

90-96 VFR 750F

Service Manual

This manual is provided FREE of charge and should be distributed to as many VFR owners you know! I decided to scan this manual because, though most mechanics are very efficient, I found some to be incompetent, and wanted to be able to check their work. This manual cost me \$60, which I know some people can't afford. I think human lives are worth more than \$60. In my opinion, this manual should have come with the bike in the first place!!!

This page is obviously not in the original service manual. All other pages are exactly as printed. Honda included several updated pages to this manual when I purchased it. These updates are included. If Honda has made any amendments/updates to this manual since November 1997. They are not included in this digitized manual.

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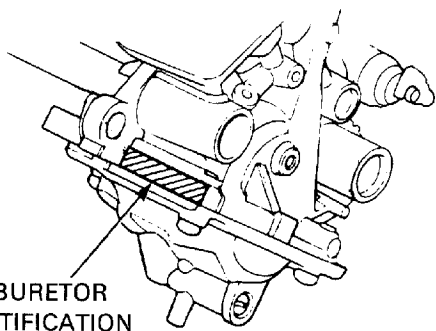


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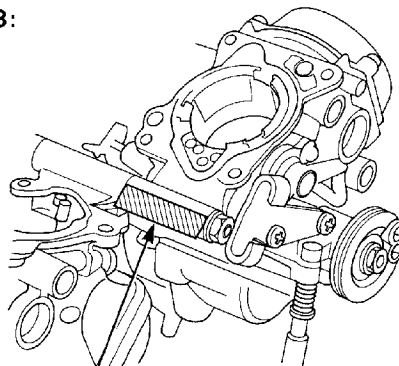
General Information

'90-'93:



(4) CARBURETOR IDENTIFICATION NUMBER

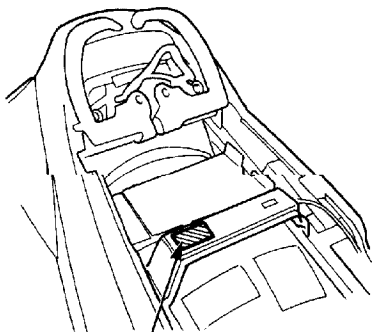
After '93:



(4) CARBURETOR IDENTIFICATION NUMBER

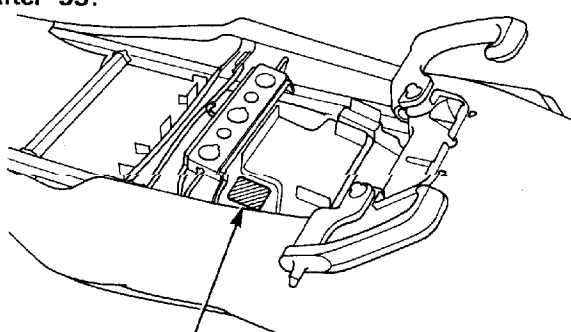
The carburetor identification number is stamped on the intake side of each carburetor body.

'90-'93:



(5) COLOR CODE LABEL

After '93:



(5) COLOR CODE LABEL

The color code label is attached on the upper rear sub frame tube cross member under the seat. When ordering a color coded part, always specify its designated color code.

The color code label is attached on the rear fender under the seat. When ordering a color coded part, always specify its designated color code.

General Information

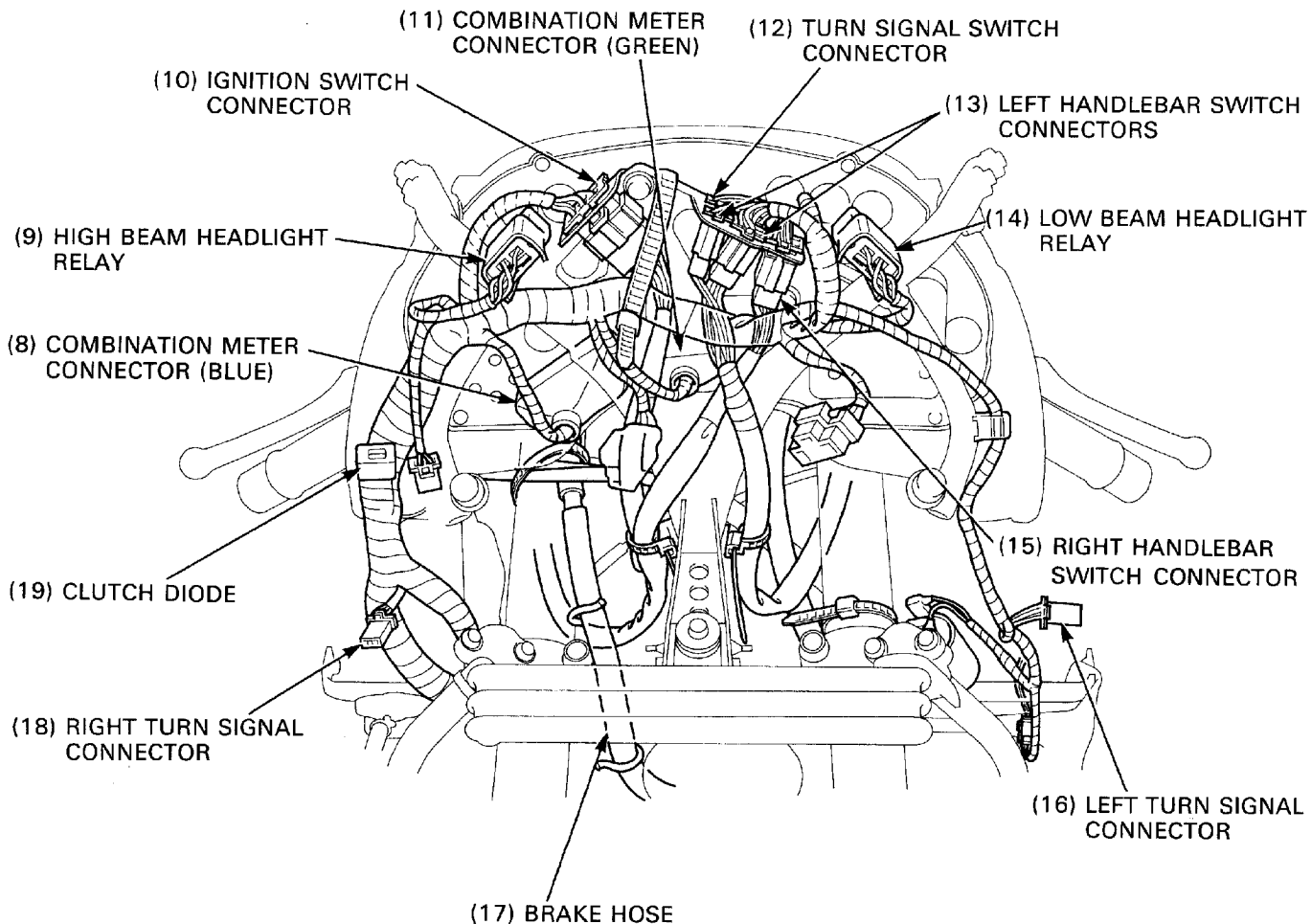
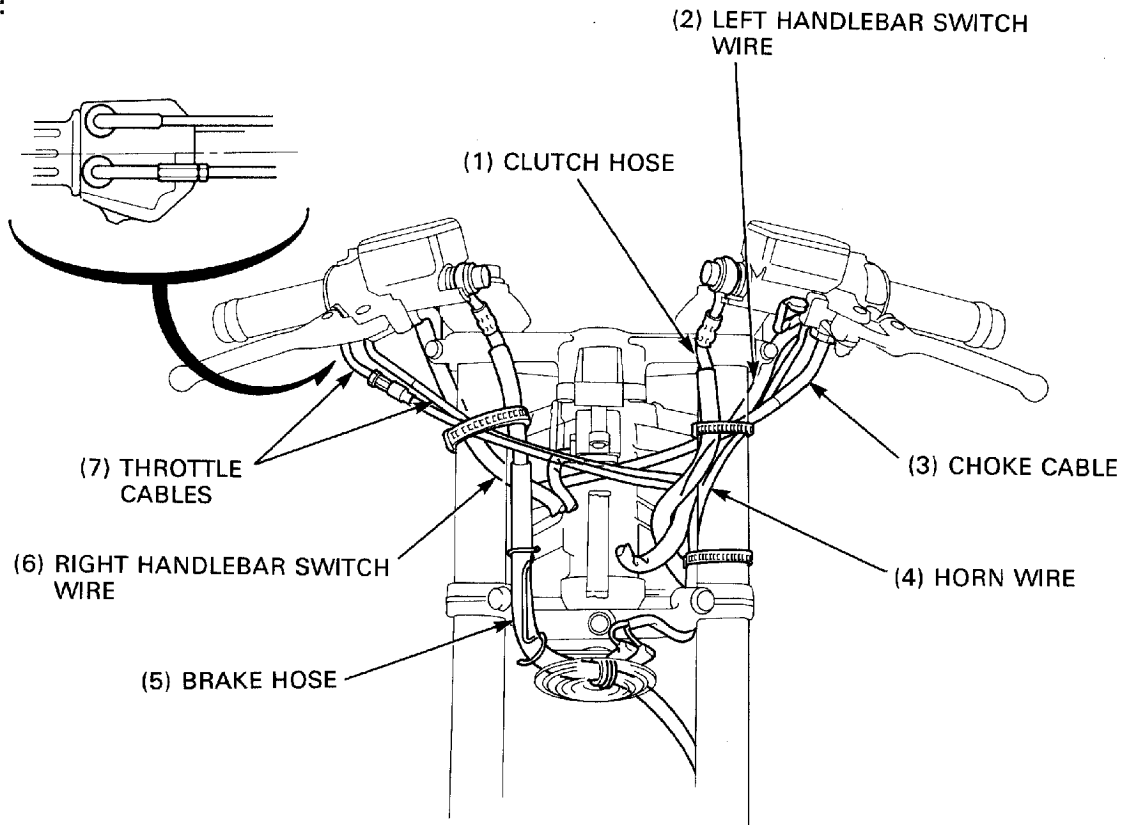
Battery/charging system		
Item	Standard	Service limit
Alternator charging coil resistance (At 20°C/68° F)	0.1–1.0 Ω	_____
Regulator/rectifier regulated voltage/amperage	13.5–16V/5–9A at 5,000 rpm	_____
Battery capacity	12V–10AH	_____
Battery specific gravity (Full charged)	_____	_____
(Needs charging)	_____	_____
Battery charging rate (Normal)	1.2A (5–10 hours)	_____
(Quick)	5A (1 hour)	_____
Battery voltage (Fully charged at 20°C/68° F)	Over 13.1V	_____
(Needs charging at 20°C/68° F)	Below 12.5V	_____
Alternator lighting coil resistance (At 20°C/68° F)	_____	_____
AC regulator regulated voltage (With analogue type)	_____	_____
(With digital type)	_____	_____

Ignition system		
Spark plug		_____
'90–'93: (Standard NGK)	CR8EH9	_____
(Standard NIPPONDENSO)	U24FER9	_____
(For cold climate/below 5°C/41° F NGK)	_____	_____
(For cold climate/below 5°C/41° F NIPPONDENSO)	_____	_____
(For extended high speed riding NGK)	CR9EH9	_____
(For extended high speed riding NIPPONDENSO)	U27FER9	_____
After '93: (Standard NGK)	CR9EH9	_____
(Standard NIPPONDENSO)	U27FER9	_____
(For cold climate/below 5°C/41° F NGK)	CR8EH9	_____
(For cold climate/below 5°C/41° F NIPPONDENSO)	U24FER9	_____
(For extended high speed riding NGK)	_____	_____
(For extended high speed riding NIPPONDENSO)	_____	_____
Spark plug gap	0.8–0.9 (0.03–0.04)	_____
Ignition timing "F" mark	15° BTDC at idle	_____
Advance starts	2,000 rpm	_____
stops	_____	_____
Fully advance	_____	_____
Alternator exciter coil resistance (At 20°C/68° F)	_____	_____
Ignition coil resistance (At 20°C/68° F)		_____
Primary	2–4 Ω	_____
Secondary with plug cap	17–24 kΩ	_____
Secondary without plug cap	13–17 kΩ	_____
Ignition pulse generator resistance (At 20°C/68° F)	200–400 Ω	_____

General Information

Tool (cont'd) Description	Tool number	Remarks	Ref. sect(s)
Shock absorber compressor	07GME-0010000	Shock absorber ('90-'93)	13
Shock absorber compressor attachment	07959-MB10000		
*Shock absorber compressor attachment	07NME-MY70100	Shock absorber ('90-'93)	13
Bearing remover	07936-3710300	Shock link ('90-'93)	13
Bearing remover handle	07936-3710100		
Bearing remover weight	07741-0010201	Shock arm ('90-'93) shock link and swing-arm (After '93)	13
Bushing pin driver assembly	07GMD-KT80100		
Attachment, 24 x 26 mm	07746-0010700	Shock arm and link ('90-'93) Shock link and swing-arm (After '93)	13
Pilot, 17 mm	07746-0040400	Driven sprocket hub	13
Pilot, 35 mm	07746-0040800		
Pilot, 40 mm	07746-0040900	Rear axle housing	13
Attachment, 52 x 55 mm	07746-0010400	Rear axle housing Driven sprocket hub	13
Attachment, 62 x 68 mm	07746-0010500	Rear axle housing	13
Driver shaft	07946-MJ00100	Swingarm	13
Needle bearing remover	07HMC-MR70100	Included in set	
Attachment, 37 x 40 mm	07746-0010200		
Pilot, 28 mm	07746-0041100	Included in set	
Bearing remover set	07936-3710001		
- Bearing remover	07936-3710600		
- Bearing remover handle	07936-3710100		
- Bearing remover weight	07741-0010201	U.S.A. only	15, 16
Digital multimeter	KS-AHM-32-003		
Analogue multimeter	07308-0020001 (SANWA) or TH-5H (KOWA)		15
Snap ring pliers	07914-3230001	Master cylinder(s)	9, 14
Rotor puller	07733-0020001	Alternator	15
Flywheel holder	07725-0040000	Alternator	15
Gear holder	07724-0010100	Starter clutch	17

After '93:



Emission Control Information Labels (U.S.A. only)

Vehicle Emission Information Label

An emission control information label is attached to the rear fender beneath the seat as shown. The seat must be removed to read it. It gives basic tune-up specifications.

Vehicle Emission Control Information Update Label

After making a high altitude carburetor adjustment, attach an update label on the rear fender as shown.

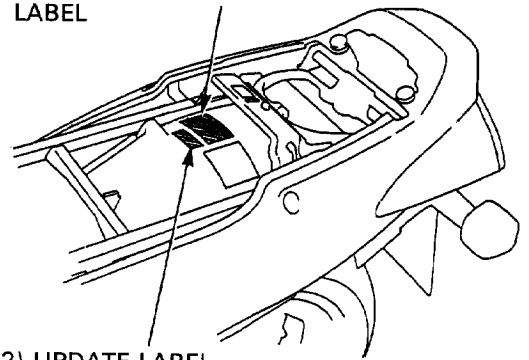
Instructions for obtaining the update label are given in Service Letter number 132.

When readjusting the carburetors back to the low altitude specification, be sure to remove this update label.

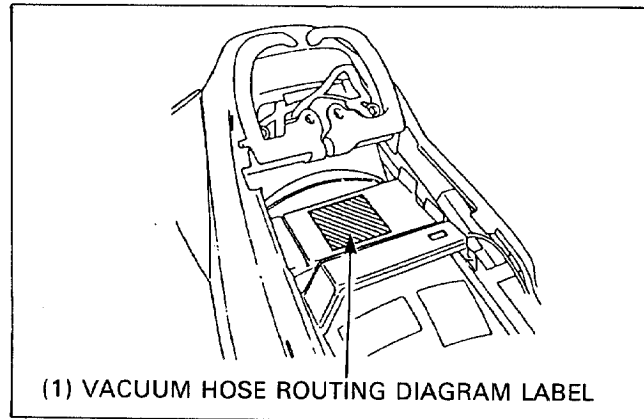
Vacuum Hose Routing Diagram Label (California type only)

The vacuum hose routing diagram label is attached on the rear fender beneath the seat. The seat must be removed to see it.

(1) VEHICLE EMISSION CONTROL INFORMATION LABEL

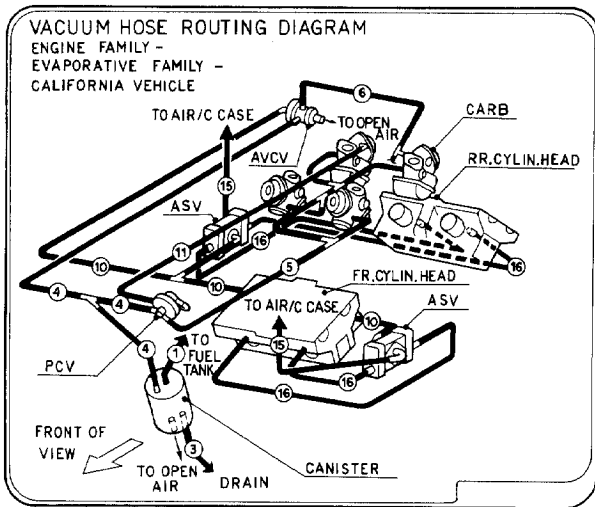


(2) UPDATE LABEL

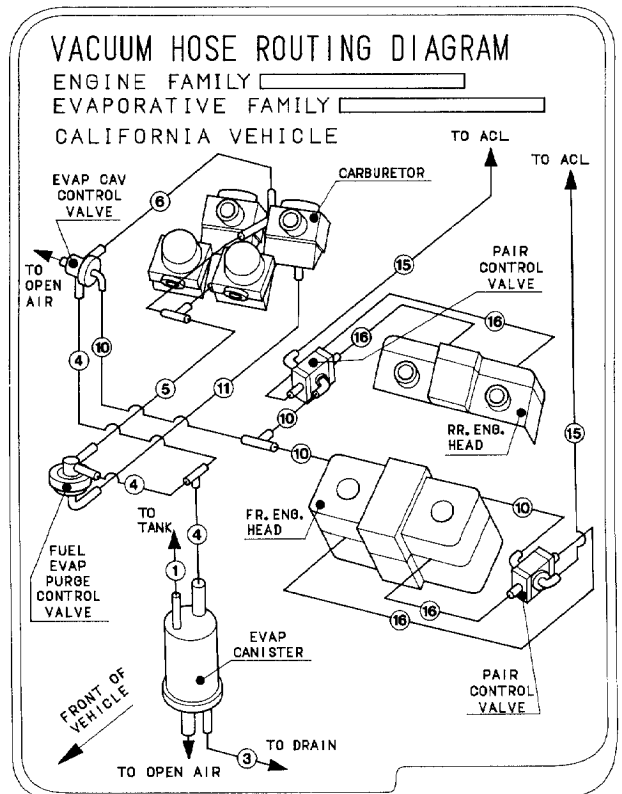


(1) VACUUM HOSE ROUTING DIAGRAM LABEL

'90-'93:

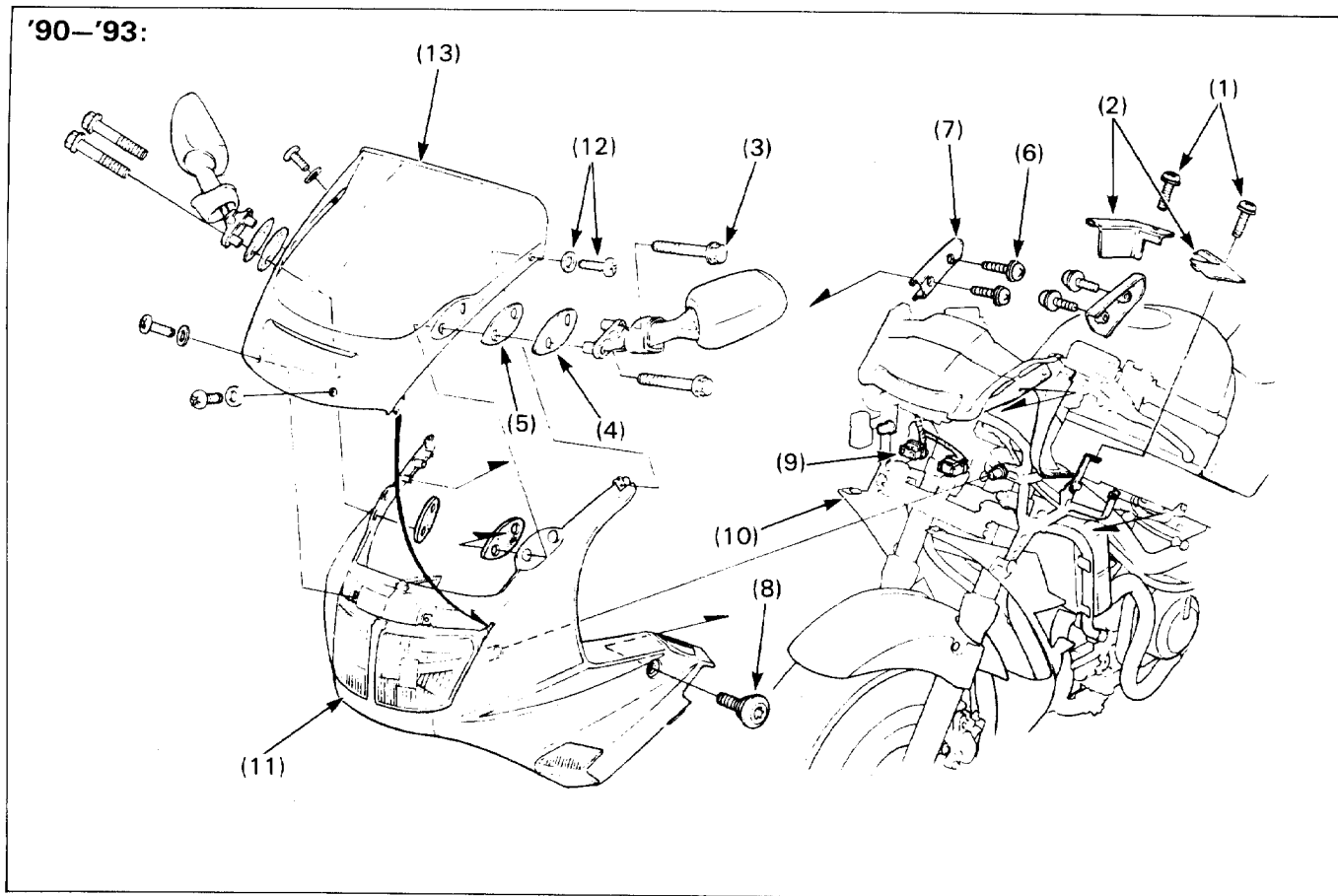


After '93:



Upper Fairing

'90-'93:

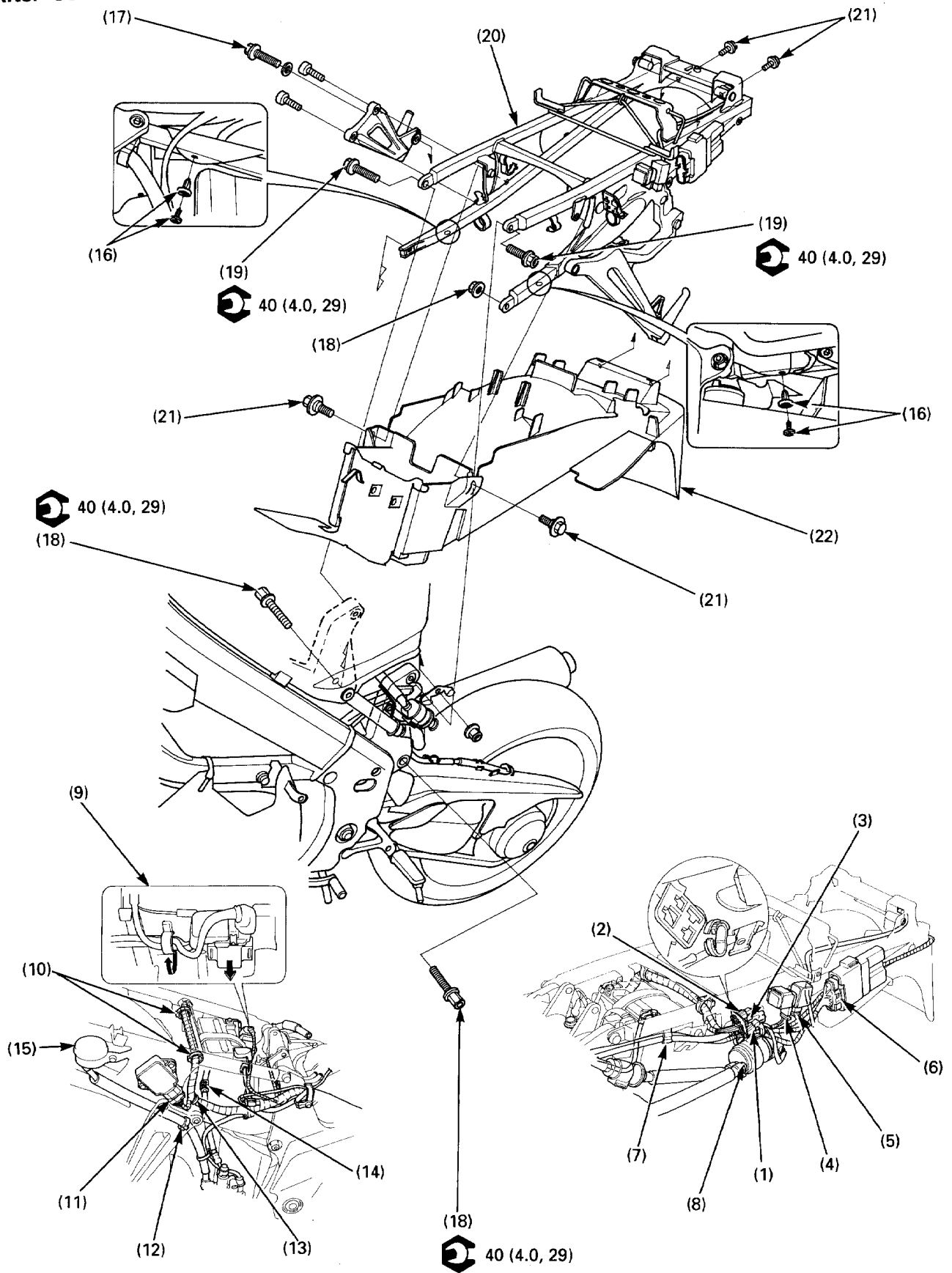


Requisite Service

- Remove the middle fairing (page 2-4).
- Support the motorcycle by placing a support block under the engine.

Procedure	Q'ty	Remarks
Removal Order		• Installation is in the reverse order of removal.
(1) Fairing inner cover screw	2	
(2) Fairing inner cover	1	
(3) Rear view mirror bolt	4	
(4) Plate	2	
(5) Rubber	2	
(6) Socket bolt	4	
(7) Inner cover	2	
(8) Upper fairing socket bolt	2	
(9) Headlight connector	1	
(10) Front turn signal connector	2	
(11) Upper fairing	1	
(12) Windshield screw washer	1/1	
(13) Windshield	1	

After '93:



Air Cleaner

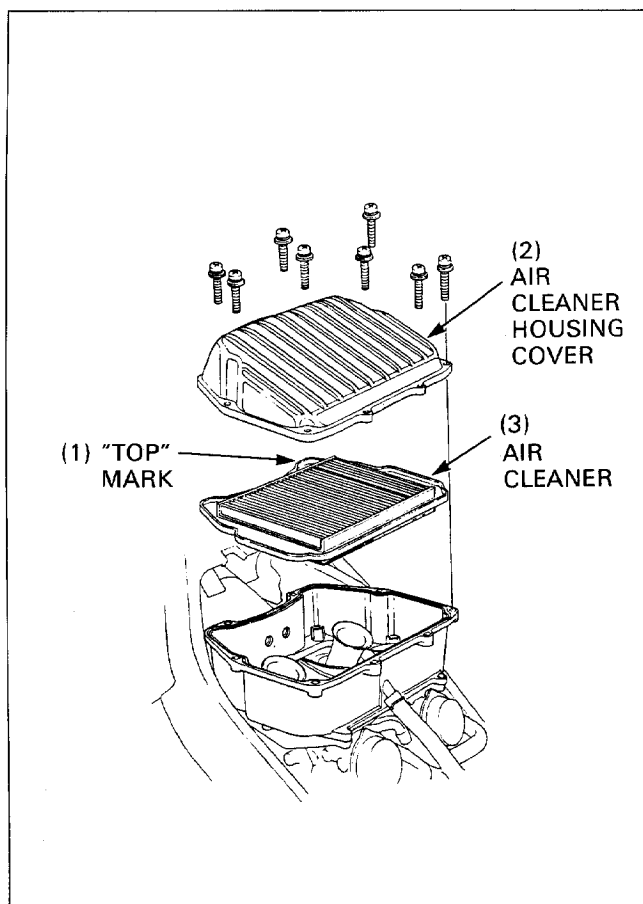
Remove the following:

- fuel tank (page 2-22).
- air cleaner housing cover

Replace the air cleaner in accordance with the maintenance schedule.

Also, replace the air cleaner when ever it becomes excessively dirty or damaged.

Install the cleaner with the "TOP" mark facing up.



Sub air cleaner:

Remove the sub air cleaner from the housing and wash away any accumulated dust or dirt, by gently squeezing it in non flammable or high flash point solvent.

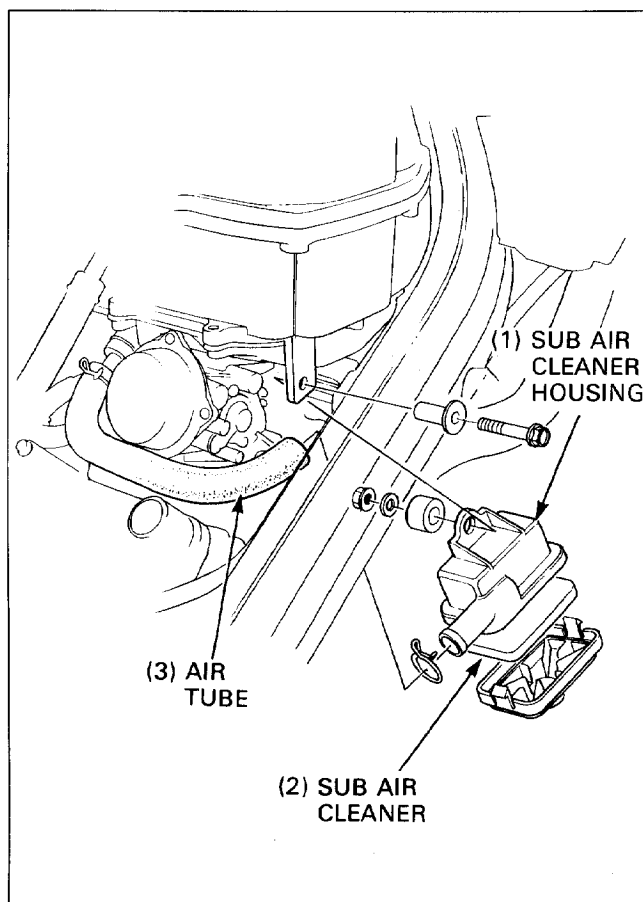
▲ WARNING

- **Using gasoline or low flash point solvents for cleaning parts may result in a fire or explosion.**

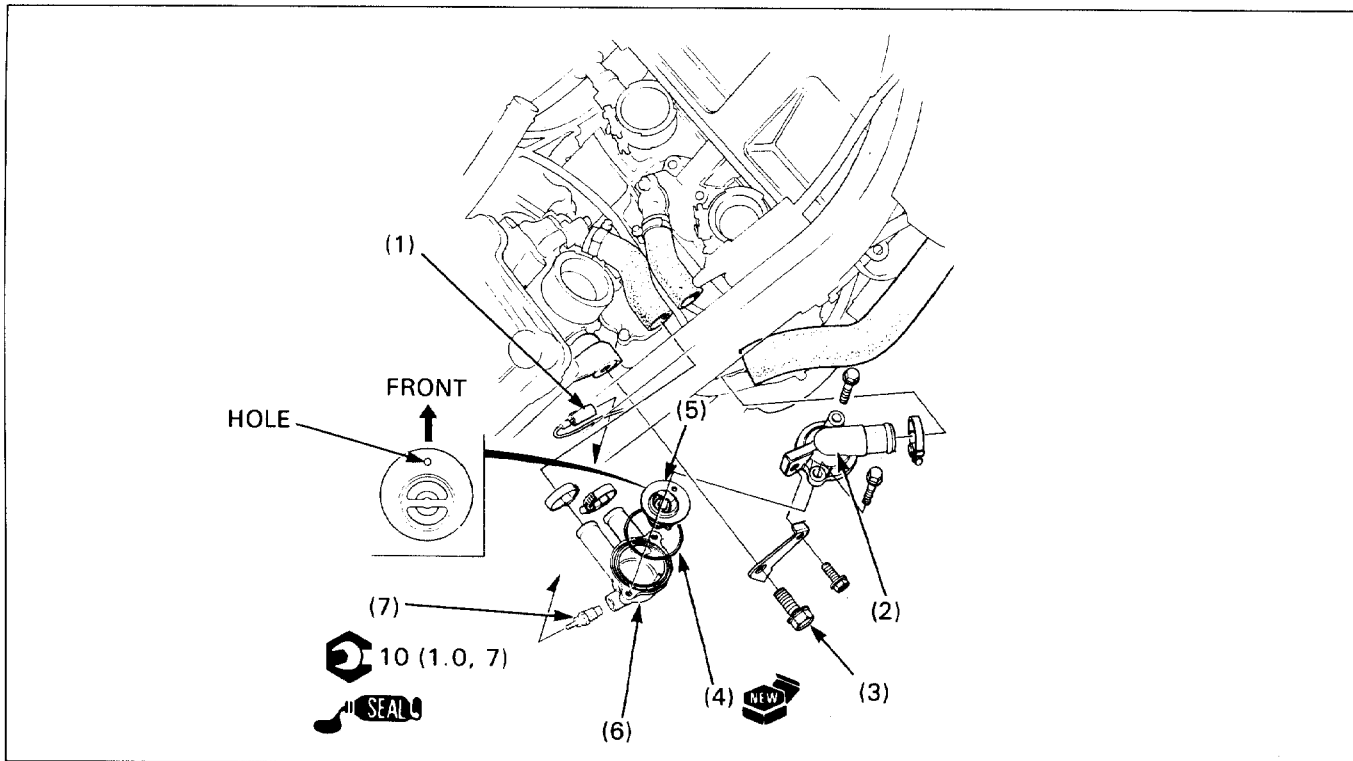
Spread Pro Honda Foam Filter Oil or equivalent on the sub air cleaner. Rub it in thoroughly over the surface with both hands, and then squeeze out any excess oil.

NOTE

- Be sure to allow the sub air cleaner to dry thoroughly before applying oil. Otherwise, the oil will be diluted by the solvent and the filtering ability of the filter will be much less effective.



Thermostat Removal/Installation

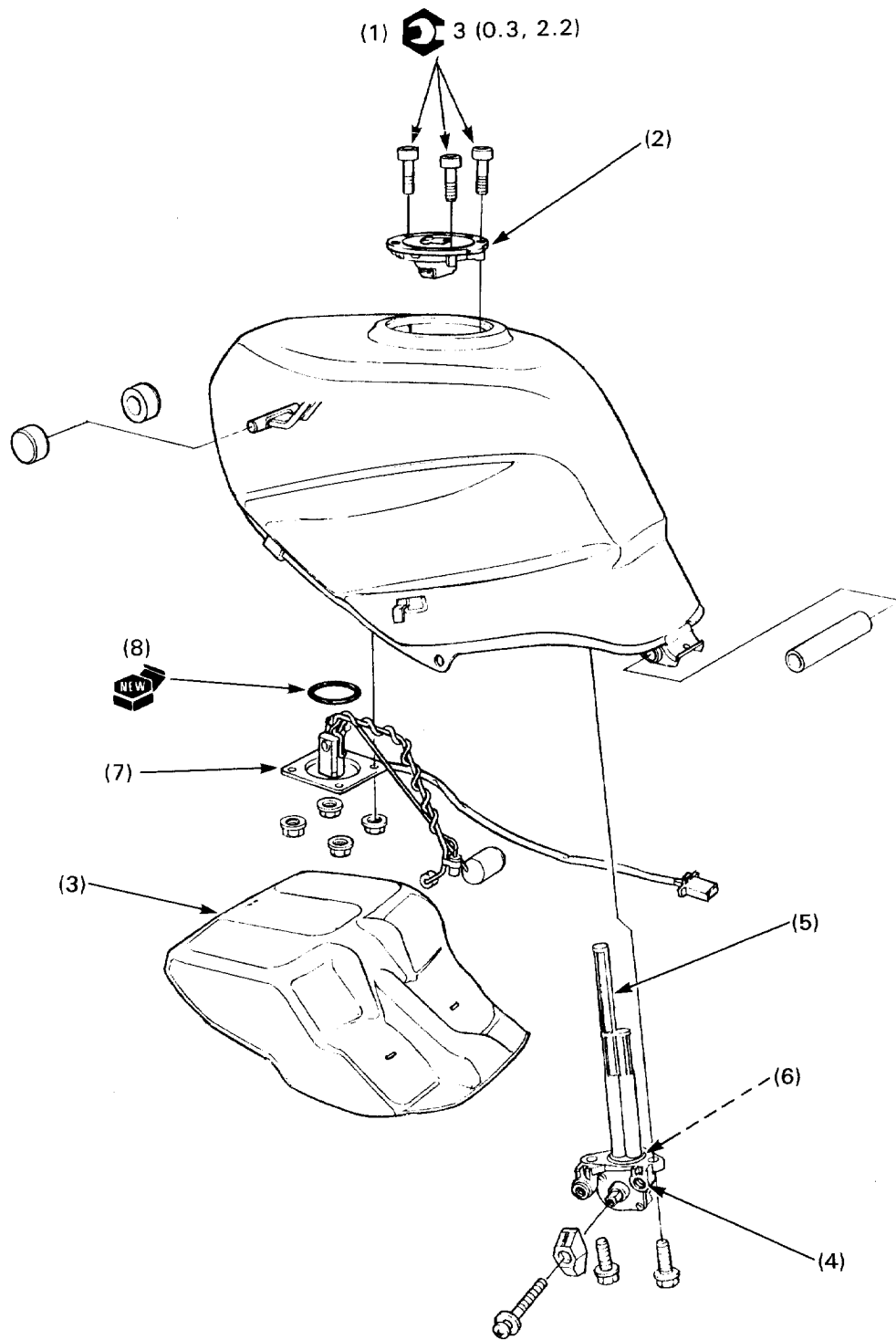


Requisite Service

- Fuel tank removal/installation (page 2-22)
- Coolant refill (section 5 of the Common Service Manual)
- Coolant draining (page 5-3)
- Carburetor removal/installation (page 6-4)

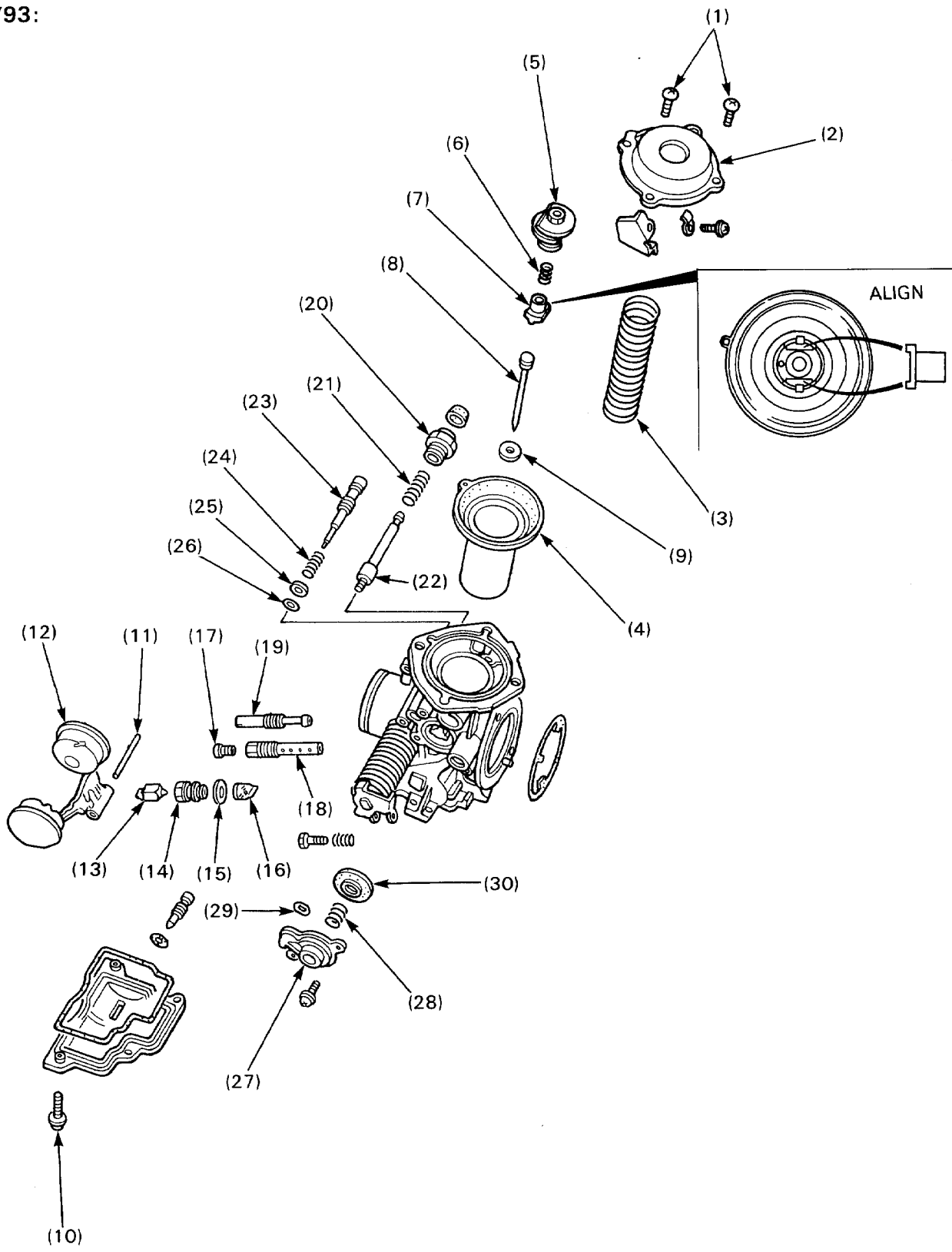
Procedure	Q'ty	Remarks
Removal Order		• Installation is in the reverse order of removal.
(1) Thermosensor connector	1	
(2) Thermostat cover	1	After inserting into the radiator hose, secure it by tightening the hose band screw.
(3) Thermostat cover mounting bolt	1	
(4) O-ring	1	
(5) Thermostat	1	Install the thermostat with its hole forwards.
(6) Thermostat housing	1	After inserting into the water hoses, secure by tightening the hose band screw.
(7) Thermosensor	1	At installation, apply sealant to the threads.


Fuel Tank Disassembly/Assembly



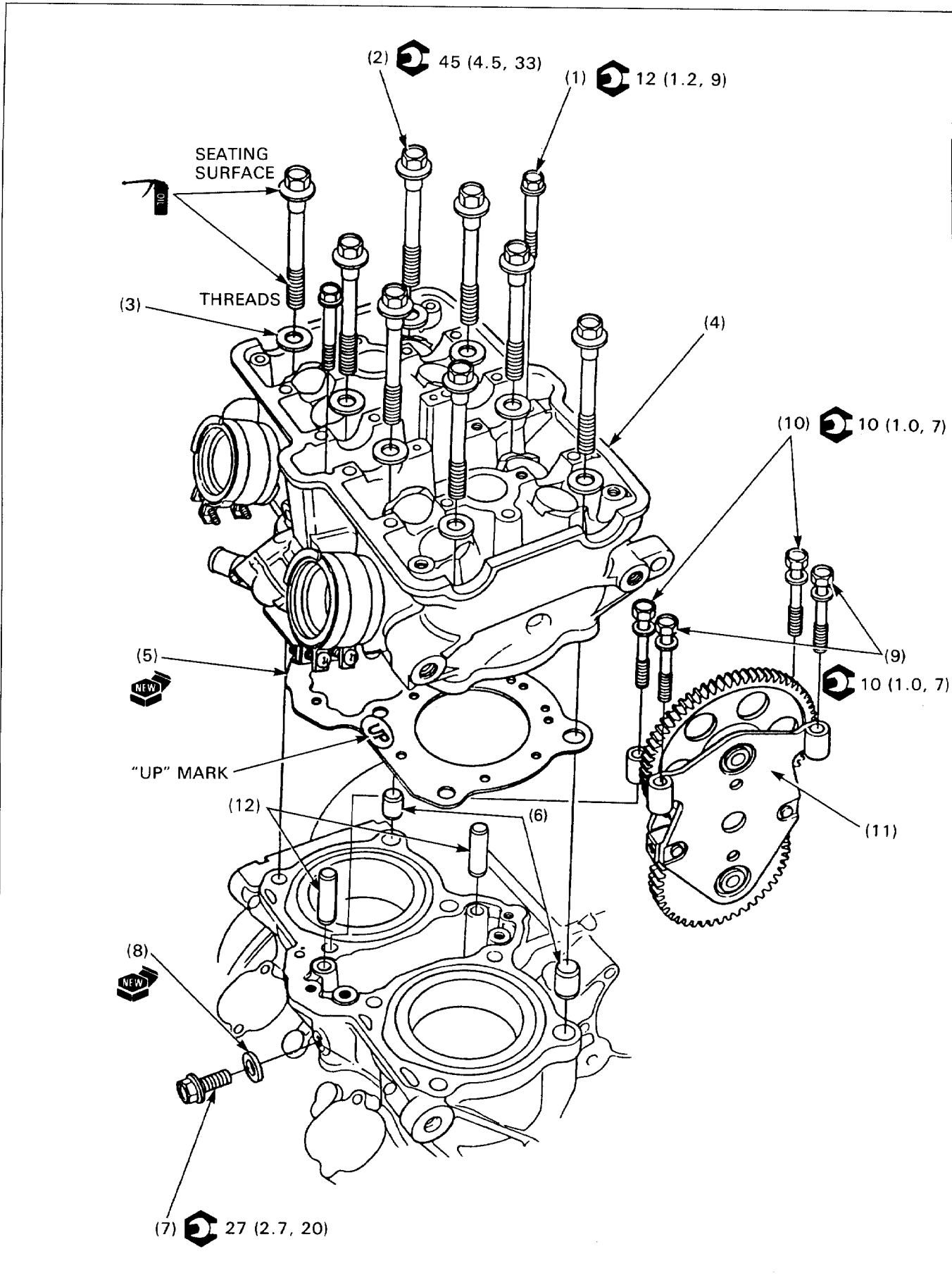
Carburetor Disassembly/Assembly

'90-'93:



 : O-ring

Cylinder Head, Camshaft Idle Gear Case Removal/Installation



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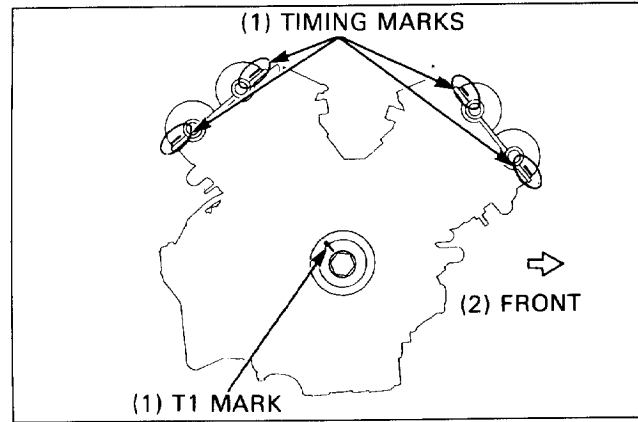


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Cylinder Head/Valves

Valve timing will be correct when the timing marks are level with the cylinder head upper edges, and the timing marks on the intake and exhaust camshaft face opposite each other.



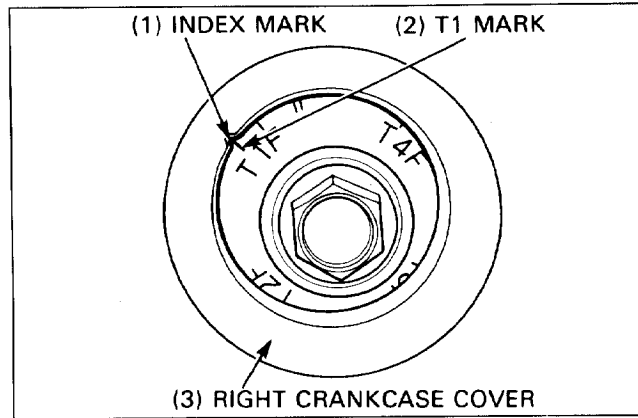
When Only the Front Cylinder Camshafts Were Removed

Align the T1 mark with the index mark on the right crankcase cover.

Remove the rear cylinder head cover.

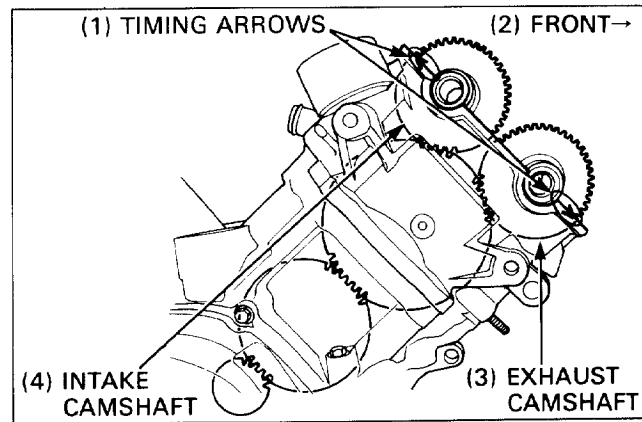
Make sure #1 cylinder is at TDC on the compression stroke. If it is not, turn the crankshaft clockwise one full turn (360°) and make sure T1 mark aligns with the index mark on the right crankcase cover.

Rotate the crankshaft clockwise 1¼ turns (450°) to align the T2 mark on the starter clutch with the index mark on the right crankcase cover.



Apply molybdenum oil solution to the cam lobes.

Install the camshafts onto the front cylinder head so that the timing arrows on the camshaft gears face opposite each other as shown.

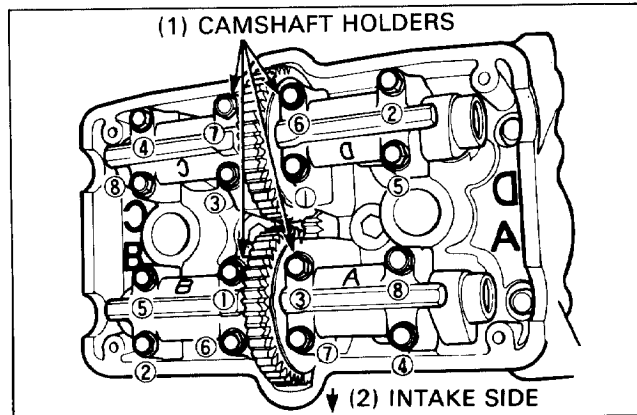


Install the camshaft holder dowel pins onto the rear cylinder head.

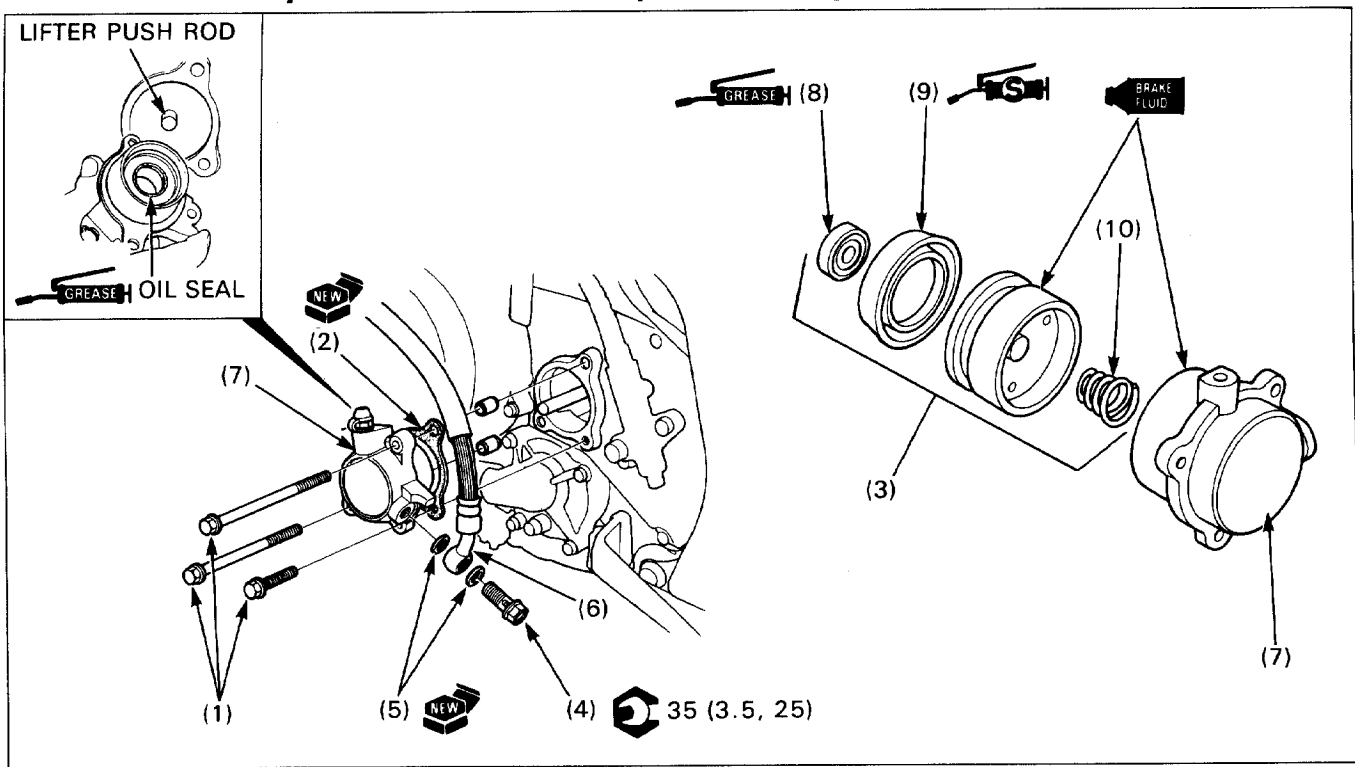
Install the holders in the correct positions, checking the identification marks on the holders and the cylinder head. Tighten the holder bolts in the sequence as shown.

Torque: 12N · m(1.2kg-m, 9ft-lb)

Make sure the timing arrows on the camshaft gears are level with cylinder head upper edge and facing opposite each other.



Clutch Slave Cylinder Disassembly/Assembly

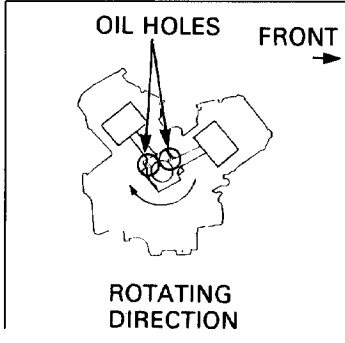
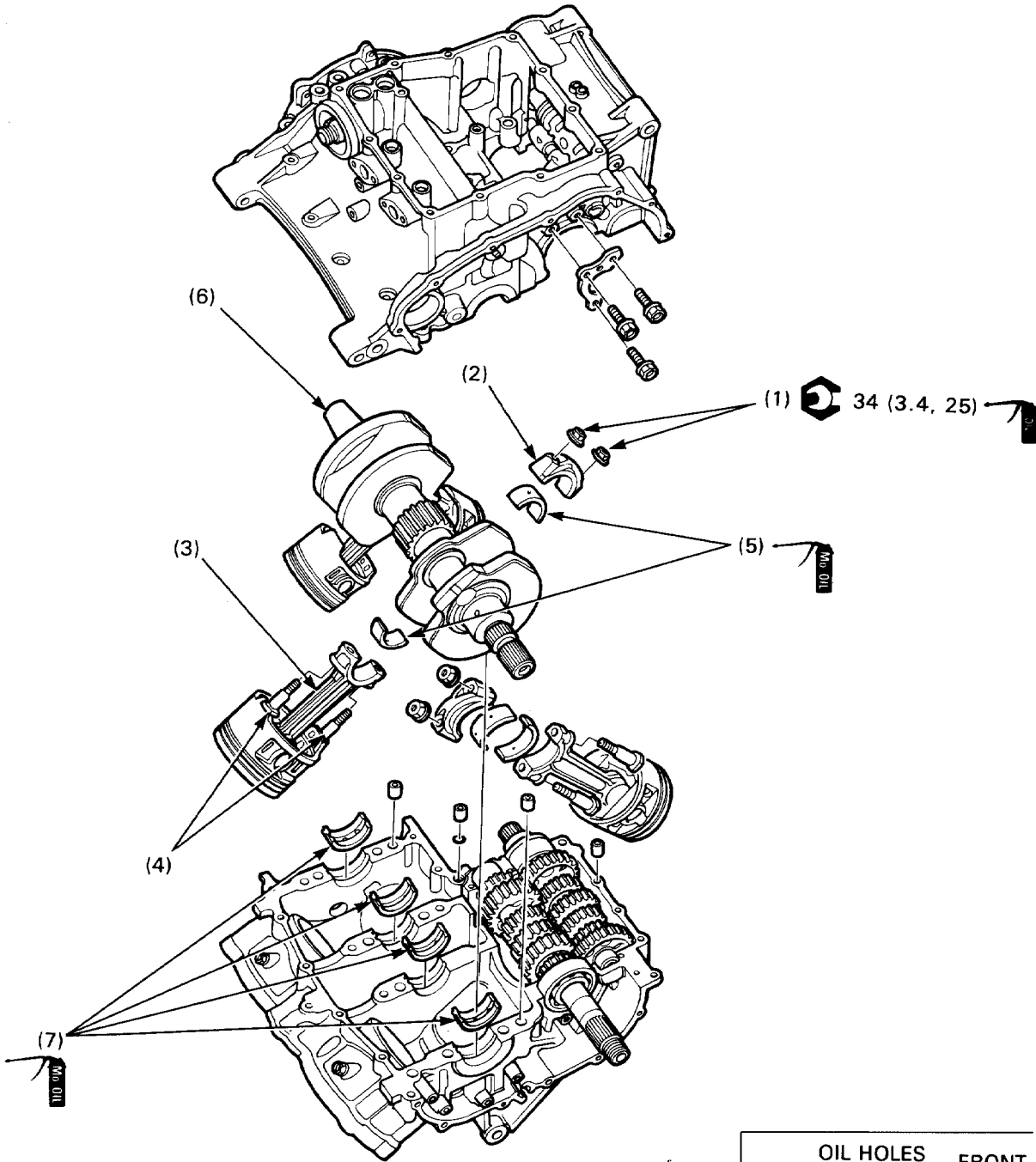


Requisite Service

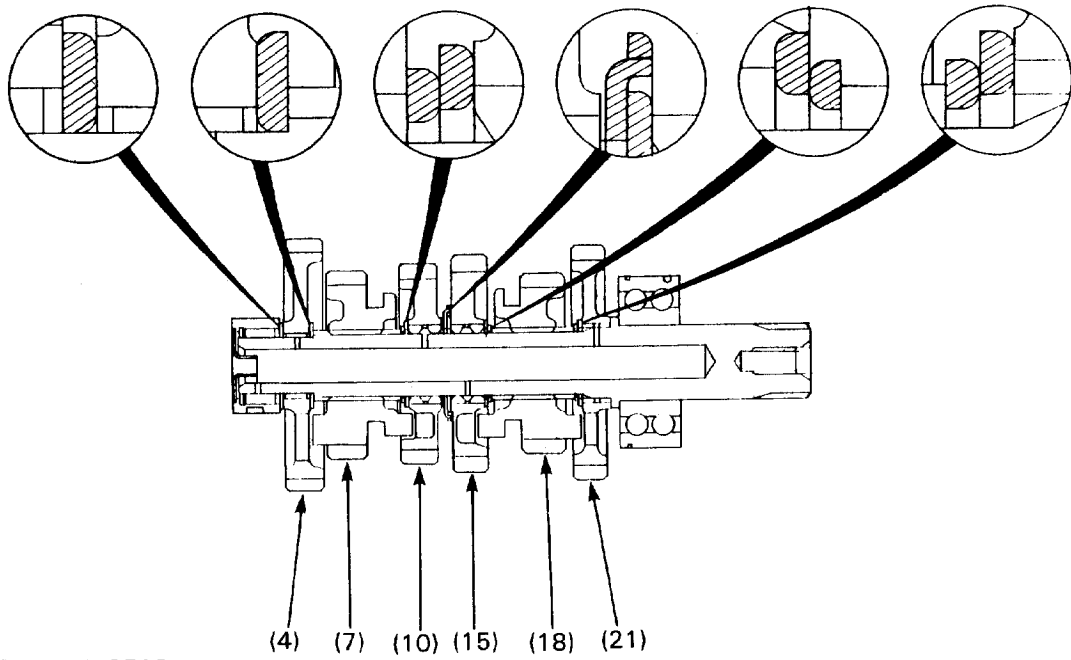
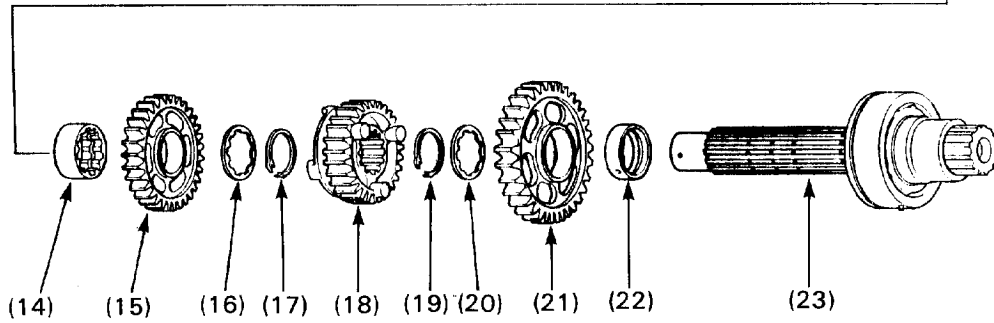
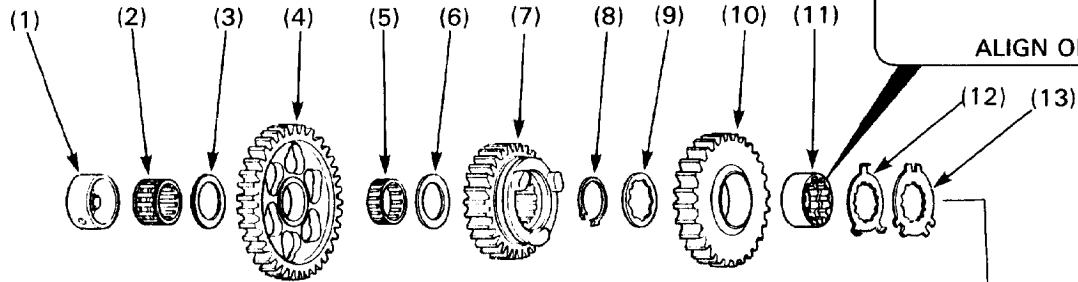
- Clutch fluid replacement/air bleeding (page 11-27, 28 of the Common Service Manual)



Procedure		Q'ty	Remarks
(1)	Disassembly Order Clutch slave cylinder mounting bolt	3	<ul style="list-style-type: none"> • Assembly is in the reverse order of removal. NOTE: <ul style="list-style-type: none"> • Do not disconnect the clutch fluid hose until the piston has been removed. <ul style="list-style-type: none"> • Place a clean pan under the slave cylinder to catch the draining fluid and squeeze the clutch lever slowly to push out the piston. Drain the clutch fluid. Temporarily install the slave cylinder then disconnect the clutch fluid hose. • When installing, make sure that the clutch lifter push rod is installed properly.
(2)	Gasket	1	
(3)	Clutch slave piston assembly	1	
(4)	Clutch fluid hose bolt	1	
(5)	Sealing washer	2	
(6)	Clutch fluid hose	1	
(7)	Clutch slave cylinder	1	
(8)	Oil seal	1	
(9)	Piston seal	1	
(10)	Spring	1	

Crankshaft/Connecting Rod Removal/Installation



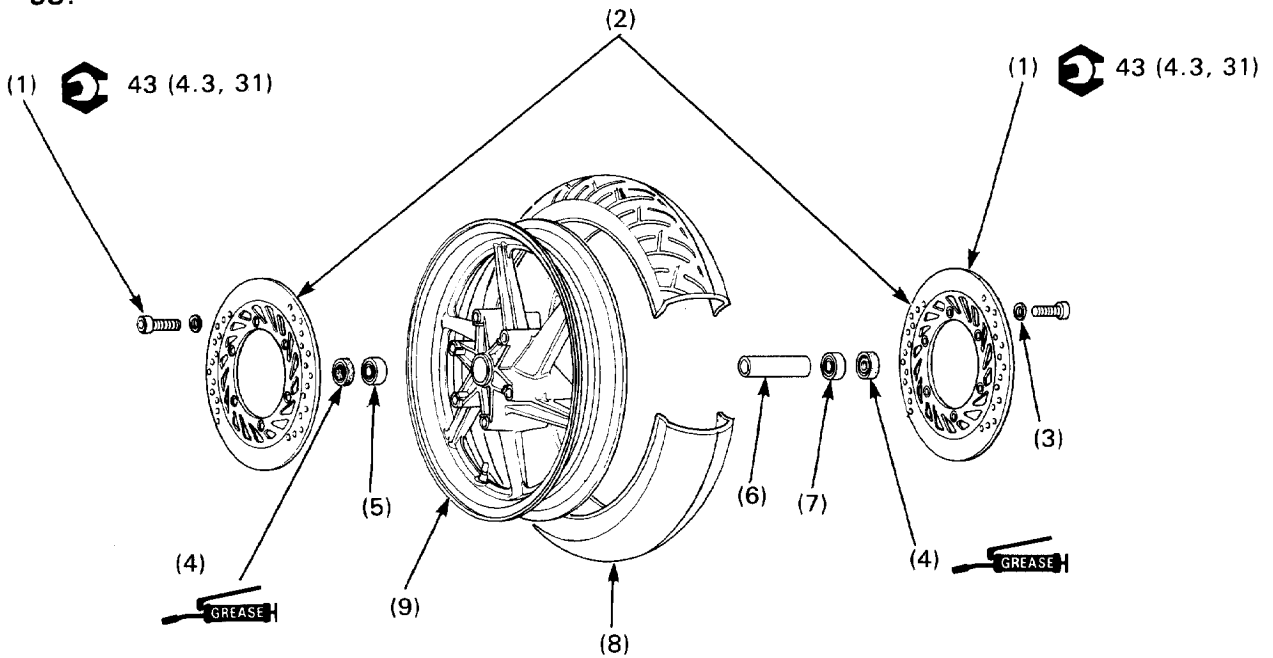
Countershaft Disassembly/Assembly



-  : SHIFTER GEAR GROOVE
-  : GEAR SLIDING SURFACE

Front Wheel Disassembly/Assembly

'90-'93:



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

- Always replace wheel bearings as a set.
- For wheel bearing replacement, refer to the section 1 of the Common Service Manual.

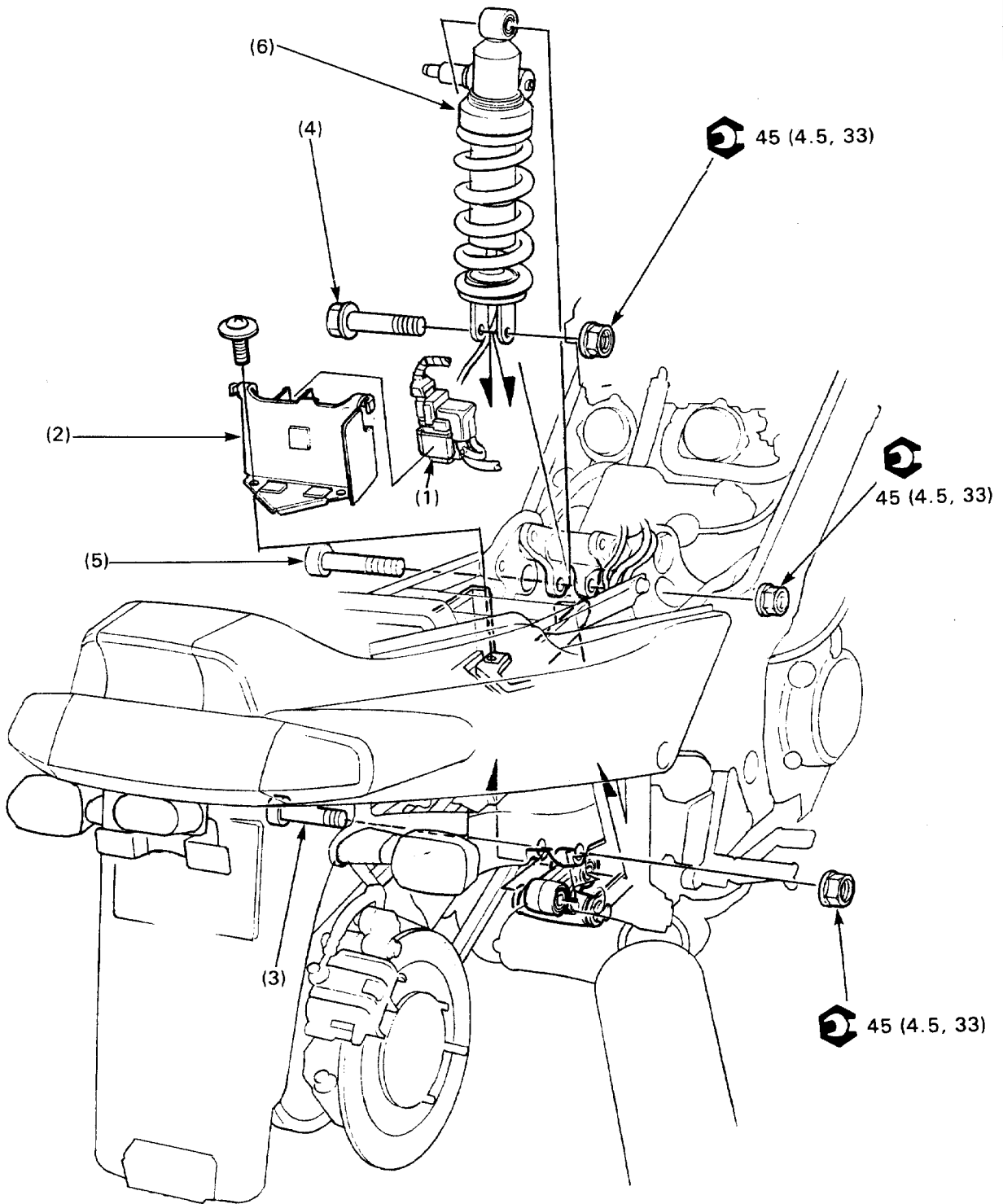
Requisite Service

- Front wheel removal/installation (page 12-4)

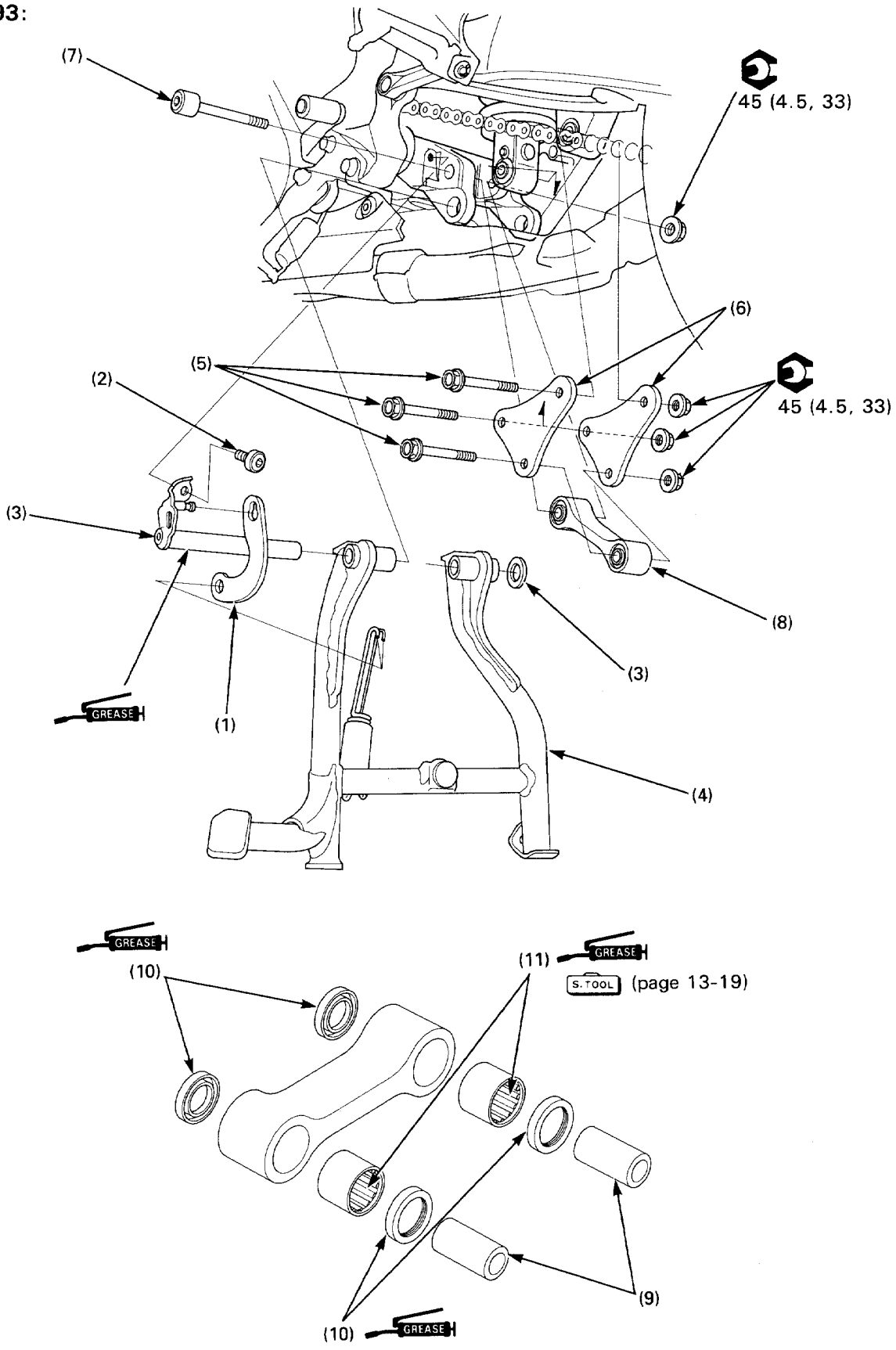
Procedure		Q'ty	Remarks
Disassembly Order			
(1)	Brake disc bolt	12	<ul style="list-style-type: none"> • Assembly is in the reverse order of disassembly. Wipe off all the grease on the bolt surface. • Install with the stamped side outward. • Each brake disc is stamped with the identification mark "R" (for right side) or "L" (for left side). Install the brake discs correctly.
(2)	Brake disc	2	
(3)	Brake disc shim	12	Apply grease to the dust seal lips and install them with the lips facing inside.
(4)	Dust seal	2	
(5)	Left wheel bearing (6004 UU)	1	
(6)	Distance collar	1	NOTE: <ul style="list-style-type: none"> • Drive in the right side bearing first, then the left side bearing.
(7)	Right wheel bearing (6004 UU)	1	
(8)	Tire	1	
(9)	Front wheel	1	

Shock Absorber Removal/Installation

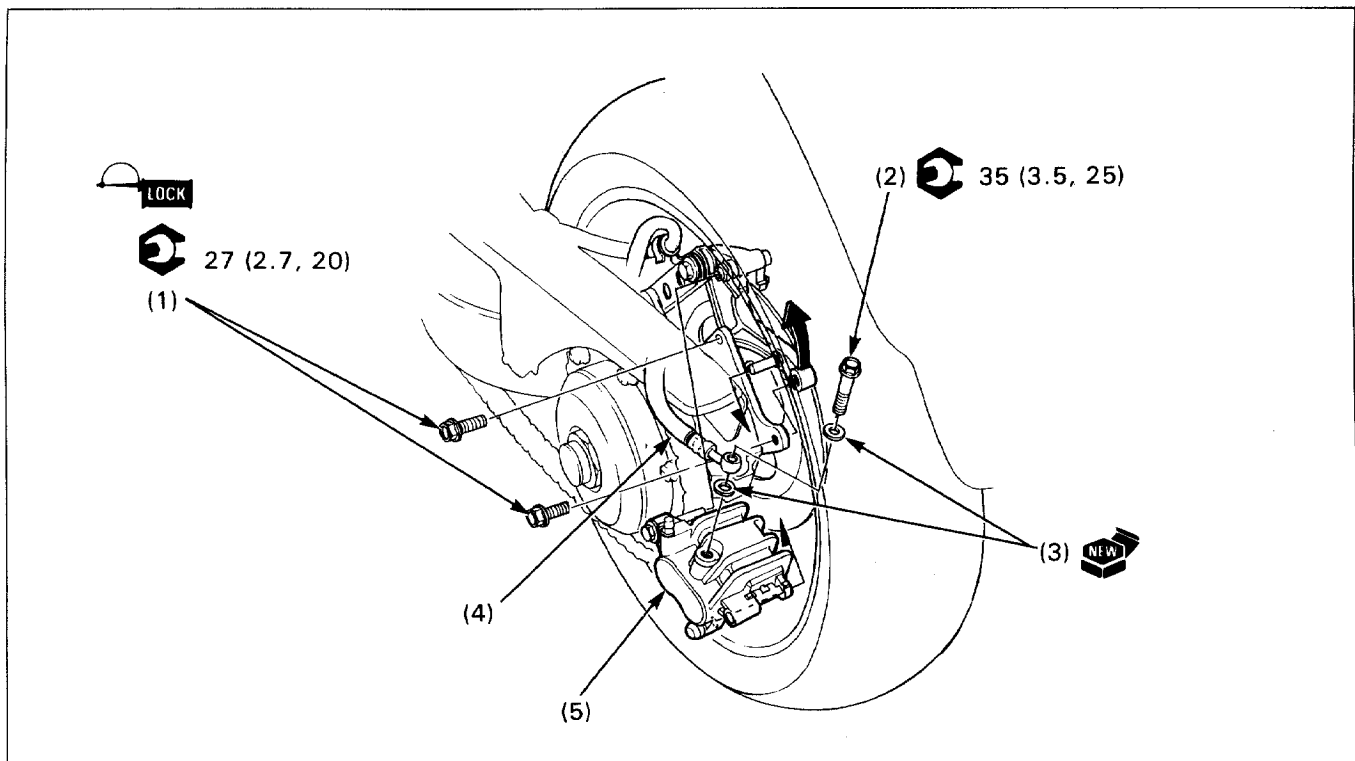
'90-'93:



After '93:



Rear Brake Caliper Removal/Installation



WARNING

- A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.
- Inhaled asbestos fibers have been found to cause respiratory disease and cancer. Never use an air hose or dry brush to clean brake assemblies. Use an OSHA-approved vacuum cleaner or alternate method approved by OSHA designed to minimize the hazard caused by airborne asbestos fibers.

NOTE

- Before disconnecting the brake hose (1), place a pan under the caliper to catch the draining fluid and squeeze the brake pedal slowly to push out the piston.

Requisite Service

- Brake pad removal/installation (page 14-3)
- Brake fluid replacement/air bleeding (section 17 of the Common Service Manual)

Procedure	Q'ty	Remarks
Removal Order		
(1) Caliper bracket bolt	2	• Installation is in the reverse order of removal. When installing, apply a locking agent to the threads.
(2) Brake hose bolt	1	
(3) Sealing washer	2	At installation, press the hose end against the stopper while tightening the hose bolt.
(4) Brake hose	1	
(5) Rear brake caliper assembly	1	

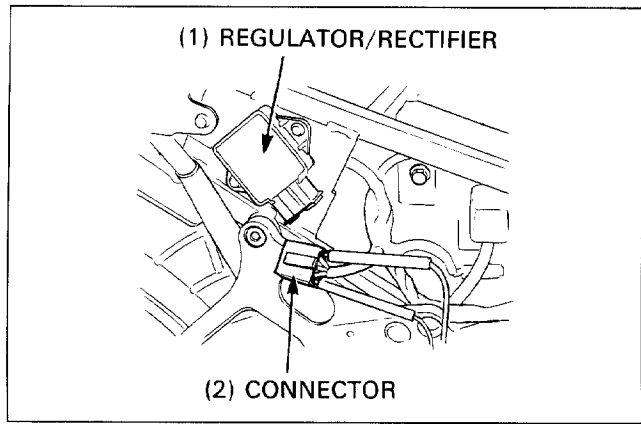
Regulator/Rectifier

Wire Harness Inspection

Remove the seat (page 2-2) and rear fairing (page 2-3).

Disconnect the regulator/rectifier connector and measure the following between connector terminals of the wire harness side.

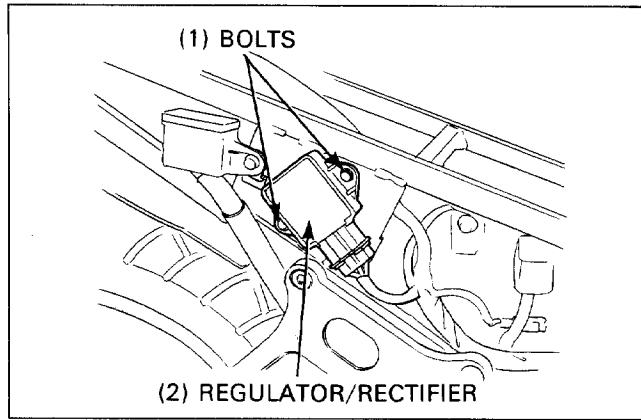
Item	Terminals	Specification
Battery charging line	Red/White (+) and ground (-)	Battery voltage should register.
Ground line	Green and ground	Continuity.
Charging coil line	Yellow and Yellow	1.0-2.0Ω (20°C/68°F)



Unit Inspection

Remove two bolts and regulator/rectifier.

Inspect the regulator/rectifier unit by measuring the resistance between the terminals. (Refer to the chart at the bottom of this page.)



NOTE

- Resistance value will not be accurate if the probes touch your finger.
- Use the following recommended multimeter. Using another manufacturer's equipment may not allow you to obtain the specified values. This is due to the characteristic of semiconductors, which have different resistance value depending on the applied voltage.

Specific Multimeters:

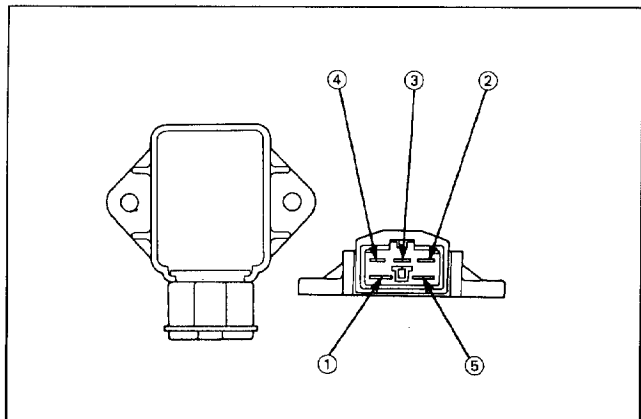
- KS-AMH-32-003 (U.S.A. only: Digital type)
- 07308-0020001 (SANWA Analogue type)
- TH-5H (KOWA Analogue type)

- Select the following range.

SANWA tester: ×kΩ

KOWA tester: ×100Ω

- When using the KOWA multimeter, remember that all readings should be multiplied by 100.
- An old, weak multimeter battery could cause inaccurate readings. Check the battery if the multimeter registers incorrectly.



Replace the regulator/rectifier unit if the resistance value between the terminals is abnormal.

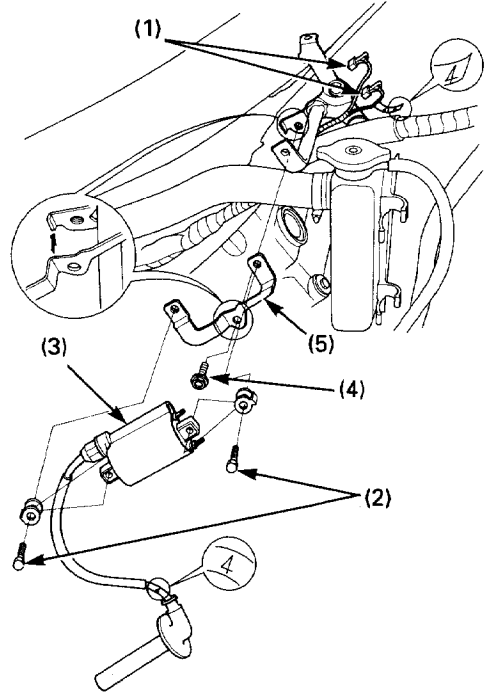
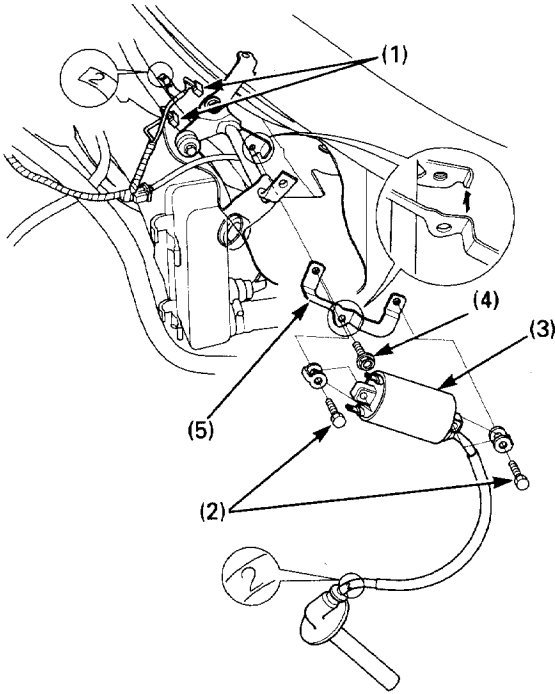
Install the regulator/rectifier in the reverse order of removal.

Unit: kΩ

	+	①	②	③	④	⑤
①	-		∞	∞	∞	∞
②		0.5-10		∞	∞	∞
③		0.5-10	∞		∞	∞
④		0.5-10	∞	∞		∞
⑤		0.7-15	0.5-10	0.5-10	0.5-10	

Ignition Coil Removal/Installation (After '93)

No.2/No.4 Ignition Coil (Front):



NOTE

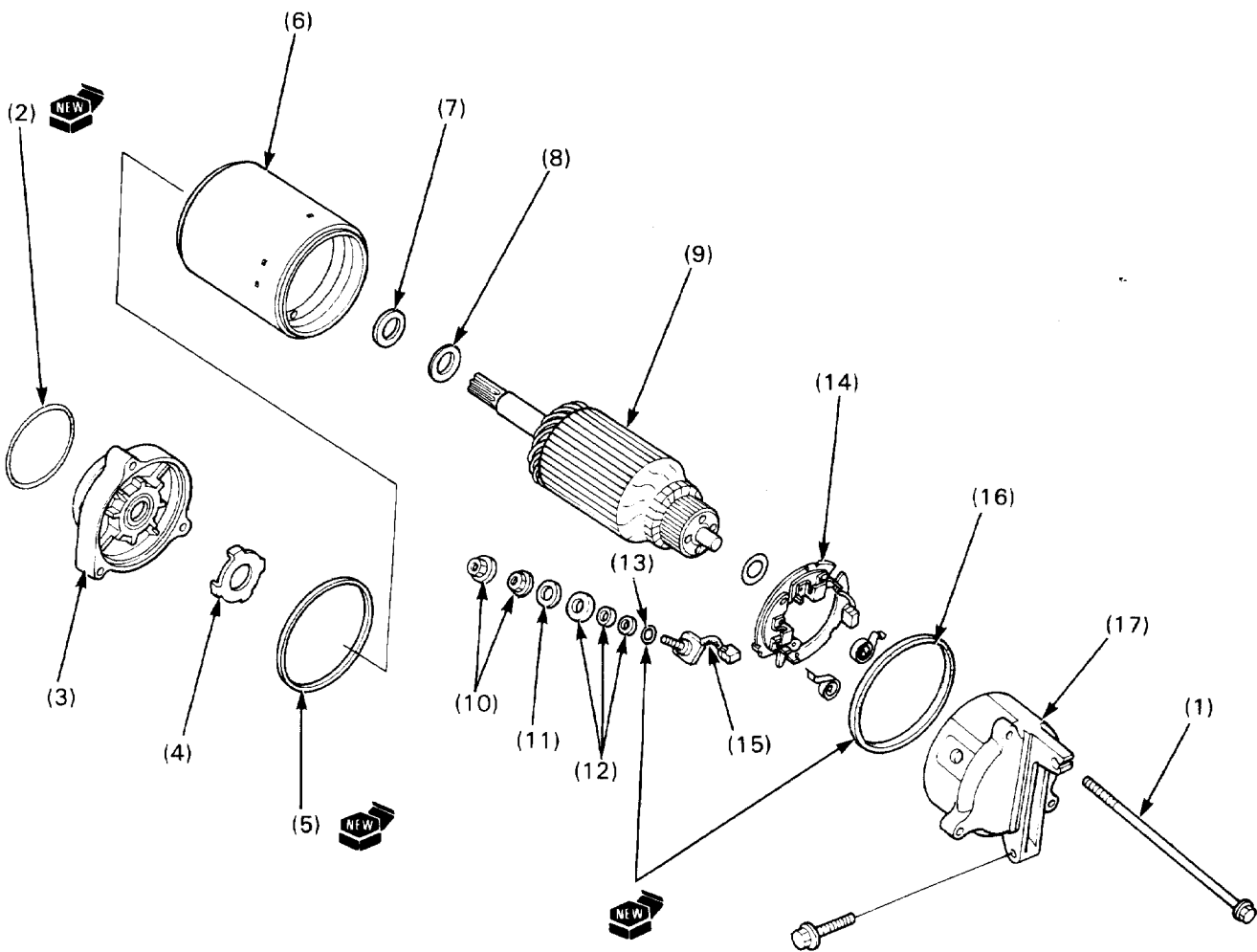
- The cylinder numbers are printed on each spark plug wire. Be sure to install each spark plug caps on the correct cylinder.

Requisite Service

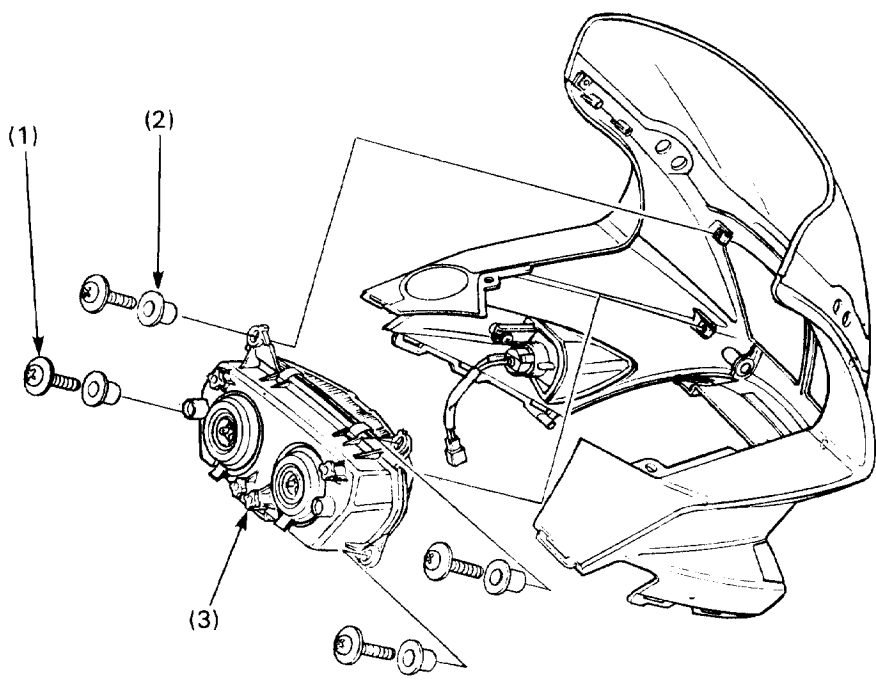
- Spark plug cap removal/installation (page 3-7)
- Upper fairing removal/installation (page 2-12)

Procedure		Q'ty	Remarks
(1)	Removal Order Connector	4	Installation is in the reverse order of removal. Connect the cylinder numbered wires to the green colored terminals. At installation, align the edge of the stay with the tab of the frame.
(2)	Bolt	4	
(3)	Ignition coil	2	
(4)	Bolt	2	
(5)	Stay	2	

Starter Motor Disassembly/Assembly



Headlight Removal/Installation



Requisite Service

- Upper fairing removal/installation (page 2-10).

Procedure		Q'ty	Remarks
Removal Order			• Installation is in the reverse order of removal.
(1)	Headlight mounting screw	4	
(2)	Collar	4	'90-'93 only
(3)	Headlight	1	

Fuel Level Sensor

Remove the fuel level sensor (page 6-6)

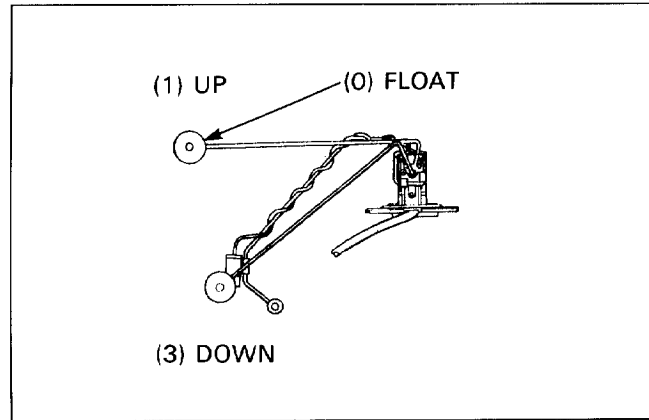
Measure the resistance with float in up and down positions.

STANDARD:

UP: 4-10Ω (20°C/68°F)

DOWN: 90-100Ω (20°C/68°F)

Replace if necessary.



Low Fuel Indicator

Inspection

Remove the fuel tank (page 2-22).

Make sure that the fuel tank is filled with enough gasoline to submerge the fuel level sensor unit.

If the low fuel indicator does not go off, check as noted below.

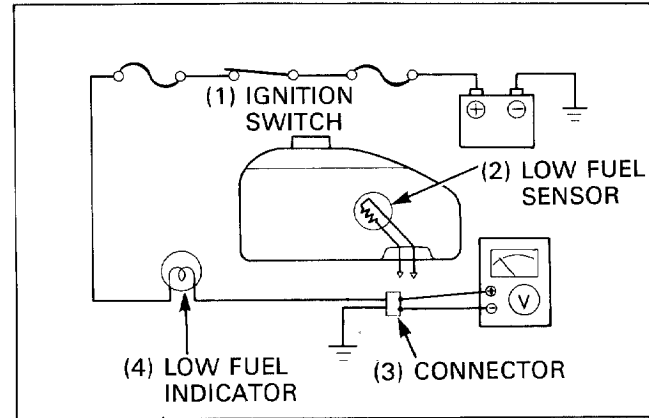
Check for battery voltage between the fuel level sensor connector terminals.

Battery voltage exists

- Faulty fuel level sensor

No battery voltage

- Shorted wire between the indicator light and sensor.



If the low fuel indicator does not turn on, check as noted below.

NOTE

- Make sure that the fuel level sensor is not submerged in the gasoline.

1. Check for battery voltage between the fuel level sensor connector terminals.

No battery voltage

Battery voltage

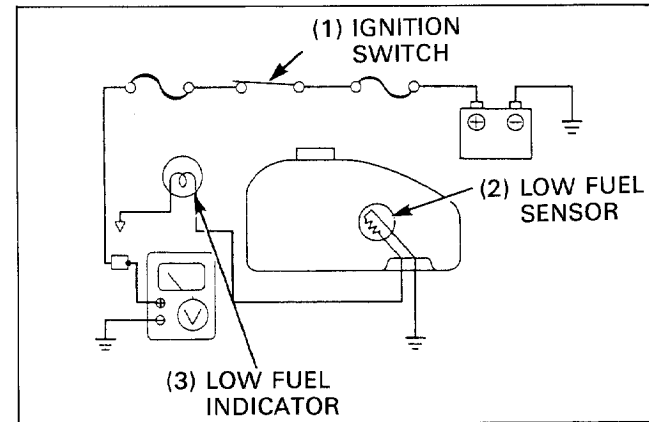
- Faulty fuel level sensor.
- Poor connection of the connector.

2. Check for battery voltage between the battery side of the wire from the indicator light and ground.

No battery voltage

Battery voltage

- Faulty sub fuse.
- Faulty ignition switch.
- Poor connection of the fuse holder connector.
- Blown bulb.
- Broken wire between the warning light and sensor.
- Faulty ground.



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