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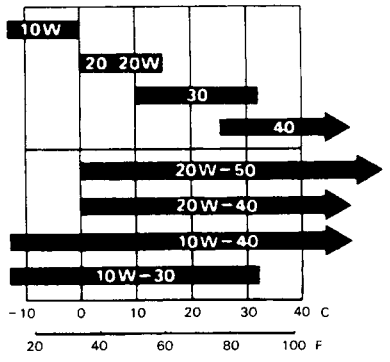
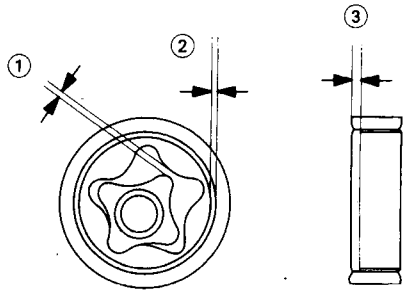
Unit: mm (in)

Lubrication System

Item	Standard	Service Limit
Engine oil capacity at draining	3.6 liter (3.78 US qt, 3.17 Imp qt)	———
at disassembly	4.5 liter (4.76 US qt, 3.96 Imp qt)	———
at oil filter change	3.8 liter (4.02 US qt, 4.43 Imp qt)	———
Recommended engine oil	Use Honda 4-stroke oil or equivalent API Service Classification: SE, SF or SG viscosity: SAE 10W–40 Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.	———
Oil pressure at oil pressure switch	588–686 kPa (6.0–7.0kg/cm², 85–100 psi) at 5,000 min⁻¹ (rpm) (80°C/176°F)	———
Oil pump rotor tip clearance ①	0.15 (0.006)	0.20 (0.008)
body clearance ②	0.15–0.22 (0.006–0.009)	0.35 (0.014)
end clearance ③	0.02–0.07 (0.001–0.003)	0.10 (0.004)



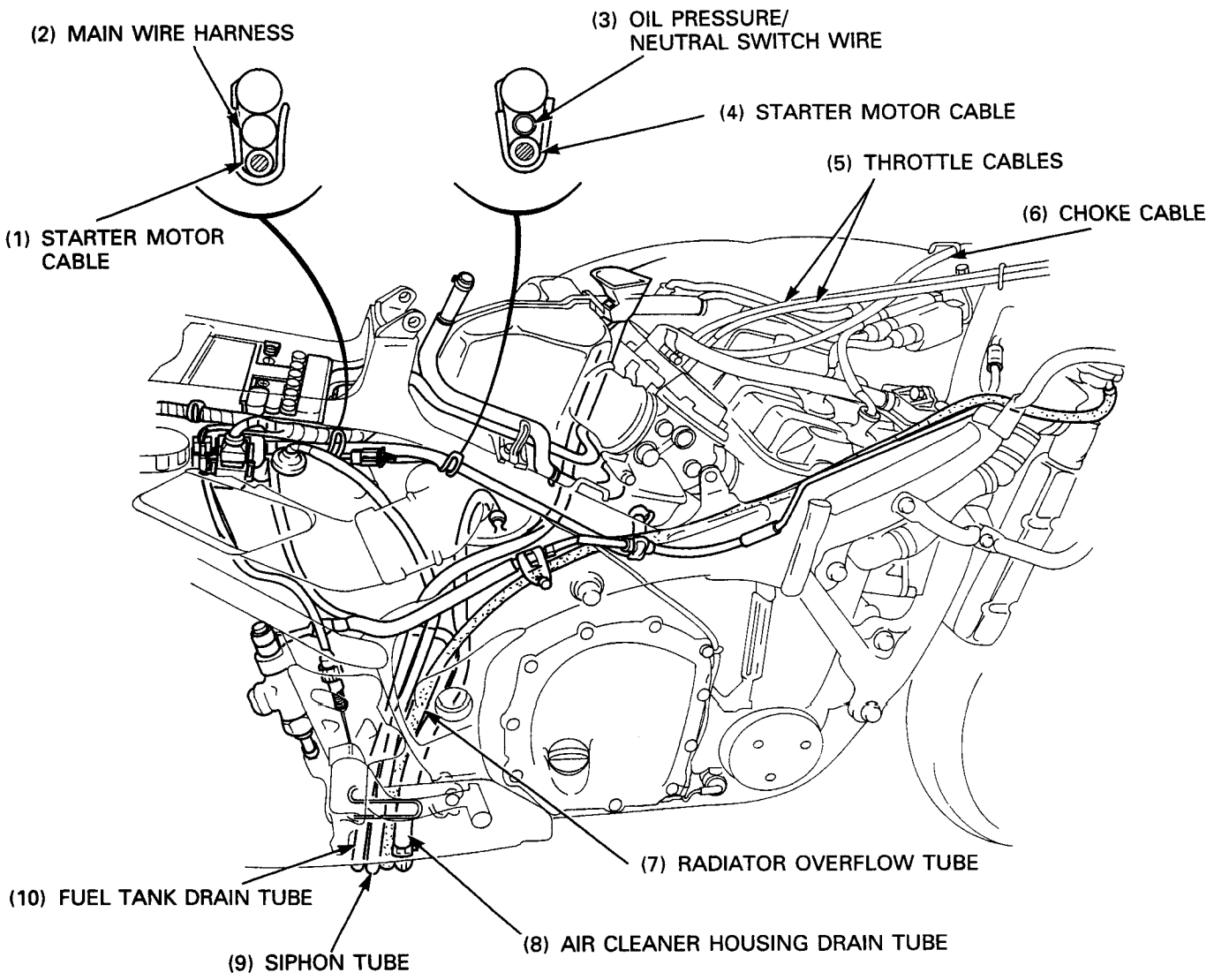


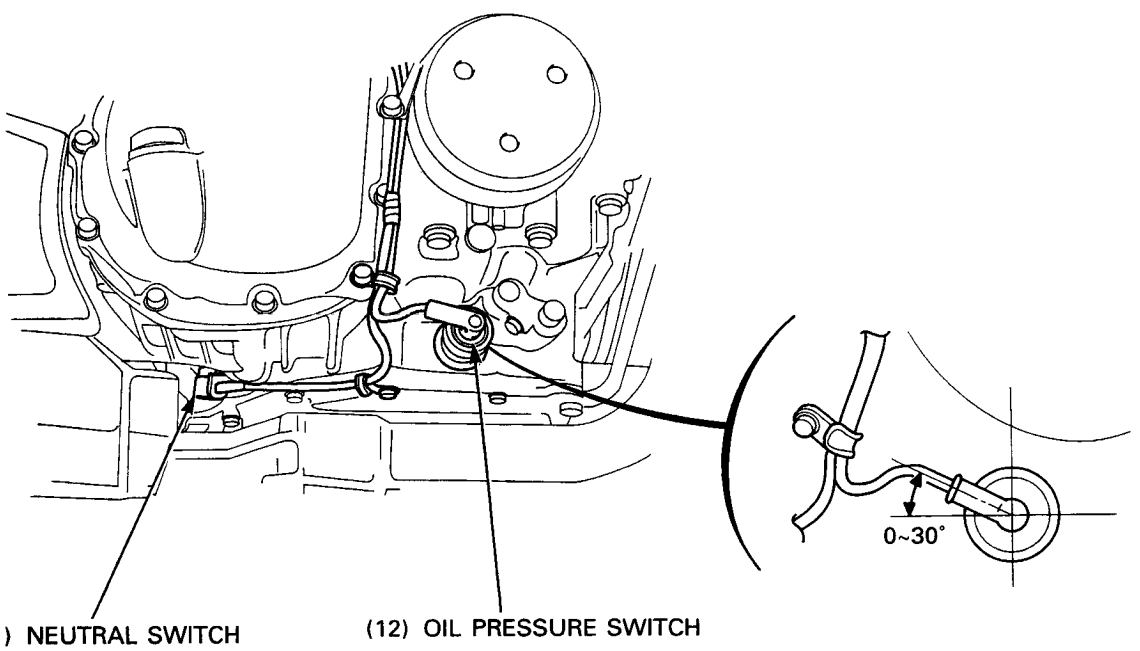
Fuel System

Carburetor identification number		———
(G type)	VP83A	———
(ED, E, ND, SP, IT, U type)	VP83B	———
(F type)	VP83C	———
(SW type)	VP85A	———
(AR type)	VP85B	———
Main jet	#122	———
Slow jet (ED, E, F, ND, SP, IT, U type)	#42	———
(G, SW, AR type)	#40	———
Pilot screw initial opening (Except SW, AR type)	3 turns out	———
(SW type)	1-3/4 turns out	———
(AR type)	2-5/8 turns out	———
Float level	13.7 (0.54)	———
Carburetor vacuum difference	20 mm Hg (0.8 in Hg)	———
Base carburetor (For carburetor synchronization)	No.3	———
Idle speed (Except SW, AR type)	1,000 ± 100 min⁻¹ (rpm)	———
(SW type)	1,050 ± 50 min⁻¹ (rpm)	———
(AR type)	1,050 ± 100 min⁻¹ (rpm)	———
Throttle grip free play	2–6 (0.08–0.24)	———
Secondary air supply system (SW, AR type)	Reed valves are built into the ASV	———
Air injection control valve vacuum pressure (SW, AR type)	420 mm Hg (16.5 in Hg)	———

Frame

Item	Q'ty	Thread dia. (mm)	Torque N • m (kg-m, ft-lb)	Remarks
Frame/Body Panels/Exhaust System:				
Exhaust pipe joint nut	8	7	17 (1.7, 12)	
Muffler band bolt	4	8	22 (2.2, 16)	
Muffler stay flange nut	3	8	22 (2.2, 16)	
Step holder bolt	4	8	33 (3.3, 24)	
Center stand bolt	1	10	50 (5.0, 36)	
Side stand pivot bolt	1	10	8 (0.8, 5.8)	
Side stand pivot lock nut	1	10	40 (4.0, 29)	Note 9
Side stand bracket bolt	3	10	65 (6.5, 47)	
Grub rail mounting bolt	4	8	35 (3.5, 2.5)	
Lubrication System:				
Oil cooler pipe joint	4	6	9 (0.9, 6.5)	
Fuel System:				
Fuel valve	1	6	10 (1.0, 7)	
Fuel tank cap	7	4	3 (0.30, 2.2)	
Fuel unit	4	6	10 (1.0, 7)	Note 9
Fuel tank mounting bolt	2	6	10 (1.0, 7)	
Fuel tank pivot nut	1	6	10 (1.0, 7)	Note 9
Cooling System:				
Fan motor switch	1	16	18 (1.8, 13)	Note 1
Water hose joint	1	6	9 (0.9, 6.5)	
Water hose band			1.0-1.5 (0.10-0.15, 0.7-1.1)	
Engine Mounting:				
Front engine hanger bolt/nut (Upper)	2	10	45 (4.5, 33)	
Front engine hanger bolt/nut (Lower)	2	10	45 (4.5, 33)	
Rear engine hanger bolt/nut (Upper)	1	12	55 (5.5, 40)	
Rear engine hanger bolt/nut (Lower)	1	12	55 (5.5, 40)	
Engine hanger adjusting bolt	1	20	8 (0.8, 5.8)	
Engine hanger adjusting bolt lock nut	1	20	25 (2.5, 18)	
Clutch/Gearshift Linkage:				
Clutch master cylinder holder bolt	2	6	12 (1.2, 9)	
Clutch master cylinder cap screw	2	4	1.5 (0.15, 1.1)	
Clutch lever pivot bolt	1	6	0.8 (0.08, 0.6)	
Clutch lever pivot nut	1	6	5.9 (0.59, 4.3)	
Clutch switch screw	1	4	1.2 (0.12, 0.8)	
Gearshift pedal arm pinch bolt	1	6	16 (1.6, 12)	
Gearshift pedal arm pivot bolt	1	8	27 (2.7, 20)	
Wheels:				
Front axle bolt	1	14	59 (5.9, 43)	
Front axle holder bolt	4	8	22 (2.2, 16)	
Front brake disc bolt	12	8	42 (4.2, 30)	Note 10
Rear axle nut	1	18	93 (9.3, 67)	
Rear brake disc bolt	6	8	42 (4.2, 30)	Note 10
Driven sprocket nut	5	12	110 (11.0, 78)	Note 9
Front Suspension:				
Steering stem nut	1	24	103 (10.3, 96)	
Top thread A	1	26	25 (2.5, 18)	See page 11-18
Top thread B	1	26	—	
Top bridge pinch bolt	2	8	23 (2.3, 17)	
Bottom bridge pinch bolt	2	10	49 (4.9, 35)	
Handlebar pivot pinch bolt	2	8	27 (2.7, 20)	
Handlebar weight mounting screw	2	6	10 (1.0, 7)	


(2) MAIN WIRE HARNESS
(3) OIL PRESSURE/
NEUTRAL SWITCH WIRE
(4) STARTER MOTOR CABLE
(5) THROTTLE CABLES
(6) CHOKE CABLE
(1) STARTER MOTOR
CABLE
(7) RADIATOR OVERFLOW TUBE
(10) FUEL TANK DRAIN TUBE
(8) AIR CLEANER HOUSING DRAIN TUBE
(9) SIPHON TUBE

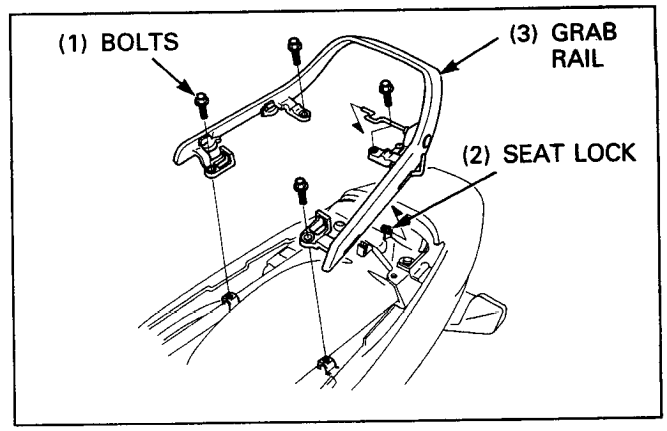

0~30°
(11) NEUTRAL SWITCH
(12) OIL PRESSURE SWITCH

Seat Cowl

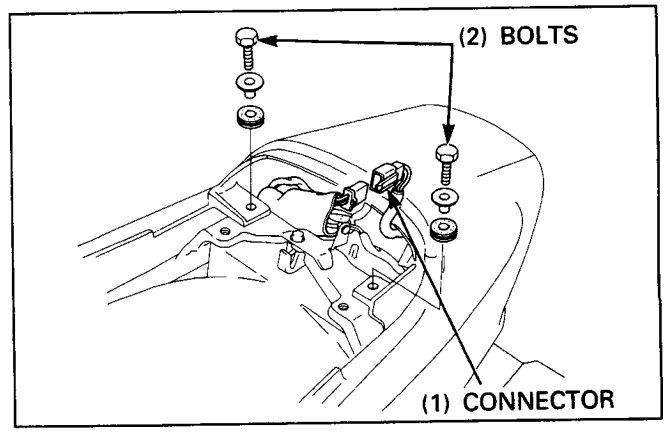
Removal

Remove the seat (page 2-3).

Remove the four grab rail mounting bolts.
Remove the grab rail while releasing the seat lock link from the seat lock.



Disconnect the tail/brake light connector.
Remove the seat cowl mounting bolts and collars.



Release the tabs from the frame hooks while pulling the seat cowl backward, then remove the seat cowl.
Remove the hook rubbers.

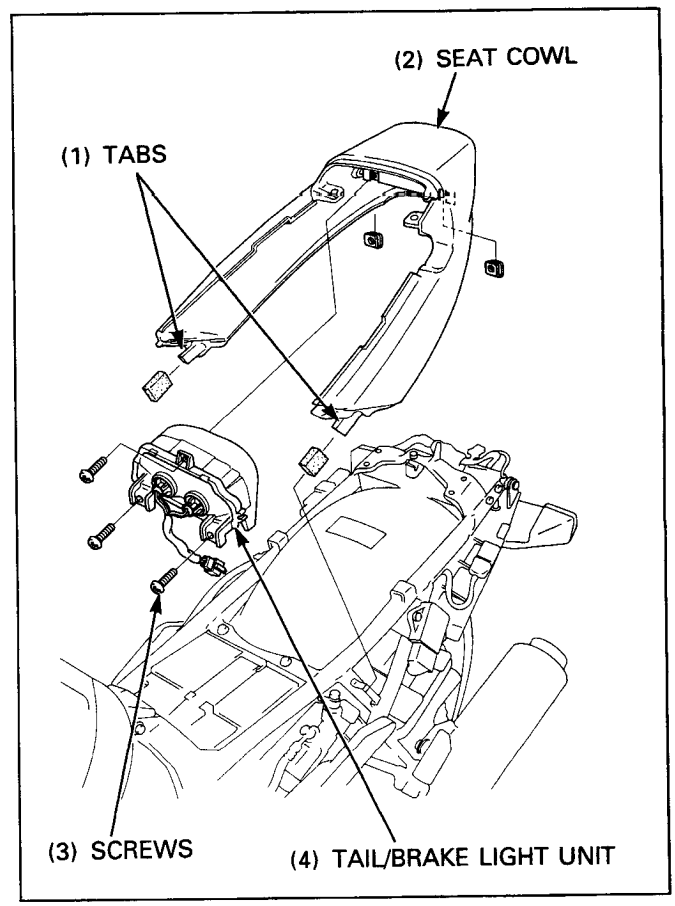
Remove the three screws and tail/brake light unit.

Installation

Installation is in the reverse order of removal.

NOTE

- At installation, install the hook rubbers securely onto the tabs of the seat cowl.



(1) Spark Plug (Wear, damage, coloration)
• Fuel tank

(2) Carburetor Choke (Operation)

(3) Steering Head Bearing (Damage)

(4) Clutch Master Cylinder (Level check, fluid replacement)

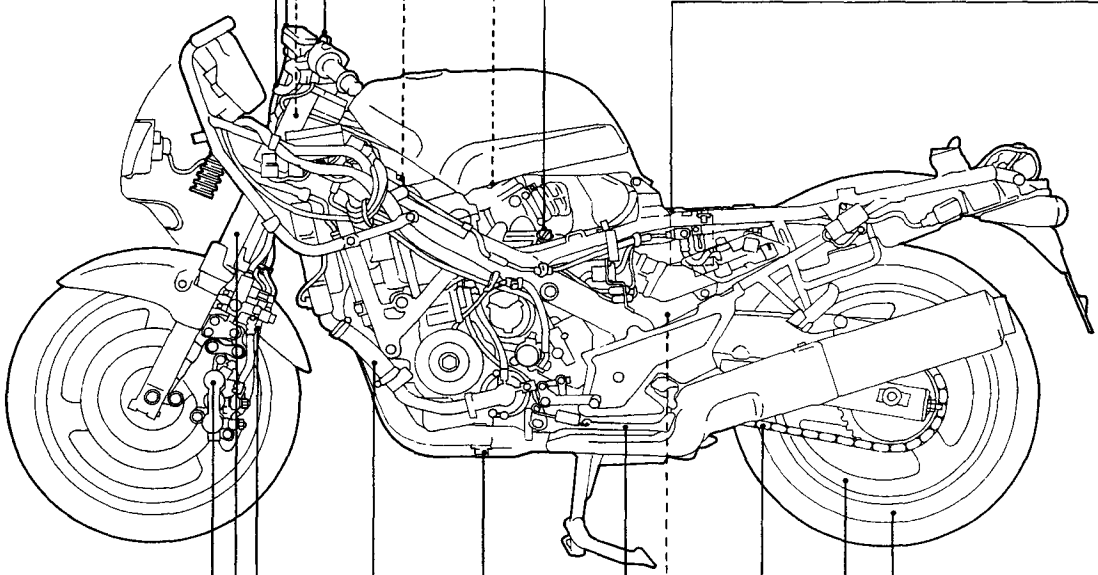
(5) Clutch Lever (Free play)

(6) Valve Clearance (Inspection/Adjustment; page 3-5)
• Fuel tank
• Lower fairing

(7) Synchronization Adjusting Screw (Carburetor synchronization; page 3-8)
• Fuel tank
• Lower fairing

(8) Throttle Stop Screw

(9) Battery (Fluid level)
• Seat



(10) Front Brake Caliper (Pad wear)

(11) Front Suspension (Loose, wear, damage)

(12) Brake Hose (Leakage, deterioration, damage)

(13) Radiator Hose (Leakage, deterioration, damage)
• Lower fairing

(14) Tire (Wear, damage, air pressure)

(15) Wheel (Damage, runout, corrosion)

(16) Drive Chain (Free play, lubrication, replacement; page 3-10)

(17) Rear Suspension (Loose, wear, damage)

(18) Side Stand (Operation)

(19) Engine Oil Drain Bolt (Oil replacement)

Brake System

NOTE

- The CBR1000F is equipped with the Dual Conbined Brake System.
- Check the front and rear brake operation as follows.

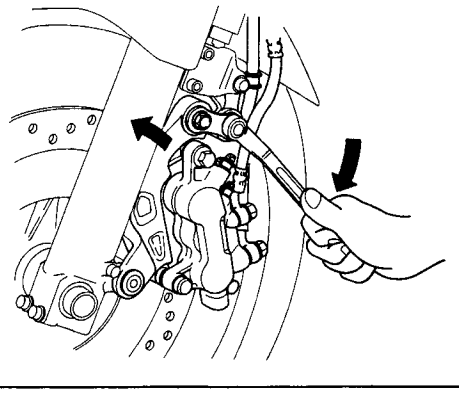
Place the motorcycle on its center stand and shift the transmission into neutral.

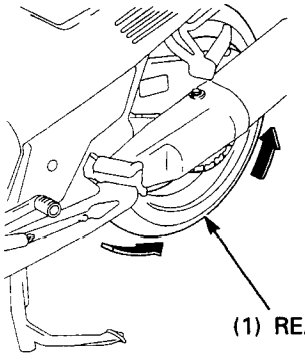
Turn the front brake link 8 mm bolt clockwise using a wrench.
Make sure the rear wheel does not turn while the front brake link is turned clockwise.

CAUTION

- **Do not turn the brake link 8 mm bolt counterclockwise or the bolt may be loosened.**

Also check the smooth operation of the brake link.

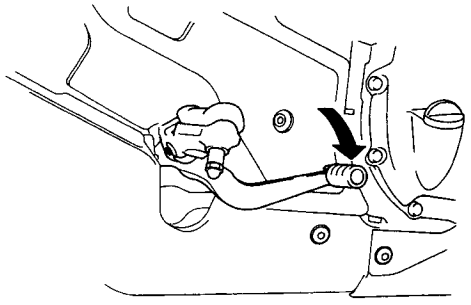


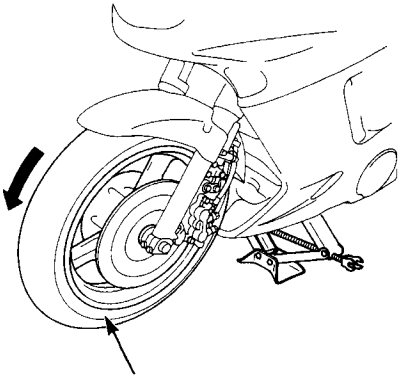


(1) REAR WHEEL

Jack-up the motorcycle and the front wheel off the ground.

Apply rear brake pedal.
Make sure the front wheel does not turn while the rear brake pedal is applied.





(1) FRONT WHEEL

Troubleshooting

Engine Won't Start
- Too much fuel getting to the engine
  - Air cleaner clogged
  - Flooded carburetors
- Intake air leak
- Fuel contaminated/deteriorated
- No fuel to carburetor
  - Fuel strainer clogged
  - Fuel tube clogged
  - Fuel valve stuck
  - Fuel pump malfunction
  - Float level misadjusted
  - Fuel tank breather tube clogged

Lean Mixture
- Fuel jets clogged
- Float valve faulty
- Float level too low
- Fuel line restricted
- Carburetor air bent tube clogged
- Intake air leak
- Fuel pump malfunction
- Throttle valve faulty
- Vacuum piston faulty

Rich Mixture
- Starting enrichment valve in ON position
- Float valve faulty
- Float level too high
- Air jets clogged
- Air cleaner element contaminated
- Flooded carburetor

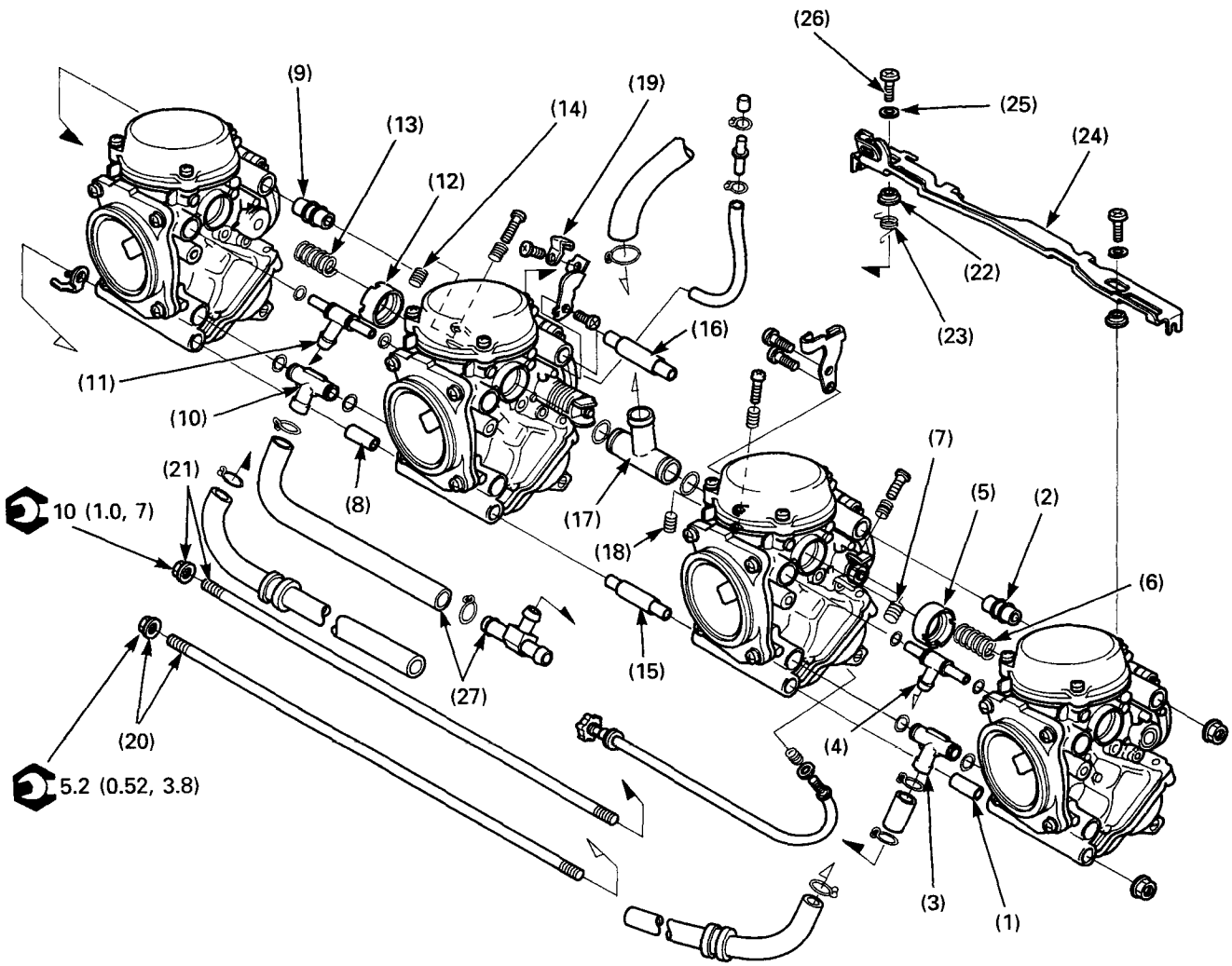
Engine Stall, Hard To Start, Rough Idling
- Fuel line restricted
- Ignition malfunction
- Fuel mixture too lean/rich
- Fuel contaminated/deteriorated
- Intake air leak
- Idle speed misadjusted
- Float level misadjusted
- Fuel tank breather tube clogged
- Fuel pump malfunction
- Pilot screw misadjusted
- Slow circuit or bystarter circuit clogged
- Emission control system is malfunction (SW, AR type only)

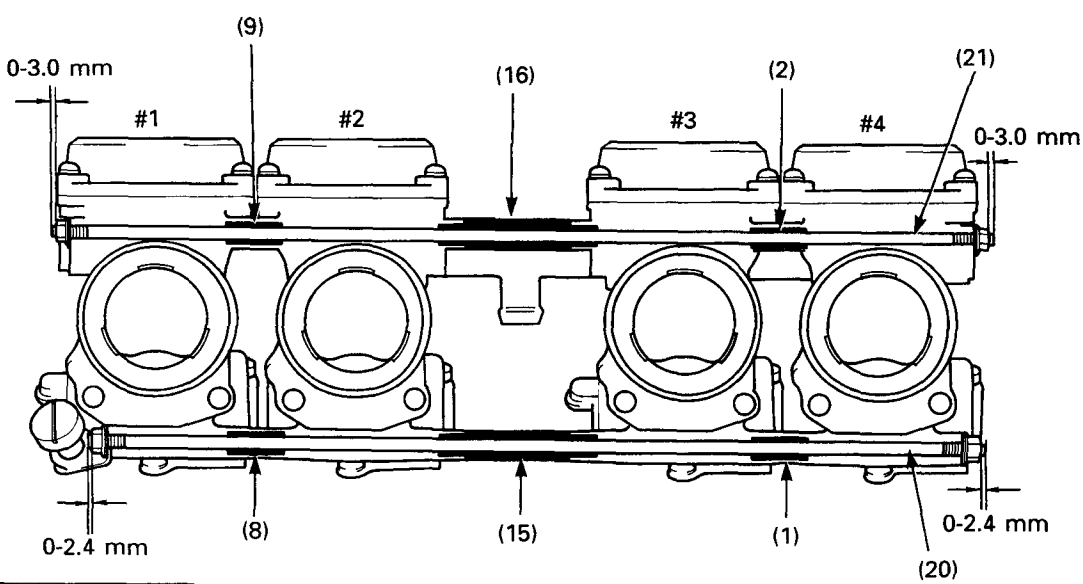
Afterburn When Engine Braking Is Used
- Lean mixture in slow circuit
- Air cut-off valve malfunction (SW,AR type only)
- Emission control system is malfunction (SW, AR type only)
  - Secondary air supply system faulty
  - Loose, disconnected or deteriorated hoses of the emission control system

Backfiring Or Misfiring During Acceleration
- Ignition system malfunction
- Fuel mixture too lean

Poor Performance (Driveability) And Poor Fuel Economy
- Fuel system clogged
- Ignition system malfunction
- Emission control system is malfunction (SW, AR type only)
  - Secondary air supply system faulty
  - Loose, disconnected or deteriorated hoses of the emission control system

Carburetor Combination





: Gasket, O-ring

7. Engine Removal/Installation

Service Information

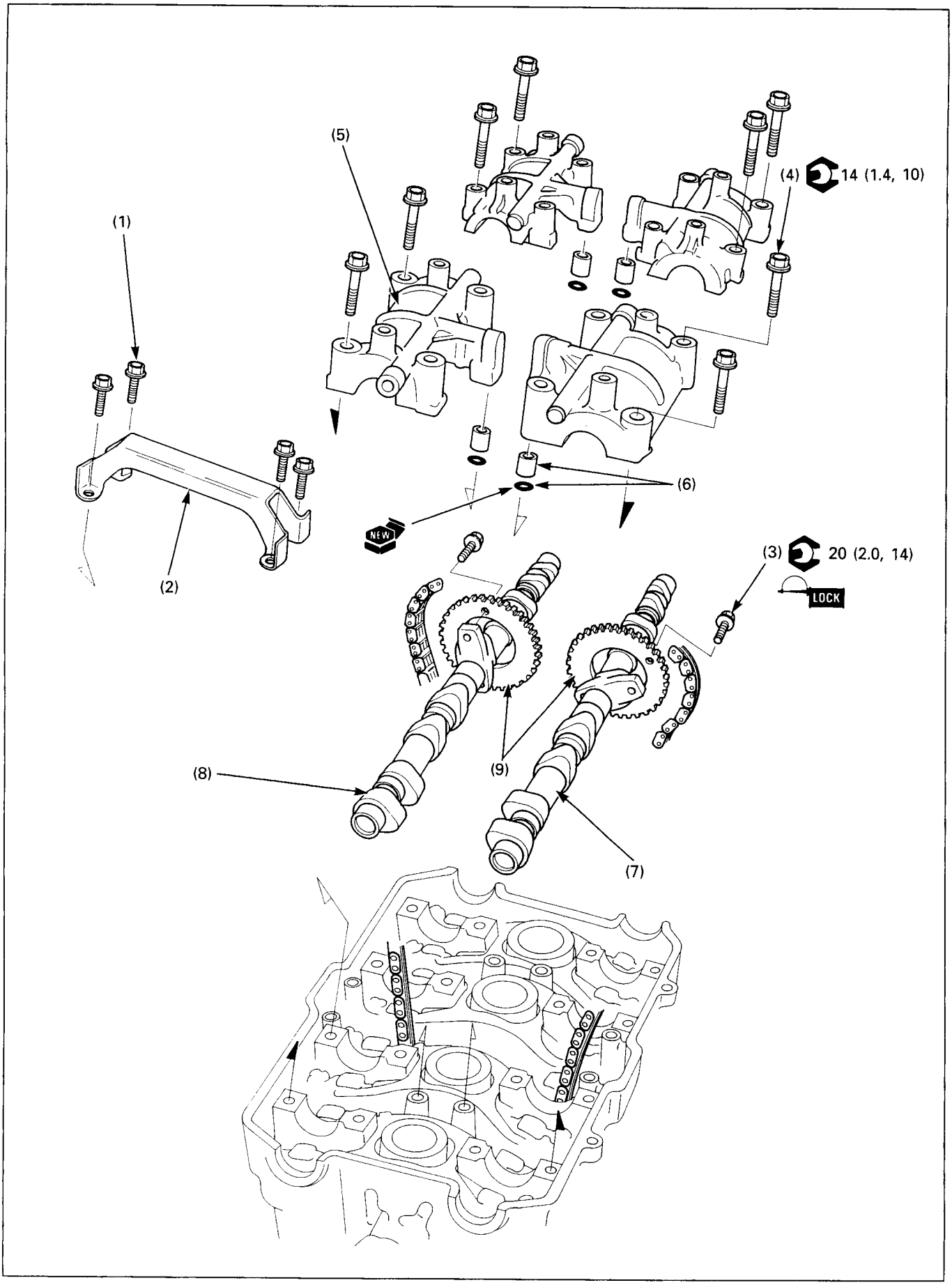
- During removal and installation, support the motorcycle using a safety stand or hoist.

⚠ WARNING

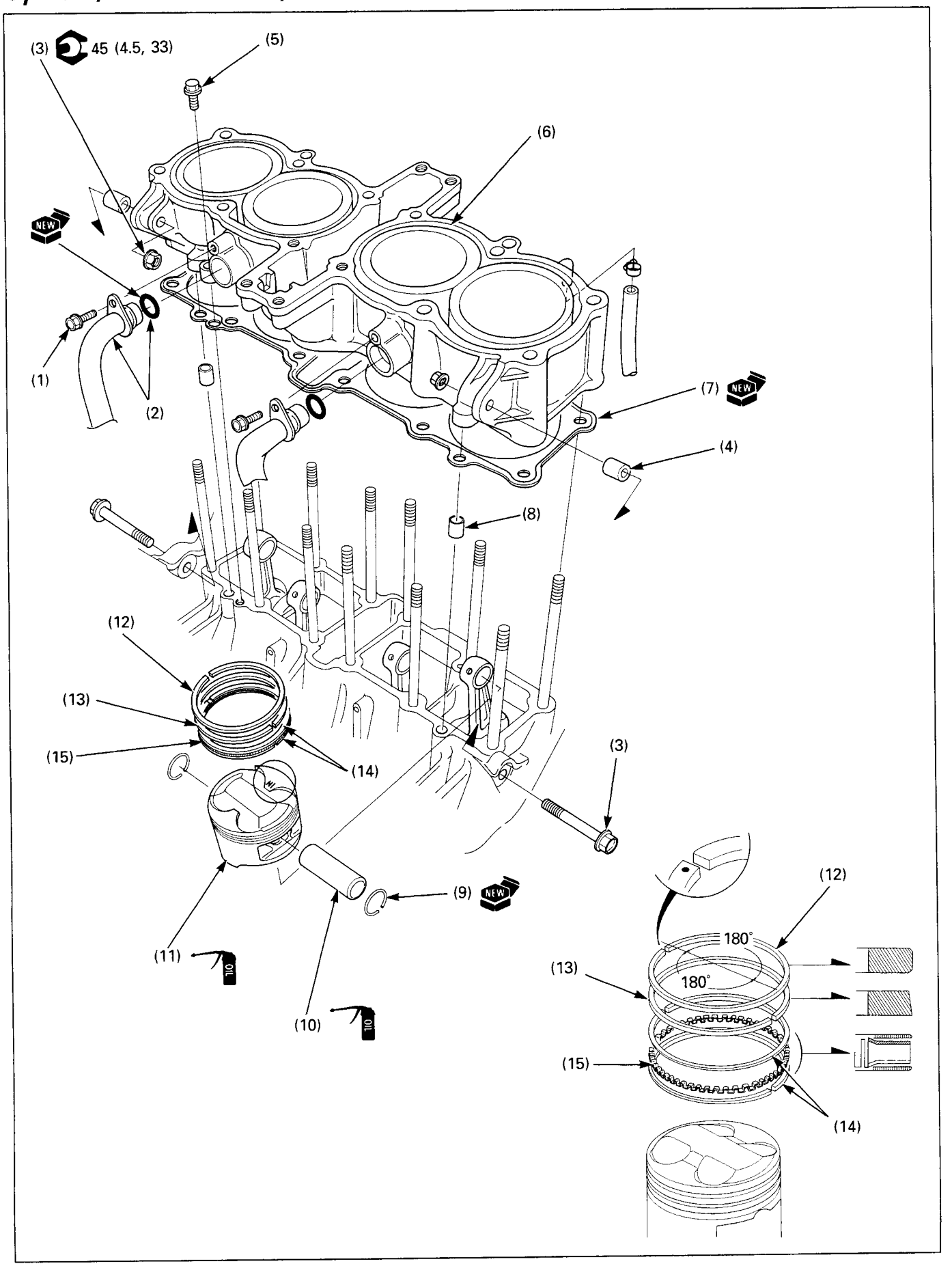
- **Do not support the engine using the oil filter.**

- The following components can be serviced with the engine installed in the frame.
  - Alternator (Section 14)
  - Clutch/gearshift linkage (Section 9)
  - Cylinder haed/valves (Section 8)
  - Oil cooler (Section 4)
  - Oil pump (Section 4)
  - Water pump (Section 6)
- The following components require engine removal for service.
  - Crankshaft/transmission (Section 10)
  - Shift forks/shift drum (Section 10)

Camshaft Removal/Installation



Cylinder/Piston Removal/Installation



NOTE

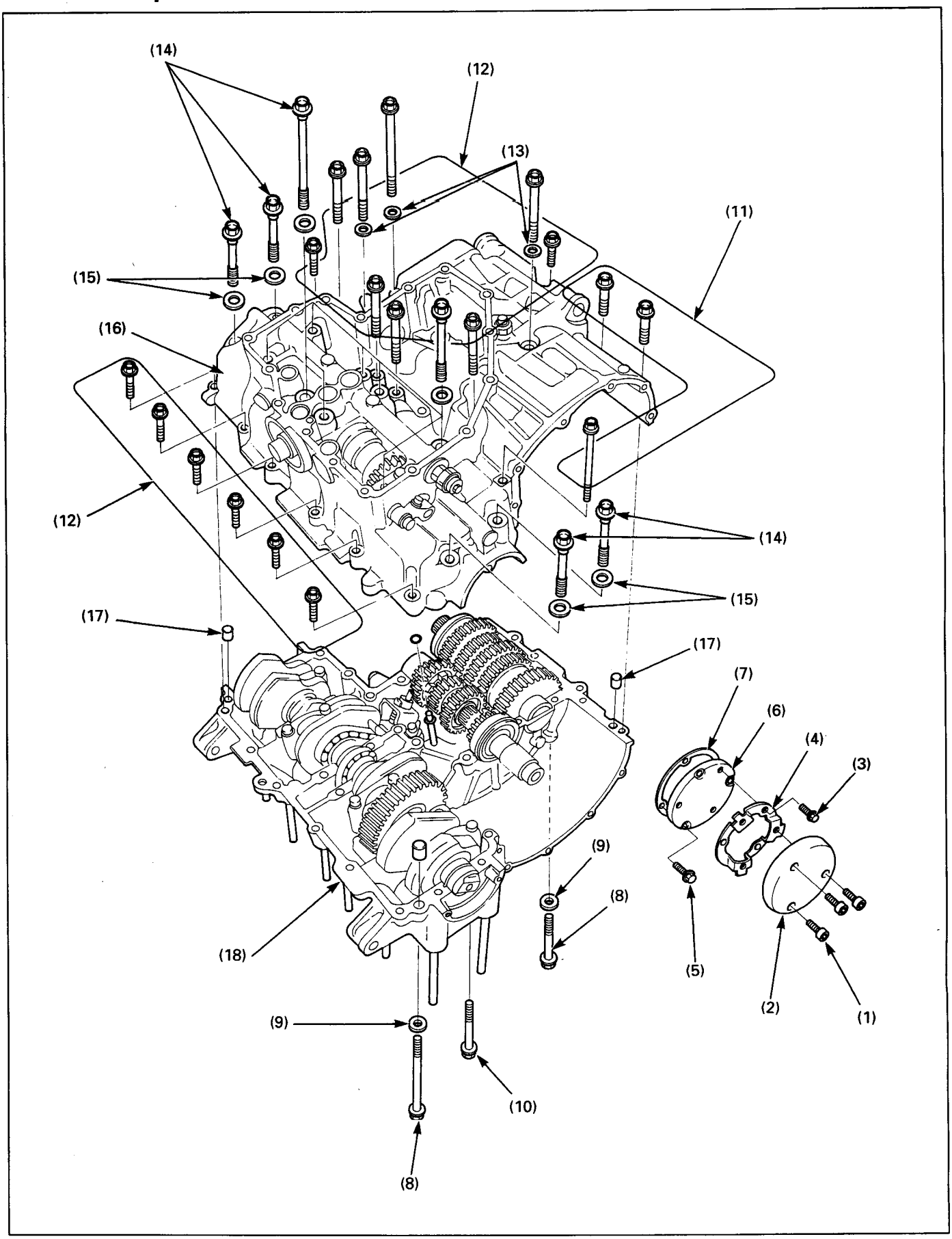
- At clutch outer installation, install the clutch outer turning the crankshaft until the primary drive gear clears the crank weight.

Requisite Service

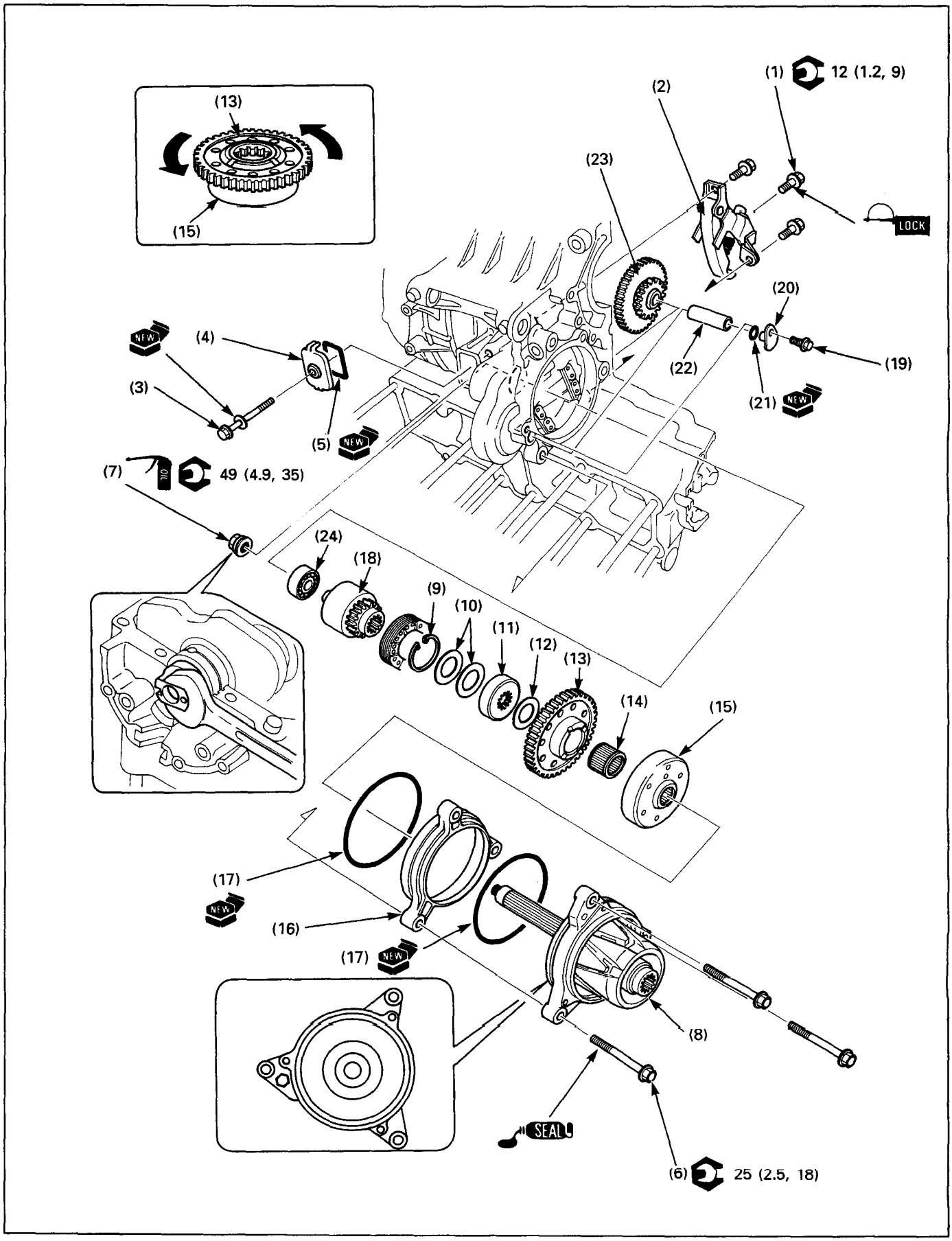
- Engine oil refilling
- Lower fairing installation (page 2-6)

	Procedure	Q'ty	Remarks
	Installation Order		
(1)	Washer	1	
(2)	Clutch outer	1	Install the clutch outer while aligning the primary drive gear and crankshaft gear using the screwdriver.
(3)	Needle bearing	1	
(4)	Clutch outer guide	1	
(5)	Washer	1	
(6)	Clutch center	1	
(7)	Lock washer	1	At installation, install the lock washer with the "OUT SIDE" mark facing out side.
(8)	Clutch center lock nut	1	NOTE • Never re-use the removed nut. • Installation (page 9-10)
(9)	Spring seat	1	
(10)	Judder spring	1	
(11)	Clutch disc B	1	
(12)	Clutch plate	8	
(13)	Clutch disc A	8	
(14)	Lifter bearing	1	
(15)	Lifter rod	1	
(16)	Lifter guide	1	
(17)	Clutch lifter plate	1	
(18)	Clutch spring	5	
(19)	Clutch lifter plate bolt	5	
(20)	Gasket	1	
(21)	Clutch cover	1	
(22)	Clutch cover bolt	11	

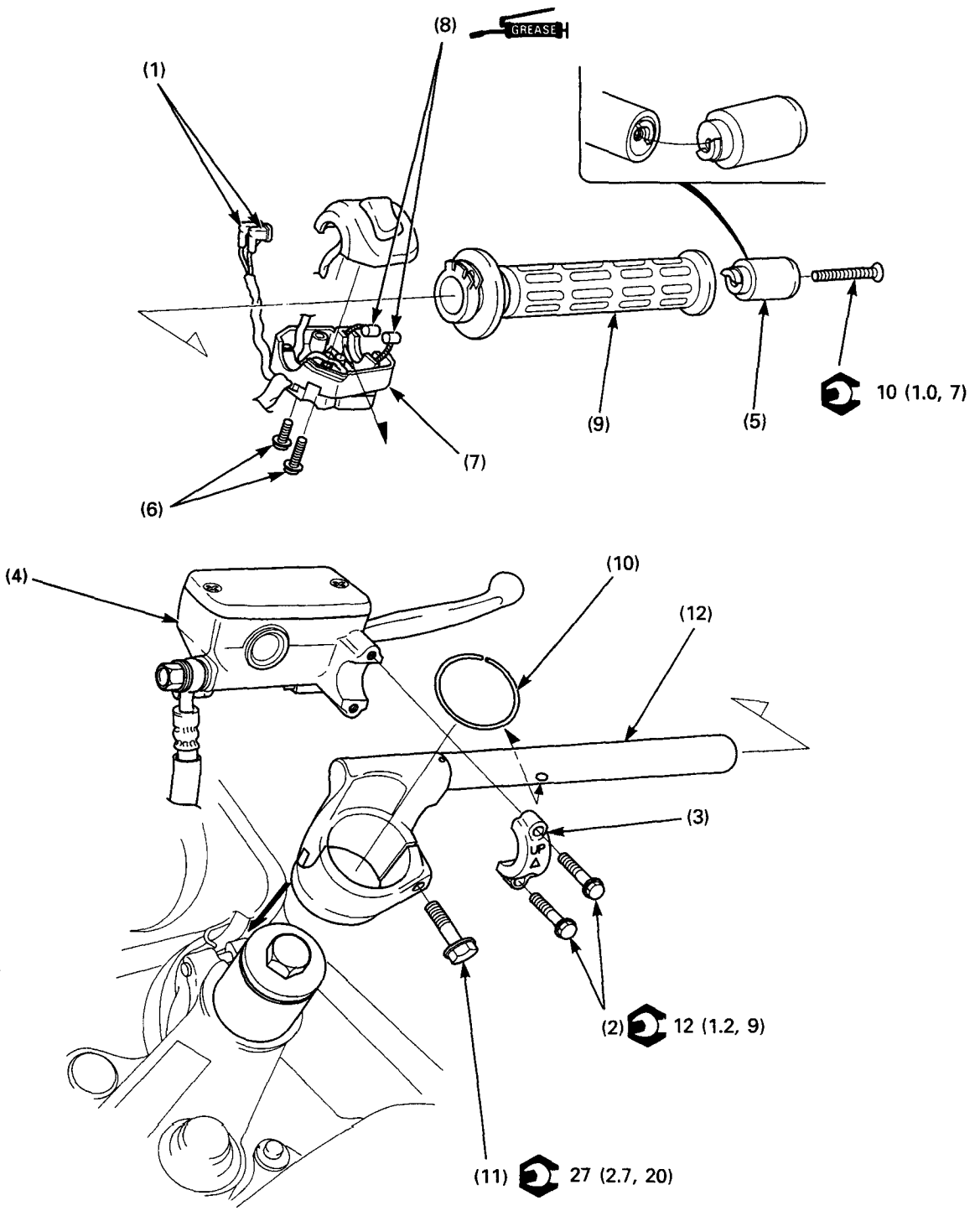
Crankcase Separation



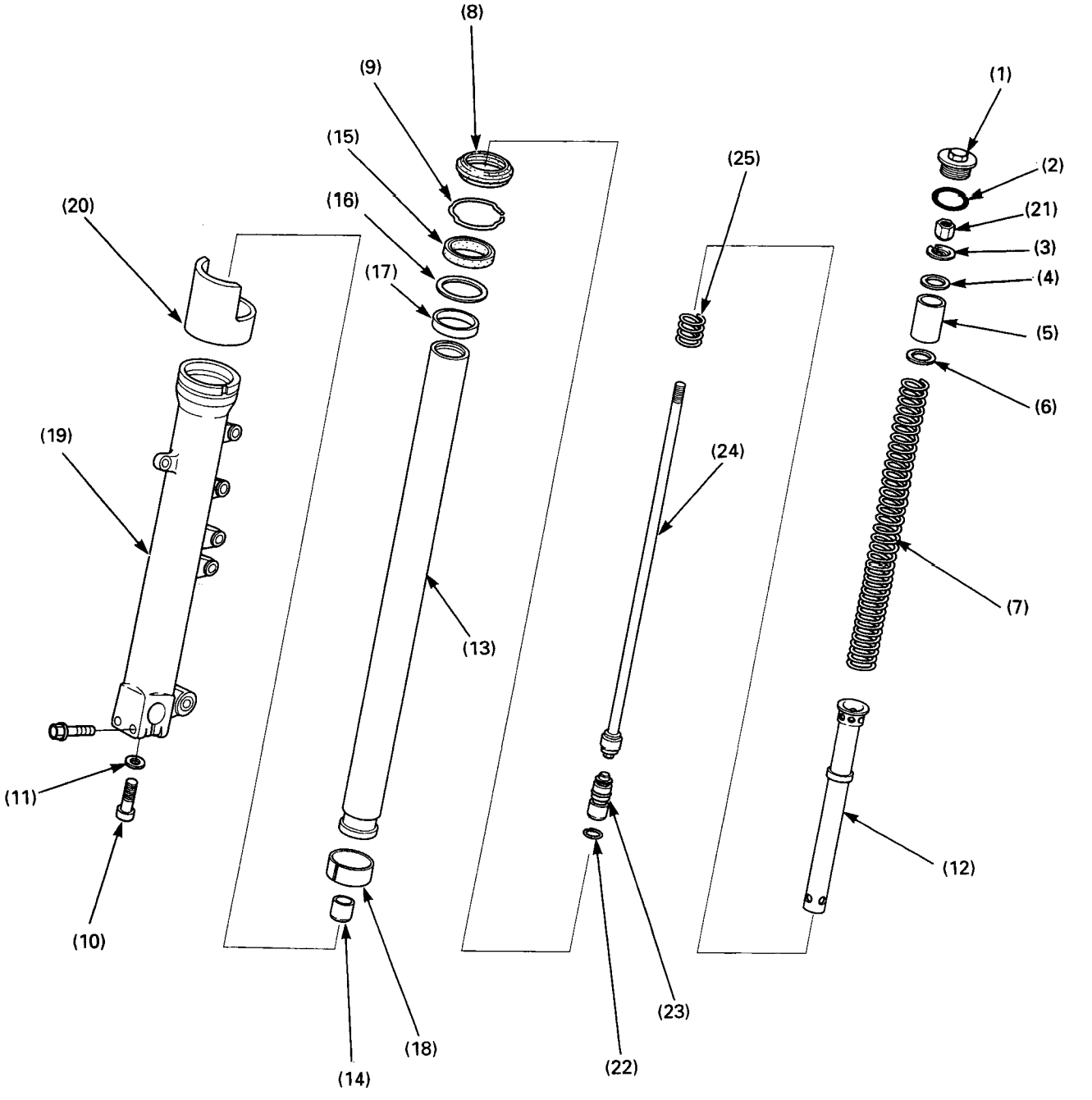
Alternator Shaft Removal/Installation



Right Handlebar Removal/Installation



Fork Disassembly



⚠ WARNING

- **A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.**

NOTE

- When servicing the rear wheel, place the motorcycle on its center stand.
- Do not operate the brake pedal or lever after the rear wheel is removed.
- Adjust the drive chain free play after installing the wheel.

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Rear axle nut	1	• Loosen the drive chain adjuster fully, then remove the axle nut. • Move the rear wheel forward, and derail the drive chain from the driven sprocket.
(2)	Rear axle washer	1	
(3)	Rear axle	1	
(4)	Rear wheel	1	
(5)	Right side collar	1	
(6)	Left side collar	1	

13. Brake System

Service Information

⚠ WARNING

- **A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.**

CAUTION

- **The CBR1000F equipped Dual Combined Brake System. Must be follow the system air bleeding procedure (page 13-25) if you disconnect or service the any brake hydraulic system.**
- **Do not disassemble the secondary master cylinder push rod or the correct brake performance is not obtained.**

- Spilled brake fluid will severely damage instrument lenses and painted surfaces. It is also harmful to some rubber parts. Be careful whenever you remove the reservoir cap: make sure the front reservoir is horizontal first.
- Never allow contaminations (dirt, water, etc.) to get into and open reservoir.
- Once the hydraulic system has been opened, or if the brake feel spongy, the system must be bled.
- Always use fresh DOT 4 brake fluid from a sealed container when servicing the system. Do not mix different types of fluid as they may not be compatible.
- Always check brake operation before riding the motorcycle.

NOTE

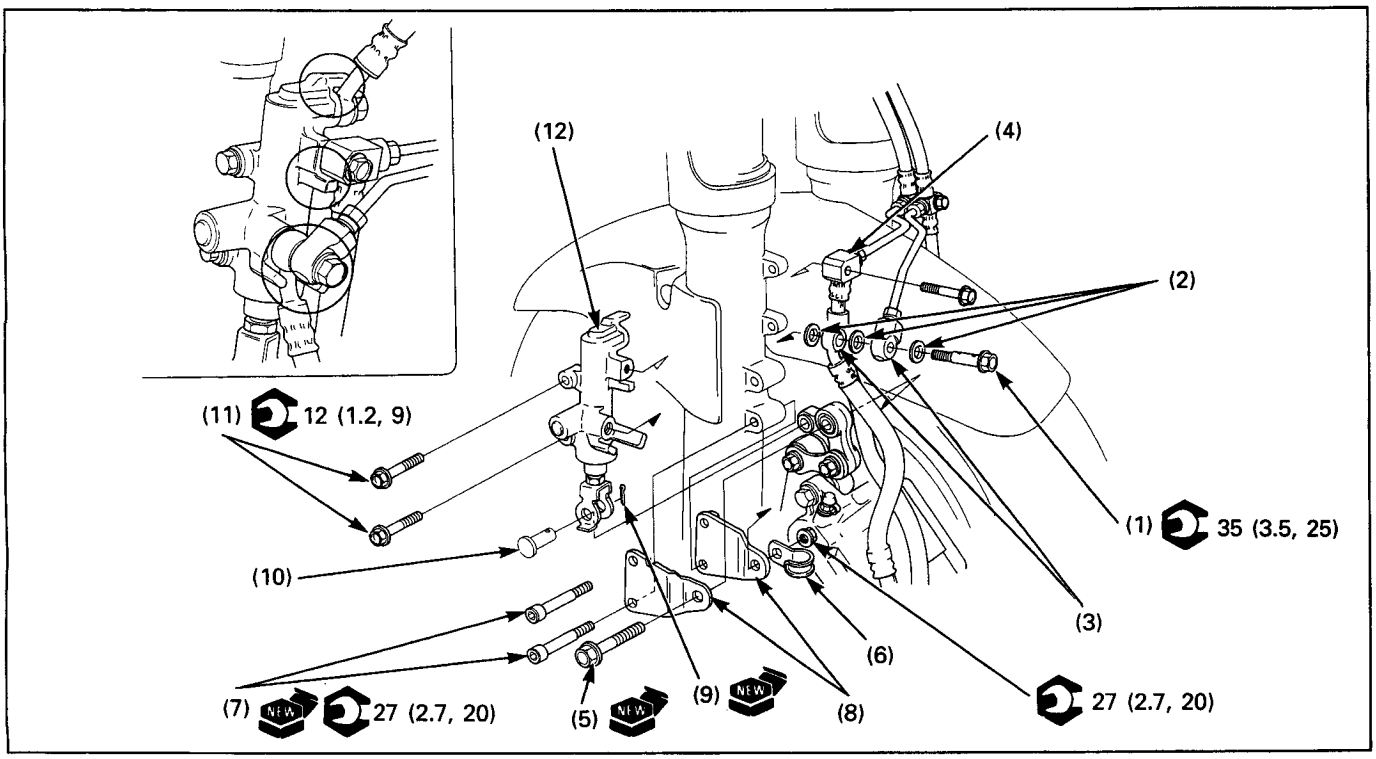
- Note the location and direction of the caliper pistons, dust seals and piston seals.
- Replace the caliper piston seals and dust seals as a set.

Requisite Service

- Left front brake caliper removal/installation (page 13-6)
- Right front brake caliper removal/installtion (page13-8)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Caliper bracket	1	
(2)	Brake pad spring	1	
(3)	Brake pad retainer	1	
(4)	Caliper body B mounting bolt	3	
(5)	Retainer	1	
(6)	Caliper body B	1	
(7)	Caliper piston (O.D. 27.0 mm)	1	
(8)	Dust seal	1	Apply silicone grease to the new dust seals.
(9)	Piston seal	1	
(10)	Caliper piston (O.D. 22.6 mm)	1	
(11)	Dust seal	1	
(12)	Piston seal	1	
(13)	Caliper piston (O.D. 25.4 mm)	1	
(14)	Dust seal	1	
(15)	Piston seal	1	
(16)	Bracket pin boot	1	
(17)	Bracket pin bolt	1	
(18)	Caliper pin boot	1	
(19)	Caliper pin bolt	1	

Secondary Master Cylinder Removal/Installation



CAUTION

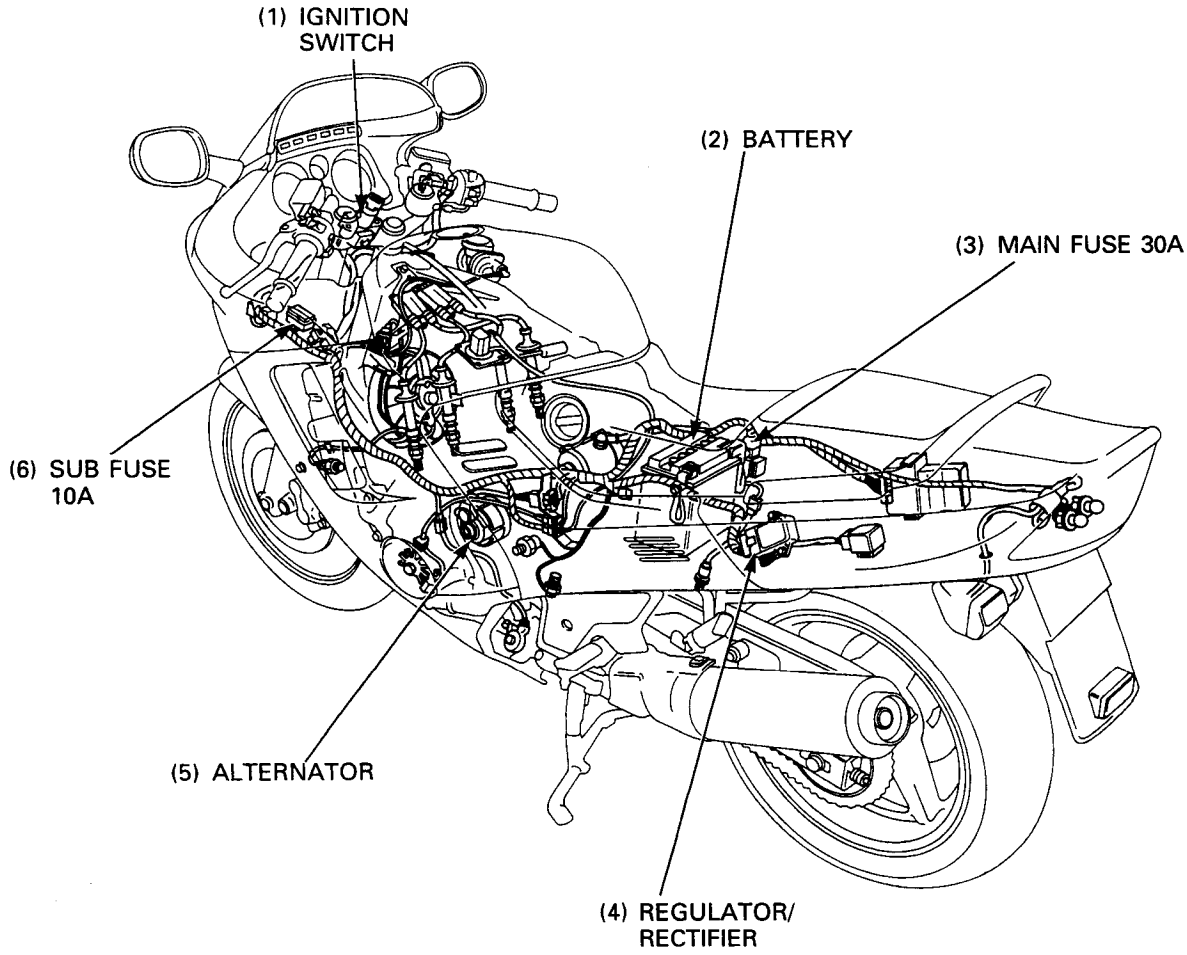
- **Avoid spilling brake fluid on painted, plastic, or rubber parts. Place a rag over these parts whenever the system is serviced.**
- **When removing the oil bolt, cover the end of the brake hose to prevent contamination.**
- **Do not allow foreign material to enter the system.**

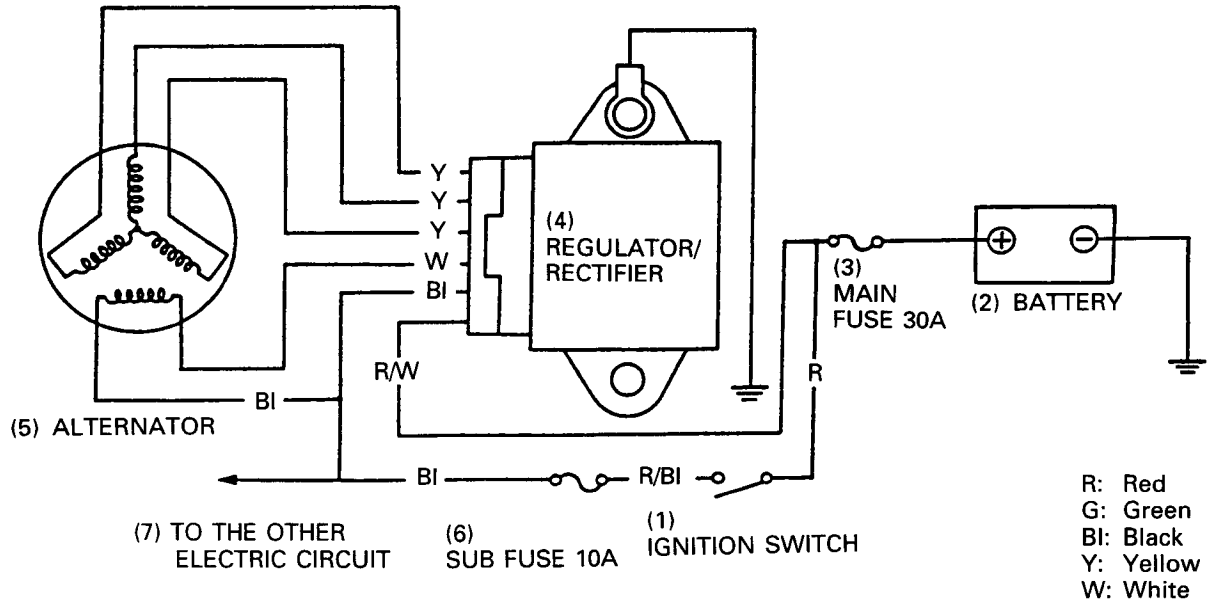
Requisite Service

- Brake system air bleeding (page 13-25)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Oil bolt	1	
(2)	Sealing washer	3	
(3)	Brake hose eyelet joint/brake pipe joint	1/1	
(4)	Brake pipe joint	1	
(5)	Brake link bolt/nut	1/1	
(6)	Brake hose clamp	1	
(7)	Brake link bracket bolt	2	
(8)	Brake link bracket	2	
(9)	Cotter pin	1	
(10)	Joint pin	1	
(11)	Secondary master cylinder mounting bolt	2	
(12)	Secondary master cylinder	1	

System Location

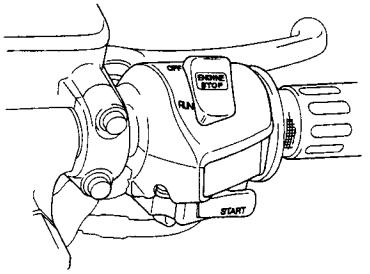




Troubleshooting

- Inspect the followings before diagnosing the system.
  - Loose spark plug caps or spark plug wire connections.
  - Water got into the spark plug cap. (Leaking the ignition secondry voltage)
  - Loose or poor contact of ignition system connectors.

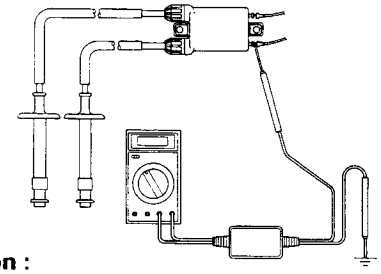
Check the starter motor operation (page 16-3).



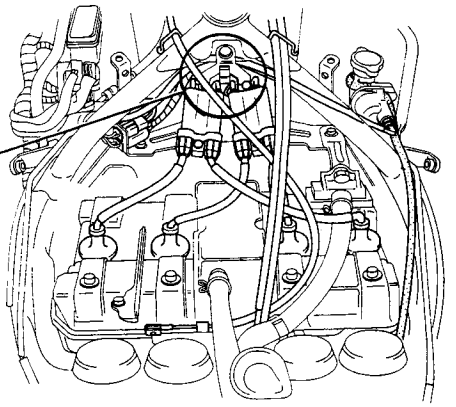
Abnormal →
- Faulty battery
- Inspect the starter system

Normal ↓

Inspect the ignition coil initial voltage (page 15-6).



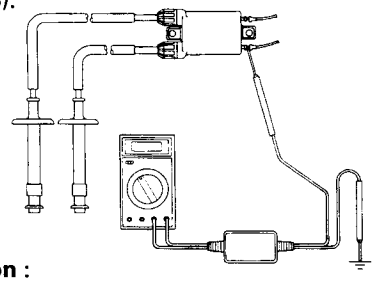
Connection :
No, 1/4 coil : Black/White (+) – Ground (–)
No, 2/3 coil : Black/White (+) – Ground (–)
Standard : Battery voltage



Abnormal →
- Faulty ignition switch
- Faulty engine stop switch
- Faulty ignition control module
- Short or open circuit in black/white wire

Normal ↓

Inspect the ignition coil primary peak voltage (page 15-6).

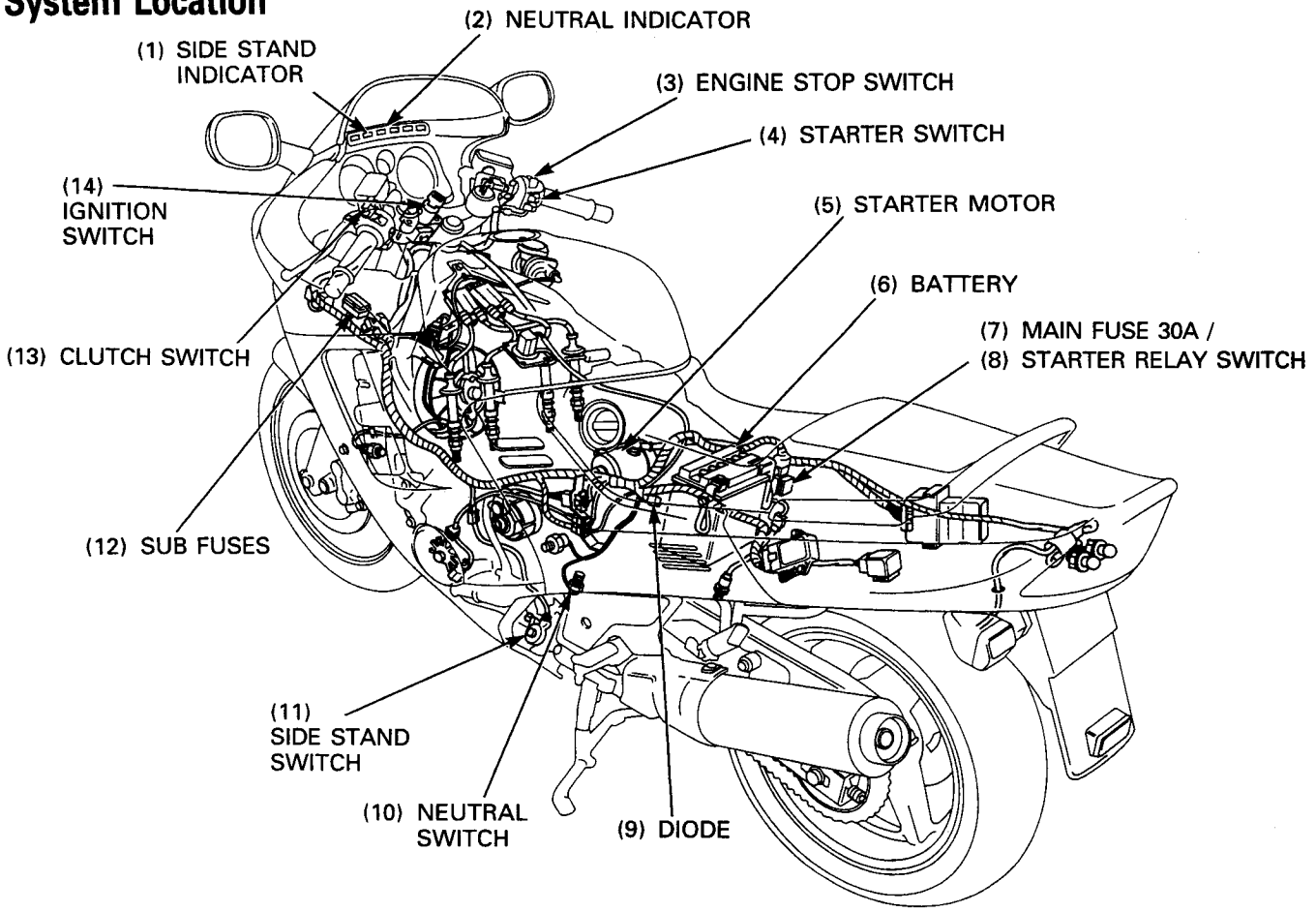


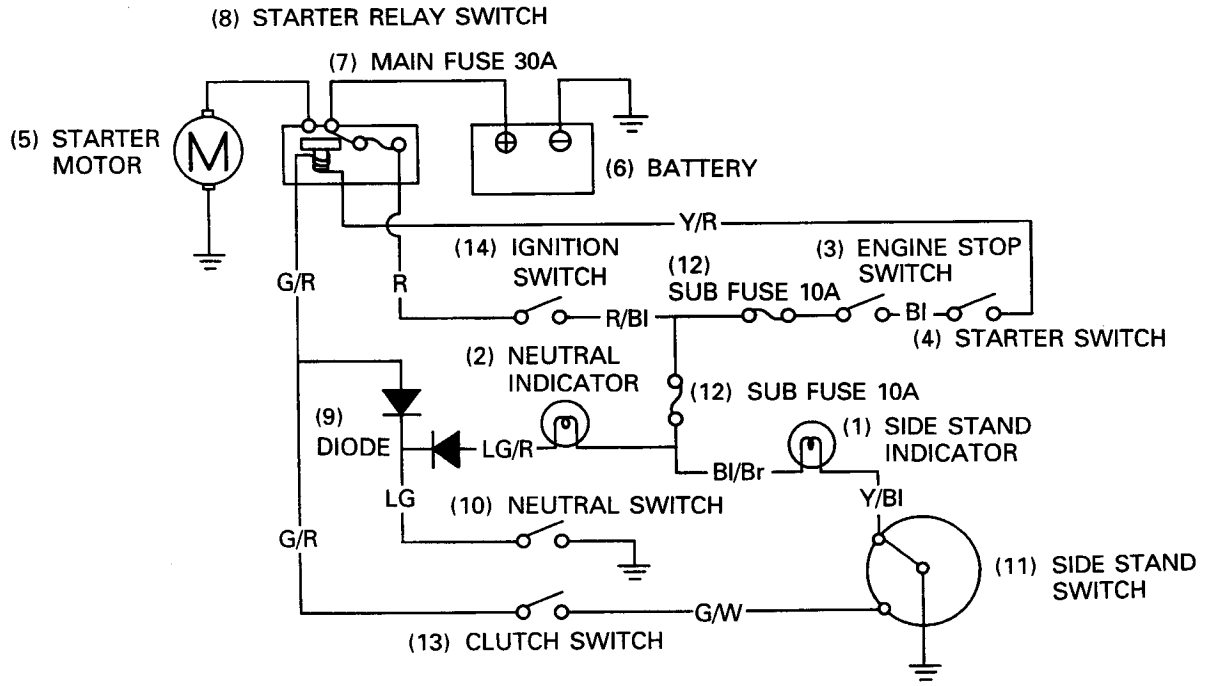
Connection :
No, 1/4 coil : Black/White (+) – Ground (–)
No, 2/3 coil : Black/White (+) – Ground (–)
Standard : 100V minimum

100V minimum →
- Faulty spark plug leaking ignition coil secon dary current ampere
- Faulty ignition coil

0V or battery voltage (below 100V) ↓

System Location





Bulb Replacement

Headlight Bulb

⚠ WARNING

- **Halogen headlight bulb becomes very hot while the headlight is ON, and remain hot for a while after it is turned OFF. Be sure to let it cool down before servicing.**

Remove the maintenance lid (2-6).

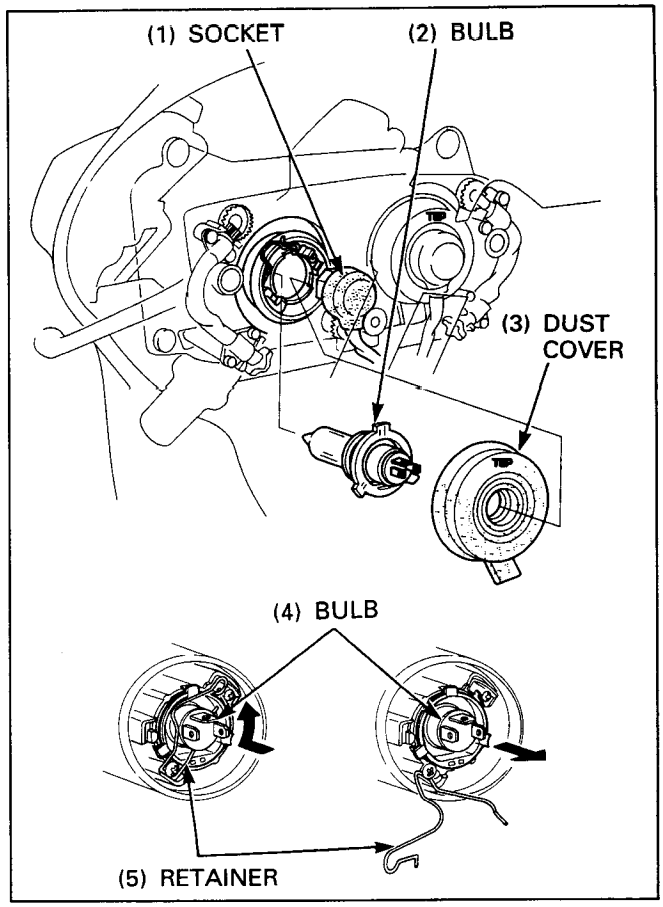
Remove the headlight bulb socket and dust cover.
Push the retaining tabs.

Unhook the bulb retainer and remove the headlight bulb.

Installation is in the reverse order of removal.

NOTE

- Install the dust cover with its "TOP" mark facing up.

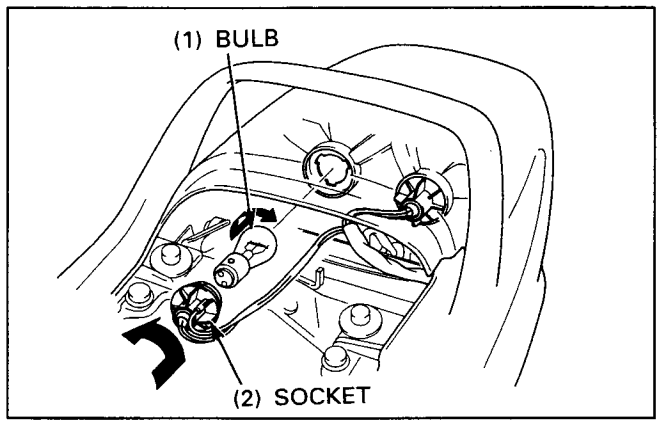


Tail/Brake Light

Remove the seat (page 2-3).

Remove the tail/brake light bulb and socket as an assembly by turning it counterclockwise.

Replace a new bulb and install it in the reverse order of removal.



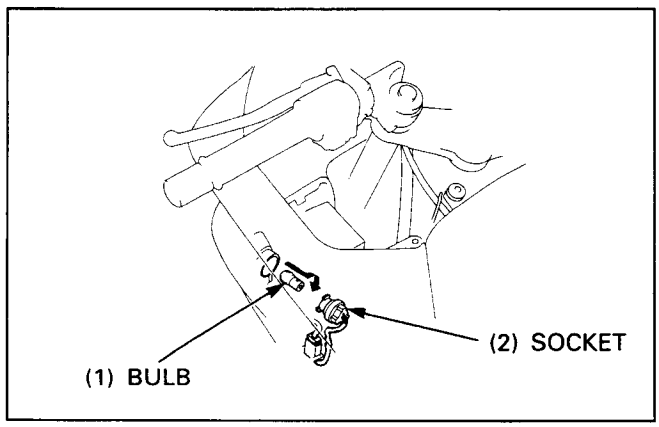
Turn Signal Bulb

Front

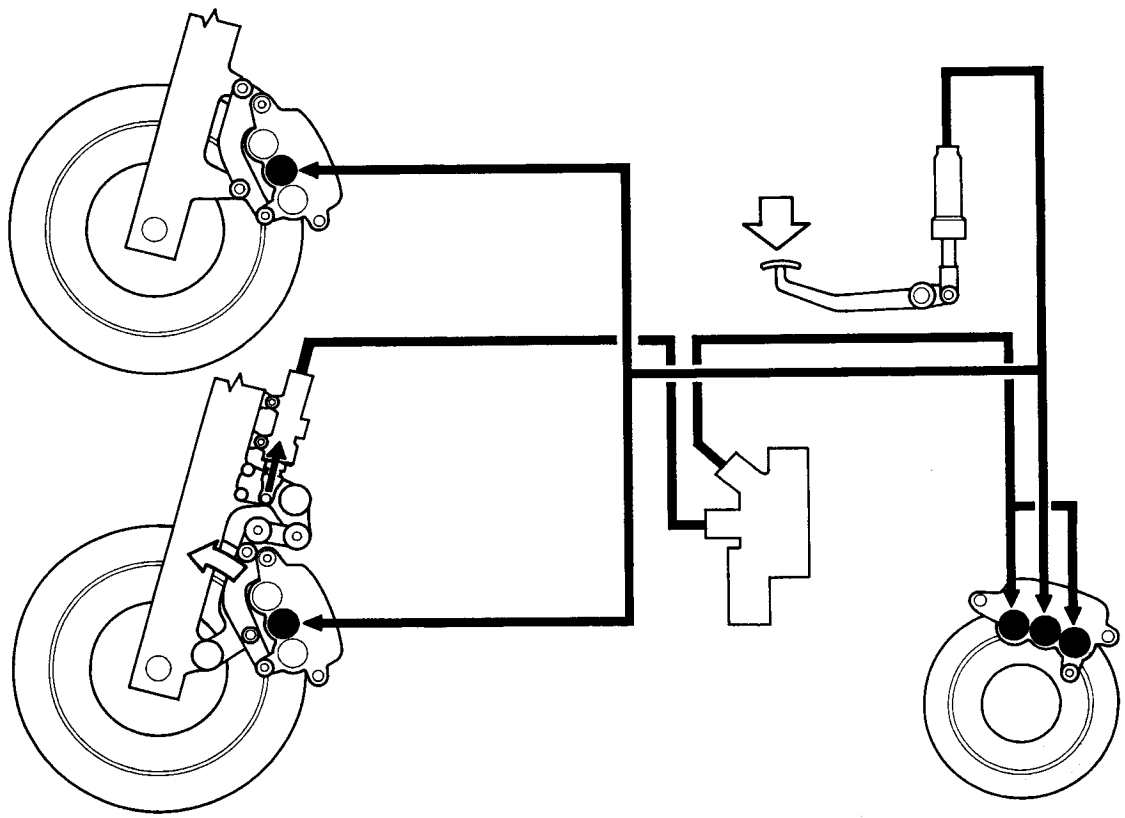
Remove the inner cover (page 2-8).

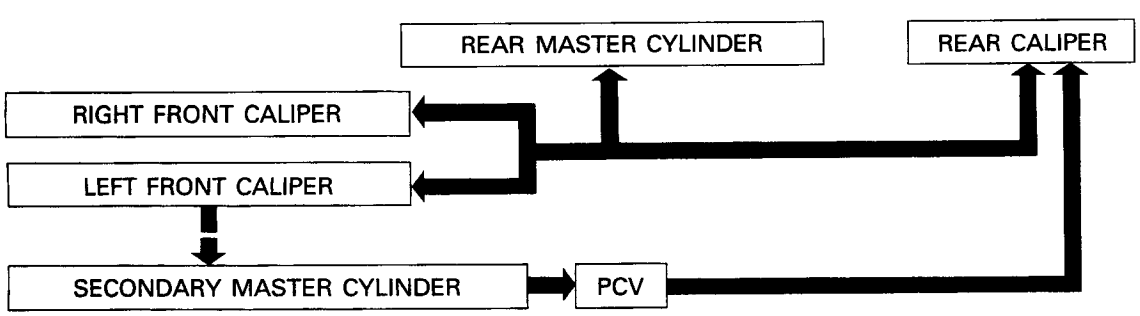
Remove the front turn signal bulb and socket as an assembly by turning it counterclockwise.

Replace a new bulb and install it in the reverse order of removal.



Foot Brake





When the rear brake pedal is pressed, hydraulic pressure from the rear master cylinder is routed through two lines. One connects directly to the rear caliper and acts on the center piston. The outer line runs to the center pistons of the two front calipers.

As during hand brake operation, hydraulic pressure from the secondary master cylinder passes through the PCV (Proportional Control Valve), and acts on the outer pistons of the rear brake caliper. Because hydraulic pressure from the foot brake master cylinder is also being applied by the rear caliper's center piston, the braking force applied to the rear wheel is greater than that applied when using the hand brake lever only.

Important Safety Notice

⚠WARNING **Indicates a strong possibility of severe personal injury or death if instructions are not followed.**

CAUTION: **Indicates a possibility of personal injury or equipment damage if instructions are not followed.**

NOTE: Gives helpful information.

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains some warnings and cautions against some specific service methods which could cause PERSONAL INJURY to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover all conceivable ways in which service, whether or not recommended by Honda, might be done or of the possibly hazardous consequences of each conceivable way, nor could Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda,must satisfy himself thoroughly that neither personal safety nor vehicle safety will be jeopardized by the service method or tools selected.

Type Codes

• Throughout this manual, the following abbreviations are used to identify individual model.

Code	Area Type
ED	European direct sales
E	U.K.
F	France
G (GI/GII)	Germany (Full power/Limited power)
U	Australia
ND	North Europe
SW	Switzerland
IT	Italy
H	Netherland
AR	Austria
SP	Spain