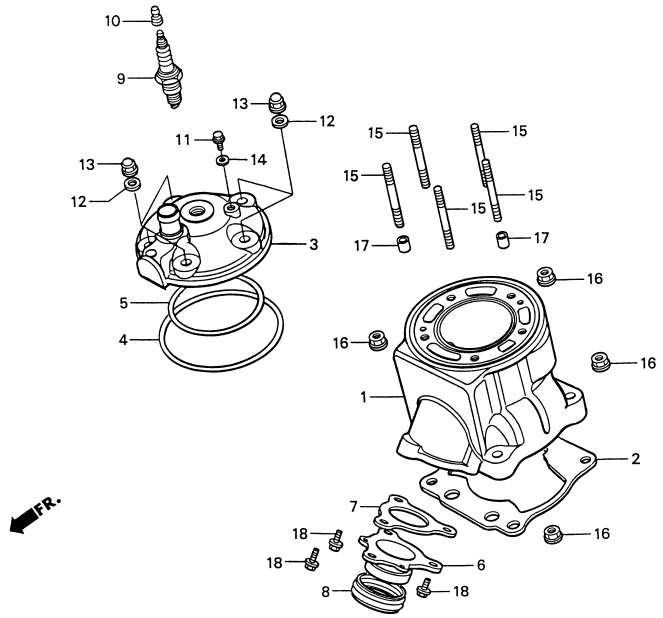
MEMO

Block No.

E-1

CYLINDER / CYLINDER HEAD

2003 RS125R
2004 RS125R



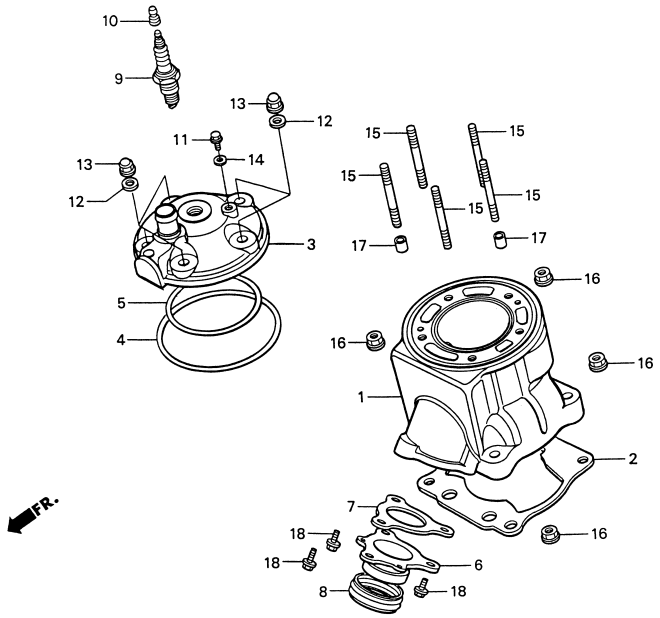
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	12100-NX4-810	CYLINDER COMP.	1	1	
• 2	12194-NX4-781	GASKET, CYLINDER 0.4T	(1)	(1)	
•	12195-NX4-781	GASKET, CYLINDER 0.5T	1	1	
•	12196-NX4-781	GASKET, CYLINDER 0.6T	(1)	(1)	
• 3	12200-NX4-710	HEAD COMP., CYLINDER	1	1	
• 4	12212-ND5-003	O-RING, 96X2.4	1	1	
• 5	12213-ND5-000	O-RING, 61X1.9	1	1	
• 6	18220-NX4-000	JOINT COMP., EXHAUST PIPE	1	1	
• 7	18331-NF4-780	GASKET, EXHAUST JOINT	1	1	
8	18359-KS7-000	SEAL, EXHAUST PIPE	1	1	
• 9	31901-NX4-701	SPARK PLUG, R6385-105P	1	1	
•	31902-NX4-701	SPARK PLUG, R6385-11P	(1)	(1)	
•	31903-NX4-701	SPARK PLUG, R6385-10P	(1)	(1)	
• 10	31910-NF4-000	NUT, SPARK PLUG	(1)	(1)	
• 11	90037-NX5-000	BOLT, WATER CHECK 6X10	1	1	
12	90441-422-000	WASHER, SEALING, 8MM	5	5	
13	90443-107-000	NUT, CAP, 8MM	5	5	
14	90543-273-000	PACKING, FRONT FORK DRAIN VALVE	1	1	
15	92900-08028-0E	BOLT, STUD II, 8X28	5	5	
16	94050-08000	NUT, FLANGE, 8MM	4	4	

Block No.

E-1

CYLINDER / CYLINDER HEAD

2003 RS125R
2004 RS125R



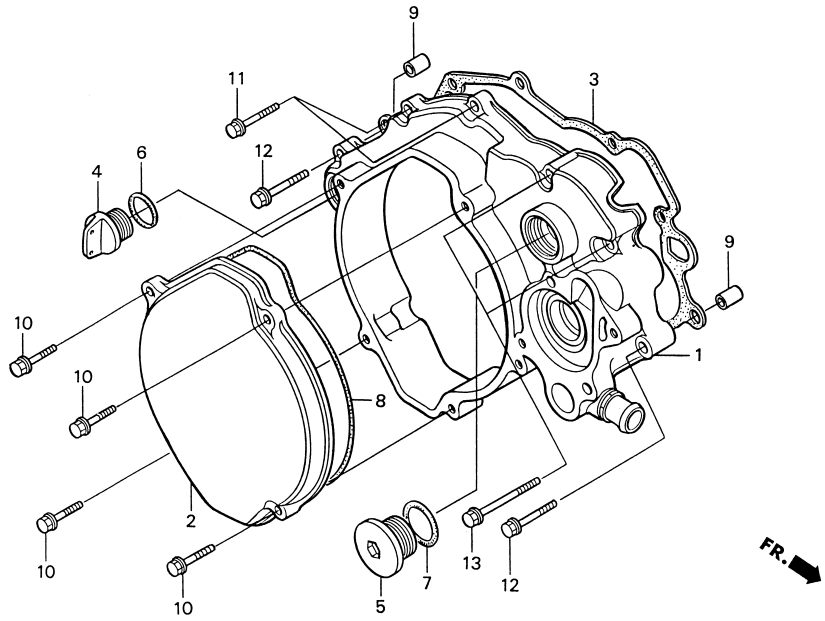
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
17	94301-06100	DOWEL PIN, 6X10	2	2	
18	96001-06014-07	BOLT, FLANGE, SH, 6X14	3	3	

Block No.

E-2

R. CRANKCASE COVER

2003 RS125R
2004 RS125R



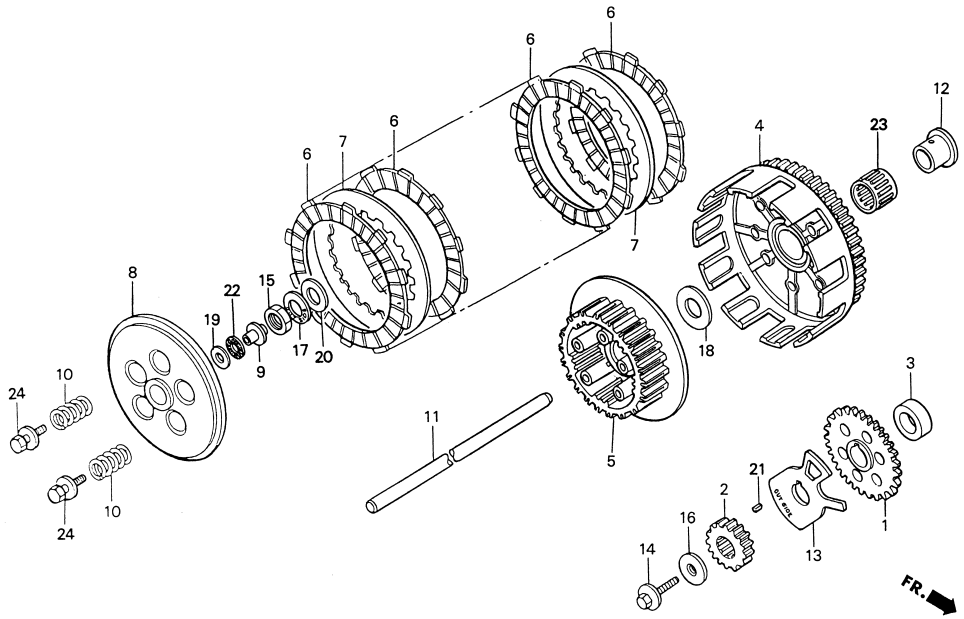
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	11340-NX4-700	COVER COMP., R. CRANKCASE	1	1	
• 2	11341-NX4-700	COVER, CLUTCH	1	1	
• 3	11394-NX4-003	GASKET, R. COVER	1	1	
• 4	15611-NF4-900	CAP, OIL FILLER	1	1	
5	90087-HB5-000	CAP, 30MM	1	1	
6	91304-MJ0-003	O-RING	1	1	
7	91305-KF0-003	O-RING, 27X2	1	1	
8	91311-KS6-700	O-RING, SPECIAL	1	1	
9	94301-08100	DOWEL PIN, 8X10	2	2	
10	96001-06020-07	BOLT, FLANGE, SH, 6X20	5	5	
11	96001-06025-00	BOLT, FLANGE, SH, 6X25	7	7	
12	96001-06032-00	BOLT, FLANGE, SH, 6X32	2	2	
13	96001-06040-00	BOLT, FLANGE, SH, 6X40	2	2	

Block No.

E-3

PRIMARY DRIVE GEAR / CLUTCH

2003 RS125R
2004 RS125R



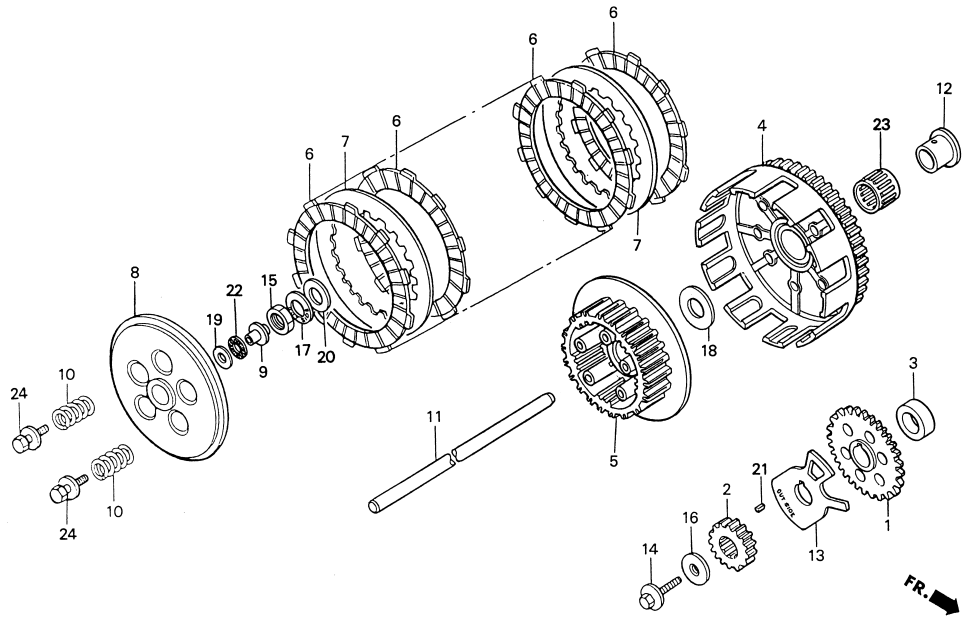
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	13411-NX4-700	GEAR, BALANCER DRIVE	1	1	Side mark "B"
• 2	13615-NX4-000	GEAR, PRIMARY DRIVE	1	1	
• 3	13617-NX4-700	COLLAR, DRIVE GEAR	1	1	
• 4	22100-NX4-700	OUTER COMP., CLUTCH	1	1	
• 5	22120-NX4-000	CENTER, CLUTCH	1	1	
• 6	22201-NX4-000	DISK, CLUTCH FRICTION	7	7	
7	22321-KF0-770	PLATE, CLUTCH	6	6	
• 8	22351-NF4-760	PLATE, CLUTCH PRESSURE	1	1	
• 9	22352-NX4-700	PIECE, CLUTCH LIFTER	1	1	
10	22401-KZ4-A90	SPRING, CLUTCH	5	5	
• 11	22850-NX4-000	ROD, CLUTCH LIFTER	1	1	
• 12	28237-NX4-000	COLLAR, DISTANCE, 20X26X26	1	1	
• 13	30290-NX4-010	PLATE, PULSER	1	1	
14	90013-430-000	BOLT, SPECIAL, 10X25	1	1	
15	90235-KA4-000	NUT, 18MM	1	1	
• 16	90401-NF4-780	WASHER, 10X30X3.5	1	1	
17	90432-428-000	WASHER, LOCK	1	1	
• 18	90451-NX4-000	WASHER, THRUST, 20MM	1	1	
19	90452-147-003	WASHER, THRUST, 12MM	1	1	
20	90456-KA4-000	WASHER, THRUST, 18X32MM	1	1	

Block No.

E-3

PRIMARY DRIVE GEAR / CLUTCH

2003 RS125R
2004 RS125R



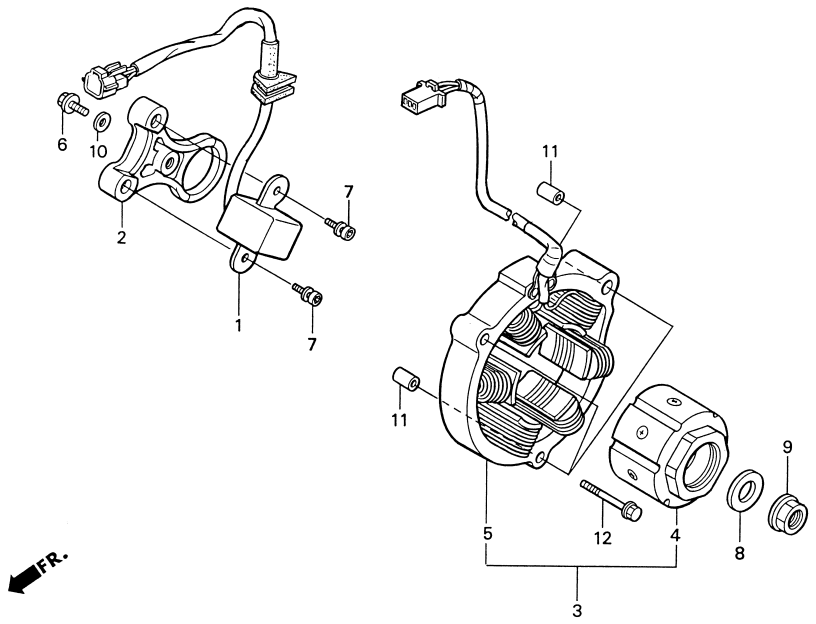
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 21	90701-NX4-700	KEY, 4X5X6.5	1	1	
22	91001-147-006	BEARING, NEEDLE, 12MM	1	1	
23	91104-PL9-008	BEARING, NEEDLE, 26X31X22	1	1	
24	90047-PH7-000	BOLT-WASHER, 6X22	5	5	

Block No.

E-4

PULSE GENERATOR / A.C. GENERATOR

2003 RS125R
2004 RS125R



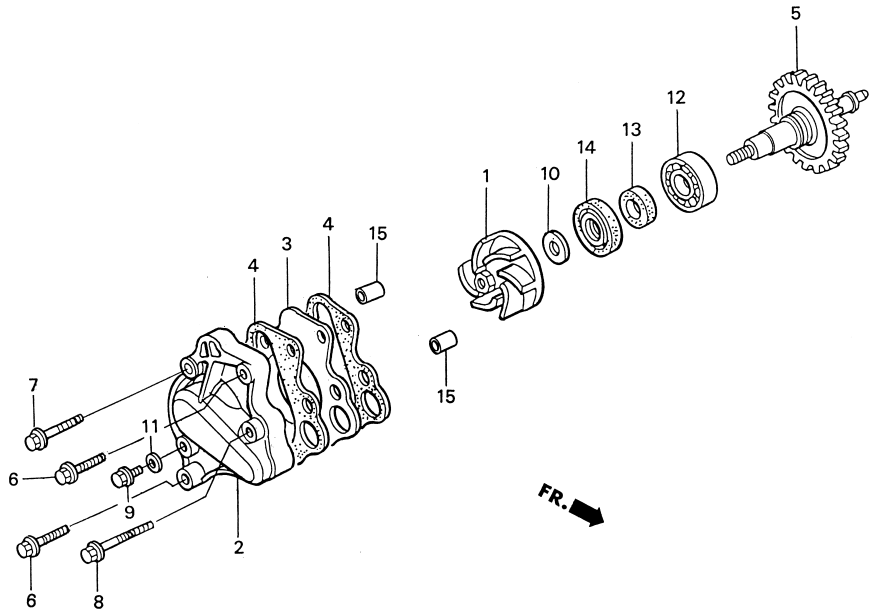
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	30300-NX4-003	PULSE GENERATOR ASSY.	1	1	
• 2	30305-NX4-000	BASE, PULSE GENERATOR	1	1	
• 3	31100-NX4-013	A.C. GENERATOR ASSY.	1	1	
• 4	31110-NX4-003	ROTOR COMP.	1	1	
• 5	31120-NX4-013	STATOR COMP.	1	1	
6	90001-GHB-630	BOLT, FLANGE, SHF, 6X16	1	1	
7	90089-KAS-900	BOLT, FLANGE, SOCKET, 5X14	2	2	
8	90465-MM9-000	WASHER, 10MM	1	1	
9	94050-10000	NUT, FLANGE, 10MM	1	1	
10	94101-06000	WASHER, PLAIN, 6MM	1	1	
11	94301-08100	DOWEL PIN, 8X10	2	2	
12	96001-06032-00	BOLT, FLANGE, SH, 6X32	3	3	

Block No.

E-5

WATER PUMP

2003 RS125R
2004 RS125R



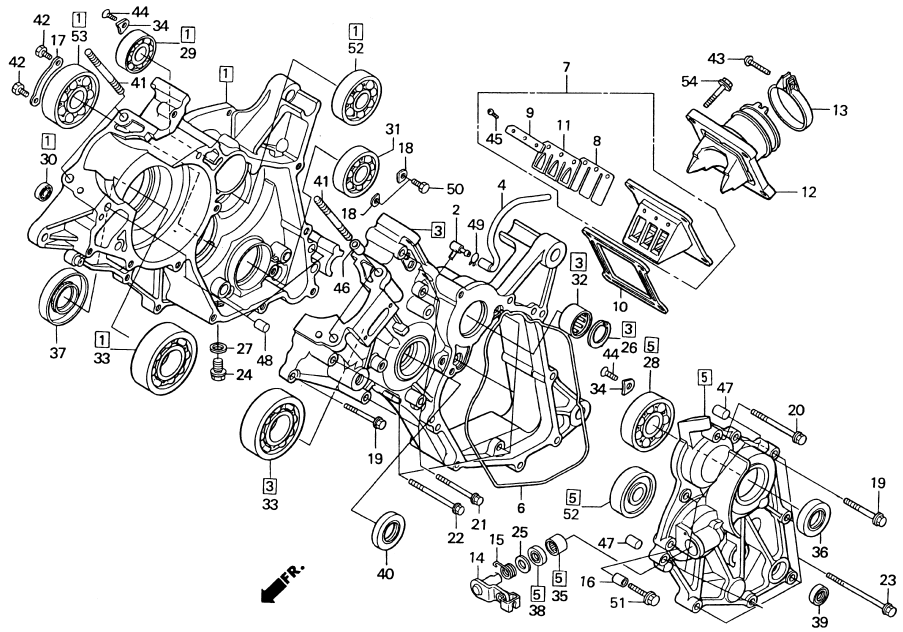
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
1	19215-KA3-740	IMPELLER, WATER PUMP	1	1	
• 2	19221-KA3-760	COVER, WATER PUMP	1	1	
• 3	19222-NX4-000	SEPARATOR, WATER PUMP	1	1	
• 4	19229-NX4-003	GASKET, WATER PUMP	2	2	
• 5	19240-NX4-010	SHAFT COMP., WATER PUMP	1	1	
6	90002-GHB-670	BOLT, FLANGE, SHF, 6X25	2	2	
7	90002-GHB-690	BOLT, FLANGE, SHF, 6X32	1	1	
8	90002-GHB-710	BOLT, FLANGE, SHF, 6X40	1	1	
• 9	90037-NX5-000	BOLT, WATER CHECK, 6X10	1	1	
10	90447-KE1-000	WASHER, SEALING, 7MM	1	1	
11	90543-273-000	PACKING, FRONT FORK DRAIN VALVE	1	1	
12	91007-KA3-740	BEARING, BALL, 12X24X6	1	1	
13	91201-965-000	OIL SEAL, 12X22X5	1	1	
14	91211-KA3-761	SEAL, WATER PUMP	1	1	
15	94301-08140	DOWEL PIN, 8X14	2	2	

Block No.

E-6

CRANKCASE

2003 RS125R
2004 RS125R



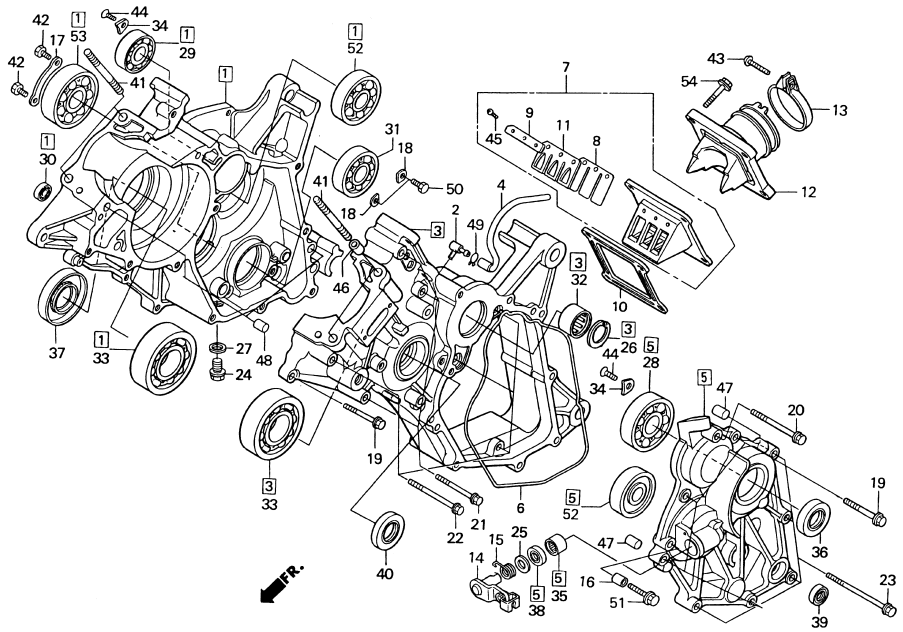
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	11100-NX4-710	CRANKCASE COMP., R.	1	1	
2	11106-GM2-300	JOINT, BREATHER	1	1	
• 3	11200-NX4-780	CRANKCASE COMP., L.	1	1	
• 4	11206-NX4-770	TUBE, BREATHER	1	1	
• 5	11310-NX4-810	COVER COMP., L. CRANKCASE	1	1	
• 6	11315-NX4-000	O-RING, L. COVER	1	1	
• 7	14100-NX4-811	VALVE ASSY., REED	1	1	
• 8	14111-NF5-000	REED VALVE ONLY	2	2	
• 9	14121-NX4-003	STOPPER, REED VALVE	2	2	
• 10	14132-NF4-651	GASKET, REED VALVE	1	1	
• 11	14141-NX4-811	DAMPER, REED	2	2	
• 12	16210-NX4-780	INSULATOR, CARBURETOR	1	1	
13	16223-KA5-690	BAND, INSULATOR	1	1	
14	22810-KS6-700	LIFTER COMP., CLUTCH	1	1	
15	22815-KS6-700	SPRING, CLUTCH LEVER	1	1	
• 16	22819-NX4-000	STOPPER COLLAR, CLUTCH LIFTER	1	1	
17	23521-HB6-000	PLATE, BEARING SET	1	1	
18	23521-KW3-000	BEARING SET PLATE A	2	2	
19	90001-GHB-670	BOLT, FLANGE, SHF, 6X25	5	5	
20	90001-GHB-720	BOLT, FLANGE, SHF, 6X45	1	1	

Block No.

E-6

CRANKCASE

2003 RS125R
2004 RS125R



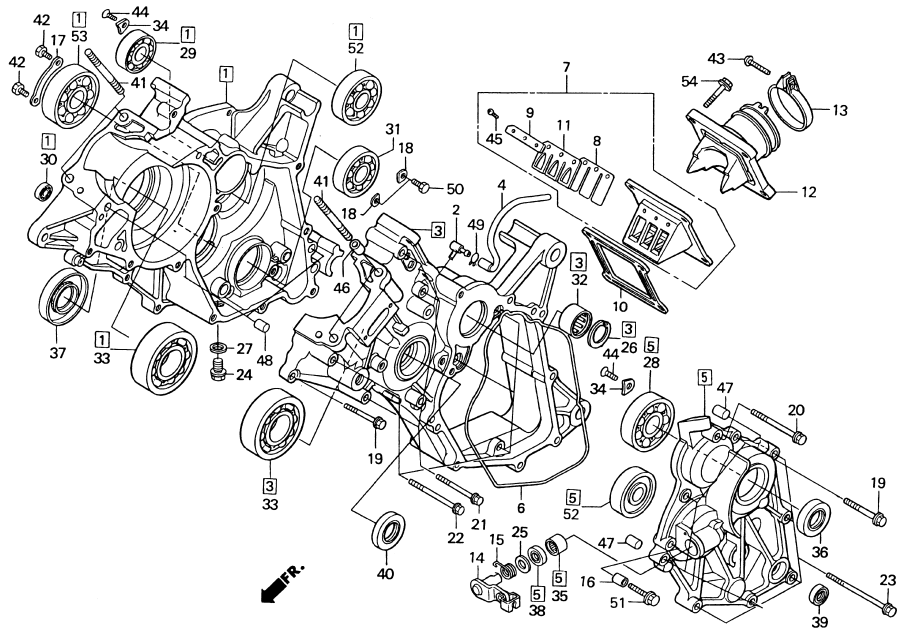
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
21	90001-GHB-740	BOLT, FLANGE, SHF, 6X55	4	4	
22	90001-GHB-760	BOLT, FLANGE, SHF, 6X65	4	4	
23	90001-GHB-790	BOLT, FLANGE, SHF, 6X80	4	4	
• 24	90081-NX4-700	**BOLT, DRAIN, 12MM**	1	1	
25	90401-430-000	WASHER, 10.2	1	1	
• 26	90601-NX4-700	**CIRCLIP, INTERNAL, 37MM**	1	1	
27	90601-ZE2-000	WASHER, PLUG, DRAIN 12MM	1	1	
28	91001-KA3-711	BEARING BALL, 6204	1	1	
• 29	91001-NX4-711	**BEARING, BALL RADIAL, 15X42X11.5**	1	1	
30	91002-KA4-003	BEARING BALL, 7X19X6	1	1	
31	91004-KY4-900	BEARING, BALL RADIAL, 6905U	1	1	
• 32	91005-NX4-701	**BEARING, NEEDLE, 28X37X17**	1	1	
33	91006-KY4-903	BEARING, BALL RADIAL, 63/05/SPECIAL	2	2	
34	91012-KA3-710	PLATE, COUNTER SHAFT BEARING	2	2	
• 35	91012-KS6-003	**BEARING, NEEDLE, 10X14X15**	1	1	
36	91201-KS6-004	OIL SEAL, 26X37X7	1	1	
• 37	91201-NX4-003	**OIL SEAL, 32X48X8**	1	1	
38	91202-KA3-711	OIL SEAL, 10X17X4	1	1	
39	91203-KK3-830	OIL SEAL, 14X22X5	1	1	
40	91205-166-004	OIL SEAL, 20X32X7	1	1	

Block No.

E-6

CRANKCASE

2003 RS125R
2004 RS125R



Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
41	92900-08040-3E	BOLT, STUD 2.8X40	4	4	
42	93301-06012-0A	BOLT, HEX., 6X12	2	2	
43	93500-05028-0A	SCREW, PAN, 5X28	1	1	
44	93600-06012-0A	SCREW, FLAT, 6X12	2	2	
45	93892-03008-08	SCREW-WASHER, 3X8	6	6	
46	94301-10160	DOWEL PIN, 10X16	2	2	
47	94303-06100	DOWEL PIN, 6X10	2	2	
48	94303-08140	DOWEL PIN, 8X14	2	2	
49	95002-02070	CLIP B7, TUBE	1	1	
50	96001-06012-00	BOLT, FLANGE, SH, 6X12	2	2	
51	96001-06025-07	BOLT, FLANGE, SH, 6X25	1	1	
52	96120-62030-00	BEARING, BALL RADIAL, 6203Z	2	2	
53	96120-62040-00	BEARING, BALL RADIAL, 6204Z	1	1	
54	96300-06022-00	BOLT, FLANGE, DR, 6X22	4	4	

Block No.

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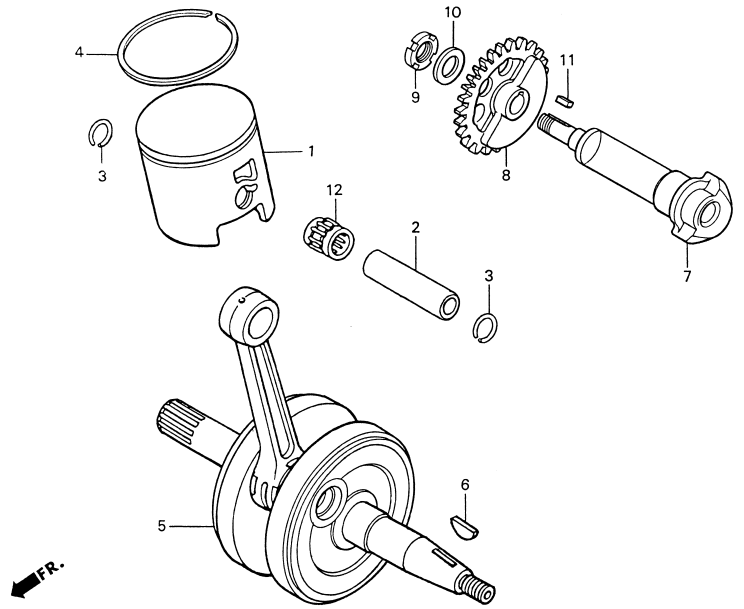
PISTON / CRANKSHAFT / BALANCER

2003 RS125R
2004 RS125R



Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	13100-NX5-791	PISTON COMP.	1	1	
• 2	13111-KV3-000	PIN, PISTON	1	1	
• 3	13112-NX5-700	CLIP, PISTON PIN, 15MM	2	2	
• 4	13121-NX4-811	RING, PISTON	1	1	
• 5	13300-NX4-711	CRANKSHAFT COMP.	1	1	
6	13331-360-000	KEY, SPECIAL WOODRUFF, 25X14	1	1	
• 7	13421-NX4-700	SHAFT, BALANCER	1	1	
• 8	13431-NX4-000	GEAR, BALANCER DRIVEN	1	1	
9	90231-KY4-900	NUT, LOCK, 14MM	1	1	
10	90433-KE1-000	WASHER, 14MM	1	1	
• 11	90701-NX5-000	KEY, 4X4X7	1	1	
• 12	91101-NX5-023	BEARING, CONN-ROD SMALL END	1	1	

Block No.

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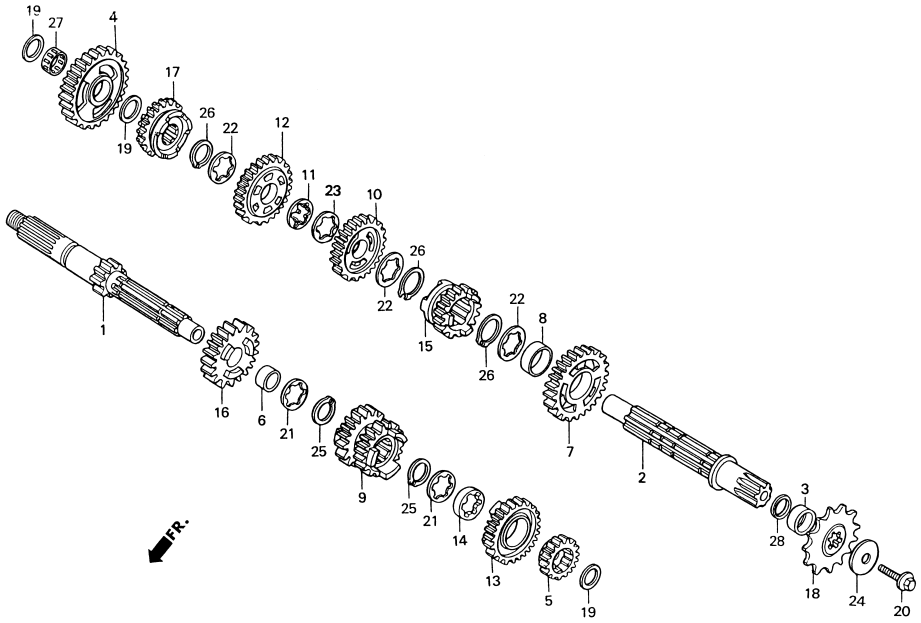
TRANSMISSION

2003 RS125R
2004 RS125R



Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	23211-NX4-000	SHAFT COMP., MAIN	1	1	16T
•	23213-NX4-000	SHAFT COMP., MAIN, PLAN-3	(1)	(1)	16T
•	23214-NX4-000	SHAFT COMP., MAIN, PLAN-4	(1)	(1)	17T
•	23215-NX4-000	SHAFT COMP., MAIN, PLAN-5	(1)	(1)	16T
• 2	23221-NX4-000	SHAFT, COUNTER	1	1	
• 3	23225-NX4-000	COLLAR, COUNTER SHAFT	1	1	
• 4	23411-NX4-000	GEAR, C-1st	1	1	30T
•	23412-NX4-000	GEAR, C-1st, PLAN-2	(1)	(1)	31T
•	23413-NX4-000	GEAR, C-1st, PLAN-3	(1)	(1)	32T
•	23414-NX4-000	GEAR, C-1st, PLAN-4	(1)	(1)	30T
•	23415-NX4-000	GEAR, C-1st, PLAN-5	(1)	(1)	29T
• 5	23421-NX4-000	GEAR, M-2nd	1	1	21T
•	23422-NX4-000	GEAR, M-2nd, PLAN-2	(1)	(1)	18T
•	23423-NX4-000	GEAR, M-2nd, PLAN-3	(1)	(1)	19T
•	23424-NX4-000	GEAR, M-2nd, PLAN-4	(1)	(1)	17T
•	23425-NX4-000	GEAR, M-2nd, PLAN-5	(1)	(1)	18T
6	23422-GB4-770	BUSH, 20X9	1	1	
• 7	23431-NX4-700	GEAR, C-2nd	1	1	32T
•	23432-NX4-700	GEAR, C-2nd, PLAN-2	(1)	(1)	29T
•	23433-NX4-700	GEAR, C-2nd, PLAN-3	(1)	(1)	28T
•	23434-NX4-700	GEAR, C-2nd, PLAN-4	(1)	(1)	29T
•	23435-NX4-700	GEAR, C-2nd, PLAN-5	(1)	(1)	28T

Block No.

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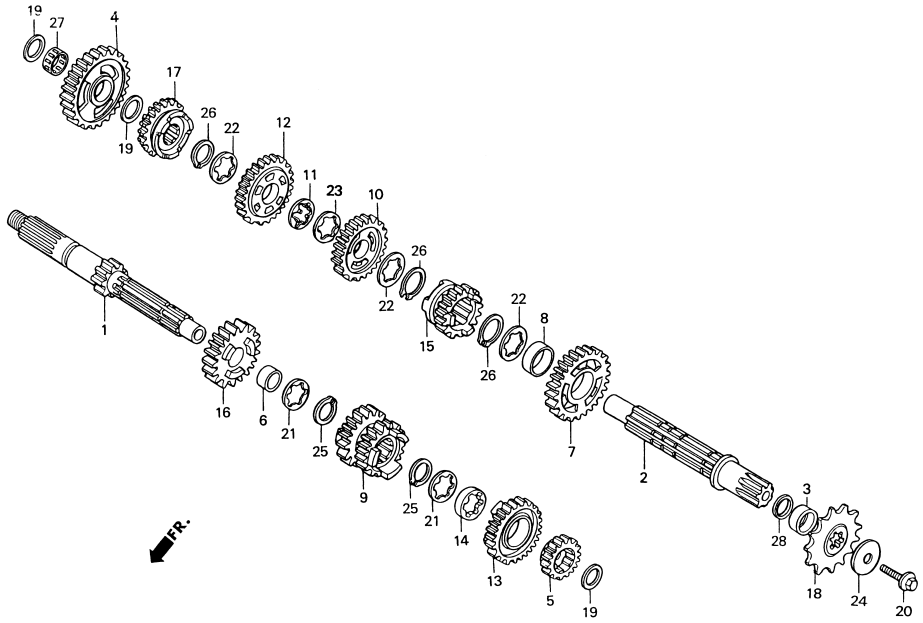
TRANSMISSION

2003 RS125R
2004 RS125R



Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
•	23436-NX4-700	GEAR, C-2nd, PLAN-6	(1)	(1)	27T
• 8	23432-NF4-750	COLLAR, 22X25X9	1	1	
• 9	23441-NX4-000	GEAR, M-3rd/4th	1	1	23T/24T
•	23441-NX4-610	GEAR, M-3rd (PLAN-4), 4th (PLAN-3)	(1)	(1)	22T/22T
•	23442-NX4-000	GEAR, M-3rd (PLAN-2), 4th	(1)	(1)	20T/24T
•	23442-NX4-610	GEAR, M-3rd (PLAN-4), 4th (PLAN-4)	(1)	(1)	22T/21T
•	23443-NX4-000	GEAR, M-3rd, 4th (PLAN-3)	(1)	(1)	23T/22T
•	23443-NX4-610	GEAR, M-3rd (PLAN-4), 4th (PLAN-6)	(1)	(1)	22T/20T
•	23444-NX4-000	GEAR, M-3rd (PLAN-2), 4th (PLAN-3)	(1)	(1)	20T/22T
•	23444-NX4-610	GEAR, M-3rd (PLAN-6), 4th	(1)	(1)	21T/24T
•	23445-NX4-000	GEAR, M-3rd, 4th (PLAN-4)	(1)	(1)	23T/21T
•	23445-NX4-610	GEAR, M-3rd (PLAN-6), 4th (PLAN-3)	(1)	(1)	21T/22T
•	23446-NX4-000	GEAR, M-3rd, 4th (PLAN-6)	(1)	(1)	23T/20T
•	23446-NX4-610	GEAR, M-3rd (PLAN-6), 4th (PLAN-4)	(1)	(1)	21T/21T
•	23447-NX4-000	GEAR, M-3rd (PLAN-2), 4th (PLAN-4)	(1)	(1)	20T/21T
•	23447-NX4-610	GEAR, M-3rd (PLAN-6), 4th (PLAN-6)	(1)	(1)	21T/20T
•	23448-NX4-000	GEAR, M-3rd (PLAN-2), 4th (PLAN-6)	(1)	(1)	20T/20T
•	23449-NX4-000	GEAR, M-3rd (PLAN-4), 4th	(1)	(1)	22T/24T
• 10	23451-NX4-680	GEAR, C-3rd	1	1	30T
•	23452-NX4-680	GEAR, C-3rd, PLAN-2	(1)	(1)	27T
•	23453-NX4-680	GEAR, C-3rd, PLAN-3	(1)	(1)	29T
•	23454-NX4-680	GEAR, C-3rd, PLAN-4	(1)	(1)	31T
•	23455-NX4-680	GEAR, C-3rd, PLAN-5	(1)	(1)	29T

Block No.

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TRANSMISSION

2003 RS125R
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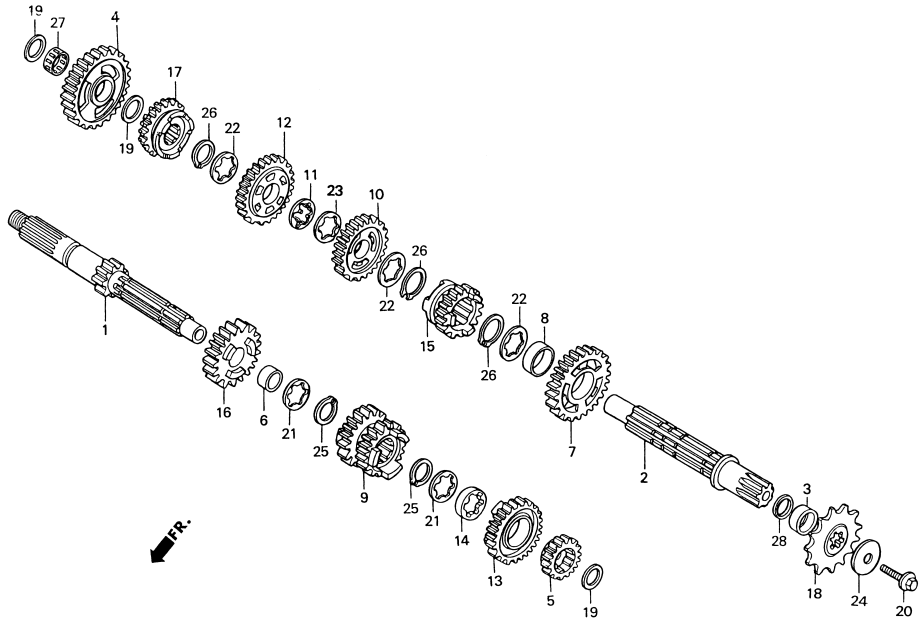

Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
•	23456-NX4-680	GEAR, C-3rd, PLAN-6	(1)	(1)	27T
11	23456-KA3-000	WASHER, LOCK	1	1	
• 12	23461-NX4-680	GEAR, C-4th	1	1	28T
•	23462-NX4-680	GEAR, C-4th, PLAN-2	(1)	(1)	29T
•	23463-NX4-680	GEAR, C-4th, PLAN-3	(1)	(1)	25T
•	23464-NX4-680	GEAR, C-4th, PLAN-4	(1)	(1)	26T
•	23465-NX4-680	GEAR, C-4th, PLAN-5	(1)	(1)	25T
•	23466-NX4-680	GEAR, C-4th, PLAN-6	(1)	(1)	23T
• 13	23471-NX4-000	GEAR, M-5th	1	1	26T
•	23472-NX4-000	GEAR, M-5th, PLAN-2	(1)	(1)	25T
•	23473-NX4-000	GEAR, M-5th, PLAN-3	(1)	(1)	23T
•	23474-NX4-000	GEAR, M-5th, PLAN-4	(1)	(1)	20T
• 14	23478-NX4-770	COLLAR, M-5th, GEAR	1	1	
• 15	23481-NX4-000	GEAR, C-5th	1	1	28T
•	23482-NX4-000	GEAR, C-5th, PLAN-2	(1)	(1)	28T
•	23483-NX4-000	GEAR, C-5th, PLAN-3	(1)	(1)	24T
•	23484-NX4-000	GEAR, C-5th, PLAN-4	(1)	(1)	22T
• 16	23491-NX4-000	GEAR, M-6th	1	1	24T
•	23492-NX4-000	GEAR, M-6th, PLAN-2	(1)	(1)	26T
•	23493-NX4-000	GEAR, M-6th, PLAN-3	(1)	(1)	27T
•	23494-NX4-000	GEAR, M-6th, PLAN-4	(1)	(1)	23T
• 17	23501-NX4-000	GEAR, C-6th	1	1	24T

Block No.

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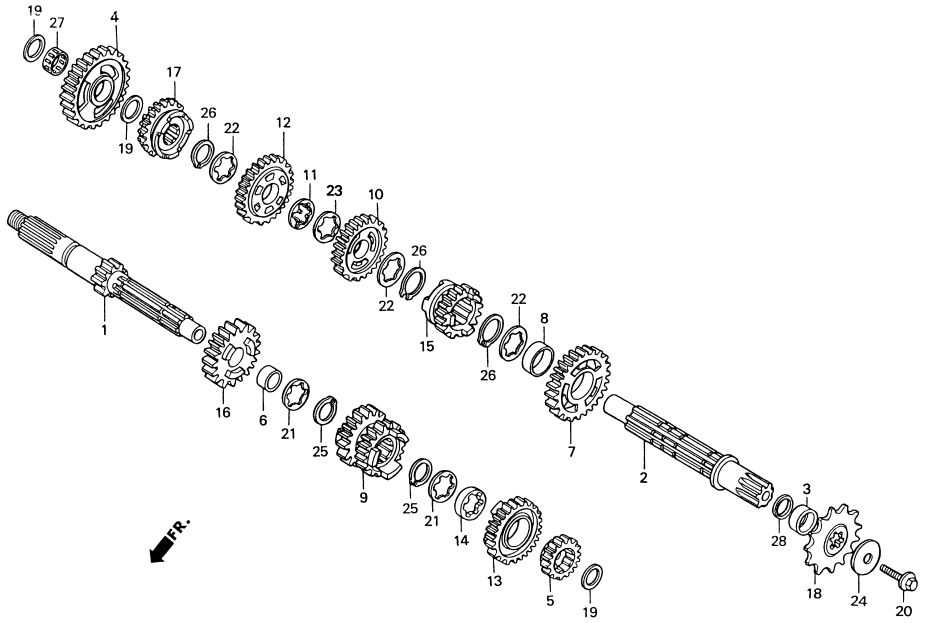
TRANSMISSION

2003 RS125R
2004 RS125R



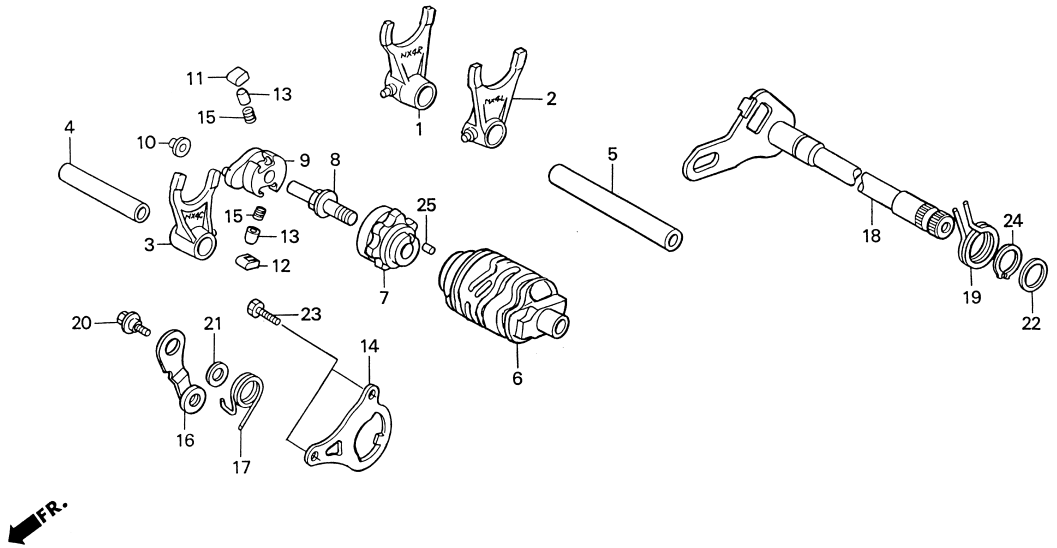
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
•	23502-NX4-000	GEAR, C-6th, PLAN-2	(1)	(1)	27T
•	23503-NX4-000	GEAR, C-6th, PLAN-3	(1)	(1)	26T
• 18	23802-NX4-780	SPROCKET, DRIVE, 15T	(1)	(1)	
•	23803-NX4-780	SPROCKET, DRIVE, 16T	1	1	
•	23804-NX4-780	SPROCKET, DRIVE, 17T	(1)	(1)	
19	90452-115-000	WASHER, 17MM	3	3	1.0t
20	90103-426-000	BOLT, FLANGE, 8X20	1	1	TRQ : 3.2kgf·m Apply oil
21	90461-444-000	WASHER, SPLINE 20MM	2	2	
22	90464-KZ4-730	WASHER, SPLINE 22MM	3	3	
23	90464-444-000	WASHER, SPLINE 22MM	1	1	
24	90501-KA3-741	WASHER, SPRING, 8X40	1	1	
25	90601-360-000	SET RING, 20MM	2	2	
26	90602-360-000	SET RING, 22MM	3	3	
• 27	91021-NX4-771	BRG. NEEDLE 17X20X9	1	1	
28	91351-KA3-711	O-RING, 20MM	1	1	

Block No.

E-9

GEAR SHIFT FORK / GEAR SHIFT DRUM

2003 RS125R
2004 RS125R



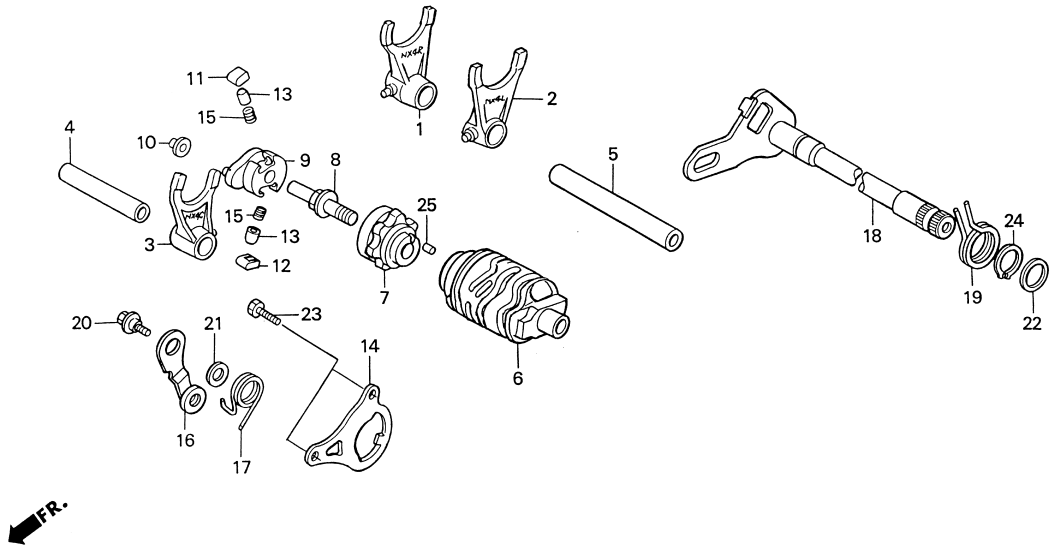
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	24211-NX4-000	FORK, R. GEAR SHIFT	1	1	
• 2	24221-NX4-000	FORK, L. GEAR SHIFT	1	1	
• 3	24231-NX4-000	FORK, C. GEAR SHIFT	1	1	
• 4	24265-NX4-000	SHAFT, SHIFT FORK M.	1	1	
• 5	24266-NX4-000	SHAFT, SHIFT FORK C.	1	1	
• 6	24311-NX4-000	DRUM, GEAR SHIFT	1	1	
7	24312-KA3-741	CENTER, SHIFT DRUM	1	1	
8	24315-HA0-000	PIN, SHIFTER	1	1	
9	24321-KZ4-620	SHIFTER, DRUM	1	1	
10	24322-HA0-000	COLLAR, SHIFTER	1	1	
11	24324-KA3-711	PAWL A, RATCHET	1	1	
12	24325-KA3-711	PAWL B, RATCHET	1	1	
13	24326-KBH-901	PLUNGER, PAWL	2	2	
• 14	24328-NX4-000	PLATE, GUIDE	1	1	
15	24329-KA3-740	SPRING, PAWL PLUNGER	2	2	
16	24430-KA3-740	STOPPER COMP., DRUM	1	1	
• 17	24435-NF4-760	SPRING, DRUM STOPPER	1	1	
• 18	24610-NX4-000	SPINDLE COMP., SHIFT	1	1	
• 19	24651-NX4-710	SPRING, SHIFT RETURN	1	1	
20	90022-MG8-000	PIVOT, SHIFT DRUM STOPPER ARM	1	1	

Block No.

E-9

GEAR SHIFT FORK / GEAR SHIFT DRUM

2003 RS125R
2004 RS125R



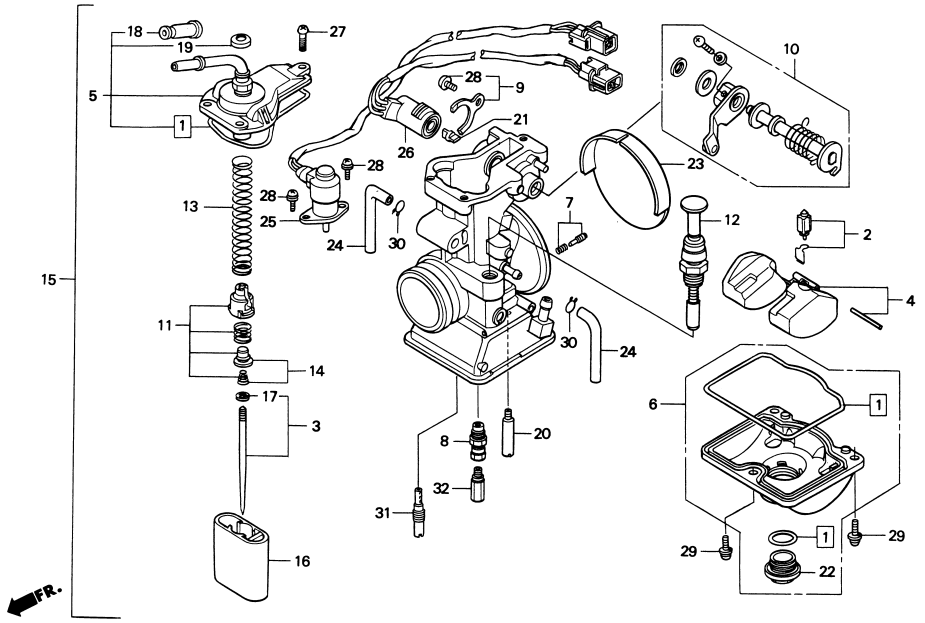
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
21	90435-HB3-000	WASHER, 6.1MM	1	1	
22	90451-155-000	WASHER, 14MM	1	1	
23	93301-06012-0A	BOLT, HEX., 6X12	2	2	
24	94510-14000	CIRCLIP, EXTERNAL, 14	1	1	
25	96220-40080	ROLLER, 4X8	1	1	

Block No.

E-10

CARBURETOR

2003 RS125R
2004 RS125R



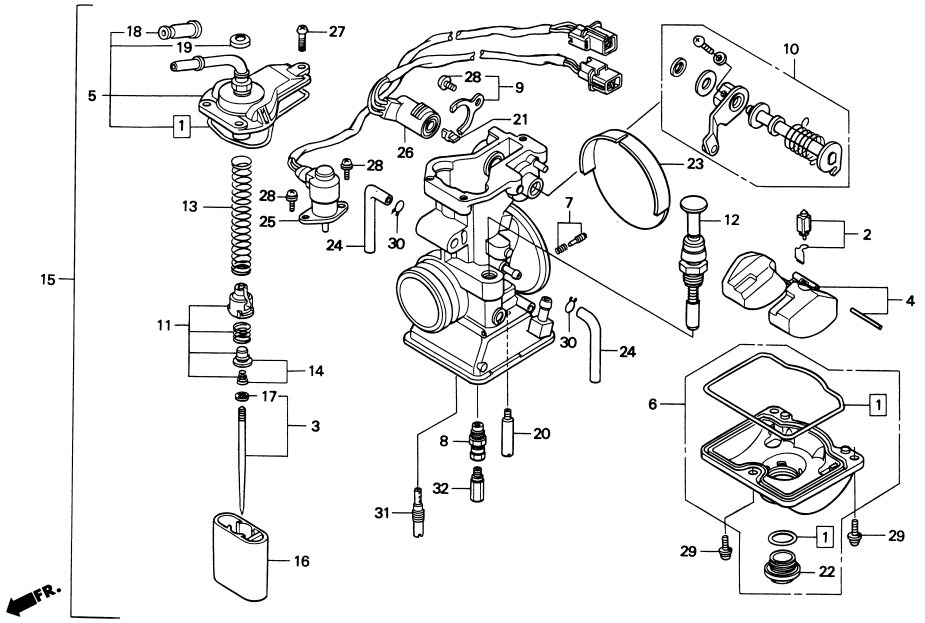
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• [1]	16010-NX4-780	GASKET SET	1	1	
2	16011-KA3-741	VALVE SET, FLOAT	1	1	
• 3	16201-NX4-780	NEEDLE SET, JET 1265/3466/2351/1159	(1)	(1)	65-34
•	16202-NX4-780	NEEDLE SET, JET 1266/3466/2351/1159	(1)	(1)	66-34
•	16012-NX4-780	NEEDLE SET, JET 1267/3466/2351/1159	(1)	(1)	67-34
•	16203-NX4-780	NEEDLE SET, JET 1268/3466/2351/1159	1	1	68-34
•	16204-NX4-780	NEEDLE SET, JET 1269/3466/2351/1159	(1)	(1)	69-34
•	16205-NX4-780	NEEDLE SET, JET 1270/3466/2351/1159	(1)	(1)	70-34
•	16206-NX4-780	NEEDLE SET, JET 1271/3466/2351/1159	(1)	(1)	71-34
•	16207-NX4-780	NEEDLE SET, JET 1272/3466/2351/1159	(1)	(1)	72-34
•	16230-NX4-780	NEEDLE SET, JET 1265/3366/2350/1159	(1)	(1)	65-33
•	16231-NX4-780	NEEDLE SET, JET 1266/3366/2350/1159	(1)	(1)	66-33
•	16232-NX4-780	NEEDLE SET, JET 1267/3366/2350/1159	(1)	(1)	67-33
•	16233-NX4-780	NEEDLE SET, JET 1268/3366/2350/1159	(1)	(1)	68-33
•	16234-NX4-780	NEEDLE SET, JET 1269/3366/2350/1159	(1)	(1)	69-33
•	16235-NX4-780	NEEDLE SET, JET 1270/3366/2350/1159	(1)	(1)	70-33
•	16236-NX4-780	NEEDLE SET, JET 1271/3366/2350/1159	(1)	(1)	71-33
•	16237-NX4-780	NEEDLE SET, JET 1272/3366/2350/1159	(1)	(1)	72-33
• 4	16013-NX4-780	FLOAT SET	1	1	
• 5	16014-NX4-711	TOP SET	1	1	
• 6	16015-NX4-780	CHAMBER SET, FLOAT	1	1	
• 7	16017-NX6-000	SCREW SET, A	1	1	

Block No.

E-10

CARBURETOR

2003 RS125R
2004 RS125R



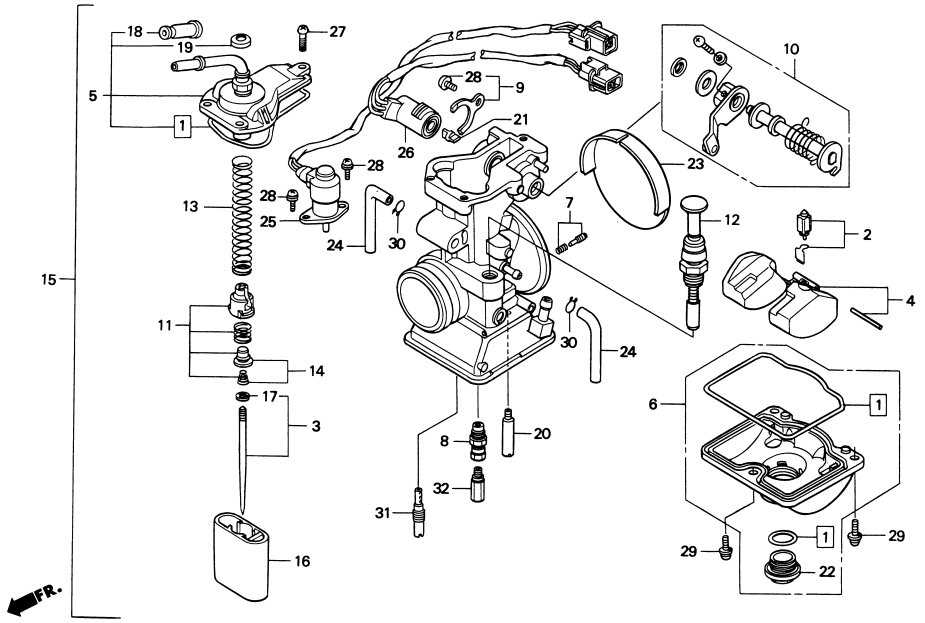
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 8	16017-NX4-780	HOLDER SET, MAIN JET	(1)	(1)	(Ø3.6)
•	16041-NX5-791	HOLDER SET, MAIN JET	(1)	(1)	MARK 37
•	16017-NX5-791	HOLDER SET, MAIN JET	1	1	MARK 39
• 9	16018-NX4-780	SET PLATE, SET	1	1	
• 10	16033-NX4-780	LEVER COMP SET, THROTTLE	1	1	
• 11	16037-NX4-781	SPRING SET, THROTTLE	1	1	
• 12	16046-NX4-681	VALVE SET, STARTER	1	1	
• 13	16050-NX4-780	SPRING, COMPRESSION COIL	1	1	
• 14	16070-NX4-781	SET COLLAR SET, SPRING	1	1	
• 15	16100-NX4-711	CARBURETOR ASSY.	1	1	
• 16	16111-NX4-780	THROTTLE VALVE #6.0	1	1	
•	16112-NX4-780	THROTTLE VALVE #5.0	(1)	(1)	
•	16113-NX4-780	THROTTLE VALVE #5.5	(1)	(1)	
•	16114-NX4-780	THROTTLE VALVE #6.5	(1)	(1)	
17	16115-GHB-610	CLIP, BAR	1	1	
18	16118-166-004	CAP, CABLE SEALING	1	1	
• 19	16118-NX4-711	CAP, RUBBER	1	1	
• 20	16121-NX4-780	JET COMP., POWER JET #35	(1)	(1)	
•	16121-NX5-791	JET COMP., POWER JET #38	(1)	(1)	
•	16122-NX4-780	JET COMP., POWER JET #40	1	1	
•	16122-NX5-791	JET COMP., POWER JET #42	(1)	(1)	

Block No.

E-10

CARBURETOR

2003 RS125R
2004 RS125R



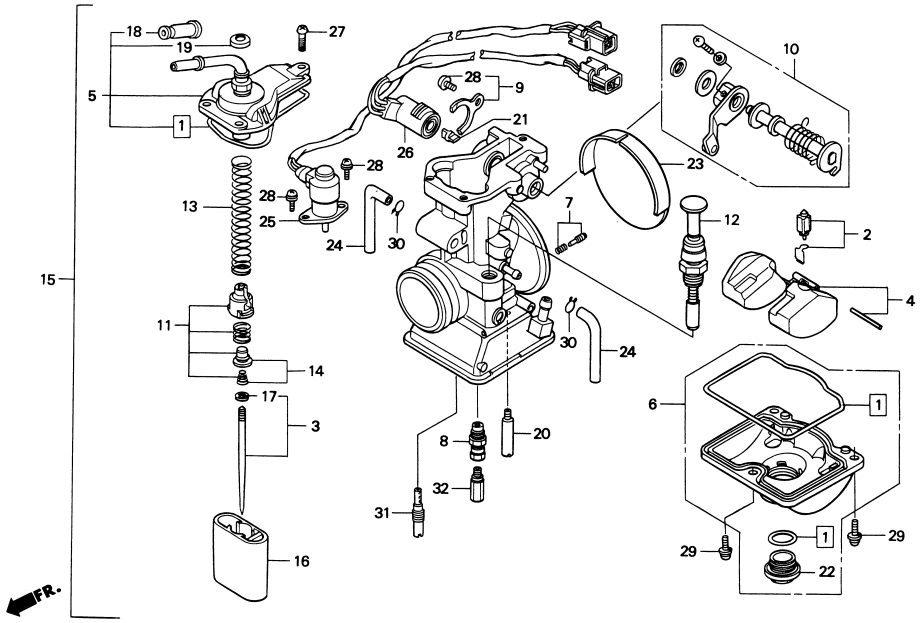
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
•	16124-NX4-780	JET COMP., POWER JET #45	(1)	(1)	
•	16123-NX5-791	JET COMP., POWER JET #48	(1)	(1)	
•	16126-NX4-780	JET COMP., POWER JET #50	(1)	(1)	
21	16145-MZ2-780	JOINT, CONNECTOR	1	1	
• 22	16162-NX4-780	DRAIN BOLT	1	1	
• 23	16196-NX6-010	CAP	1	1	
• 24	16199-NX4-780	TUBE, AIR VENT	2	2	
• 25	16200-NX4-780	VALVE ASSY., SOLENOID	1	1	
• 26	17135-NX4-780	SENSOR ASSY., THROTTLE	1	1	
27	93500-04012-0A	SCREW-PAN 4X12	3	3	
28	93892-04010-00	SCREW-WASHER 4X10	3	3	
29	93892-04014-18	SCREW-WASHER 4X14	3	3	
30	95002-02079	CLIP B17, TUBE	2	2	
31	99103-440-0400	JET, SLOW #40	(1)	(1)	
	99103-440-0420	JET, SLOW #42	(1)	(1)	
	99103-440-0450	JET, SLOW #45	1	1	
	99103-440-0480	JET, SLOW #48	(1)	(1)	
	99103-440-0500	JET, SLOW #50	(1)	(1)	
32	99113-GHB-1500	JET, MAIN #150	(1)	(1)	
	99113-GHB-1520	JET, MAIN #152	(1)	(1)	

Block No.

E-10

CARBURETOR

2003 RS125R
2004 RS125R



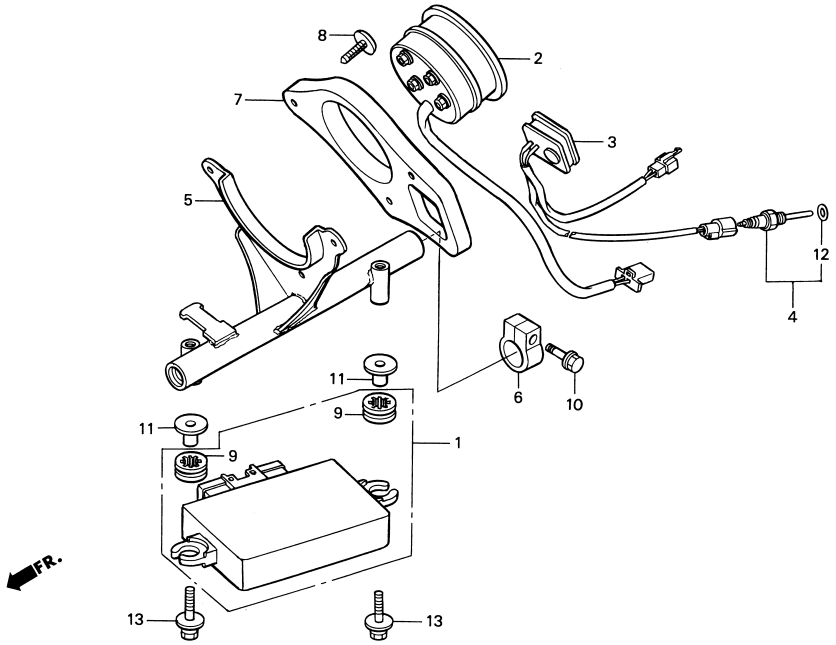
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
	99113-GHB-1550	JET, MAIN #155	(1)	(1)	
	99113-GHB-1580	JET, MAIN #158	(1)	(1)	
	99113-GHB-1600	JET, MAIN #160	(1)	(1)	
	99113-GHB-1620	JET, MAIN #162	(1)	(1)	
	99113-GHB-1650	JET, MAIN #165	(1)	(1)	
	99113-GHB-1680	JET, MAIN #168	(1)	(1)	
	99113-GHB-1700	JET, MAIN #170	(1)	(1)	
	99113-GHB-1720	JET, MAIN #172	(1)	(1)	
	99113-GHB-1750	JET, MAIN #175	(1)	(1)	
	99113-GHB-1780	JET, MAIN #178	(1)	(1)	
	99113-GHB-1800	JET, MAIN #180	(1)	(1)	
	99113-GHB-1820	JET, MAIN #182	(1)	(1)	
	99113-GHB-1850	JET, MAIN #185	(1)	(1)	
	99113-GHB-1880	JET, MAIN #188	(1)	(1)	
	99113-GHB-1900	JET, MAIN #190	(1)	(1)	
	99113-GHB-1920	JET, MAIN #192	(1)	(1)	
	99113-GHB-1950	JET, MAIN #195	1	1	
	99113-GHB-1980	JET, MAIN #198	(1)	(1)	
	99113-GHB-2000	JET, MAIN #200	(1)	(1)	
•	99113-GHB-2050	JET, MAIN #205	(1)	(1)	
•	99113-GHB-2100	JET, MAIN #210	(1)	(1)	
•	99113-GHB-2150	JET, MAIN #215	(1)	(1)	

Block No.

F-1

METER / METER PANEL

2003 RS125R
2004 RS125R



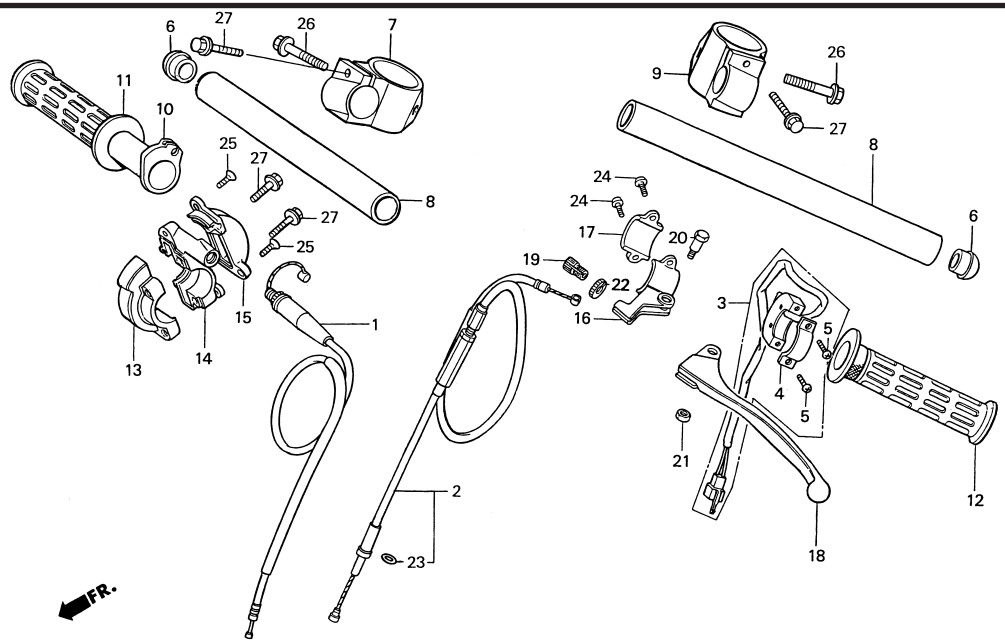
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	30400-NX4-711	UNIT ASSY., ENGINE CONTROL	1	1	
• 2	37250-NF4-771	TACHOMETER ASSY.	1	1	
•	37250-NX4-731	TACHOMETER ASSY.	(1)	(1)	OP
• 3	37460-NX4-701	INDICATOR ASSY., WATER TEMP.	1	1	
• 4	37870-NF4-611	SENSOR ASSY., T.W.	1	1	
• 5	50810-NX4-680	STAY COMP., CENTER FRONT COWL	1	1	
• 6	50811-NX4-680	BAND, D25	1	1	
• 7	50815-NX4-000	PANEL, METER	1	1	
• 8	50816-NX4-000	CLIP, XMAS TREE	3	3	
9	80116-MR1-000	RUBBER B, REAR COWL MOUNT	2	2	
10	90004-GHB-670	BOLT FLANGE, SHF, 6X25	1	1	
11	90502-KS5-000	COLLAR, 19X6.2X13.5	2	2	
12	91307-PK2-005	O-RING, 1.5X9.5	1	1	
13	93404-06028-00	BOLT-WASHER, 6X28	2	2	

Block No.

F-2

CABLE / SWITCH / HANDLEBAR (HANDLE PIPE)

2003 RS125R
2004 RS125R



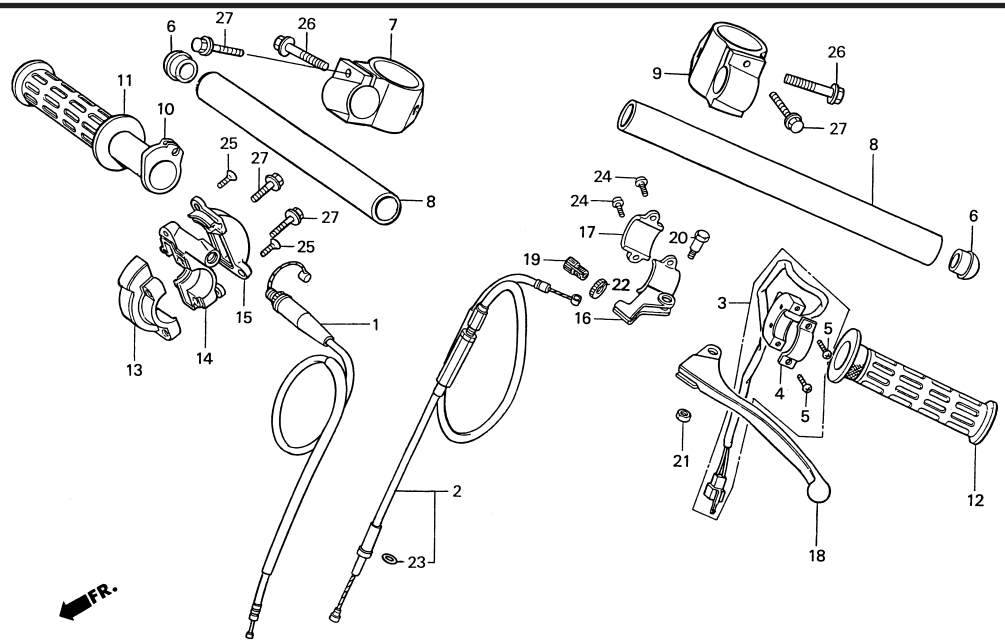
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	17910-NX4-780	CABLE COMP., THROTTLE	1	1	
• 2	22870-NX4-810	CABLE COMP., CLUTCH	1	1	
• 3	35130-NX4-000	SWITCH ASSY., ENGINE STOP	1	1	
4	35132-KR5-013	PLATE, SET	1	1	
5	35133-KJ2-003	SCREW, PAN, 4X12	2	2	
• 6	53105-NF4-770	CAP, HANDLE PIPE	2	2	
• 7	53110-NX4-000	HOLDER, R. HANDLE	1	1	
• 8	53111-NX4-000	PIPE, HANDLE	2	2	
• 9	53120-NX4-000	HOLDER, L. HANDLE	1	1	
• 10	53141-NF4-003	PIPE, THROTTLE GRIP	1	1	
11	53165-422-000	GRIP, R. HANDLE	1	1	
12	53166-422-000	GRIP, L. HANDLE	1	1	
13	53167-KS6-000	HOUSING, A GRIP	1	1	
14	53168-KS6-000	HOUSING, B GRIP	1	1	
15	53169-ML3-790	COVER, HOUSING B	1	1	
16	53172-430-003	BRACKET, L. HANDLE LEVER	1	1	
17	53173-376-000	HOLDER, LEVER BRACKET	1	1	
18	53178-399-700	LEVER, L. STEERING HANDLE	1	1	
19	53192-KA3-700	BOLT, WIRE ADJUST	1	1	
20	90114-310-000	BOLT, HANDLE LEVER PIVOT	1	1	

Block No.

F-2

CABLE / SWITCH / HANDLEBAR (HANDLE PIPE)

2003 RS125R
2004 RS125R



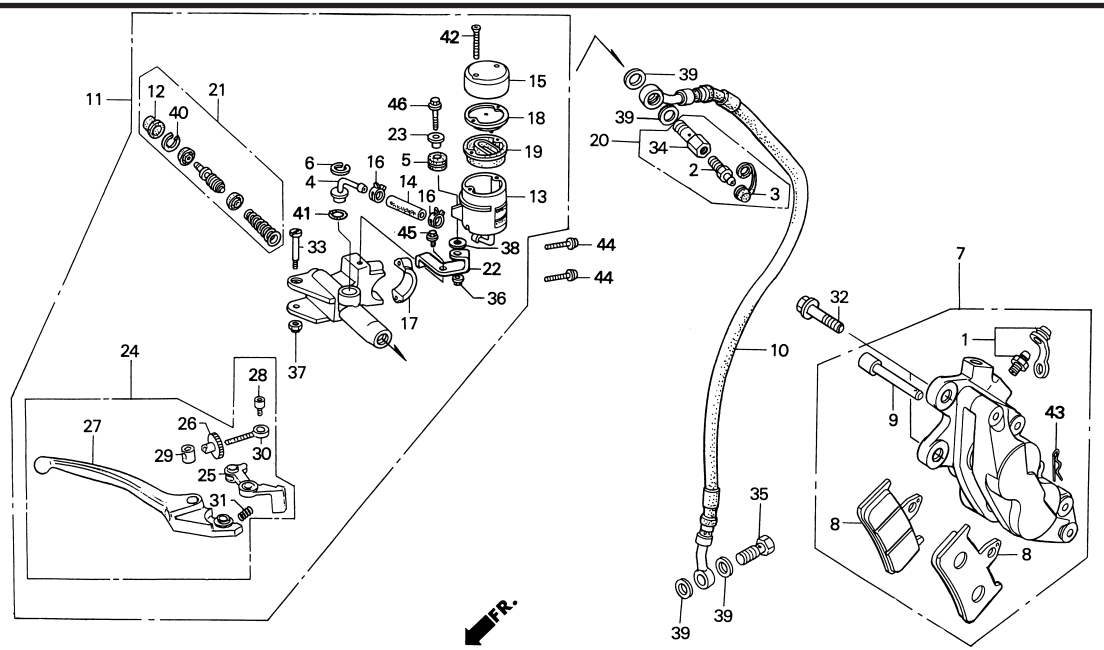
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 21	90302-NX5-000	U-NUT, HEX., 6MM	1	1	
22	90321-KF0-000	NUT, FIXING	1	1	
23	91357-KA4-004	O-RING, 5.8X1.9	1	1	
24	93500-05016-0A	SCREW, PAN, 5X16	2	2	
25	93700-04010-0G	SCREW, OVAL, 4X10	2	2	
26	95801-08030-00	BOLT, FLANGE, 8X30	2	2	
27	96001-06022-00	BOLT, FLANGE, SH, 6X22	4	4	

Block No.

F-3

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2003 RS125R



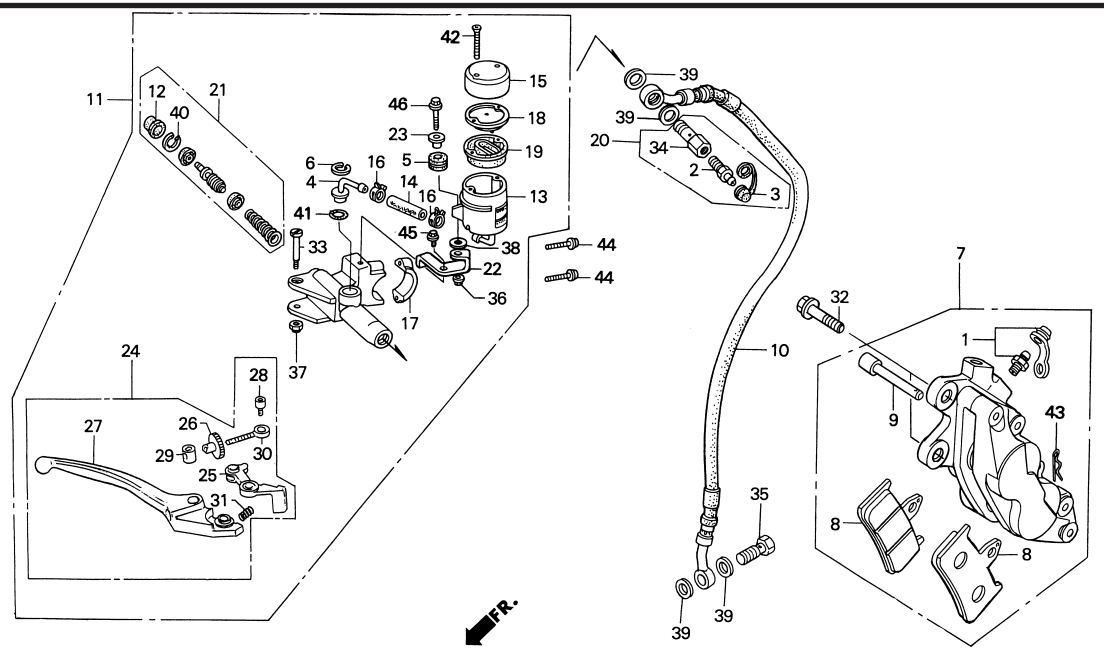
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	43352-NX5-004	BLEEDER COMP.	1	
2	43352-568-003	SCREW, BLEEDER	1	
3	43353-461-771	CAP, BLEEDER	1	
4	43503-KS6-701	CONNECTOR	1	
5	43516-HA2-000	RUBBER, OIL CUP MOUNT	1	
6	43517-KS6-701	CIRCLIP, REAR MASTERCYLINDER	1	
• 7	45100-NX4-770	CALIPER ASSY., R. FRONT	1	
• 8	45105-NX4-770	PAD COMP., BRAKE	2	For SUS DISK
• 9	45109-NX5-004	PIN, HANGER	1	
• 10	45125-NX4-811	HOSE, FRONT BRAKE	1	
• 11	45500-NX4-003	MASTERCYLINDER ASSY., FRONT BRAKE	1	
12	45504-410-003	BOOT COMP.	1	
13	45511-KV3-016	OIL CUP COMP.	1	
14	45512-MR7-006	HOSE, MASTERCYLINDER OIL	1	
15	45513-KV3-006	CAP, OIL CUP	1	
16	45514-KV3-006	CLAMP, MASTERCYLINDER OIL HOSE	2	
17	45517-166-006	HOLDER, MASTERCYLINDER	1	
18	45518-KV3-006	PLATE, DIAPHRAGM	1	
19	45520-KV3-006	DIAPHRAGM	1	
• 20	45530-NF4-650	BOLT ASSY., OIL BLEEDER	1	

Block No.

F-3

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2003 RS125R



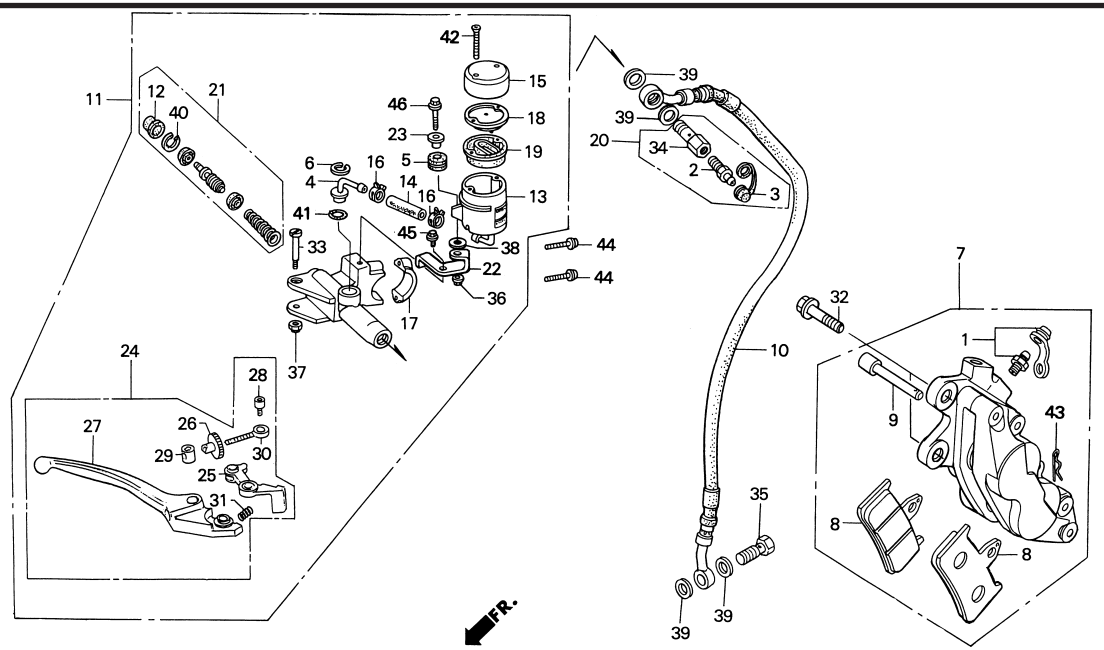
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
21	45530-471-831	CYLINDER SET, MASTER	1	
• 22	45550-NX4-003	STAY, FRONT MASTERCYLINDER	1	
23	50324-425-010	COLLAR, 6.3X13	1	
24	53170-MW0-006	LEVER ASSY., R. HANDLE	1	
• 25	53171-MW0-006	KNOCKER, MASTERCYLINDER	1	
26	53172-KV0-006	ADJUSTER, HANDLE LEVER R.	1	
• 27	53175-MW0-006	LEVER, HANDLE R.	1	
28	53177-KV0-006	BOLT, LEVER SOCKET, 5X5	1	
29	53179-KV0-006	JOINT, LEVER	1	
30	53180-KV0-006	BOLT, ADJUST	1	
31	53181-KV0-006	SPRING, HANDLE LEVER	1	
• 32	90111-NX4-710	BOLT, FLANGE, 10X31	2	With wire lock hole
33	90114-MA5-671	BOLT, HANDLE LEVER	1	
• 34	90145-NF4-650	BOLT, OIL BLEEDER	1	
• 35	90145-NX4-710	OIL BOLT, 10X21.5	1	
36	90301-MG3-000	U-NUT, 6MM	1	
• 37	90302-NX5-000	U-NUT, HEX., 6MM	1	
38	90473-147-000	WASHER, 6X16	1	
39	90601-ZE1-000	WASHER, PLUG DRAIN, 10MM	4	
40	90651-MA5-671	CIRCLIP	1	

Block No.

F-3

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2003 RS125R



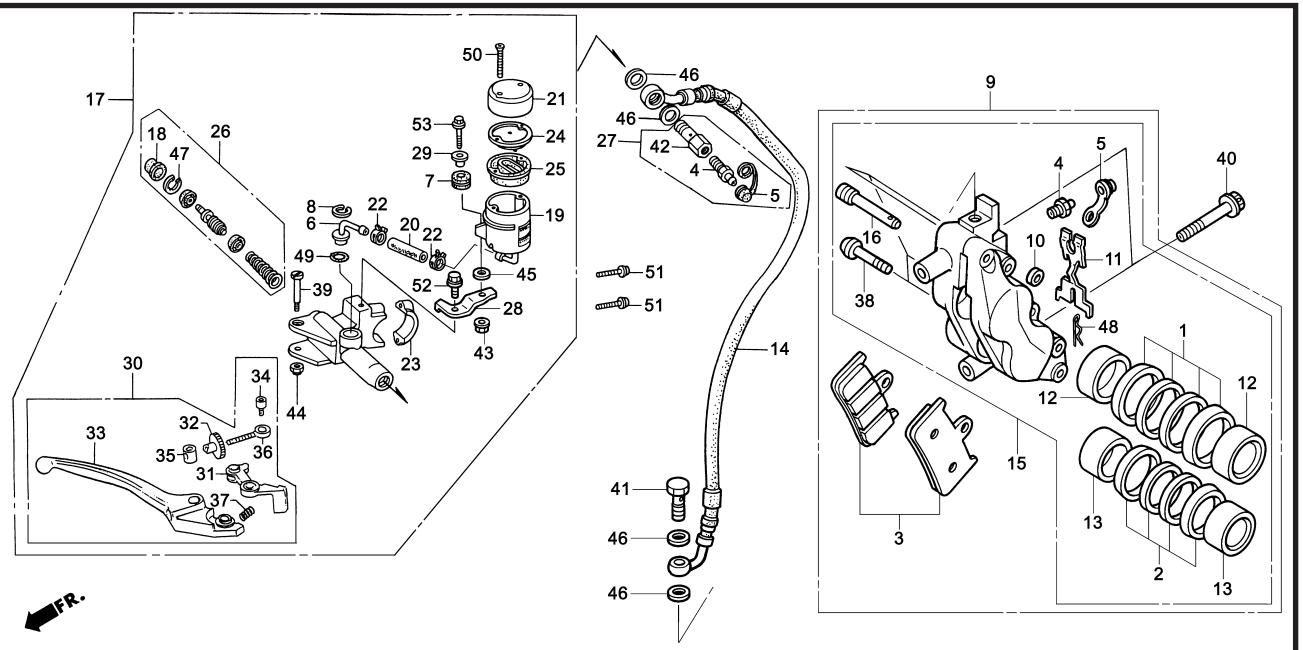
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
41	91212-422-006	O-RING, 14.8X2.4	1	
42	93600-04050-1G	SCREW, FLAT, 4X50	2	
43	94251-05000	PIN, LOCK, 5MM	1	
44	95801-06025-00	BOLT, FLANGE, 6X25	2	
45	96300-06012-07	BOLT, FLANGE, DR, 6X12	1	
46	96300-06028-07	BOLT, FLANGE, DR, 6X28	1	

Block No.

F-3-1

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2004 RS125R



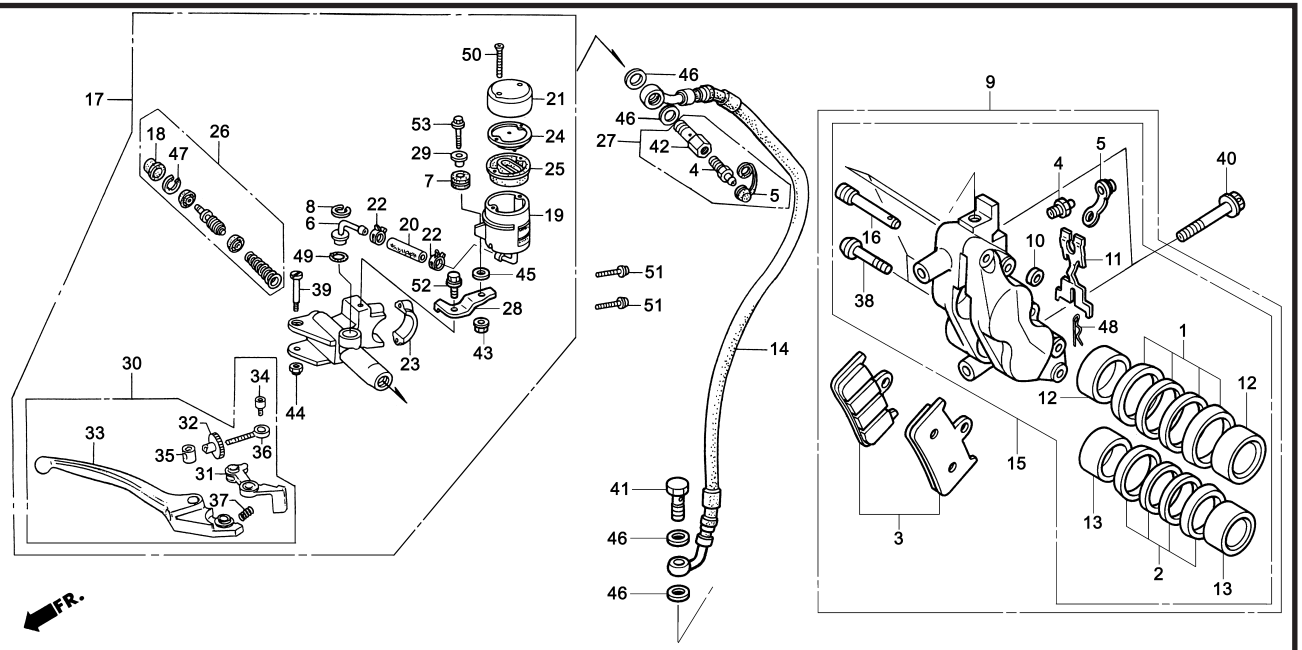
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	06451-NX4-860	SEAL SET, PISTON 34	1	
• 2	06452-NX4-860	SEAL SET, PISTON 30	1	
• 3	06455-NX4-860	PAD SET, FR	1	
4	43352-568-003	SCREW, BLEEDER	2	
5	43353-461-771	CAP, BLEEDER	2	
6	43503-KS6-701	CONNECTOR	1	
7	43516-HA2-000	RUBBER, OIL CUP MOUNT	1	
8	43517-KS6-701	CIRCLIP, REAR MASTERCYLINDER	1	
• 9	45100-NX4-861	CALIPER ASSY., R. FRONT	1	
10	45103-MR7-006	SEAL, JOINT	1	
• 11	45106-NX4-860	SPRING,PAD	1	
• 12	45107-NX4-860	PISTON, B	2	
13	45117-MR7-006	PISTON, A	2	
• 14	45125-NX4-861	HOSE, FRONT BRAKE	1	
• 15	45150-NX4-860	CALIPER SUB ASSY., R. FR	1	
• 16	45215-NX4-860	PIN, HANGER	1	
• 17	45500-NX4-861	MASTERCYLINDER ASSY., FRONT BRAKE	1	
18	45504-410-003	BOOT COMP.	1	
19	45511-KV3-016	OIL CUP COMP.	1	
• 20	45512-NX4-861	HOSE, MASTERCYLINDER OIL CUP	1	

Block No.

F-3-1

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2004 RS125R



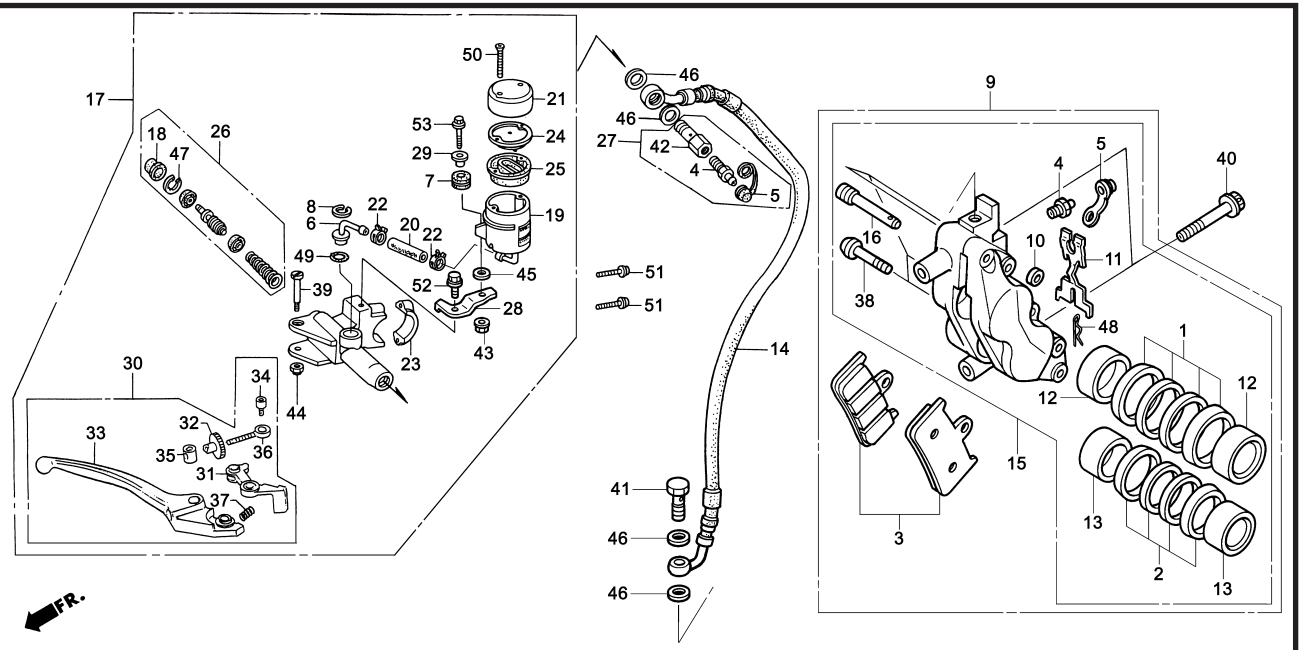
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
21	45513-KV3-006	CAP, OIL CUP	1	
22	45514-KV3-006	CLAMP, MASTERCYLINDER OIL HOSE	2	
23	45517-166-006	HOLDER, MASTERCYLINDER	1	
24	45518-KV3-006	PLATE, DIAPHRAGM	1	
25	45520-KV3-006	DIAPHRAGM	1	
26	45530-471-831	CYLINDER SET, MASTER	1	
• 27	45530-NF4-650	BOLT ASSY., OIL BLEEDER	1	
• 28	45550-NX4-860	STAY, MASTERCYLINDER CUP	1	
29	50324-425-010	COLLAR, 6.3X13	1	
30	53170-MW0-006	LEVER ASSY., R. HANDLE	1	
• 31	53171-MW0-006	KNOCKER, MASTERCYLINDER	1	
32	53172-KV0-006	ADJUSTER, HANDLE LEVER R.	1	
• 33	53175-MW0-006	LEVER, HANDLE R.	1	
34	53177-KV0-006	BOLT, LEVER SOCKET, 5X5	1	
35	53179-KV0-006	JOINT, LEVER	1	
36	53180-KV0-006	BOLT, ADJUST	1	
37	53181-KV0-006	SPRING, HANDLE LEVER	1	
• 38	90107-NX4-860	BOLT, TORX 8X38	4	
39	90114-MA5-671	BOLT, HANDLE LEVER	1	
• 40	90131-NX4-860	BOLT, FLANGE, 10X75	2	With wire lock hole

Block No.

F-3-1

FRONT BRAKE CALIPER / FRONT BRAKE MASTERCYLINDER

2004 RS125R



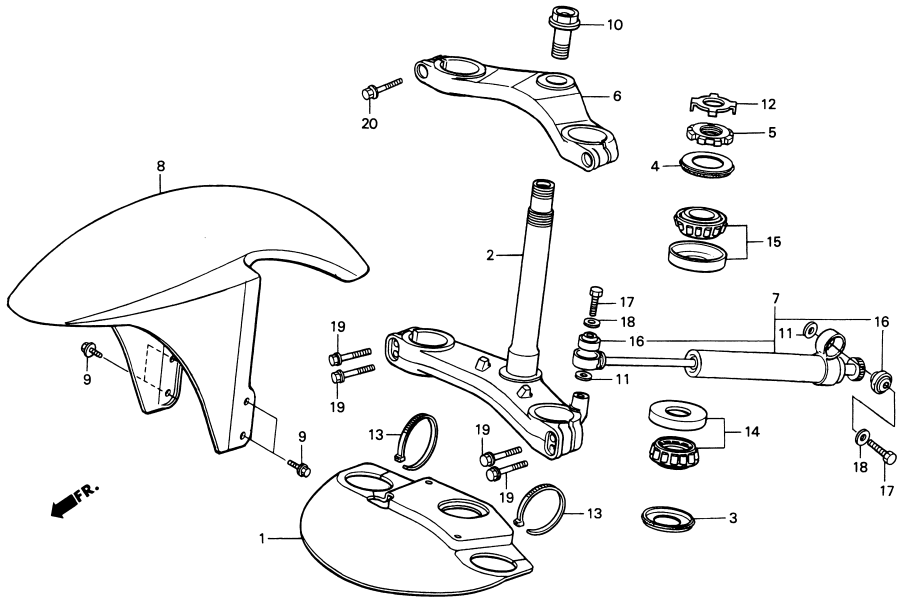
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
41	90145-MS9-612	OIL BOLT, 10X22	1	
• 42	90145-NF4-650	BOLT, OIL BLEEDER	1	
43	90301-MG3-000	U-NUT, 6MM	1	
• 44	90302-NX5-000	U-NUT, HEX., 6MM	1	
45	90473-147-000	WASHER, 6X16	1	
46	90601-ZE1-000	WASHER, PLUG DRAIN, 10MM	4	
47	90651-MA5-671	CIRCLIP	1	
• 48	90701-NX4-860	PIN, LOCK	1	
49	91212-422-006	O-RING, 14.8X2.4	1	
50	93600-04050-1G	SCREW, FLAT, 4X50	2	
51	95801-06025-00	BOLT, FLANGE, 6X25	2	
52	96300-06012-07	BOLT, FLANGE, DR, 6X12	1	
53	96300-06028-07	BOLT, FLANGE, DR, 6X28	1	

Block No.

F-4

STEERING STEM / STEERING DAMPER / FRONT FENDER

2003 RS125R
2004 RS125R



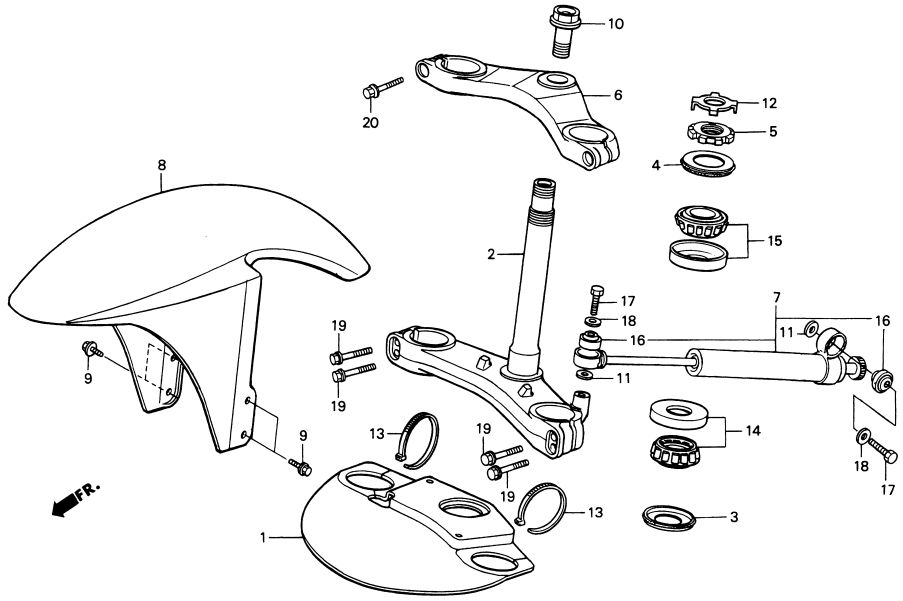
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	50820-NX4-000	COVER, STEERING UNDER	1	1	
• 2	53200-NX4-000	STEM COMP., STEERING, 32.5	1	1	
•	53200-NX4-610	STEM COMP., STEERING, 30	(1)	(1)	
3	53214-KZ4-701	DUST-SEAL, STEERING HEAD	1	1	
4	53214-430-003	DUST-SEAL, STEERING HEAD	1	1	
• 5	53229-NX4-000	THREAD, STEERING	1	1	
• 6	53230-NX4-000	BRIDGE, FORK TOP, 32.5	1	1	
•	53230-NX4-610	BRIDGE, FORK TOP, 30	(1)	(1)	
• 7	53700-NF4-900	DAMPER ASSY., STEERING	1	1	
• 8	61100-NX4-770	FENDER, FRONT	1	–	
•	61100-NX4-860	FENDER, FRONT	–	1	
• 9	90108-GK1-000	BOLT, FLANGE, SH, 6X12	4	4	
• 10	90303-NX4-000	BOLT, STEERING STEM	1	1	
11	90465-MC4-000	WASHER, 8MM	2	2	
• 12	90506-NX4-000	STOPPER, STEERING THREAD	1	1	
• 13	90651-NC8-000	TIE-WRAP, 3.6X281	2	2	
14	91015-KZ4-701	BEARING, HEAD PIPE	1	1	
15	91015-425-831	BEARING, HEAD PIPE UP	1	1	
• 16	91060-NL0-003	BEARING, SPHERICAL, 8MM	2	2	
17	92201-08032-0A	BOLT, HEX., 8X32	2	2	

Block No.

F-4

STEERING STEM / STEERING DAMPER / FRONT FENDER

2003 RS125R
2004 RS125R



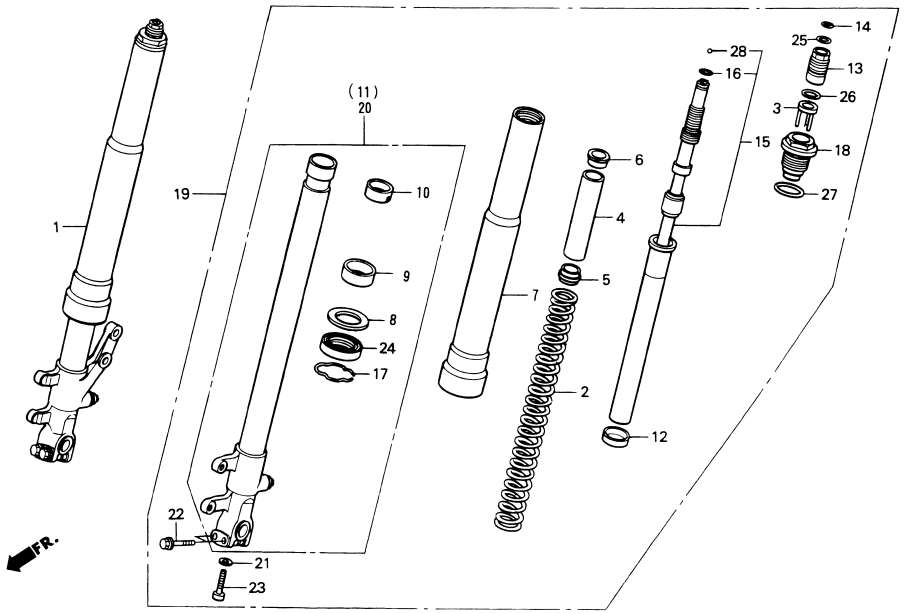
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
18	94102-08000	WASHER, PLAIN, 8MM	2	2	
19	95801-08028-00	BOLT, FLANGE, 8X28	4	4	
20	95801-08032-00	BOLT, FLANGE, 8X32	2	2	

Block No.

F-5

FRONT FORK

2003 RS125R



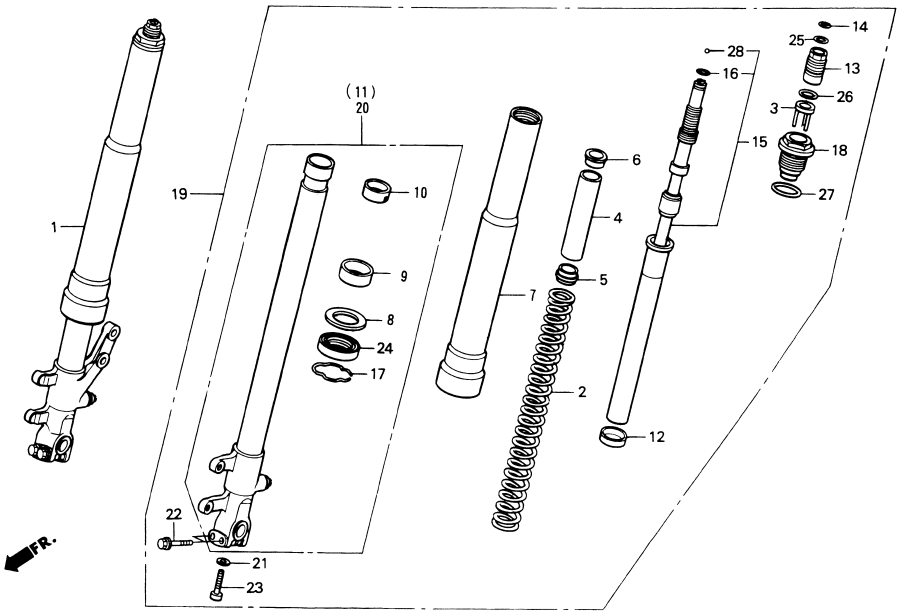
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	51400-NX4-811	FORK ASSY., R. FRONT	1	
• 2	51401-NX4-003	SPRING, FRONT FORK	2	K=0.6
•	51402-NX4-003	SPRING, FRONT FORK H	(2)	K=0.65
•	51403-NX4-003	SPRING, FRONT FORK S	(2)	K=0.55
• 3	51404-NF5-611	PLATE COMP., SPRING ADJUST	2	
• 4	51404-NX4-003	COLLAR, SPRING	2	
• 5	51405-NX4-003	PLATE, SPRING JOINT	2	
• 6	51406-NX4-003	STOPPER, SPRING SEAT	2	
• 7	51410-NX4-711	TUBE, OUTER	2	
8	51412-422-003	RING, BACK UP	2	
• 9	51414-NX4-701	BUSH, GUIDE	2	
• 10	51415-NX4-701	BUSH, SLIDE	2	
• 11	51420-NX4-811	PIPE COMP., R. SLIDE	1	
12	51421-MW4-003	PLATE, CENTERING	2	
• 13	51422-NF5-611	ADJUSTER, SPRING	2	
• 14	51423-NF5-611	RING B, STOPPER	2	
• 15	51430-NX4-811	DAMPER COMP., FRONT	2	
• 16	51436-NF5-761	EXPANDER	2	
• 17	51447-KL4-951	RING, OIL SEAL STOP	2	
• 18	51454-NX4-003	BOLT, FRONT FORK	2	

Block No.

F-5

FRONT FORK

2003 RS125R



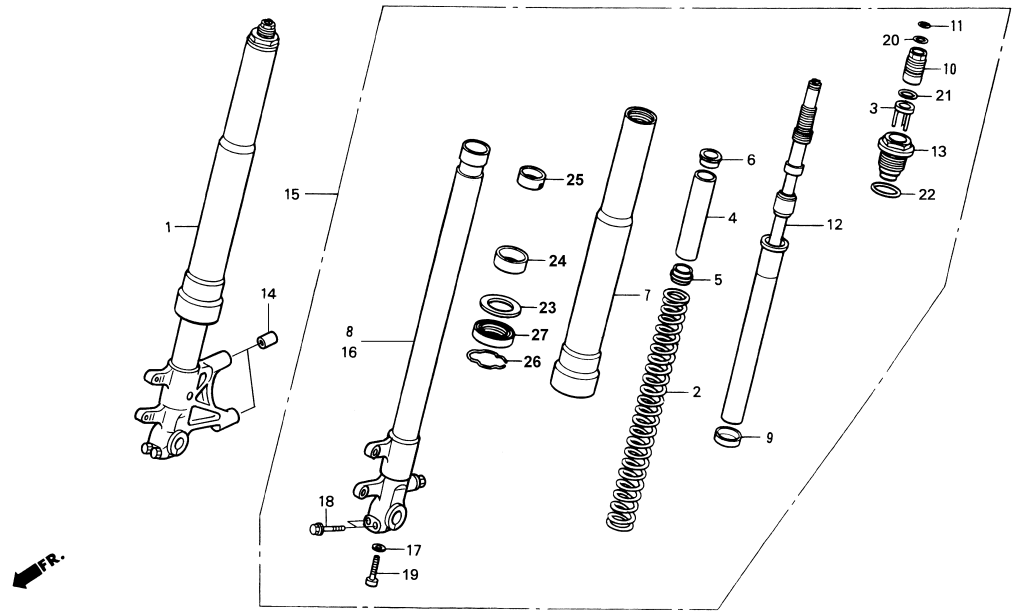
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 19	51500-NX4-811	FORK ASSY., L. FRONT	1	
• 20	51520-NX4-811	PIPE COMP., L. SLIDE	1	
21	52442-KA3-711	WASHER, SPECIAL, 10MM	2	
22	90107-KF0-000	BOLT, FLANGE, DR, 8X40	4	
23	90126-MR7-003	BOLT, SOCKET, 10X35	2	
• 24	91255-NX4-771	SEAL, OIL, 35X48X11	2	
25	91311-MR7-003	O-RING, 13.8X2.4	2	
• 26	91351-NF5-611	O-RING, 23.7X2.4	2	
27	91356-KA4-711	O-RING, 35.2X2.4	2	
28	96211-04000	BALL, STEEL 4	2	

Block No.

F-5-1

FRONT FORK

2004 RS125R



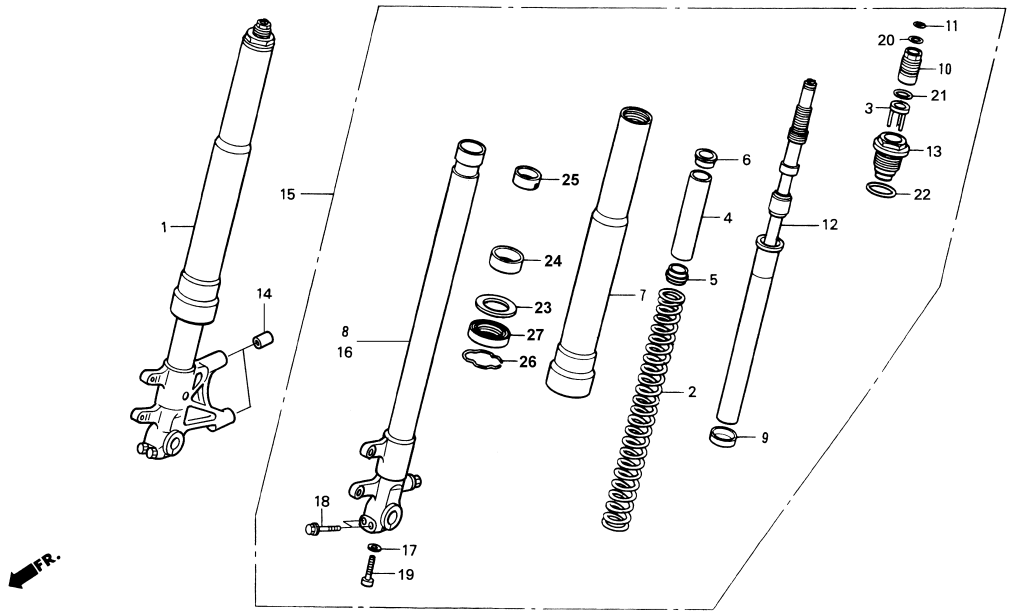
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	51400-NX4-861	FORK ASSY., R. FRONT	1	
• 2	51401-NX4-003	SPRING, FRONT FORK	2	K=0.6
•	51402-NX4-003	SPRING, FRONT FORK H	(2)	K=0.65
•	51403-NX4-003	SPRING, FRONT FORK S	(2)	K=0.55
• 3	51404-NF5-611	PLATE COMP., SPRING ADJUST	2	
• 4	51404-NX4-003	COLLAR, SPRING	2	
• 5	51405-NX4-003	PLATE, SPRING JOINT	2	
• 6	51406-NX4-003	STOPPER, SPRING SEAT	2	
• 7	51410-NX4-861	TUBE, OUTER	2	
• 8	51420-NX4-861	PIPE COMP., R. SLIDE	1	
9	51421-MW4-003	PLATE, CENTERING	2	
• 10	51422-NF5-611	ADJUSTER, SPRING	2	
• 11	51423-NF5-611	RING B, STOPPER	2	
• 12	51430-NX4-861	DAMPER COMP., FRONT	2	
• 13	51454-NX4-003	BOLT, FRONT FORK	2	
14	51497-MEL-000	SPACER, FR. FORK	2	
• 15	51500-NX4-861	FORK ASSY., L. FRONT	1	
• 16	51520-NX4-861	PIPE COMP., L. SLIDE	1	
17	52442-KA3-711	WASHER, SPECIAL, 10MM	2	
18	90107-KF0-000	BOLT, FLANGE, DR, 8X40	4	

Block No.

F-5-1

FRONT FORK

2004 RS125R



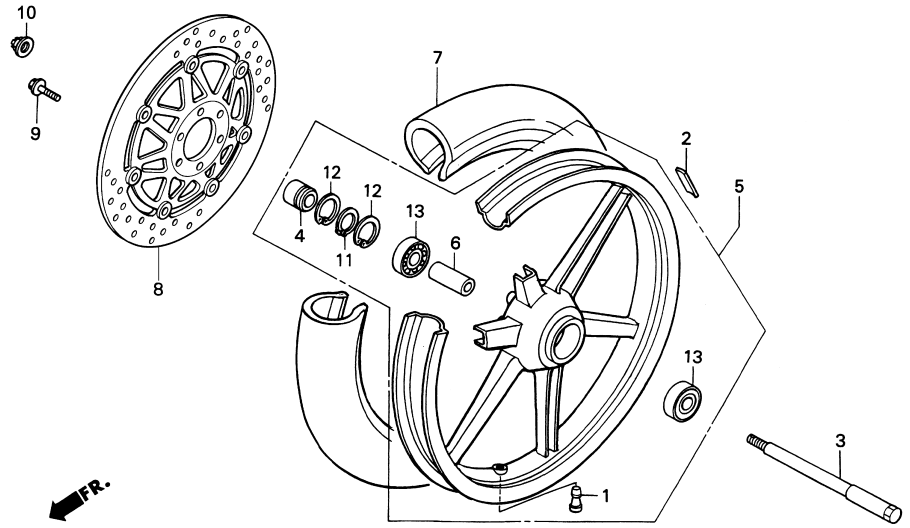
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
19	90126-MR7-003	BOLT, SOCKET, 10X35		2	
20	91311-MR7-003	O-RING, 13.8X2.4		2	
• 21	91351-NF5-611	O-RING, 23.7X2.4		2	
22	91356-KA4-711	O-RING, 35.2X2.4		2	
23	51412-422-003	RING, BACK UP		2	
• 24	51414-NX4-701	BUSH, GUIDE		2	
• 25	51415-NX4-701	BUSH, SLIDE		2	
26	51447-KL4-951	RING, OIL SEAL STOP		2	
• 27	91255-NX4-771	SEAL, OIL, 35X48X11		2	

Block No.

F-6

FRONT WHEEL

2003 RS125R
2004 RS125R



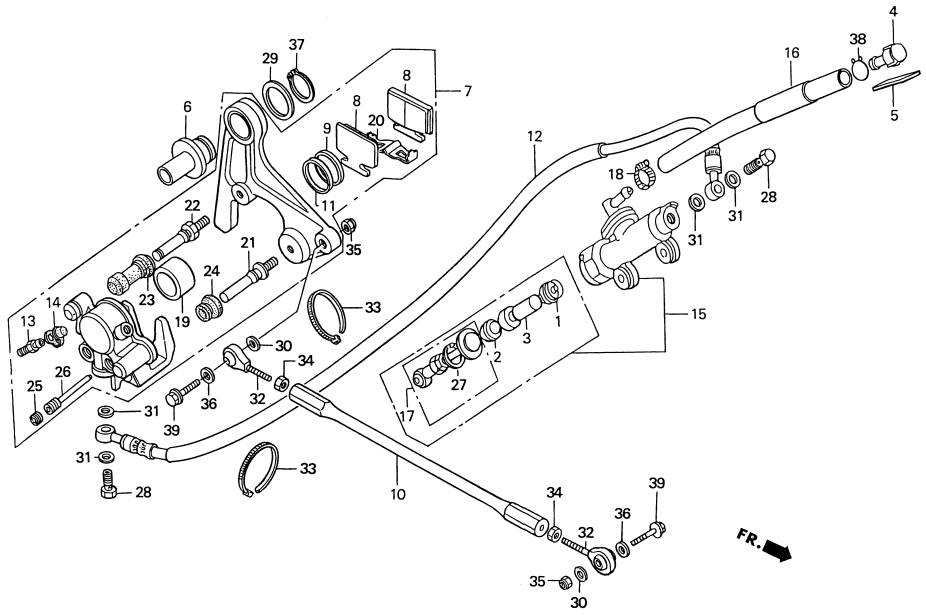
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	42704-NF5-710	VALVE, WHEEL	(1)	(1)	Alminium
	42753-ML7-003	VALVE, RIM (BS)	1	1	
• 2	42720-NC8-000	WEIGHT, BALANCER, 10G	N	N	
•	42721-NC8-000	WEIGHT, BALANCER, 20G	N	N	
• 3	44301-NX4-000	AXLE, FRONT WHEEL	1	1	
• 4	44303-NF4-000	COLLAR, FRONT WHEEL SIDE	1	1	
• 5	44600-NX4-306	WHEEL SET, FRONT (2.50X17)	1	1	BLACK
• 6	44620-NF4-000	COLLAR, FRONT WHEEL DISTANCE	1	1	
7	————	TIRE, FRONT 90/580 R17 (BS)	1	1	No sale by HRC
• 8	45120-NX4-681	DISK COMP., R. FRONT BRAKE	1	1	SUS (Steel)
9	90003-MC7-000	BOLT, FLANGE, 6X20	6	6	
•	90113-ND5-761	BOLT, FLANGE, 6X20	(6)	(6)	With wire lock hole
10	90305-GE8-003	U-NUT, 14MM	1	1	
• 11	90651-NF4-000	CIRCLIP, EXTERNAL 26	1	1	
• 12	90652-NF4-000	CIRCLIP, INTERNAL 35	2	2	
13	96140-62020-10	BEARING, BALL RADIAL, 6202U	2	2	

Block No.

F-7

REAR BRAKE CALIPER / REAR BRAKE MASTERCYLINDER

2003 RS125R
2004 RS125R



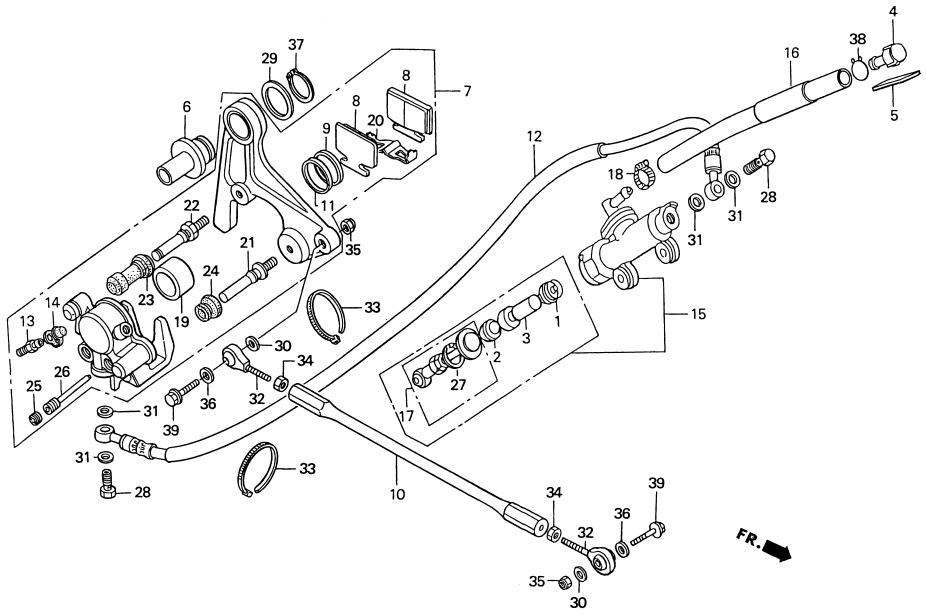
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	04601-ND5-760	CUP, PRIMARY	1	1	
• 2	04602-ND5-760	CUP, SECONDARY	1	1	
• 3	04603-NF4-770	PISTON, REAR	1	1	
4	17370-419-700	PLUG, BREATHER TUBE	1	1	
5	19105-MR8-300	CUSHION, TANK RESERVE	1	1	
• 6	42305-NX4-000	COLLAR, CALIPER BRACKET	1	1	
• 7	43100-NF5-611	CALIPER ASSY., REAR	1	1	
• 8	43105-NF5-611	PAD COMP.	2	2	
9	43109-MA3-006	DUST SEAL	1	1	
• 10	43111-NX4-000	ROD, REAR BRAKE TORQUE	1	1	
11	43209-MA3-006	SEAL, PISTON	1	1	
• 12	43310-NX4-003	HOSE, REAR BRAKE	1	1	
13	43352-568-003	SCREW, BLEEDER	1	1	
14	43353-461-771	CAP, BLEEDER	1	1	
• 15	43500-NF4-770	MASTER CYLINDER ASSY., REAR	1	1	
• 16	43503-NX4-000	V-TUBE, 9X13X275	1	1	
• 17	43504-NF4-770	ROD ASSY.	1	1	
• 18	43541-ND5-750	CLAMP	1	1	
19	45107-GM9-711	PISTON	1	1	
20	45108-GM9-741	PAD SPRING	1	1	

Block No.

F-7

REAR BRAKE CALIPER / REAR BRAKE MASTERCYLINDER

2003 RS125R
2004 RS125R



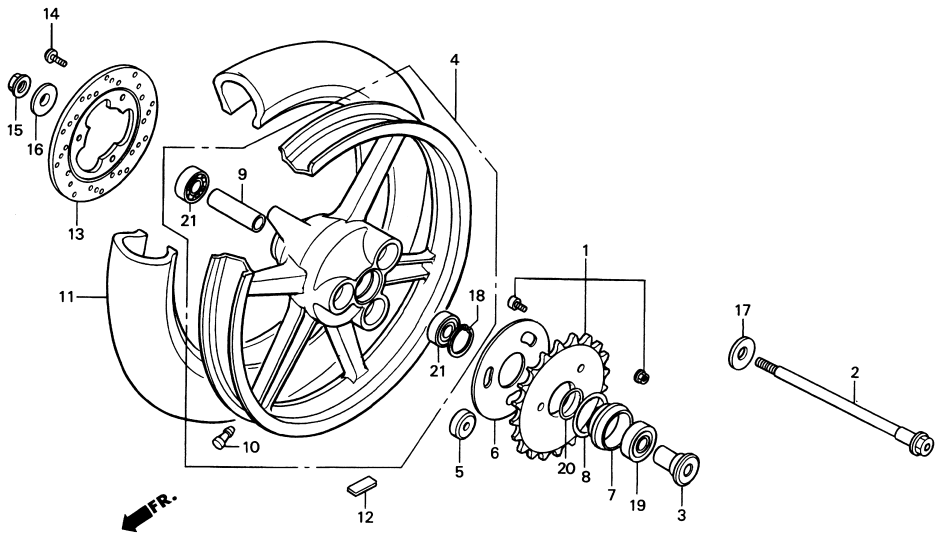
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
21	45131-HA5-672	PIN BOLT, A	1	1	
22	45131-166-016	PIN, BOLT	1	1	
23	45132-166-016	BUSH, PIN	1	1	
24	45133-MA3-006	BOOT, B	1	1	
25	45203-MG3-016	PLUG, PIN	2	2	
26	45215-GE2-016	HANGER PIN	2	2	
27	46182-500-013	CIRCLIP, MASTER CYLINDER	1	1	
28	90145-MS9-612	OIL BOLT, 10X22	2	2	
29	90475-425-000	WASHER, THRUST, 30MM	1	1	
30	90485-GB4-790	WASHER, 8MM	2	2	
31	90601-ZE1-000	WASHER, PLUG, DRAIN, 10MM	4	4	
• 32	91048-NX4-710	ROD END, 8MM	2	2	
33	91058-MG9-681	BAND, SELF LOCK	2	2	
34	94002-08000-0S	NUT, HEX, 8MM	2	2	
35	94050-08000	NUT, FLANGE, 8MM	2	2	
36	94102-08000	WASHER, PLAIN, 8MM	2	2	
37	94510-30000	CIRCLIP, EXTERNAL, 30	1	1	
38	95002-02120	CLIP, B12 TUBE	1	1	
39	95801-08035-00	BOLT, FLANGE, 8X35	2	2	

Block No.

F-8

REAR WHEEL

2003 RS125R
2004 RS125R



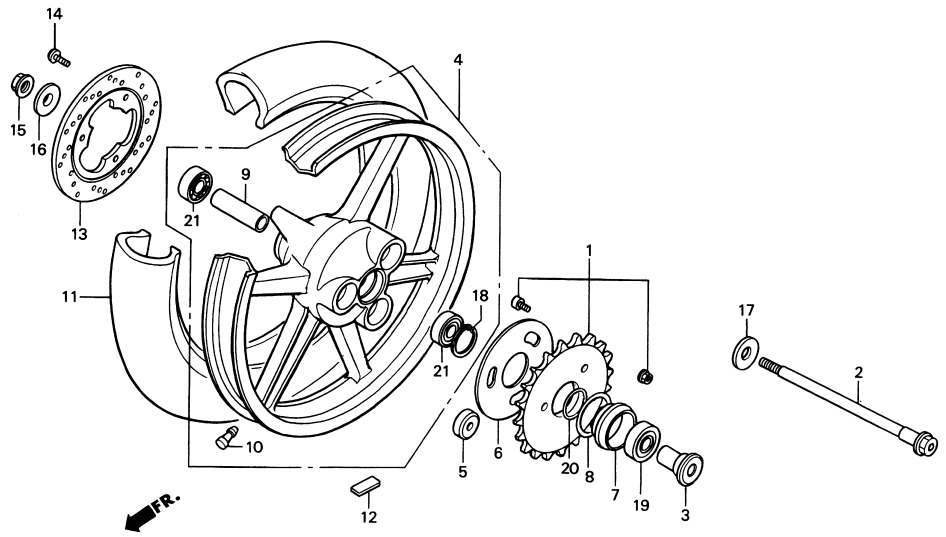
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	41102-NX4-770	SPROCKET ASSY., FINAL DRIVEN 32T	(1)	(1)	
•	41103-NX4-770	SPROCKET ASSY., FINAL DRIVEN 33T	(1)	(1)	
•	41104-NX4-770	SPROCKET ASSY., FINAL DRIVEN 34T	(1)	(1)	
•	41105-NX4-770	SPROCKET ASSY., FINAL DRIVEN 35T	(1)	(1)	
•	41106-NX4-770	SPROCKET ASSY., FINAL DRIVEN 36T	1	1	
•	41107-NX4-770	SPROCKET ASSY., FINAL DRIVEN 37T	(1)	(1)	
•	41108-NX4-770	SPROCKET ASSY., FINAL DRIVEN 38T	(1)	(1)	
•	41109-NX4-770	SPROCKET ASSY., FINAL DRIVEN 39T	(1)	(1)	
•	41110-NX4-770	SPROCKET ASSY., FINAL DRIVEN 40T	(1)	(1)	
• 2	42301-NX4-000	AXLE, REAR WHEEL	1	1	
• 3	42304-NX4-000	COLLAR, REAR WHEEL SIDE	1	1	
• 4	42600-NX4-306	WHEEL SET, REAR (3.50X17)	1	1	BLACK
• 5	42615-ND5-750	RUBBER, REAR WHEEL DAMPER	3	3	
• 6	42616-NF4-000	WASHER, SPROCKET	1	1	
• 7	42617-NF4-770	COLLAR, SPROCKET	1	1	
• 8	42618-NF4-000	WASHER, COLLAR SPROCKET 0.2	N	N	
•	42619-NF4-000	WASHER, COLLAR SPROCKET 0.3	N	N	
• 9	42620-NX4-000	COLLAR, REAR WHEEL DISTANCE	1	1	
• 10	42704-NF5-710	VALVE, WHEEL	(1)	(1)	Alminium
	42753-ML7-003	VALVE, RIM (BS)	1	1	
11	————	TIRE, REAR 120/595 R17 (BS)	1	1	No sale by HRC

Block No.

F-8

REAR WHEEL

2003 RS125R
2004 RS125R



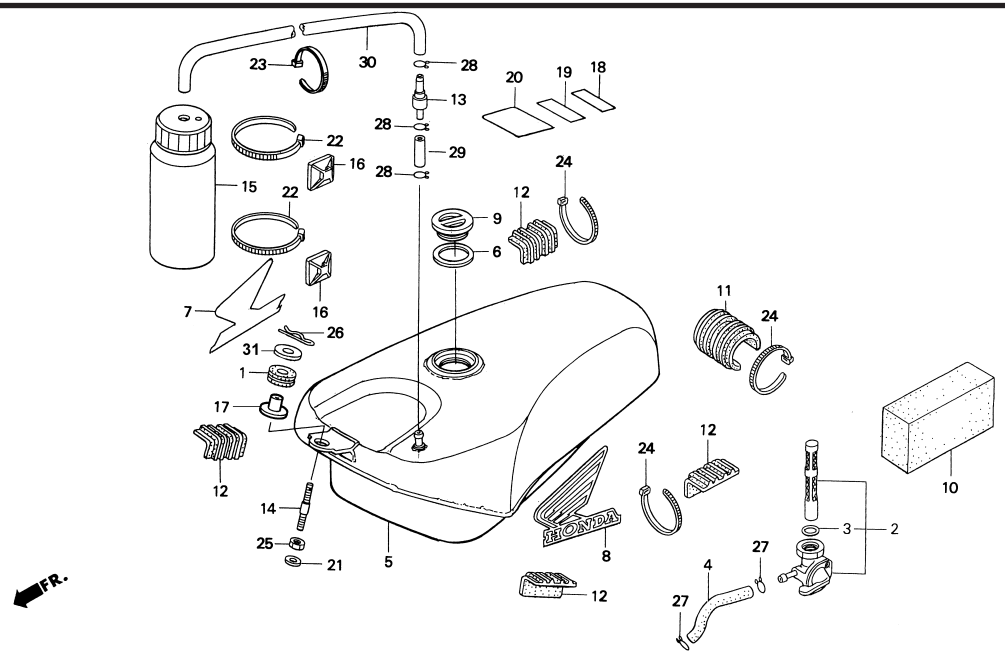
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 12	42720-NC8-000	WHEIGHT, BALANCE, 10G	N	N	
•	42721-NC8-000	WHEIGHT, BALANCE, 20G	N	N	
• 13	43122-NF5-760	DISK, BRAKE	1	1	SUS (Steel)
14	90105-KR3-000	BOLT, FRONT DISK, 8X24	3	3	
15	90305-GE8-003	U-NUT, 14MM	1	1	
• 16	90411-NX4-000	WASHER, 14X32X1	1	1	
• 17	90456-NX4-000	WASHER, 18X32X1	1	1	
• 18	90652-NF4-000	CIRCLIP, INTERNAL 35	1	1	
• 19	91052-NF4-000	BEARING, BALL RADIAL, 6904UU	1	1	
20	91357-964-006	O-RING, 31	1	1	
21	96140-62020-10	BEARING, BALL RADIAL, 6202U	2	2	

Block No.

F-9

FUEL TANK

2003 RS125R
2004 RS125R



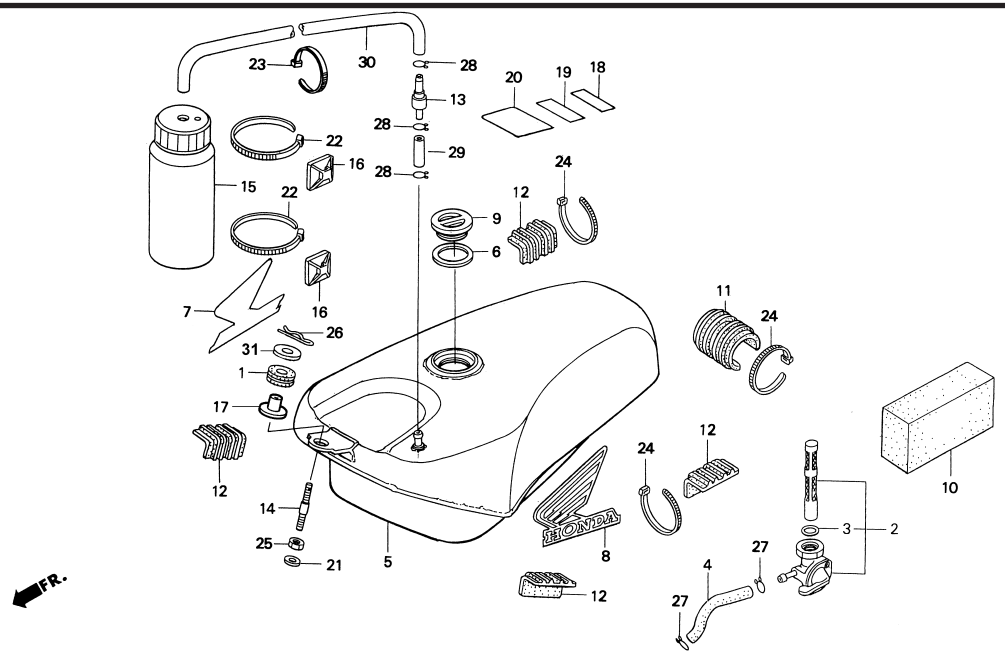
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
1	15604-MG7-000	GROMMET, OIL COOLER	1	1	
• 2	16950-NF5-003	VALVE ASSY., FUEL	1	1	
3	16958-MA1-731	O-RING, 10.6X1.3	1	1	
• 4	16960-NX4-700	TUBE, FUEL	1	1	
• 5	17510-NX4-680	TANK COMP., FUEL	1	1	
• 6	17515-NX5-770	PACKING, FUEL CAP	1	1	
• 7	17516-NF4-610	WING MARK, R. SIDE	1	1	
• 8	17517-NF4-610	WING MARK, L. SIDE	1	1	
• 9	17521-NX4-680	CAP, FUEL TANK	1	1	
• 10	17522-NF5-690	SPONGE, BUFFLE	3	3	
• 11	17528-NC8-000	RUBBER, FUEL TANK MOUNT REAR	1	1	
• 12	17528-NF4-000	RUBBER, FUEL TANK MOUNT B	4	4	
• 13	17625-NF4-003	VALVE COMP., CHECK	1	1	
• 14	17629-NX4-000	PIN, TANK MOUNT	1	1	
• 15	19602-NF4-810	TANK, CATCH 250	1	1	
• 16	32114-NF4-780	BASE, TYLAP	2	2	
17	80115-GS3-000	SIDE COLLAR, REAR FENDER	1	1	
• 18	87207-NX4-770	MARK, CAUTION	1	1	
• 19	87208-ND4-000	MARK, CAUTION	1	1	
20	87506-357-671	MARK, CAUTION	1	1	

Block No.

F-9

FUEL TANK

2003 RS125R
2004 RS125R



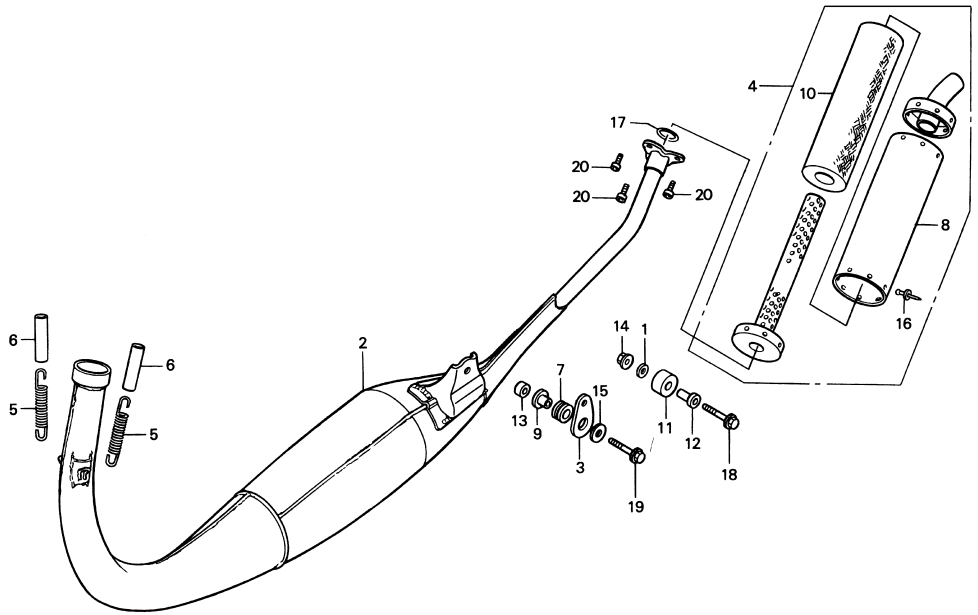
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
21	90443-GC8-000	WASHER, THRUST, 8MM	1	1	
• 22	90651-NC8-000	TIE-WRAP, 3.6X281	2	2	
• 23	90652-ND5-000	TIE-WRAP, 2.4X92	1	1	
24	91058-MG9-681	BAND, SELF LOCK	3	3	
25	94002-08000-0S	NUT, HEX., 8MM	1	1	
26	94252-10100	PIN, LOCK, 10MM	1	1	
27	95002-02120	CLIP, B12 TUBE	2	2	
28	95002-45000	CLIP, C8 TUBE	3	3	
• 29	95003-10003-31	VINYL-TUBE, 5X8X30	1	1	No sale by HRC I.D. 5mmX30mm
• 30	95003-10060-31	VINYL-TUBE, 5X8X600	1	1	No sale by HRC I.D. 5mmX600mm
31	91251-HW3-670	WASHER, 8MM	1	1	

Block No.

F-10

EXPANSION CHAMBER / CHAIN ROLLER

2003 RS125R
2004 RS125R



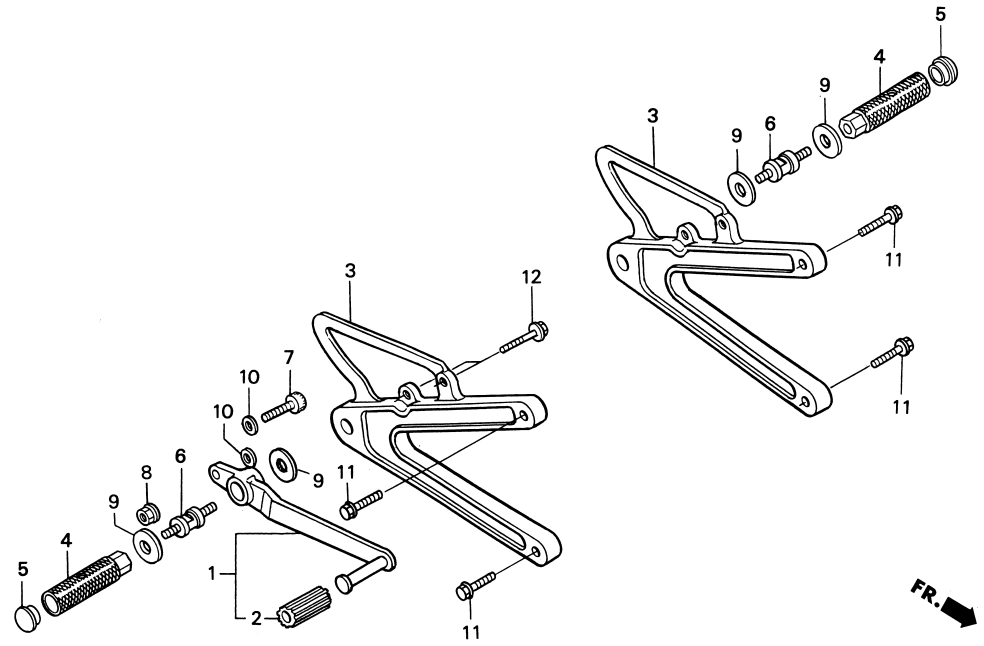
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
1	17936-921-000	WASHER, PIVOT	1	1	
• 2	18310-NX4-710	EXPANSION CHAMBER COMP.	1	1	
• 3	18326-NX4-710	STAY, CHAMBER	1	1	
• 4	18330-NX4-780	SILENCER ASSY.	1	1	
5	18332-KS6-000	SPRING, EXHAUST PIPE	2	2	
6	14539-KCZ-300	TUBE, TENSIONER SPRING	2	2	
7	18334-KA3-830	RUBBER, SILENCER	1	1	
• 8	18334-NX4-780	BODY, OUTER	1	1	
9	18336-KS6-700	COLLAR, SILENCER MOUNT	1	1	
• 10	18336-NX4-780	GLASS WOOL	1	1	
11	52158-HB5-003	ROLLER, CHAIN	1	1	
• 12	52159-NX4-000	COLLAR, CHAIN ROLLER	1	1	
13	17202-ZV4-300	COLLAR, DISTANCE	1	1	
14	90301-473-003	U-NUT, 6MM	1	1	
15	90506-430-000	WASHER, FENDER MOUNT	1	1	
• 16	91081-NF4-003	RIVET, BLIND, 3.2	16	16	
17	91361-MT3-003	O-RING, 24.5X1.9	1	1	
18	95801-06050-00	BOLT, FLANGE, 6X50	1	1	
19	96001-06032-00	BOLT, FLANGE, SH, 6X32	1	1	
• 20	96700-06012-17	SOCKET BOLT, 6X12	3	3	

Block No.

F-11

BRAKE PEDAL / FOOTPEG (STEP ARM)

2003 RS125R
2004 RS125R



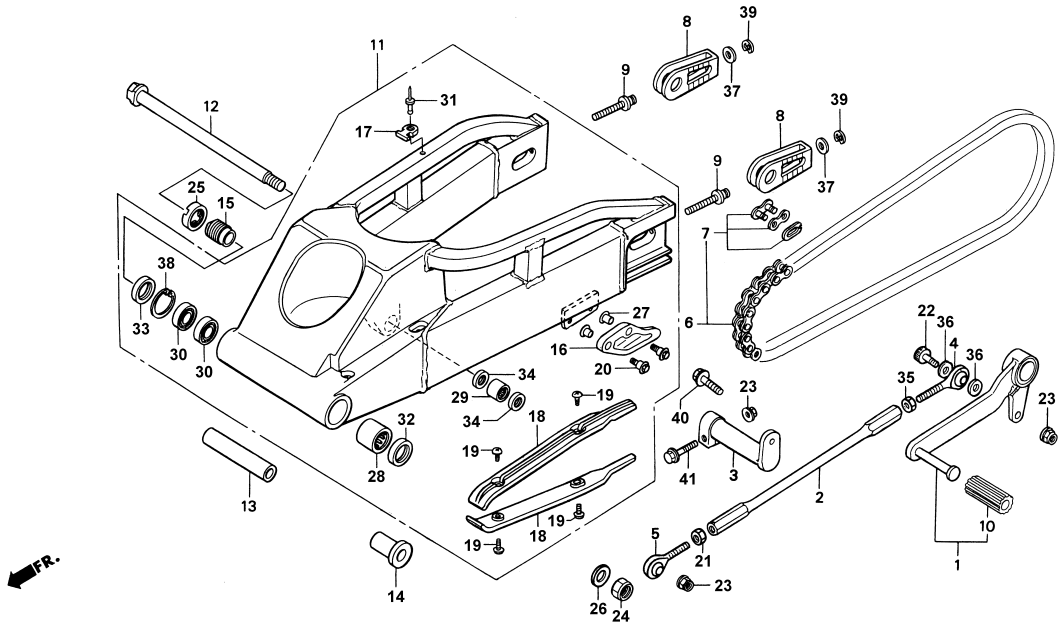
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	46500-NF4-780	PEDAL COMP., BRAKE	1	1	
• 2	46501-ND4-750	RUBBER, PEDAL	1	1	
• 3	50600-NX4-770	HOLDER, STEP	2	2	
• 4	50610-NL5-760	ARM, STEP	2	2	
• 5	50612-NL5-760	END, STEP, ARM	2	2	
• 6	50643-NX4-770	BOSS, PEDAL, PIVOT	2	2	
• 7	90211-NX4-771	BOLT, SOCKET, 6X25	1	1	
8	90301-473-003	U-NUT, 6MM	1	1	
9	90504-MA6-000	WASHER, 8.5X26	4	4	
10	94101-06000	WASHER, PLAIN, 6MM	2	2	
11	95701-08030-00	BOLT, FLANGE, 8X30	4	4	
12	95801-06020-00	BOLT, FLANGE, 6X20	2	2	

Block No.

F-12

GEAR SHIFT PEDAL (CHANGE PEDAL) / REAR SWINGARM

2003 RS125R
2004 RS125R



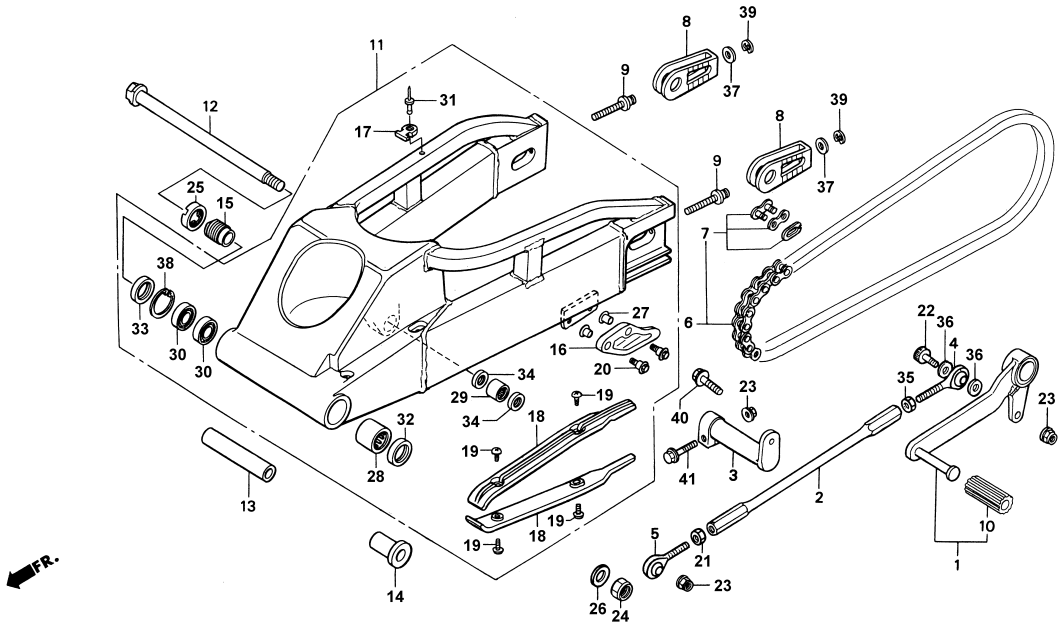
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	24700-NF4-780	PEDAL COMP., CHANGE	1	1	
• 2	24706-NX4-000	ROD, CHANGE	1	1	
• 3	24710-NX4-000	ARM, GEAR CHANGE	1	1	
• 4	24711-NX4-710	ROD, END, 6MM A	1	1	
• 5	24712-NX4-710	ROD, END, 6MM B	1	1	
• 6	40530-NX4-810	CHAIN, DRIVE (RK415HRU-120RJ)	1	1	
• 7	40531-NF4-632	JOINT SET, DRIVE CHAIN (DID415ER)	(1)	(1)	
•	40531-NX4-811	JOINT SET, DRIVE CHAIN (RK415HRU)	1	1	
• 8	40543-NX4-000	ADJUSTER, CHAIN	2	2	
• 9	40545-NX4-000	BOLT, CHAIN ADJUSTER	2	2	
• 10	46501-ND4-750	RUBBER, PEDAL	1	1	
• 11	52100-NX4-710	SWING ARM ASSY.	1	1	
• 12	52101-NX4-680	BOLT, SWING ARM PIVOT	1	1	
• 13	52102-NX4-000	COLLAR, DISTANCE SWING ARM	1	1	
• 14	52106-NX4-000	COLLAR B, PIVOT	1	1	
• 15	52109-NX4-000	BOLT, ADJUST PIVOT	1	1	
16	52156-GAN-670	GUARD, CHAIN	1	1	
• 17	52161-NF5-710	HOSE BASE, SADDLE	1	1	
• 18	52170-NX4-000	SLIDER, CHAIN	2	2	
19	90101-692-000	SCREW, TRUSS G. BOX	4	4	

Block No.

F-12

GEAR SHIFT PEDAL (CHANGE PEDAL) / REAR SWINGARM

2003 RS125R
2004 RS125R



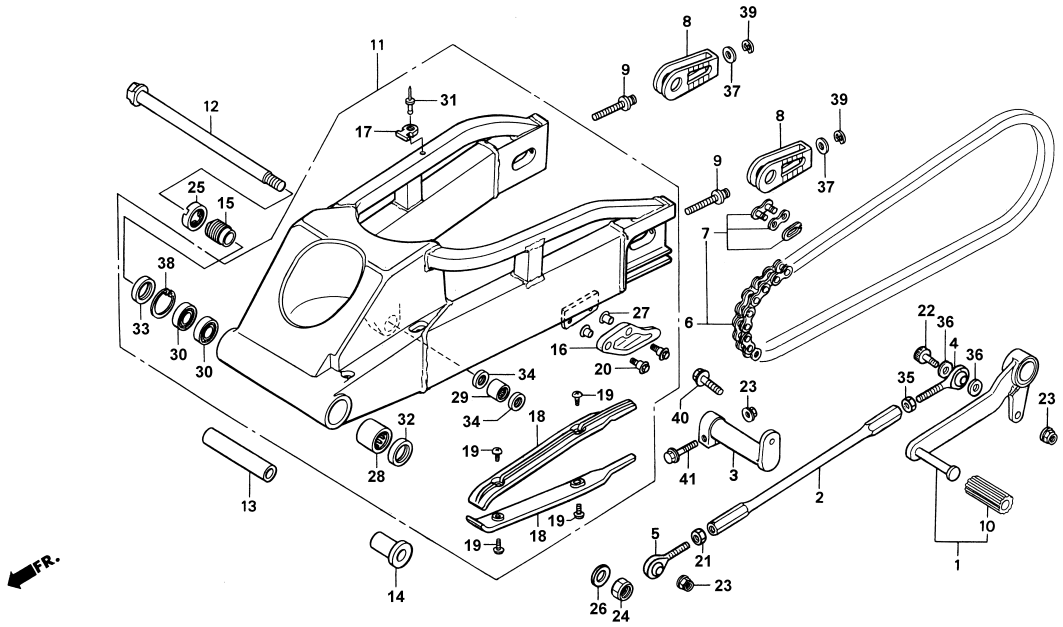
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
20	90110-GE0-710	BOLT, FLANGE, 6MM	2	2	
21	90201-KV3-700	NUT, TIE ROD B	1	1	
• 22	90211-NX4-771	BOLT, SOCKET, 6X25	1	1	
23	90301-473-003	U-NUT, 6MM	3	3	
24	90305-KZ4-891	U-NUT, 18MM	1	1	
• 25	90355-NX4-000	NUT, SWING ARM PIVOT	1	1	
26	90401-KZ4-890	WASHER, 18X32X2	1	1	
27	90522-028-000	WASHER, CHAIN CASE SETTING	2	2	
28	91071-MR7-003	BEARING, NEEDLE	1	1	
29	91071-MY1-005	BEARING, NEEDLE, 17X24X17	1	1	
30	91072-MR7-003	BEARING, BALL RADIAL, 20X37X9	2	2	
• 31	91080-NF5-710	RIVET, 4.0X8.6	1	1	
32	91202-MR7-003	DUST SEAL, 28X37X4	1	1	
33	91214-MR7-003	DUST SEAL, 26X37X5	1	1	
34	91262-KV3-831	DUST SEAL, 17X24X5	2	2	
35	94001-06200-0S	NUT, HEX, 6MM	1	1	
36	94101-06000	WASHER, PLAIN, 6MM	2	2	
37	94102-08000	WASHER, PLAIN, 8MM	2	2	
38	94520-37000	CIRCLIP, INTERNAL 37	1	1	

Block No.

F-12

GEAR SHIFT PEDAL (CHANGE PEDAL) / REAR SWINGARM

2003 RS125R
2004 RS125R



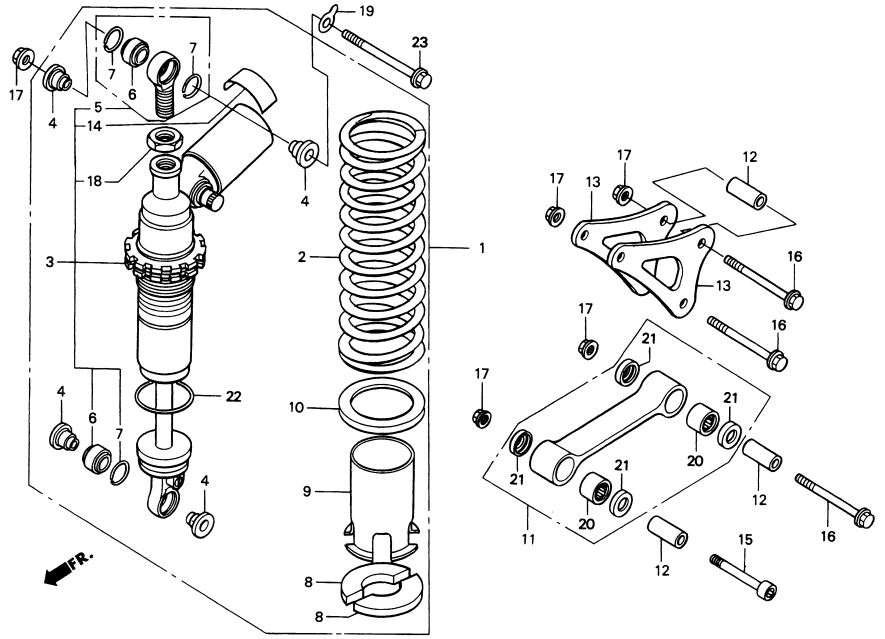
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
39	94540-07029	E-RING, 7	2	2	
40	96001-06022-00	BOLT, FLANGE, SH, 6X22	1	1	
41	96001-06028-00	BOLT, FLANGE, SH, 6X28	1	1	

Block No.

F-13

REAR SHOCK ABSORBER (REAR CUSHION) / SHOCK LINK (CUSHION ROD)

2003 RS125R
2004 RS125R



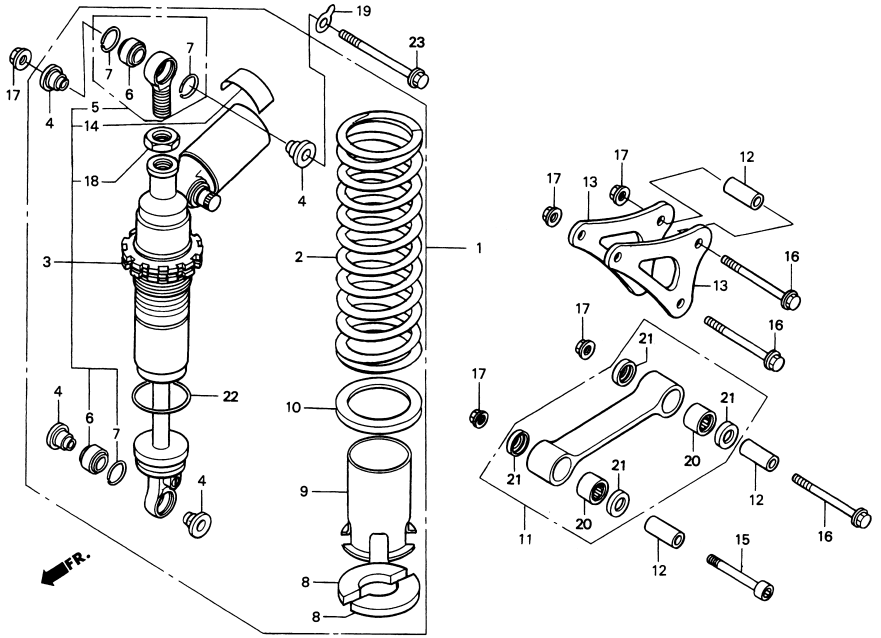
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	52400-NX4-841	CUSHION ASSY., REAR	1	1	
• 2	52401-NX4-003	SPRING, REAR CUSHION	1	1	K=8.0
•	52402-NX4-003	SPRING, REAR CUSHION H	(1)	(1)	K=8.5
•	52403-NX4-003	SPRING, REAR CUSHION S	(1)	(1)	K=7.5
•	52404-NX4-701	SPRING, REAR CUSHION 7.0	(1)	(1)	K=7.0
•	52405-NX4-701	SPRING, REAR CUSHION 6.5	(1)	(1)	K=6.5
• 3	52410-NX4-841	DAMPER COMP., REAR	1	1	
• 4	52411-NX4-003	COLLAR, DAMPER UP	4	4	
• 5	52420-NX4-003	JOINT COMP., UPPER	1	1	
• 6	52422-NF5-952	BEARING, SPHERICAL	2	2	
7	52424-GC4-831	RING, STOPPER	3	3	
• 8	52455-NF4-781	STOPPER, SPRING SEAT	2	2	
• 9	52458-NX4-003	GUIDE, SPRING	1	1	
• 10	52459-NX4-003	SEAT, SPRING	1	1	
• 11	52460-NX4-000	ROD ASSY., CUSHION	1	1	
• 12	52465-NX4-000	COLLAR, CUSHION ARM	3	3	
• 13	52471-NX4-000	PLATE, CUSHION ARM	2	2	
14	87516-KZ1-600	LABEL, REAR DAMPER	1	1	
15	90110-MR8-000	BOLT, SOCKET, 10X52	1	1	
16	90154-HA8-000	BOLT, FLANGE, 10X52	3	3	

Block No.

F-13

REAR SHOCK ABSORBER (REAR CUSHION) / SHOCK LINK (CUSHION ROD)

2003 RS125R
2004 RS125R



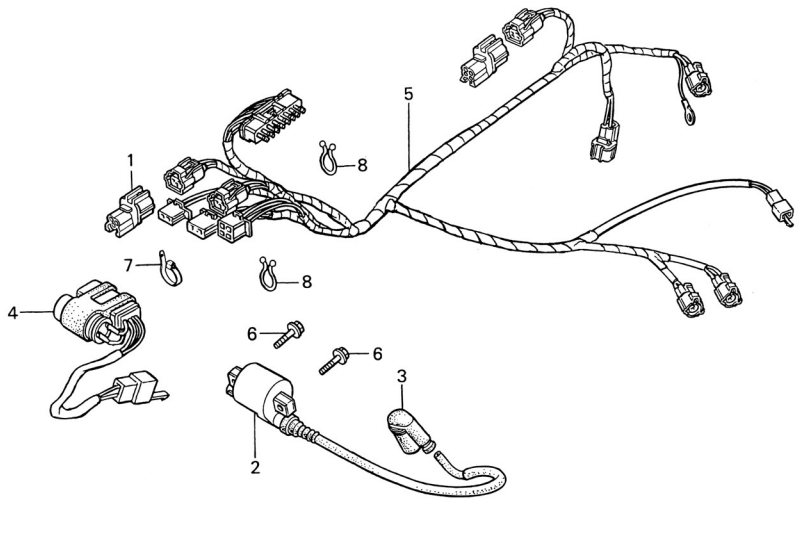
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
17	90304-GA6-003	NUT, AXLE	5	5	
• 18	90306-NF5-951	NUT, LOCK,16MM	1	1	
• 19	90510-NX4-000	SHIM, ENGINE MOUNT 0.2	N	N	
•	90511-NX4-000	SHIM, ENGINE MOUNT 0.6	N	N	
•	90512-NX4-000	SHIM, ENGINE MOUNT 1.0	N	N	
•	90513-NX4-000	SHIM, ENGINE MOUNT 1.5	N	N	
20	91071-MY1-005	BEARING, NEEDLE, 17X24X17	2	2	
21	91262-KV3-831	DUST SEAL, 17X24X5	4	4	
22	91356-KZ3-003	O-RING, 44.7X2.4	1	1	
23	95801-10060-00	BOLT, FLANGE, 10X60	1	1	

Block No.

F-14

IGNITION COIL / WIRE HARNESS

2003 RS125R
2004 RS125R



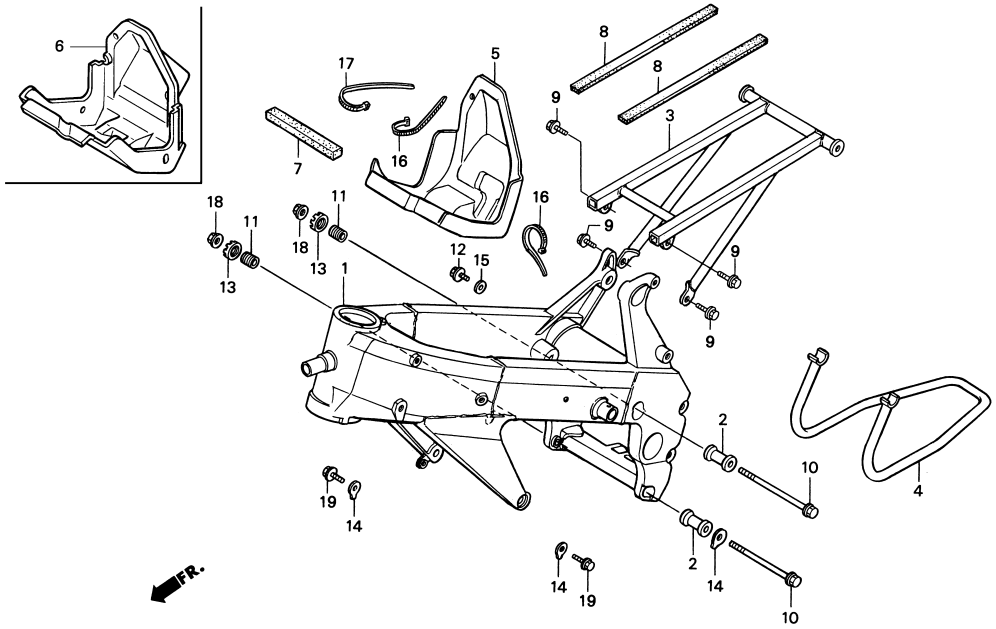
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	30411-NX5-790	COUPLER, P/J MODE 1	1	1	
•	30412-NX5-790	COUPLER, P/J MODE 2	(1)	(1)	
•	30413-NX5-790	COUPLER, P/J MODE 3	(1)	(1)	
• 2	30500-NX4-003	COIL COMP., IGNITION	1	1	
• 3	30700-NX4-000	CAP ASSY., NOISE SUPPRESSOR	1	1	
• 4	31600-NX4-000	REGULATE RECTIFIER COMP. (DC)	1	1	
• 5	32100-NX4-810	HARNESS, WIRE	1	1	
6	90197-MN5-000	BOLT, FLANGE, 5X20	2	2	
7	90650-MA6-720	BAND, HARNESS	1	1	
8	90659-MR5-000	CLIP, HARNESS	2	2	

Block No.

F-15

FRAME BODY / STAND / CARBURETOR BOX

2003 RS125R
2004 RS125R



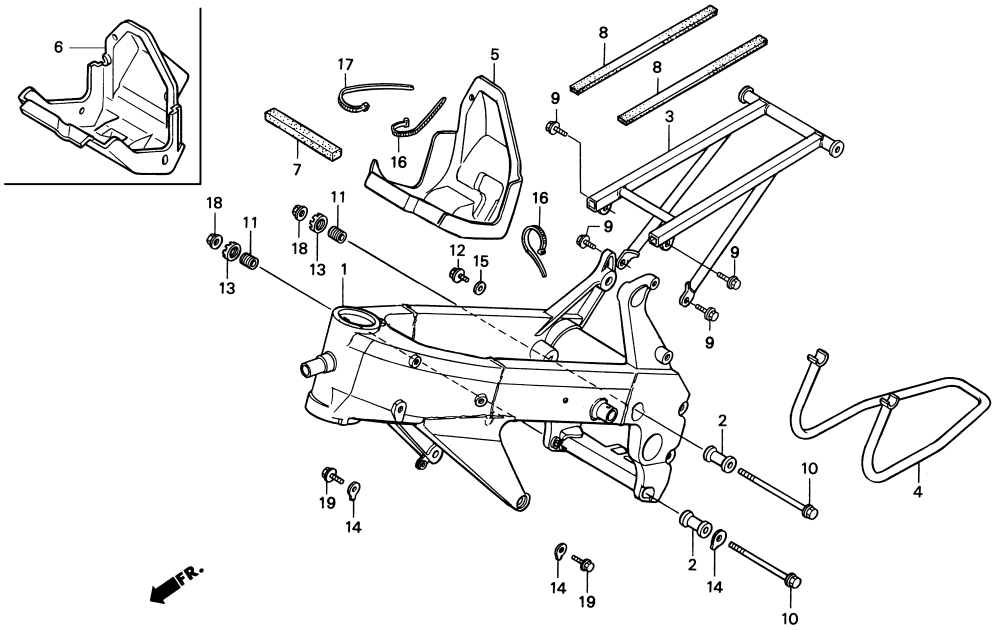
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
• 1	50100-NX4-710	FRAME BODY COMP.	1	1	
• 2	50180-NX4-000	COLLAR, ENGINE MOUNT	2	2	
• 3	50240-NX4-000	RAIL COMP., SEAT	1	1	
• 4	50500-NX4-000	STAND, MAIN	1	1	
• 5	64110-NX4-000	BOX, CARBURETOR	1	–	
• 6	64110-NX4-860	BOX, CARBURETOR	1	1	
7	64231-MZ7-300	SEAL LOWER, HEADLIGHT	1	1	
• 8	77105-NX4-000	RUBBER, SEAT RAIL	2	2	
9	90004-GHB-620	BOLT, FLANGE, NSHF 6X14	4	4	
10	90102-GW2-000	BOLT, FLANGE, 10X183	2	2	
• 11	90124-NX4-000	BOLT, ENGINE MOUNT ADJUST 18X34.5	2	2	
• 12	90134-ND5-000	BOLT, FLANGE, 6X10	1	1	
• 13	90301-NX4-000	NUT, LOCK, M18X1.5	2	2	
• 14	90510-NX4-000	SHIM, ENGINE MOUNT 0.2	N	N	
•	90511-NX4-000	SHIM, ENGINE MOUNT 0.6	N	N	
•	90512-NX4-000	SHIM, ENGINE MOUNT 1.0	N	N	
•	90513-NX4-000	SHIM, ENGINE MOUNT 1.5	N	N	
15	90543-273-000	PACKING, FRONT FORK DRAIN	1	1	
• 16	90651-NC8-000	TIE-WRAP, 3.6X281	2	2	
17	91058-MG9-681	BAND, SELF LOCK	1	1	

Block No.

F-15

FRAME BODY / STAND / CARBURETOR BOX

2003 RS125R
2004 RS125R



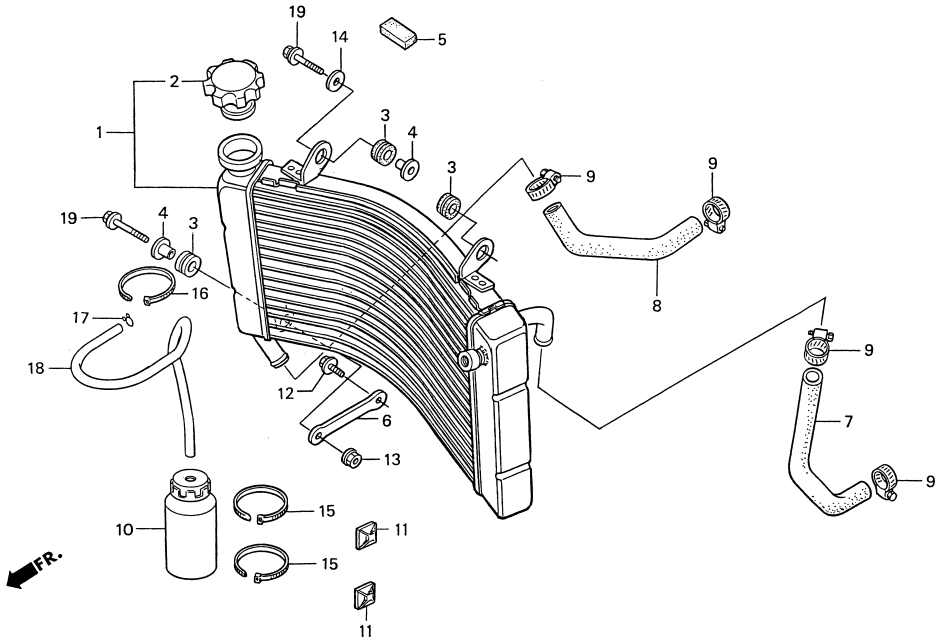
Ref. No.	Part No.	Description	Reqd. No. '03	Reqd. No. '04	Remarks
18	94050-10000	NUT, FLANGE, 10MM	2	2	
19	95801-10028-00	BOLT, FLANGE, 10X28	2	2	

Block No.

F-16

RADIATOR

2003 RS125R



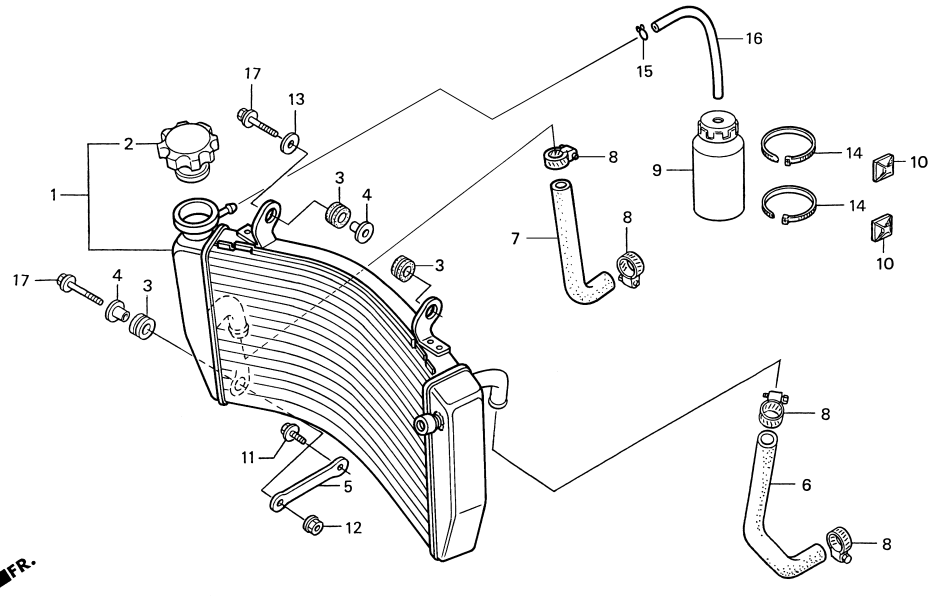
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	19010-NX4-771	RADIATOR ASSY.	1	
2	19045-MY3-671	CAP COMP., RADIATOR	1	
3	19051-KA3-830	RUBBER, RADIATOR MOUNT	3	
4	19052-KA3-830	COLLAR, RADIATOR MOUNT	2	
5	19105-MR8-300	CUSHION, TANK RESERVE	1	
• 6	19110-NX4-000	STAY, RADIATOR	1	
• 7	19502-NX4-000	HOSE A, WATER	1	
• 8	19503-NX4-000	HOSE B, WATER	1	
9	19504-KY1-003	CLAMP, WATER HOSE D25	4	
• 10	19602-NF4-810	TANK, CATCH 250	1	
• 11	32114-NF4-780	BASE, TYLAP	2	
12	90108-GK1-000	BOLT, FLANGE, SH, 6X12	1	
13	90301-473-003	U-NUT, 6MM	1	
14	90506-430-000	WASHER, FENDER MOUNT	1	
• 15	90651-NC8-000	TIE-WRAP, 3.6X281	2	
16	91058-MG9-681	BAND, SELF LOCK	1	
17	95002-45000	CLIP, C8 TUBE	1	
• 18	95003-10040-31	VINYL-TUBE, 5X8X400	1	No sale by HRC I.D. 5mmX400mm
19	96001-06025-00	BOLT, FLANGE, SH, 6X25	2	

Block No.

F-16-1

RADIATOR

2004 RS125R



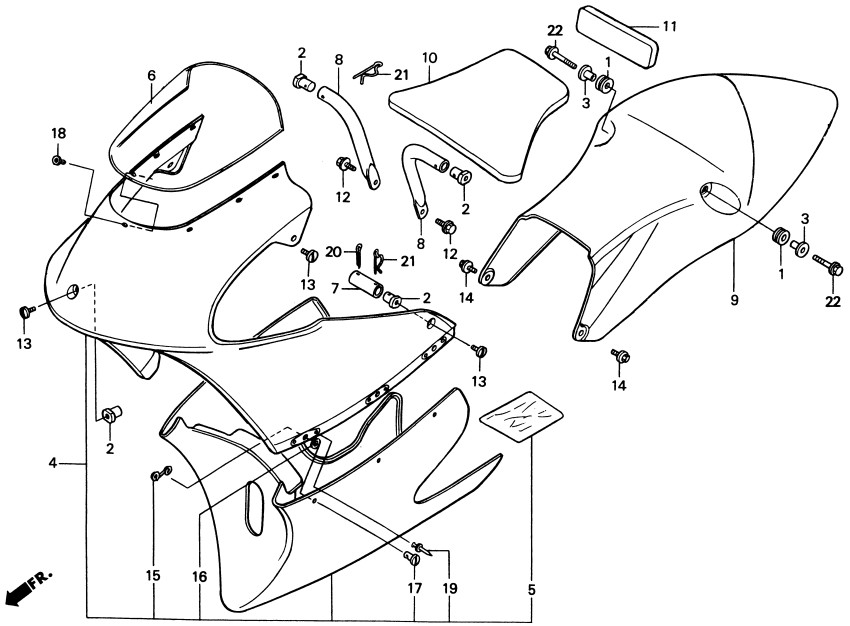
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 1	19010-NX4-860	RADIATOR COMP.	1	
2	19045-MY3-671	CAP COMP., RADIATOR	1	
3	19051-KA3-830	RUBBER, RADIATOR MOUNT	3	
4	19052-KA3-830	COLLAR, RADIATOR MOUNT	2	
• 5	19110-NX4-000	STAY, RADIATOR	1	
• 6	19502-NX4-000	HOSE A, WATER	1	
• 7	19503-NX4-860	HOSE, WATER B	1	
8	19504-KY1-003	CLAMP, WATER HOSE D25	4	
• 9	19602-NF4-810	TANK, CATCH 250	1	
• 10	32114-NF4-780	BASE, TYLAP	2	
11	90108-GK1-000	BOLT, FLANGE, SH, 6X12	1	
12	90301-473-003	U-NUT, 6MM	1	
13	90506-430-000	WASHER, FENDER MOUNT	1	
• 14	90651-NC8-000	TY-LAP, 3.6X281	3	
15	95002-45000	CLIP, C8 TUBE	1	
• 16	95003-10023-31	VINYL-TUBE, 5X8X230	1	No sale by HRC I.D. 5mmX230mm
17	96001-06025-00	BOLT, FLANGE, SH, 6X25	2	

Block No.

F-17

COWL

2003 RS125R



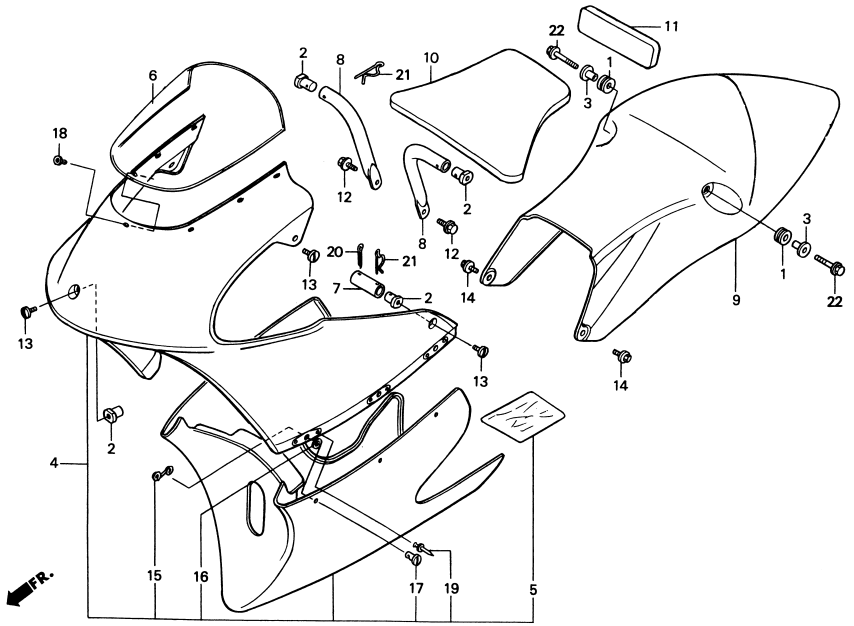
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
1	33712-KC5-003	GROMMET, TAILLIGHT MOUNT	2	
• 2	50803-NF4-610	NUT, COWL STAY	5	
3	61104-KA4-700	COLLAR, FENDER MOUNT	2	
• 4	64100-NX4-810	COWLING, FRONT	1	
• 5	64109-NF5-750	SEAT, HEAT PROOF	1	
• 6	64200-NX4-680	SCREEN	1	
• 7	64210-NX4-000	STAY, FRONT COWL SIDE	2	
• 8	64240-NX4-680	STAY, FRONT COWL UP	2	
• 9	77210-NX4-680	COWL, SEAT	1	
• 10	77220-NX4-000	RUBBER, SEAT	1	
• 11	77221-NF5-760	RUBBER, SEAT BACK	1	
12	90004-GHB-620	BOLT, FLANGE, NSHF, 6X14	2	
• 13	90106-NF4-770	BOLT, COWL SET, 6X13	5	
14	90108-GK1-000	BOLT, FLANGE, SH, 6X12	2	
• 15	90653-NC8-000	SPRING, FASTENER, 35	6	
• 16	90654-NC8-000	GROMMET, FASTENER	6	
• 17	90655-NC8-000	STUD, FASTENER, 35	6	
• 18	90656-NX4-000	RIVET, 4X7	7	
• 19	91080-NC8-300	RIVET, 3.2X6.4	12	
20	94201-25300	PIN, SPLIT, 2.5X30	2	

Block No.

F-17

COWL

2003 RS125R



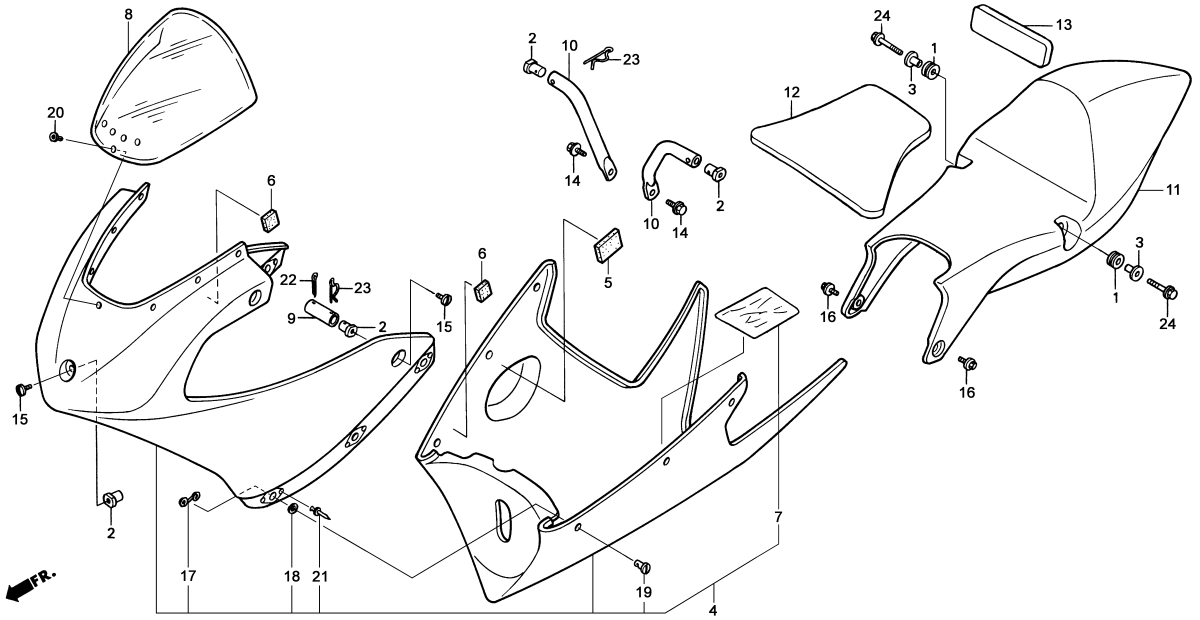
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
21	94252-16100	PIN, LOCK, 16MM	4	
22	96001-06020-00	BOLT, FLANGE, SH, 6X20	2	

Block No.

F-17-1

COWL

2004 RS125R



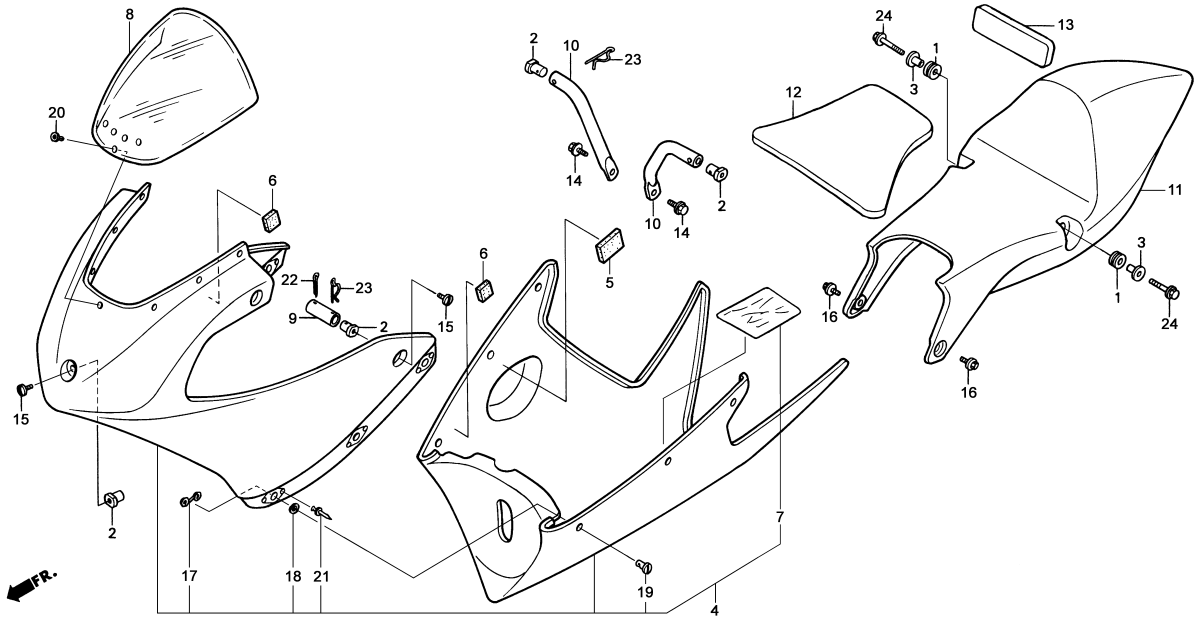
Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
1	33712-KC5-003	GROMMET, TAILLIGHT MOUNT	2	
• 2	50803-NF4-610	NUT, COWL STAY	5	
3	61104-KA4-700	COLLAR, FENDER MOUNT	2	
• 4	64100-NX4-861	COWLING, FRONT	1	
• 5	64107-NX4-860	MAT, COWL A	1	
• 6	64108-NX4-860	MAT, COWL B	3	
• 7	64109-NF5-750	SEAT, HEAT PROOF	1	
• 8	64200-NX4-860	SCREEN	1	
• 9	64210-NX4-000	STAY, FRONT COWL SIDE	2	
• 10	64240-NX4-860	STAY, FRONT COWL UP	2	
• 11	77210-NX4-860	COWL, SEAT	1	
• 12	77220-NX4-000	RUBBER, SEAT	1	
• 13	77221-NF5-760	RUBBER, SEAT BACK	1	
14	90004-GHB-620	BOLT, FLANGE, NSHF, 6X14	2	
• 15	90106-NF4-770	BOLT, COWL SET, 6X13	5	
16	90108-GK1-000	BOLT, FLANGE, SH, 6X12	2	
• 17	90653-NC8-000	SPRING, FASTENER, 35	6	
• 18	90654-NC8-000	GROMMET, FASTENER	6	
• 19	90655-NC8-000	STUD, FASTENER, 35	6	
• 20	90656-NX4-000	RIVET, 4X7	7	

Block No.

F-17-1

COWL

2004 RS125R



Ref. No.	Part No.	Description	Reqd. No. '03 '04	Remarks
• 21	91080-NC8-300	RIVET, 3.2X6.4	12	
22	94201-25300	PIN, SPLIT, 2.5X30	2	
23	94252-16100	PIN, LOCK, 16MM	4	
24	96001-06020-00	BOLT, FLANGE, SH, 6X20	2	

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Part No.	Block	Part No.	Block	Part No.	Block	Part No.	Block
99113-GHB-1900	E-10						
99113-GHB-1920	E-10						
99113-GHB-1950	E-10						
99113-GHB-1980	E-10						
99113-GHB-2000	E-10						
99113-GHB-2050	E-10						
99113-GHB-2100	E-10						
99113-GHB-2150	E-10						