Introduction

This service manual describes the service procedures for the SK50M.
This Model Specific Manual includes every service procedure that is of a specific nature to this particular model. Basic service procedures that are common to other Honda Motorcycles/Motor Scooters/ATVs are covered in the Common Service Manual. This Model Specific Service Manual should be used together with the Common Service Manual in order to provide complete service information on all aspects of this scooter.

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition. Performing the first scheduled maintenance is very important. It compensates for the initial wear that occurs during the break-in period.

Sections 1 and 3 apply to the whole scooter. Section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections.
While Sections 4 through 17 describe parts of the scooter, grouped according to locations.

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

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

If you don't know the source of the trouble, go to section 18 TROUBLESHOOTING.

HONDA MOTOR CO., LTD.
SERVICE PUBLICATIONS OFFICE

Contents

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Important Safety Notice

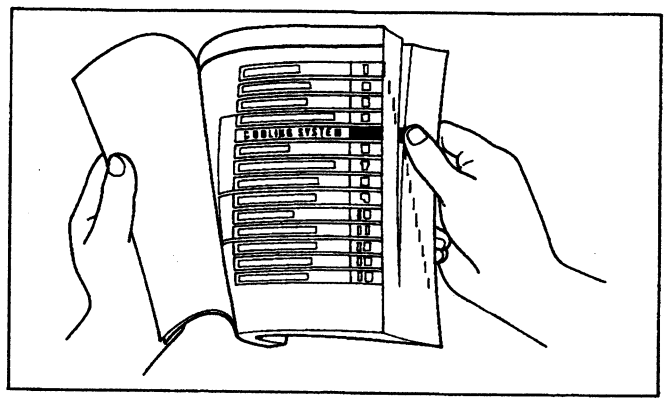
⚠ WARNING **Indicates a strong possibility of severe personal injury or death if instructions are not followed.**

CAUTION: **Indicates a possibility of 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 methods or tools selected.

How to Use This Manual

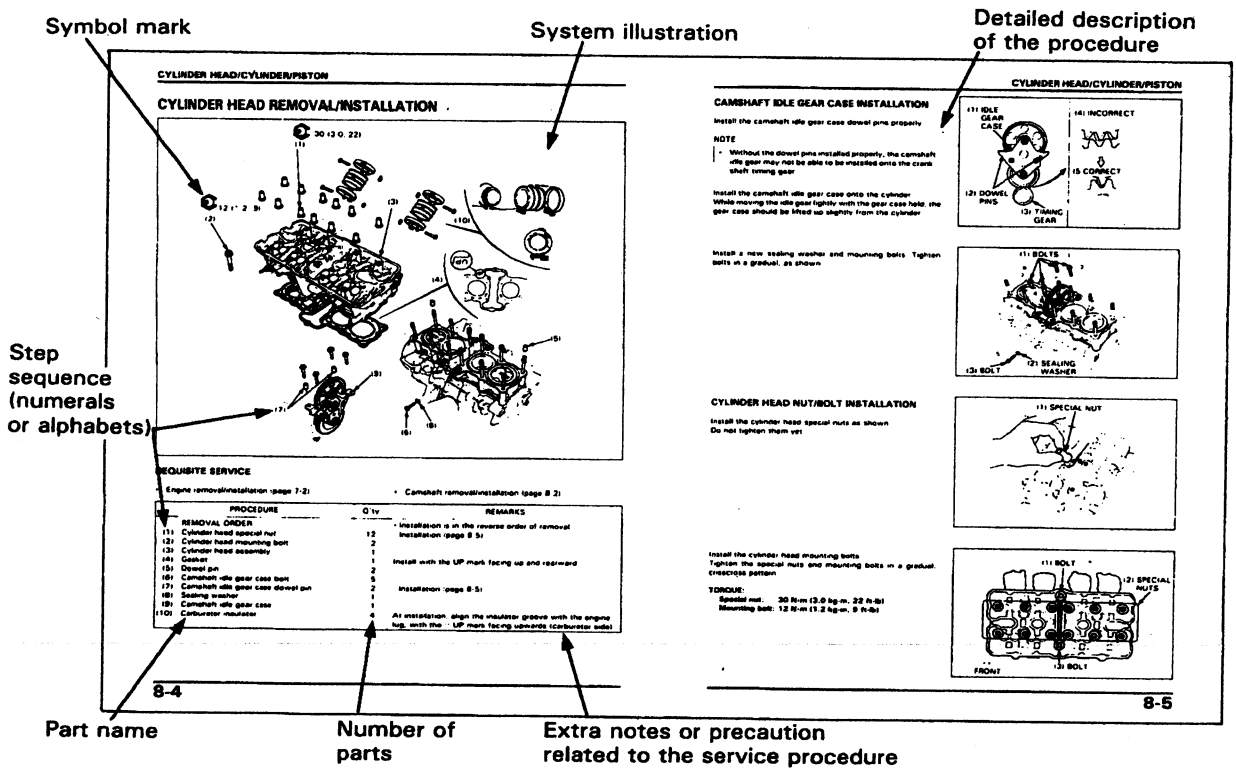


Finding Information You Need

- This manual is divided into sections which cover each of the major components of the motorcycle.
  To quickly find the section you are interested in, the first page of each section is marked with a black tab that lines up with one of the thumb index tabs before this page.
  The first page of each section lists the table of contents within the section.
  Read the service information and troubleshooting related to the section before you begin working.
- An index of the entire book is provided in the last chapter to directly locate the information you need.

Note on the Explanation Method of This Manual

- The removal and installation of parts are for the most part illustrated by large and clear illustrations that should provide the reader with visual aid in understanding the major point for servicing.
- The system illustrations are augmented by callouts whose numbers or letters indicate the order in which the parts should be removed or installed.
- The sequence of steps represented numerically are differentiated from the ones represented alphabetically to notify the reader that they must perform these steps seperately.
  For example, if the steps prior and up to camshaft removal are performed with the engine installed, but the subsequent steps like cylinder head removal require engine removal, the callouts are grouped in numerical and alphabetical orders.
- The illustrations may contain symbol marks to indicate necessary service procedures and precautions that need to be taken. Refer to the next page for the meaning of each symbol mark.
- Also in the illustration is a chart that lists information such as the order in which the part is removed/installed, the name of the part, and some extra notes that may be needed.
- Step by step instructions are provided to supplement the illustrations when detailed explanation of the procedure is necessary or illustrations alone would not suffice.
- Service procedures required before or after the procedure described on that particular page, or inspection/adjustment procedures required following the installation of parts, are described under the title Requisite Service.
- Standard workshop procedures and knowledge covered in the Common Service Manual are abbreviated in this manual.



Symbols

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it would be explained specifically in the text without the use of the symbols.

	Replace the part(s) with new one(s) before assembly.
	Use special tool
	Use optional tool. Use the same procedure you use to order parts.
 10 (1.0, 7.2)	Torque specification. 10 N·m (1.0 kg-m, 7.2 ft-lb)
	Use recommended engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease with the ratio 1 : 1).
	Use multi-purpose grease (Lithium based multi-purpose grease NLGI #2 or equivalent)
	Use molybdenum disulfide grease (containing more than 3% molybdenum disulfide, NLGI #2 or equivalent) Example: Molykote® BR-2 plus manufactured by Dow Corning, U.S.A. Multi-purpose M-2 manufactured by Mitsubishi Oil Japan
	Use molybdenum disulfide paste (containing more than 40% molybdenum disulfide, NLGI #2 or equivalent) Example: Molykote® G-n Paste manufactured by Dow Corning, U.S.A. Honda Moly 60 (U.S.A. only) Rocol ASP manufactured by Rocol Limited, U.K. Rocol Paste manufactured by Sumico Lubricant, Japan
	Use silicone grease
	Apply a locking agent. Use the agent of the middle strength, unless otherwise specified.
	Apply sealant
	Use brake fluid, DOT 3 or DOT 4. Use the recommended brake fluid, unless otherwise specified.
	Use Fork or Suspension Fluid.

1. General Information

General Safety

Carbon Monoxide
If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in an enclosed area.

⚠ WARNING

- **The exhaust contains poisonous carbon monoxide gas that can cause loss of consciousness and may lead to death.**

Run the engine in an open area or with an exhaust evacuation system in an enclosed area.

Gasoline
Work in a well ventilated area. Keep cigarettes, flames or sparks away from the work area or where gasoline is stored.

⚠ WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions. KEEP OUT OF REACH OF CHILDREN.**

Hot Components

⚠ WARNING

- **Engine and exhaust system parts become very hot and remain hot for some time after the engine is run. Wear insulated gloves or wait until the engine and exhaust system have cooled before handling these parts.**

Brake Dust
Never use an air hose or dry brush to clean brake assemblies. Use a vacuum cleaner or alternate method designed to minimize the hazard caused by airborne asbestos fibers.

⚠ WARNING

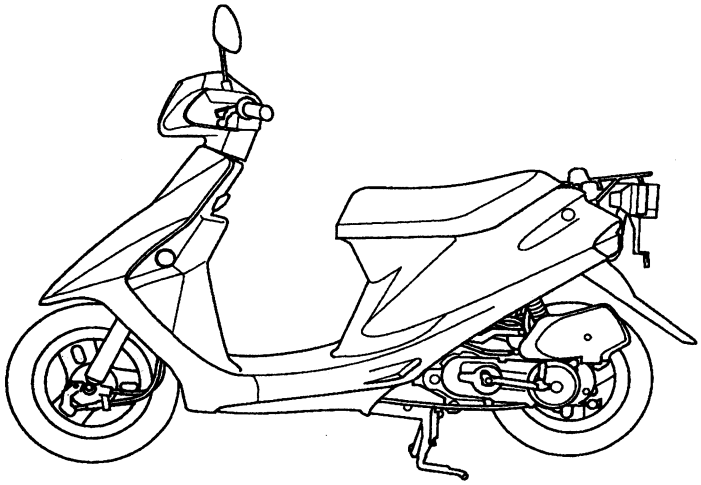
- **Inhaled asbestos fibers have been found to cause respiratory disease and cancer.**

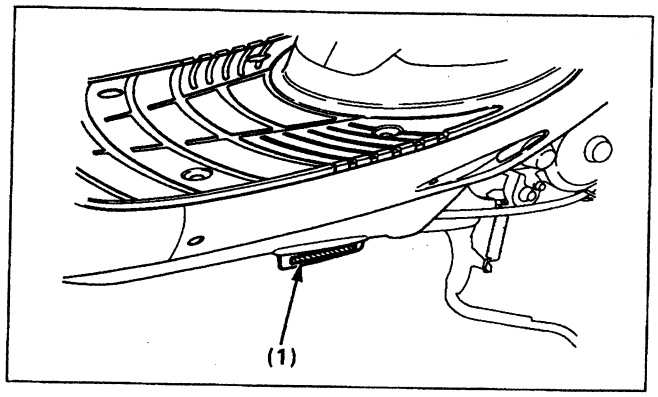
Battery Hydrogen Gas & Electrolyte

⚠ WARNING

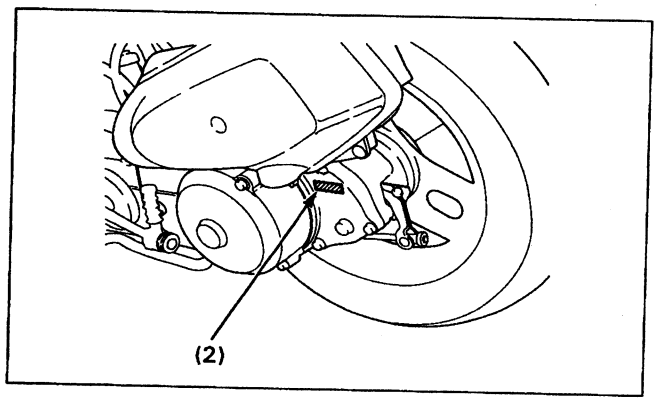
- **The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging.**
- **The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.**
  - **If electrolyte gets on your skin, flush with water.**
  - **If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician.**
- **Electrolyte is poisonous.**
  - **If swallowed, drink large quantities of water or milk and follow with milk of magnesia or vegetable oil and call a physician. KEEP OUT OF REACH OF CHILDREN.**

Model Identification

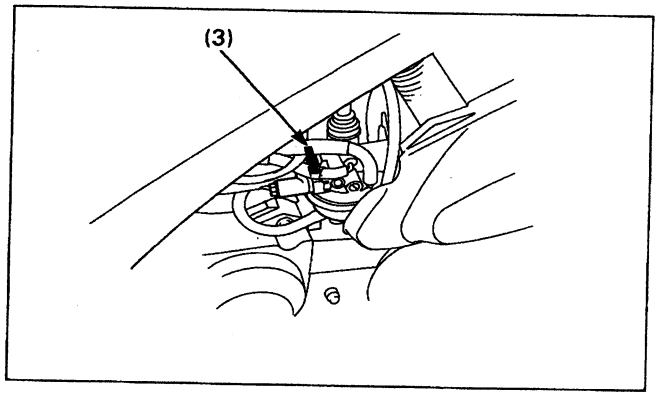




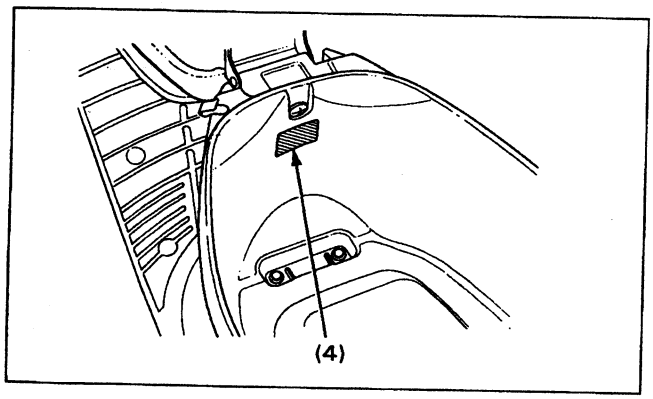
(1) FRAME SERIAL NUMBER
The frame serial number is stamped on the left side of the frame.



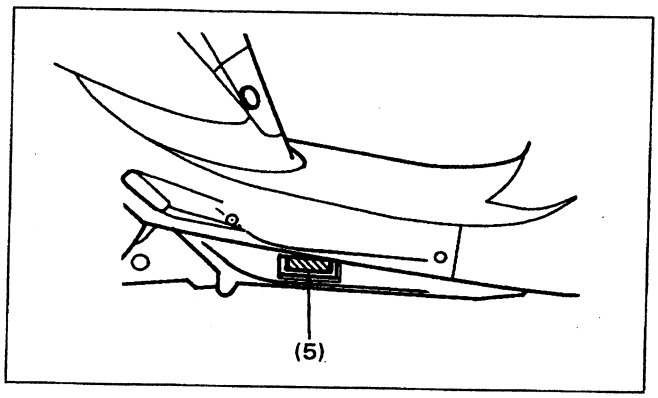
(2) ENGINE SERIAL NUMBER
The engine serial number is stamped on the left side of the transmission cover.



(3) CARBURETOR IDENTIFICATION NUMBER
The carburetor identification number is stamped on the left side of the carburetor body.



(4) COLOR CODE LABEL
The color code label is attached to the luggage box under the seat. When ordering a color coded parts, always specify its designated color.



(5) SAFETY CERTIFICATION LABEL (CM type only)
The safety certification label is attached to the right side of the frame.

Specifications

General

Unit: mm (in)

Item		Specifications
Dimensions	Overall length	1,650 (65.0)
	Overall width	645 (25.4)
	Overall height	990 (39.0)
	Wheelbase	1,145 (45.1)
	Seat height	715 (28.1)
	Footpeg height	360 (14.2)
	Ground clearance	100 (3.9)
	Dry weight	66 kg (146.6 lbs)
	Curb weight	71 kg (157.7 lbs)
	Maximum weight capacity	91 kg (200 lbs)
Frame	Frame type	Under bone
	Front suspension	Telescopic
	Front wheel travel	53.7 (2.11)
	Rear suspension	Final drive unit/swingarm
	Rear wheel travel	60.7 (2.39)
	Front damper	——
	Rear damper	——
	Front tire size	3.00–10 42J
	Rear tire size	3.00–10 42J
	Tire brand (Bridgestone) Front/Rear	ML31/ML32
	Tire brand (Dunlop) Front/Rear	K378F/K378
	Tire brand (IRC) Front/Rear	MB48/MB47
	Front brake	Internal expanding shoe
	Rear brake	Internal expanding shoe
	Caster angle	26° 30′
	Trail length	73 (2.9)
	Fuel tank capacity	5.0 liters (1.32 US gal, 1.10 Imp gal)
	Fuel tank reserve capacity	——
	Fork leg oil capacity	——
Engine	Bore and stroke	39.0 x 41.4 (1.54 x 1.63)
	Displacement	49.4 cm³ (3.01 cu in)
	Compression ratio	7.1
	Port timing intake open	Reed valve controlled
	Port timing intake close	Reed valve controlled
	Port timing Exhaust open	84° BBDC
	Port timing Exhaust close	84° ABDC
	Port timing Scavenge open	62° BBDC
	Port timing Scavenge close	62° ABDC
	Firing order	——
	Lubrication system	Oil automatically mixed with gasoline
	Oil pump type	Plunger type
	Cooling system	Forced air cooled
	Air filtration	Urethane foam
	Crankshaft type	Assembly type
	Egnine weight (dry)	16.1 kg (35.5 lbs)

General (cont'd)

Unit: mm (in)

Item		Specifications
Carburetor	Carburetor type Venturi dia.	Piston valve 14.0 (0.55)
Drive train	Clutch system Primary reduction Final reduction Gear ratio	Dry, automatic centrifugal clutch —— 12.115 2.450–0.850
Electrical	Ignition system Starting system Charging system Regulator/rectifier type	CDI Electric starter motor/kickstarter Single phase alternator, 12 V–133 W SCR switching regulator, AC regulator built in type/ single phase, half-wave rectifier

Unit: mm (in)

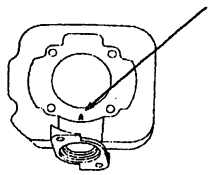
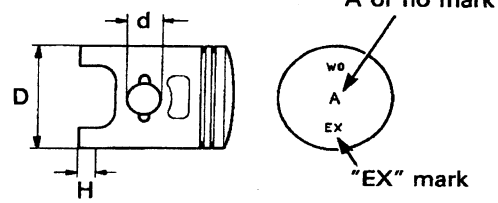
Lubrication

Item	Standard	Service limit
Engine oil tank capacity	1.2 liters (1.27 US qt, 1.06 Imp qt)	———
Recommended engine oil	Use Honda 2-stroke oil or equivalent	———

Fuel System

Carburetor identification number	PB80P	———
Main jet	#75A	———
Slow jet	#35	———
Jet needle clip position	3rd groove	———
Air screw initial opening	1-1/4 turns out	———
Air screw high altitude adjustment	———	———
Float level	8.0 (0.31)	———
Idle speed	1,800 ± 100 min^{-1} (rpm)	———
Throttle grip free play	2–6 (0.08–0.24 in)	———

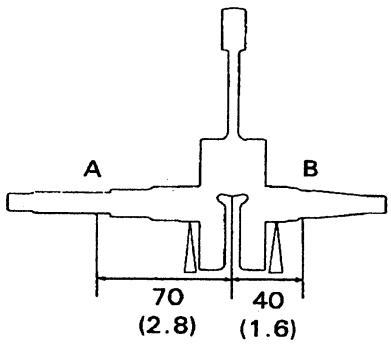
Cylinder Head/Cylinder/Piston

Cylinder compression	981 kPa (10.0 kg/cm^2, 142 psi)/600 min^{-1} (rpm)	———
Cylinder head warpage	———	0.01 (0.0004)
Cylinder warpage	———	0.01 (0.0004)
Cylinder identification mark location	Lower surface of the cylinder	———
		
Cylinder I.D. A mark	39.000–39.005 (1.5354–1.5356)	39.05 (1.537)
No mark	39.005–39.010 (1.5356–1.5358)	39.05 (1.537)
out of round	———	0.10 (0.004)
taper	———	0.10 (0.004)
Piston mark direction	"EX" mark facing exhaust side	
Piston O.D. (D) A mark	38.955–38.960 (1.5337–1.5339)	38.90 (1.531)
B mark	38.965–38.970 (1.5341–1.5342)	38.90 (1.531)
No mark	38.960–38.965 (1.5339–1.5341)	38.90 (1.531)
Piston O.D. measurement point (H)	6.5 (0.26) from the bottom	———
Piston pin hole I.D. (d)	12.002–12.008 (0.4725–0.4728)	12.03 (0.474)
		
Cylinder-to-piston clearance	0.035–0.050 (0.0014–0.0020)	0.10 (0.004)
Piston pin O.D.	11.994–12.000 (0.4722–0.2724)	11.98 (0.4717)
Piston-to-piston pin clearance	0.002–0.014 (0.0001–0.0006)	0.03 (0.001)
Top ring-to-ring groove clearance	———	———
Second ring-to-ring groove clearance	———	———
Top ring end gap	0.10–0.25 (0.004–0.010)	0.40 (0.016)
Secend ring end gap	0.10–0.25 (0.004–0.010)	0.40 (0.016)
Top ring mark	"N" mark	———
Second ring mark	"ZT" mark	———

Crankshaft

Unit: mm (in)

Item	Standard	Service limit
Connecting rod small end I.D.	17.005–17.017 (0.6695–0.6700)	17.03 (0.6705)
Connecting rod big end side clearance	0.15–0.55 (0.006–0.022)	0.60 (0.024)
radial clearance	0.007–0.019 (0.0003–0.0007)	0.04 (0.002)
Crankshaft runout at A	———	0.15 (0.006)
at B	———	0.10 (0.004)



Kickstarter/Balancer

Kickstarter spindle O.D.	———	———
bushing I.D.	———	———
Kickstarter idle gear I.D.	———	———
bushing O.D.	———	———
Kickstarter driven gear I.D.	———	———
boss O.D.	———	———

Drive Train

Drive belt width	15.5 (0.61)	14.5 (0.57)
Movable drive face bushing I.D.	20.035–20.085 (0.7888–0.7907)	20.60 (0.811)
boss O.D.	20.010–20.025 (0.7878–0.7884)	19.97 (0.786)
weight roller O.D.	15.92–16.08 (0.627–0.633)	15.40 (0.606)
Clutch lining thickness	4.5 (0.18)	2.0 (0.08)
Engine brake clutch lining thickness	———	———
I.D.	———	———
Drive chain slack	———	———
Driven face spring free length	98.1 (3.86)	92.8 (3.65)
Driven face O.D.	33.965–33.985 (1.3372–1.3380)	33.94 (1.336)
Movable driven face I.D.	34.000–34.025 (1.3386–1.3397)	34.06 (1.341)
Final reduction gear case oil capacity at disassembly	90 cc (3.04 US oz, 3.16 Imp oz)	———
at draining	———	———
Clutch outer I.D.	107.0–107.2 (4.21–4.22)	107.5 (4.23)

Cooling System

Coolant capacity (Radiator and engine)	———	———
(Reserve tank)	———	———
Radiator cap relief pressure	———	———
Thermostat begin to open	———	———
Thermostat fully open	———	———
Thermostat valve lift	———	———

Unit: mm (in)

Wheels/Tires

Item	Standard	Service limit
Cold tire pressure (Front)	125 kPa (1.25 kg/cm², 18 psi)	———
(Rear)	200 kPa (2.00 kg/cm², 29 psi)	———
Front and rear axle runout	———	0.2 (0.008)
Front and rear wheel rim runout (Radial)	———	2.0 (0.08)
(Axial)	———	2.0 (0.08)
Drive chain slack	———	———
Drive chain size/link (DID)	———	———
(RK)	———	———

Front Suspension

Fork spring free length	133.5 (5.26)	129.5 (5.10)
Fork spring free length A	———	———
B	———	———
Fork spring direction	Tightly wound coil facing up	———
Fork tube runout	———	———
Recommended fork oil	———	———
Fork oil level	———	———
Fork oil level (Right)	———	———
(Left)	———	———
Fork oil capacity	———	———
Fork oil capacity (Right)	———	———
(Left)	———	———
Fork air pressure	———	———
Steering bearing preload	———	———

Rear Suspension

Shock absorber spring free length	———	———
Shock absorber spring free length A	———	———
B	———	———
Shock absorber spring direction	———	———
Damper drilling point	———	———

Brakes

Front brake fluid	———	———
brake lever free play	10–20 (0.4–0.8)	———
brake disc thickness	———	———
brake disc runout	———	———
master cylinder I.D.	———	———
master piston O.D.	———	———
caliper cylinder I.D.	———	———
caliper piston O.D.	———	———
brake drum I.D.	95.0 (3.74)	95.5 (3.76)
brake lining thickness	3.0 (0.12)	1.0 (0.04)
Rear brake fluid	———	———
brake lever free play	10–20 (0.4–0.8)	———
brake pedal free play	———	———
brake disc thickness	———	———
brake disc runout	———	———
master cylinder I.D.	———	———
master piston O.D.	———	———
caliper cylinder I.D.	———	———
caliper piston O.D.	———	———
brake drum I.D.	95.0 (3.74)	95.5 (3.76)
brake lining thickness	3.0 (0.12)	1.0 (0.04)

Unit: mm (in)

Battery/Charging System

Item	Standard	Service limit
Alternator charging coil resistance (at 20°C/68°F)	0.4–1.0 Ω (between W and ground)	———
lighting coil resistance (at 20°/68°F)	0.2–0.8 Ω (between Y and ground)	
Regulator/rectifier regulated voltage (Charging)	14.0–15.0 V/5,000 min^{-1} (rpm)	———
(Lighting)	12.6–13.6 V/5,000 min^{-1} (rpm)	———
Battery capacity	12 V 3 Ah	———
Battery specific gravity (Fully charged)	———	———
(Needs charging)	———	———
Battery charging rate (Normal)	0.4 A x 5 h	———
(Quick)	4 A x 0.5 h	———
Battery voltage (Fully charged, at 20°/68°F)	13.0–13.2 V	———
(Needs charging, at 20°/68°F)	12.3 V	———
Auto bystarter resistor resistance (6.7 Ω 5 W)	4.7–5.3 Ω	———

Ignition System

Spark plug (Standard)	BR6HSA (NGK)	———
	W20FR-L (NIPPONDENSO)	———
(For cold climate/below 5°C/41°F)	BR4HSA (NGK)	———
	W14FR-L (NIPPONDENSO)	———
(For extended high speed riding)	BR8HSA (NGK)	———
	W24FR-L (NIPPONDENSO)	———
Spark plug gap	0.6–0.7 (0.024–0.028)	———
Ignition timing "F" mark	17° BTDC/1,800 min^{-1} (rpm)	———
Peak voltage Ignition coil	100 V minimum	———
Exciter coil	100 V minimum	———
Pulse generator coil	0.7 V minimum	———
Alternator exciter coil resistance (at 20°C/68°F)	400–800 Ω	———
Ignition coil resistance (at 20°C/68°F)		
Primary	0.1–0.4 Ω	———
Secondary with plug cap	6.5–9.7 kΩ	———
Secondary without plug cap	2.7–3.5 kΩ	———
Pulse generator resistance (at 20°C/68°F)	50–200Ω	———

Lights/Meters/Switches

Fuse		10 A	———
Headlight (high/low beam)	U type	12 V 35/35 W	———
	CM type	12 V 25/25 W	———
Brake/taillight	U type	12 V 21/5 W	———
	CM type	12 V 32/3 cp	———
Front turn signal light	U type	12 V 21 W x 2	———
	CM type	12 V 21 cp x 2	———
Rear turn signal light	U type	12 V 21 W x 2	———
	CM type	12 V 32 cp x 2	———
Instrument light		12 V 1.7 W x 2	———
High beam indicator		12 V 1.7 W	———
Turn signal indicator		12 V 3.4 W	———
Fuel level sensor resistance (at full position)			
between G and Y/W		25–45 Ω	———
between G and Bu/W		400–700 Ω	———
between Y/W and Bu/W		450–750 Ω	———
(at empty position)			
between G and Y/W		400–700 Ω	———
between G and Bu/W		25–45 Ω	———
between Y/W and Bu/W		450–750 Ω	———

Torque Values

Standard

Fastener Type	Torque N·m (kg-m, ft-lb)	Fastener Type	Torque N·m (kg-m, ft-lb)
5 mm bolt and nut	5 (0.5, 3.5)	5 mm screw	4 (0.4, 2.9)
6 mm bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.5)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head)	9 (0.9, 6.5)
10 mm bolt and nut	35 (3.5, 25)	6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
12 mm bolt and nut	55 (5.5, 40)	8 mm flange bolt and nut	27 (2.7, 20)
		10 mm flange bolt and nut	40 (4.0, 29)

• Torque specifications listed below are for important fasteners.
Others should be tightened to standard torque values listed above.

Engine

Item	Q'ty	Thread dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Lubrication system:				
Oil pump mounting bolt	1	6	10 (1.0, 7)	
Fuel system:				
Carburetor mounting bolt	2	6	10 (1.0, 7)	
Left shroud mounting bolt	2	6	10 (1.0, 7)	
Intake manifold mounting bolt	4	6	10 (1.0, 7)	
Air cleaner case mounting bolt	2	6	12 (1.2, 9)	
Cylinder head/cylinder/piston:				
Cylinder head bolt	4	6	10 (1.0, 7)	Apply oil to the threads and flange surface.
Spark plug	1	14	14 (1.4, 10)	
Kickstarter/drive pulley/clutch/ driven pulley:				
Left crankcase rear cover bolt	5	6	10 (1.0, 7)	
Left crankcase front cover bolt	5	6	10 (1.0, 7)	
Drive pulley nut	1	12	60 (6.0, 43)	Apply oil to the threads and seating surface.
Clutch outer nut	1	10	40 (4.0, 29)	
Movable drive face seal bolt	3	4	4.5 (0.45, 3.3)	
Clutch drive plate nut	1	28	55 (5.5, 40)	
Final reduction:				
Transmission cover bolt	5	6	10 (1.0, 7)	
Transmission oil level check bolt	1	8	13 (1.3, 9)	
Crankcase/crankshaft:				
Crankcase bolt	6	6	10 (1.0, 7)	
Charging system/alternator:				
Cooling fan cover bolt	2	6	10 (1.0, 7)	
Cooling fan bolt	4	6	8 (0.8, 5.8)	
Flywheel nut	1	10	40 (4.0, 29)	
Stator bolt	2	6	10 (1.0, 7)	
Pulse generator bolt	2	6	10 (1.0, 7)	
Electric starter:				
Starter motor mounting bolt	2	6	10 (1.0, 7)	

Frame

Item	Q'ty	Thread dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Exhaust system:				
Exhaust pipe joint nut	2	6	12 (1.2, 9)	
Muffler mounting bolt	2	8	27 (2.7, 20)	
Exhaust pipe protector bolt	2	6	12 (1.2, 9)	
Engine mount:				
Engine mounting bolt	1	10	50 (5.0, 36)	
Engine mounting bracket bolt	1	10	60 (6.0, 43)	
Front wheel/suspension/ steering/brake:				
Speedometer cable set screw	1	4	2 (0.2, 1.4)	
Front axle nut	1	10	45 (4.5, 33)	
Front brake arm bolt	1	5	6 (0.6, 4.3)	
Fork pinch bolt	4	8	27 (2.7, 20)	
Handlebar pinch bolt	1	10	50 (5.0, 36)	
Steering stem lock nut	1	25.4	70 (7.0, 51)	
Rear wheel/suspension/brake:				
Rear axle nut	1	14	120 (12.0, 87)	Apply oil to the threads and seating surface.
Rear brake arm bolt	1	5	6 (0.6, 4.5)	
Shock absorber upper mounting bolt	1	10	40 (4.0, 29)	
Shock absorber lower mounting bolt	1	8	27 (2.7, 20)	

Tools

• Refer to "Ball bearing replacement" in section 1 of the Common Service Manual.

Description	Tool Number	Application	Section
Float level gauge	07401–0010000	Carburetor float level inspection	5
Clutch center holder	07724–0050001	Drive pulley face removal/installation	8
Universal holder	07725–0030000	Clutch outer removal/installation	
Clutch spring compressor	07960–KM10000	Clutch/driven pulley disassembly/assembly	
Lock nut wrench, 39 x 41 mm	07GMA–KS40100		
Bearing driver	07945–GC80000	Driven face outer bearing installation	
Crankcase assembly collar	07965–GM00100	Driveshaft installation	9
Crankcase assembly shaft	07965–GM00300		
Shaft protector	07931–1870000	Driveshaft removal	
Case puller	07935–GK80000	Crankcase separation	10
Case/driven gear puller	07935–KG80000	Crankshaft removal	
Universal bearing puller	07631–0010000	Crankshaft bearing removal	
Shaft protector	07931–1870000	Crankcase separation, crankshaft removal	
Crankcase assembly collar	07965–GM00100	Crankshaft installation	
Crankcase assembly shaft	07965–1660200		
Crankcase assembly collar	07965–GM00100	Crankcase assembly	
Crankcase assembly shaft	07965–GM00300		
Lock nut wrench A	07916–KM10000	Steering stem lock nut removal/installation	11
Lock nut wrench B	07916–1870100		
Ball race remover	07946–GA70000	Steering head ball race removal	
Driver	07749–0010000	Steering head ball race installation	
Attachment, 42 x 47 mm	07746–0010300		
Snap ring pliers	07914–3230001	Fork disassembly/Assembly	
Universal holder	07725–0030000	Flywheel removal/installation	13
Flywheel puller	07733–0010000	Flywheel removal	

Tools

• Refer to "Ball bearing replacement" in section 1 of the Common Service Manual.

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Case puller	07935–GK80000	Crankcase separation	10
Case/driven gear puller	07935–KG80000	Crankshaft removal	
Universal bearing puller	07631–0010000	Crankshaft bearing removal	
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Crankcase assembly collar	07965–GM00100	Crankshaft installation	
Crankcase assembly shaft	07965–1660200		
Crankcase assembly collar	07965–GM00100	Crankcase assembly	
Crankcase assembly shaft	07965–GM00300		
Lock nut wrench A	07916–KM10000	Steering stem lock nut removal/installation	11
Lock nut wrench B	07916–1870100		
Ball race remover	07946–GA70000	Steering head ball race removal	
Driver	07749–0010000	Steering head ball race installation	
Attachment, 42 x 47 mm	07746–0010300		
Snap ring pliers	07914–3230001	Fork disassembly/Assembly	
Universal holder	07725–0030000	Flywheel removal/installation	13
Flywheel puller	07733–0010000	Flywheel removal	

Lubrication & Seal Points

Engine

Location	Material	Remarks
Crankcase mating surfaces	Liquid sealant	
Oil pump O-ring Oil pump shaft bearing Cylinder Piston Piston pin Connecting rod small end bearing Crankshaft oil seals Crankshaft 12 mm threaded portion	Honda 2-stroke engine oil	
Crankshaft bearings	Muntipurpose grease	
Oil pump gear	Molybdenum disulfide grease	
Driven face Kickstarter driven gear Kickstarter spindle bearing Starter pinion bearing	Lithium based grease —MITSUBISHI: HD-3 —NIPPON SEKIYU: LIPANOX DELUX 3 —IDEMITSU: AUTOLEX B	Pack 5.0—5.5 g (0.18—0.19 oz) of grease to the inside.
Transmission (final reduction) case	Hypoid gear oil #90	90 cc (3.04 US oz, 3.16 Imp oz)
Transmission (final reduction) oil seal Cylinder head bolts	4-stroke engine oil	

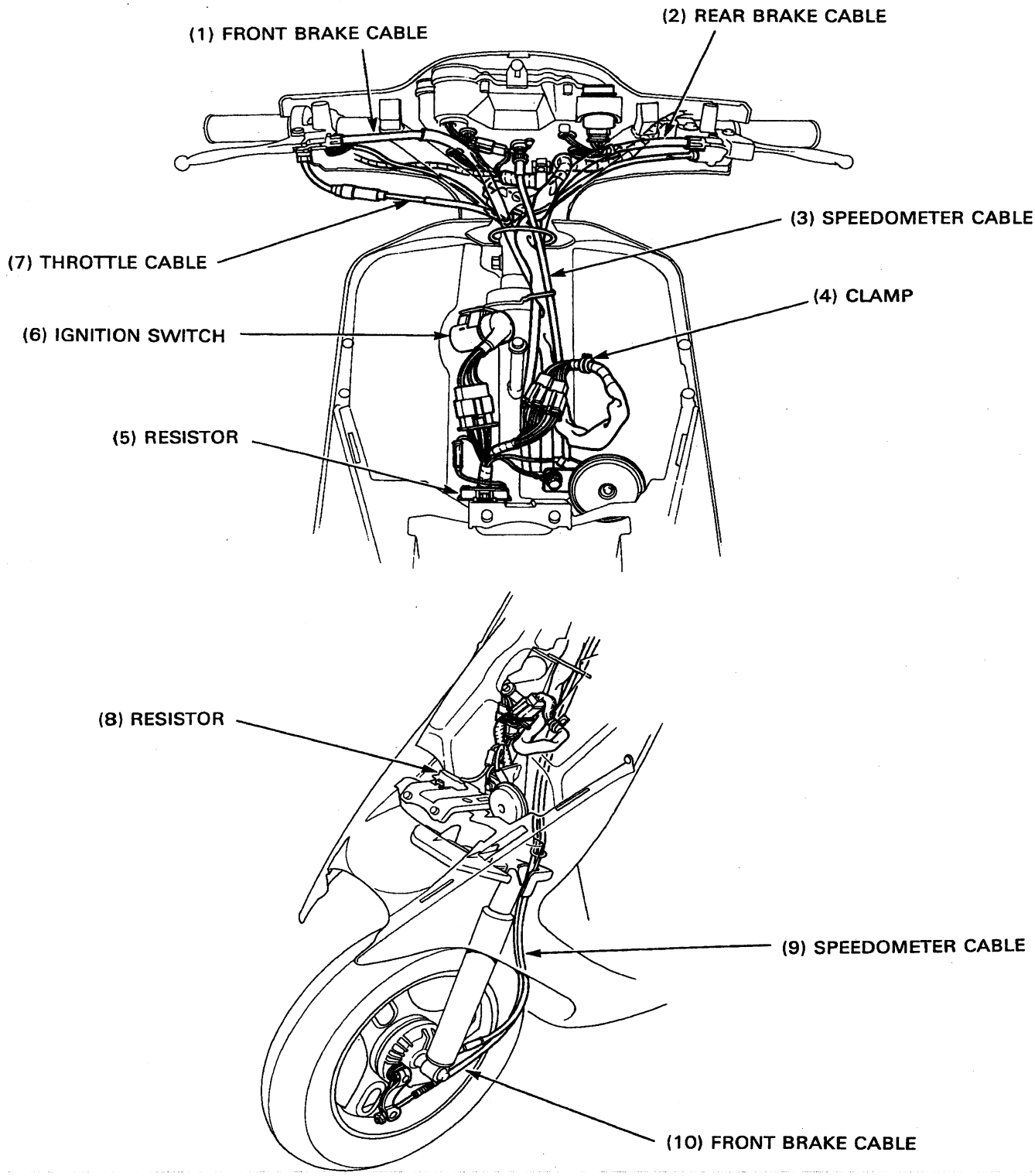
Frame

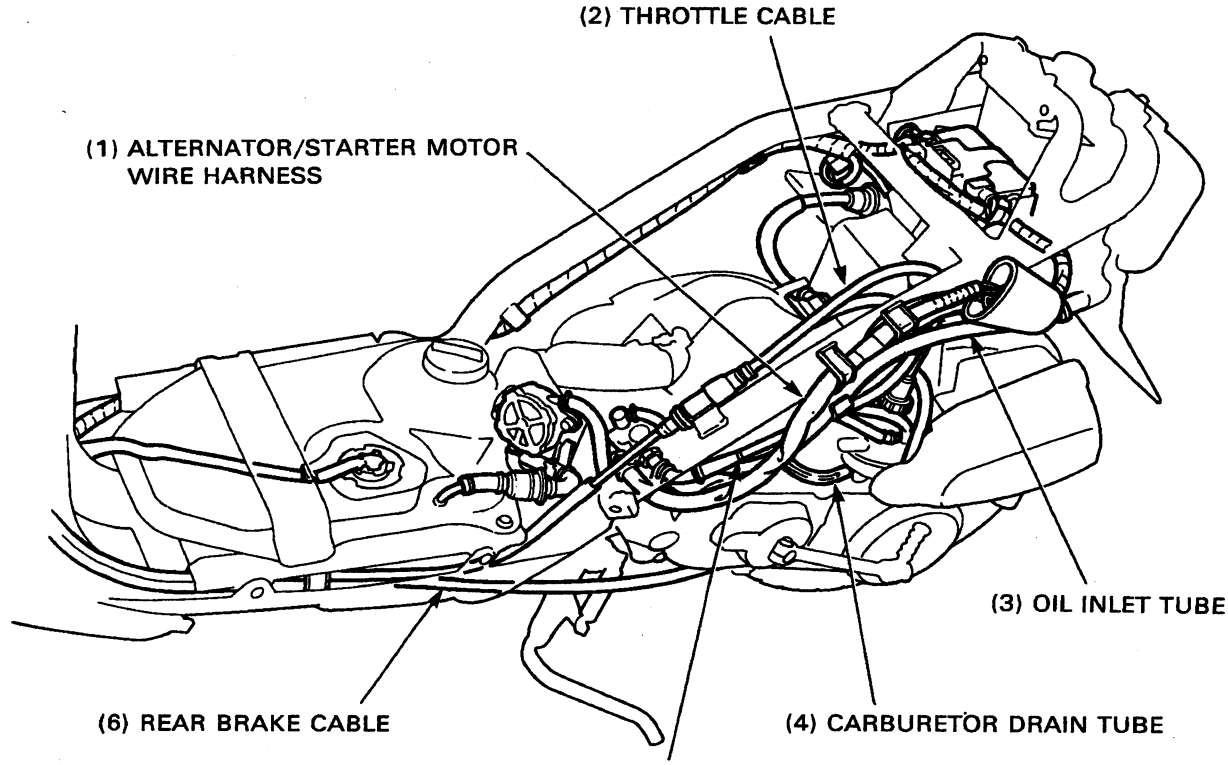
Location	Material	Remarks
Front wheel dust seal lip Fork Fork dust seal lip Fork tube bushing sliding surface Rebound spring Fork spring tightly wound coils Front brake cam Front brake panel anchor pin Front brake panel oil seal lip Rear brake cam Rear brake anchor pin Steering stem bearings Steering stem bearing races Speedometer cable Seat lock pivot Center stand pivot Speedometer gear Speedometer pinion	Multipurpose grease	Pack 1.5—2 g (0.05—0.07 oz) of grease between the bottom case and fork tube (page 11-9).
Inside of the front brake cable boot Inside of the rear brake cable boot	Silicone grease	

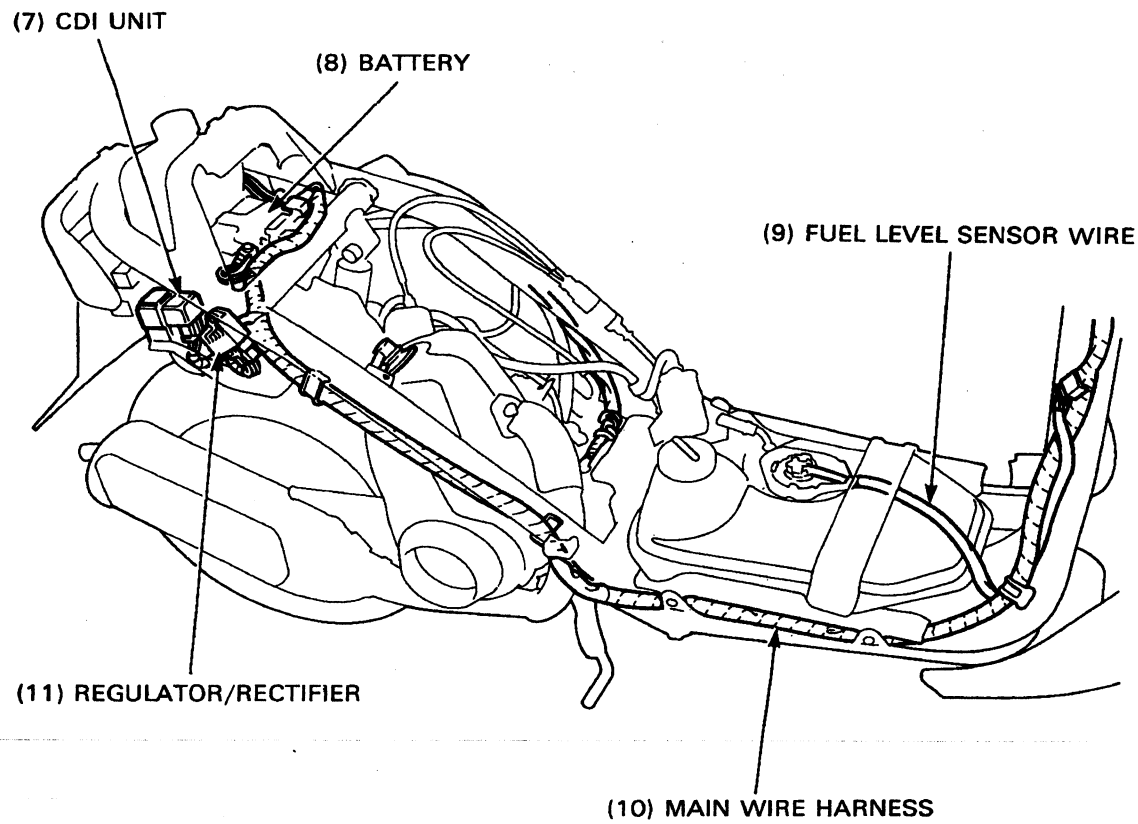
Frame

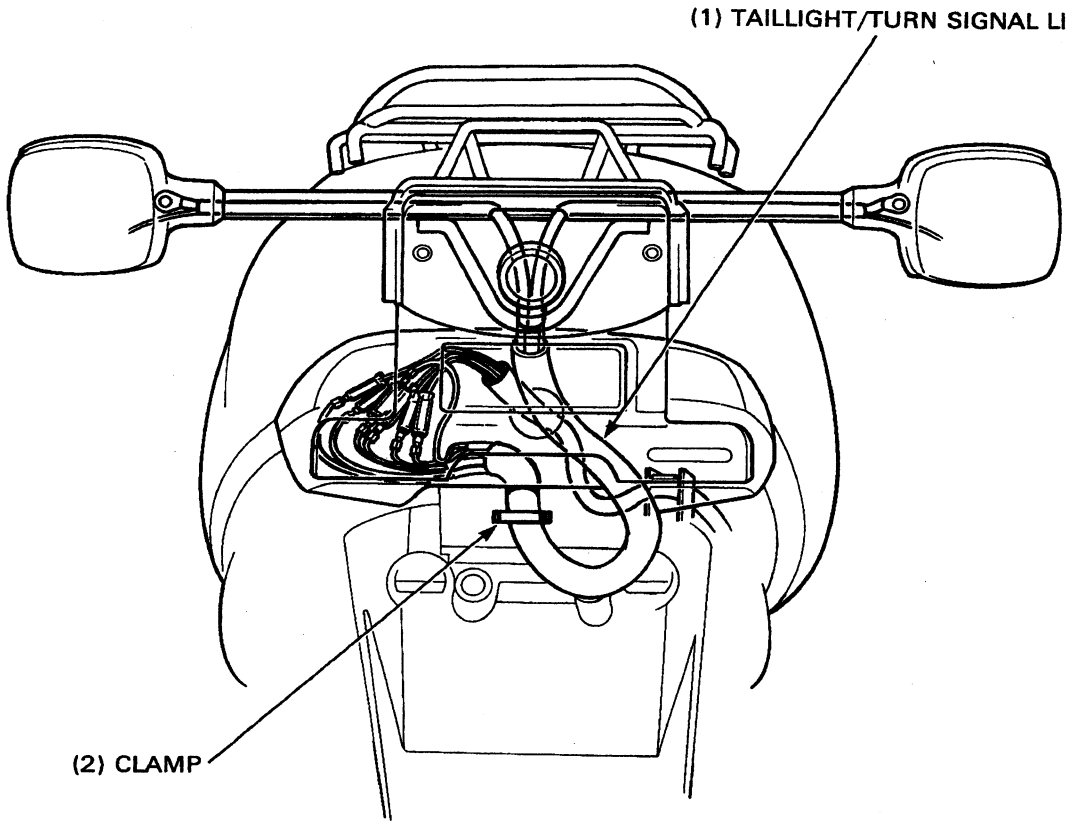
Location	Material	Remarks
Brake cam felt seals Brake cables	Engine oil	
Inside surface of handle grip	Honda Bond A or equivalent	
Air cleaner connecting tube-to-case joint	Semedain #540	
Air cleaner element Engine oil tank	Honda 2-stroke engine oil	

Cable & Harness Routing




(2) THROTTLE CABLE
(1) ALTERNATOR/STARTER MOTOR WIRE HARNESS
(3) OIL INLET TUBE
(6) REAR BRAKE CABLE
(4) CARBURETOR DRAIN TUBE
(5) OIL PUMP CONTROL CABLE


(7) CDI UNIT
(8) BATTERY
(9) FUEL LEVEL SENSOR WIRE
(11) REGULATOR/RECTIFIER
(10) MAIN WIRE HARNESS


(1) TAILLIGHT/TURN SIGNAL LIGHT WIRE
(2) CLAMP

2. Frame/Body Panels/Exhaust System

Service Information

⚠ WARNING

- **Gasoline is extremely flammable and explosive under certain conditions.**
- **Serious burns may result if the exhaust system is not allowed to cool before components are removed or serviced.**

- Work in a well ventilated area. Smoking or allowing flames or sparks in the working area or where gasoline is stored can cause a fire or explosion.
- This section covers removal and installation of the frame covers, fuel tank and exhaust system. Frame cover installation is in the reverse order of removal, unless noted otherwise.
- When romoving the cover, be careful not to damage any tab or groove of a cover.
- Always inspect the exhaust system for leaks after installation.

Troubleshooting

Excessive exhaust noise
- Broken exhaust system
- Exhaust gas leak

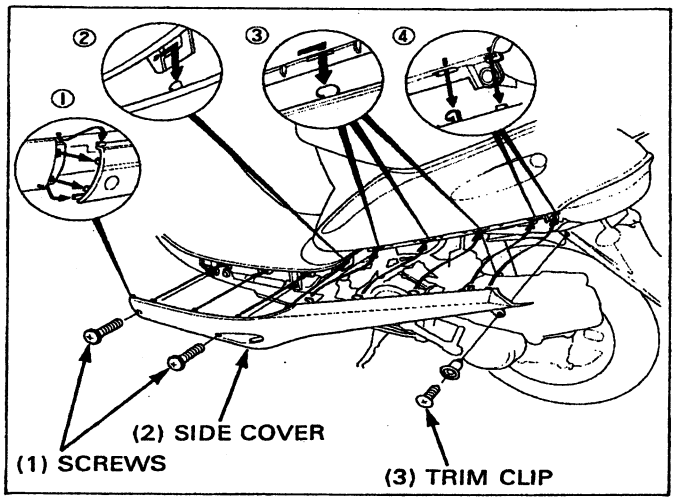
Poor performance
- Deformed exhaust system
- Exhaust gas leak
- Clogged muffler

Side Cover

Remove the trim clip and two screws.
①Release the front tabs of the cover from the front fender while sliding the cover rearward.
②Push the cover rearward and release the four front tabs outward.
③Push the cover rearward and release the three tabs from the frame body cover downward.
④Release the two rear tabs while pulling down the rear of the cover.

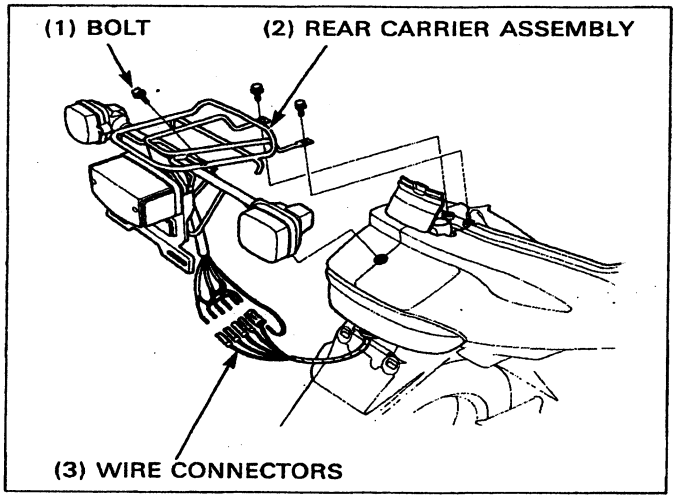
NOTE

Attach the rear of the front fender with the side cover front screw.

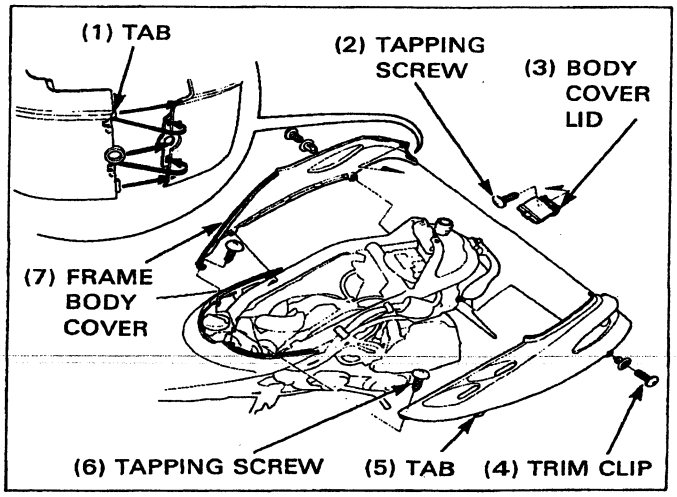


Frame Body Cover

Remove the luggage box (page 2-4).
Disconnect the turn signal light and taillight wire connectors.
Remove the three bolts and the rear carrier assembly.



Remove the side covers.
Remove the center cover (page 2-4).
Remove the two tapping screws and two trim clips.
①Release the front tabs upward.
②Remove the frame body cover rearward.
③Remove the two tapping screws and the body cover lid.
④Pull the left frame body cover back to release the two tabs and separate the left and right frame body covers.

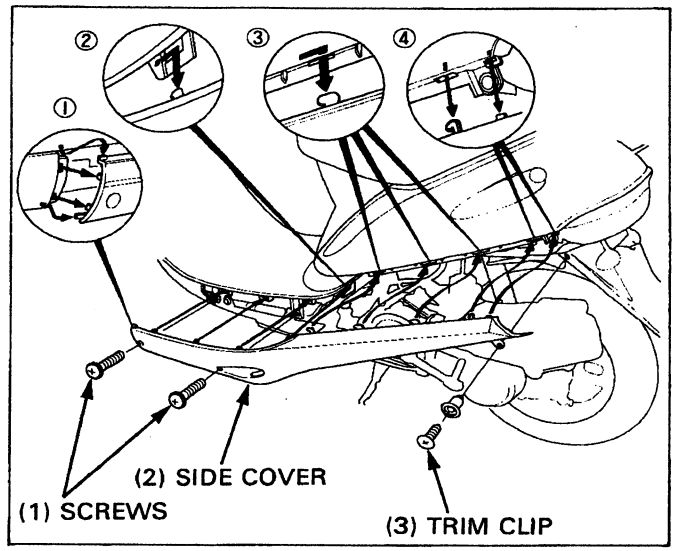


Side Cover

Remove the trim clip and two screws.
①Release the front tabs of the cover from the front fender while sliding the cover rearward.
②Push the cover rearward and release the four front tabs outward.
③Push the cover rearward and release the three tabs from the frame body cover downward.
④Release the two rear tabs while pulling down the rear of the cover.

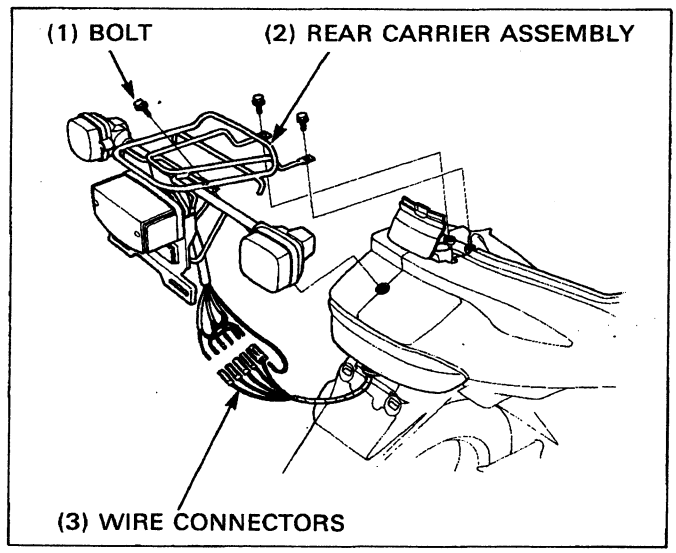
NOTE

Attach the rear of the front fender with the side cover front screw.

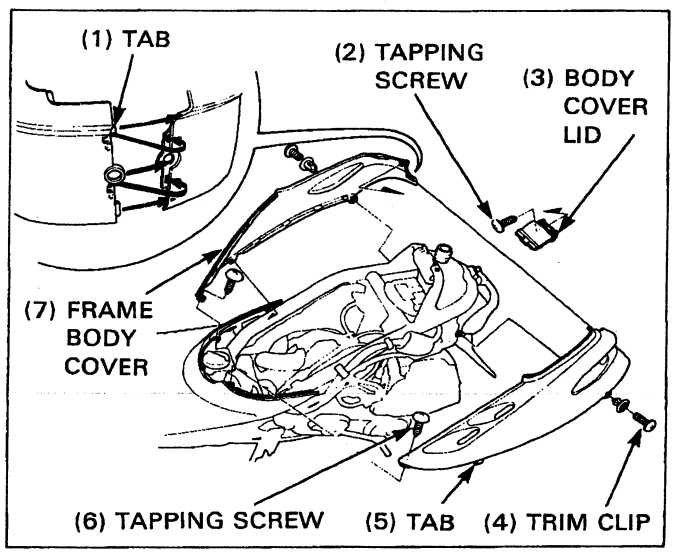


Frame Body Cover

Remove the luggage box (page 2-4).
Disconnect the turn signal light and taillight wire connectors.
Remove the three bolts and the rear carrier assembly.



Remove the side covers.
Remove the center cover (page 2-4).
Remove the two tapping screws and two trim clips.
①Release the front tabs upward.
②Remove the frame body cover rearward.
③Remove the two tapping screws and the body cover lid.
④Pull the left frame body cover back to release the two tabs and separate the left and right frame body covers.



Luggage Box

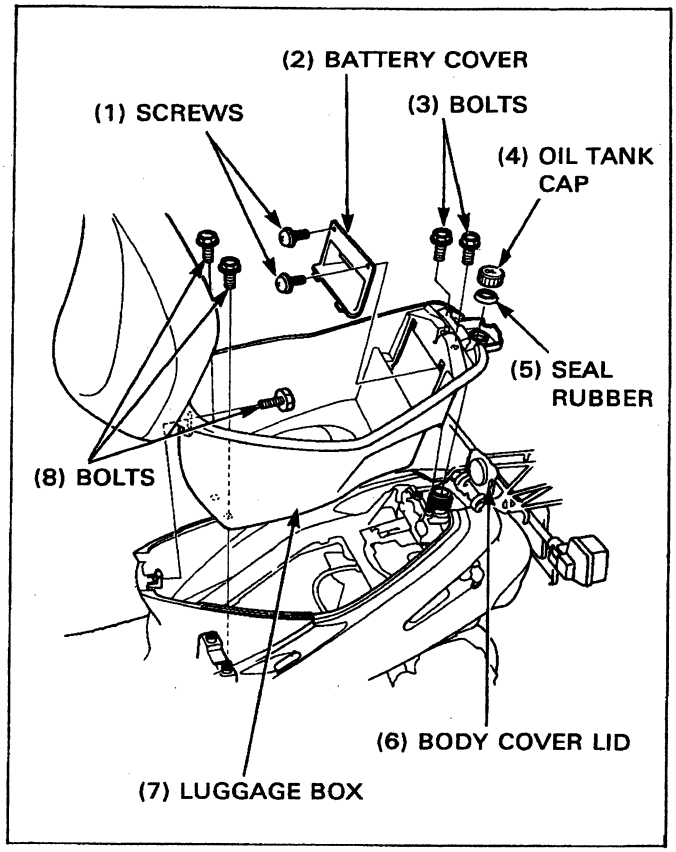
NOTE

- The luggage box can be removed together with the seat.

Open the seat.
Remove the two screws and the battery cover.
Open the body cover lid.
Remove the oil tank cap and seal rubber.
Remove the five bolt and the luggage box.

NOTE

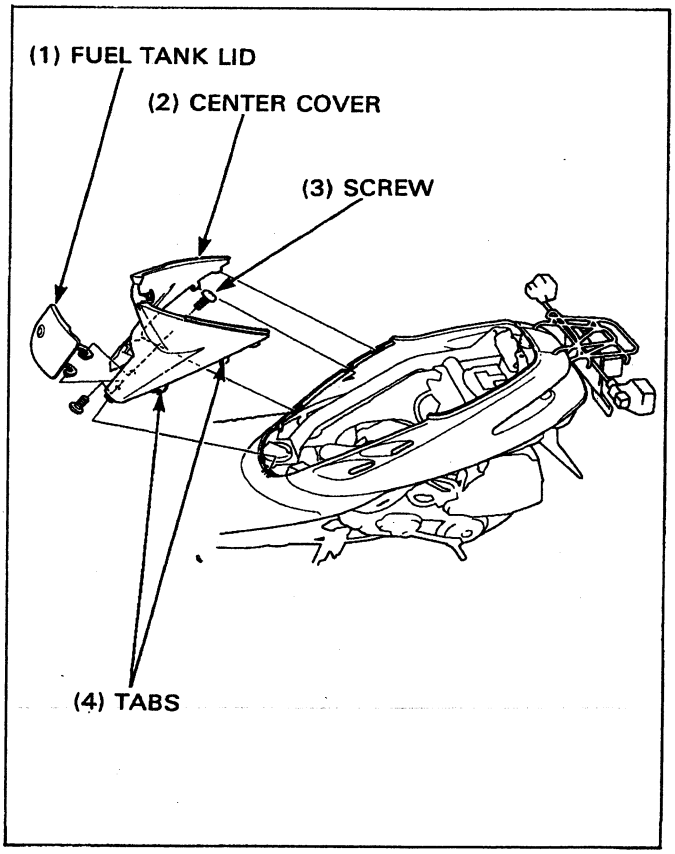
- After removing the luggage box, install the seal rubber and oil tank cap to prevent dirt and dust from entering the oil tank.



Center Cover

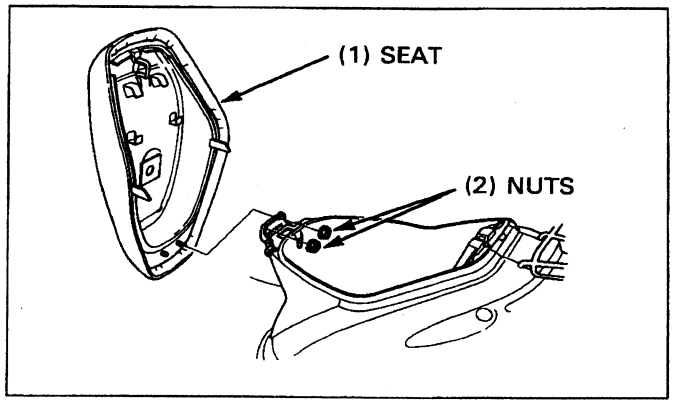
Remove the luggage box.
Slide the center cover upward to release the two tabs from the frame body cover and remove the center cover.

Open the fuel tank lid.
Remove the two screws and the fuel tank lid.



Seat

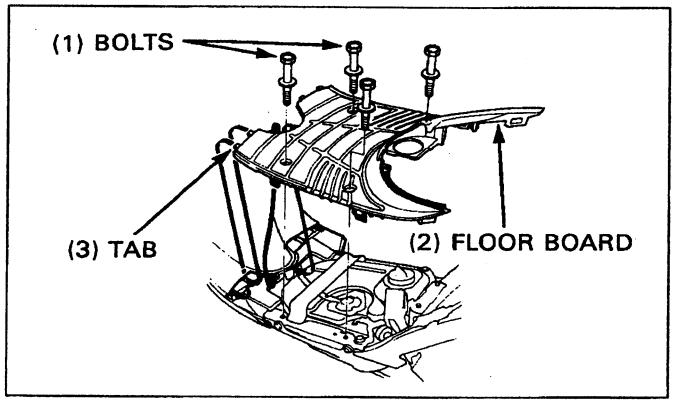
Open the seat.
Remove the two nuts and the seat.



Floor Board

Remove the frame body cover (page 2-3).

Remove the four bolts.
Raise the rear of the floor board slightly, pull the floor board rearward to release the tabs and remove it.

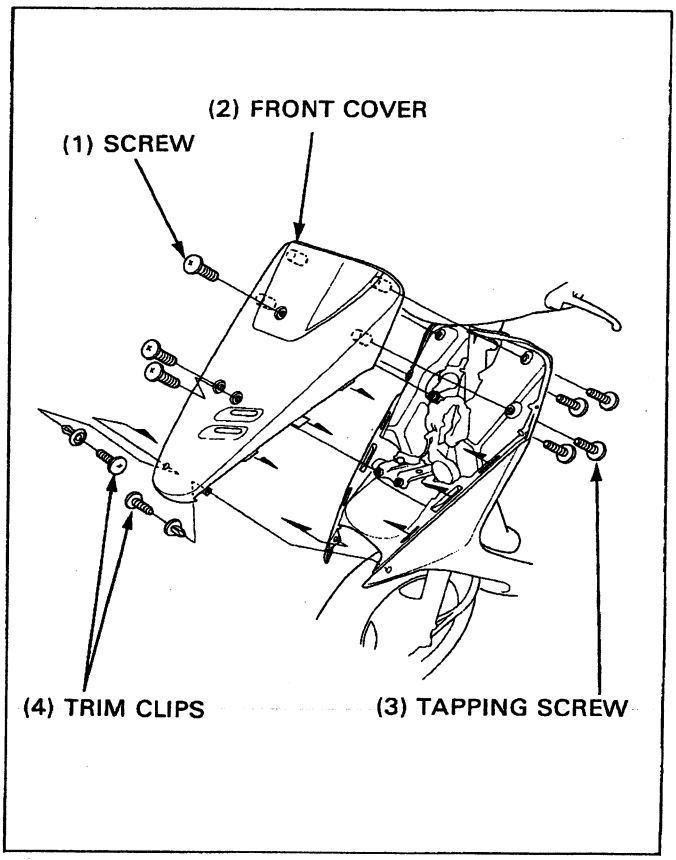


Front Cover

Remove the four tapping screws.
Remove the two trim clips.
Remove the three screws.
Release the tabs while pushing both sides of the cover inward and the remove cover.

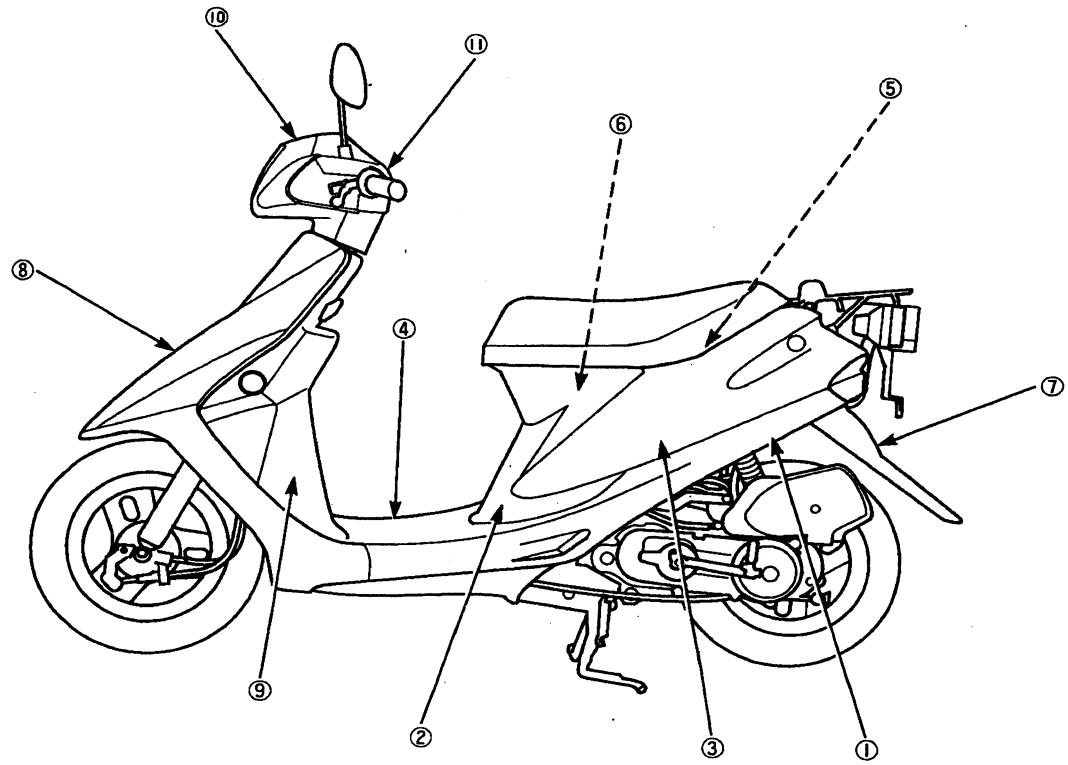
NOTE

- When installing, make sure that the tabs are aligned with the slots properly before tightening the screws.



Frame Cover Removal/Installation

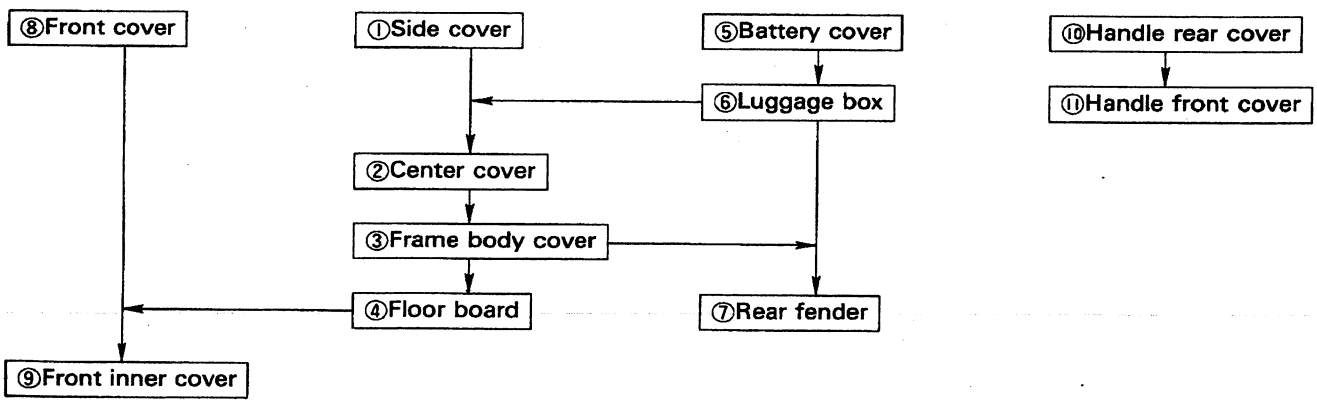
Frame Cover Locations



①Side cover
②Center cover
③Frame body cover
④Floor board
⑤Battery cover
⑥Luggage box
⑦Rear Fender
⑧Front cover
⑨Front inner cover
⑩Handle front cover
⑪Handle rear cover

Frame Cover Removal Chart

• This chart shows removal order of frame covers by means of arrow.



Front Inner Cover

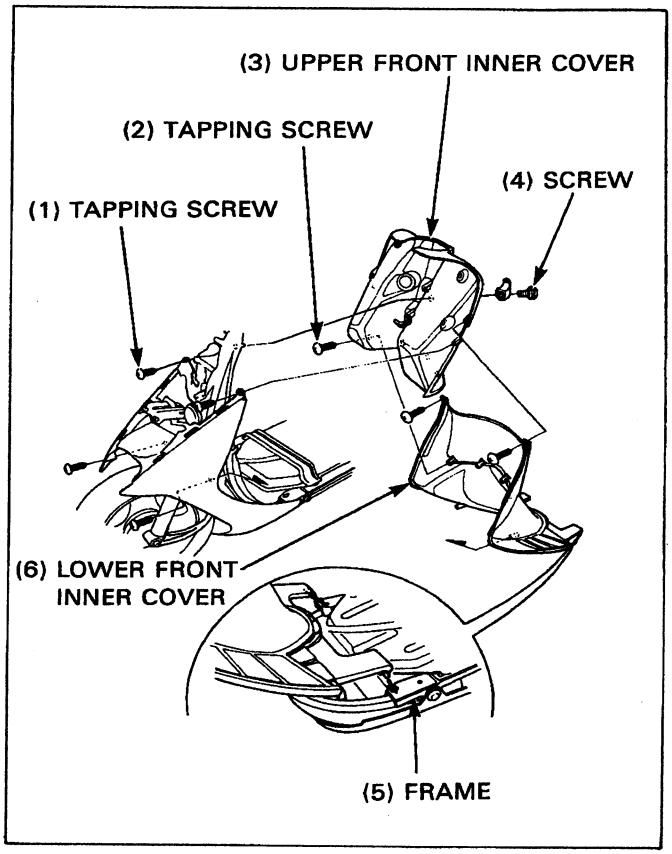
Remove the floor board (page 2-5).
Remove the front cover (page 2-5).

Remove the four tapping screws attaching the inner cover to the front fender.
Remove the screw attaching the inner cover to the frame.
Pull the upper portion of the cover back out of the frame.
Slide the cover upward along the frame and remove it.

Remove the six tapping screws and separate the upper and lower inner covers.

NOTE

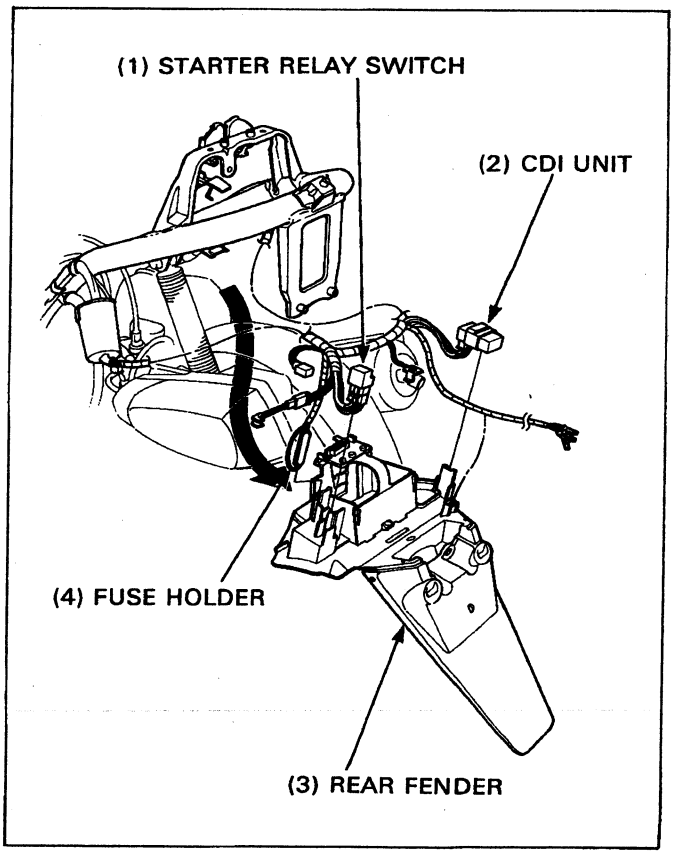
- When installing, align the bosses of the inner cover with the holes in the frame properly.



Rear Fender

Remove the oil tank (page 4-4).
Remove the ignition coil (page 14-6).

Remove the CDI unit, starter relay switch and fuse holder from the rear fender.
Remove the rear fender from the frame.

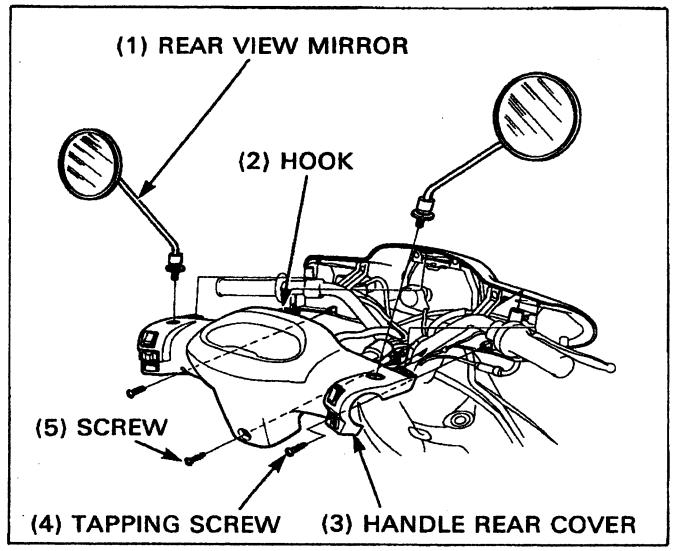


Handle Rear Cover

Remove the rearview mirrors.
Remove the two tapping screws and the screw.
Release the three hooks by pushing down the cover and sliding it rearward.
Remove the cover from the handlebar.

NOTE

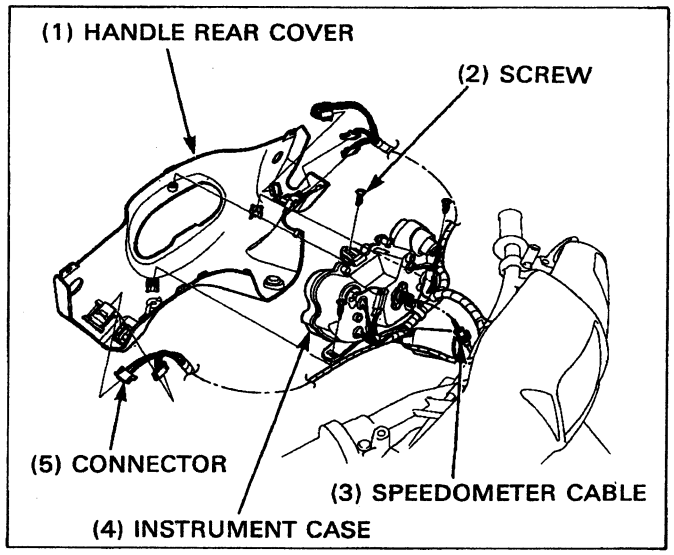
- When installing, be careful not to pinch the wires.



Disconnect the speedometer cable from the speedometer.
Disconnect the five connectors from the handlebar switches.
Remove the three screws and the cover from the instrument case.

NOTE

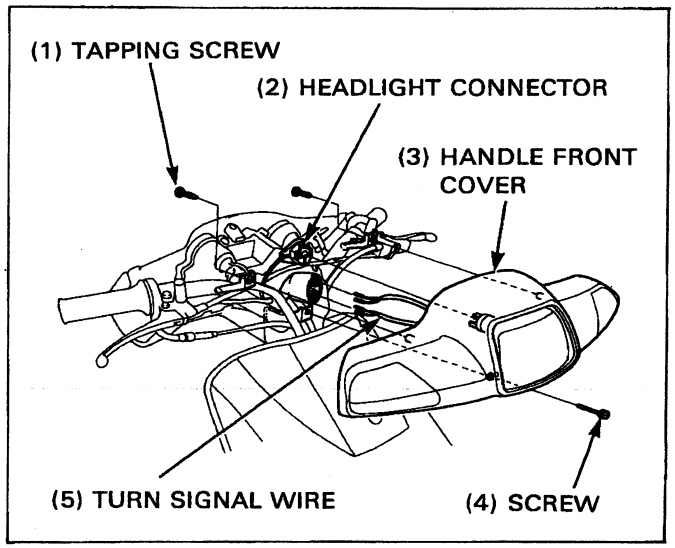
- It is not necessary to remove the handle rear cover from the instrument case to remove the handle front cover.



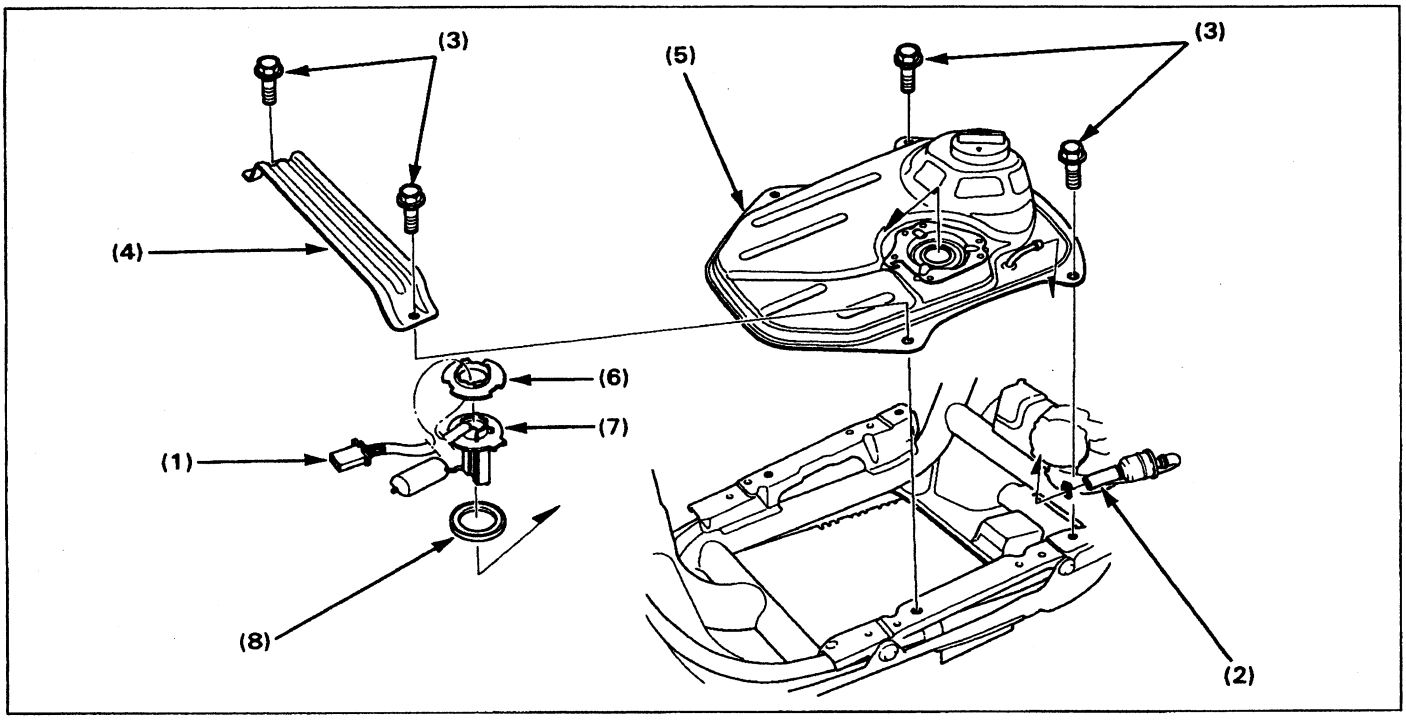
Handle Front Cover

Remove the handle rear cover from the handlebar.

Remove the two tapping screws and the screw.
Disconnect the headlight connector.
Disconnect the turn signal light wire connectors and remove the handle front cover.



Fuel Tank Removal/Installation



⚠ WARNING

• Gasoline is extremely flammable and is explosive under certain condition. KEEP OUT OF REACH OF CHILDREN.

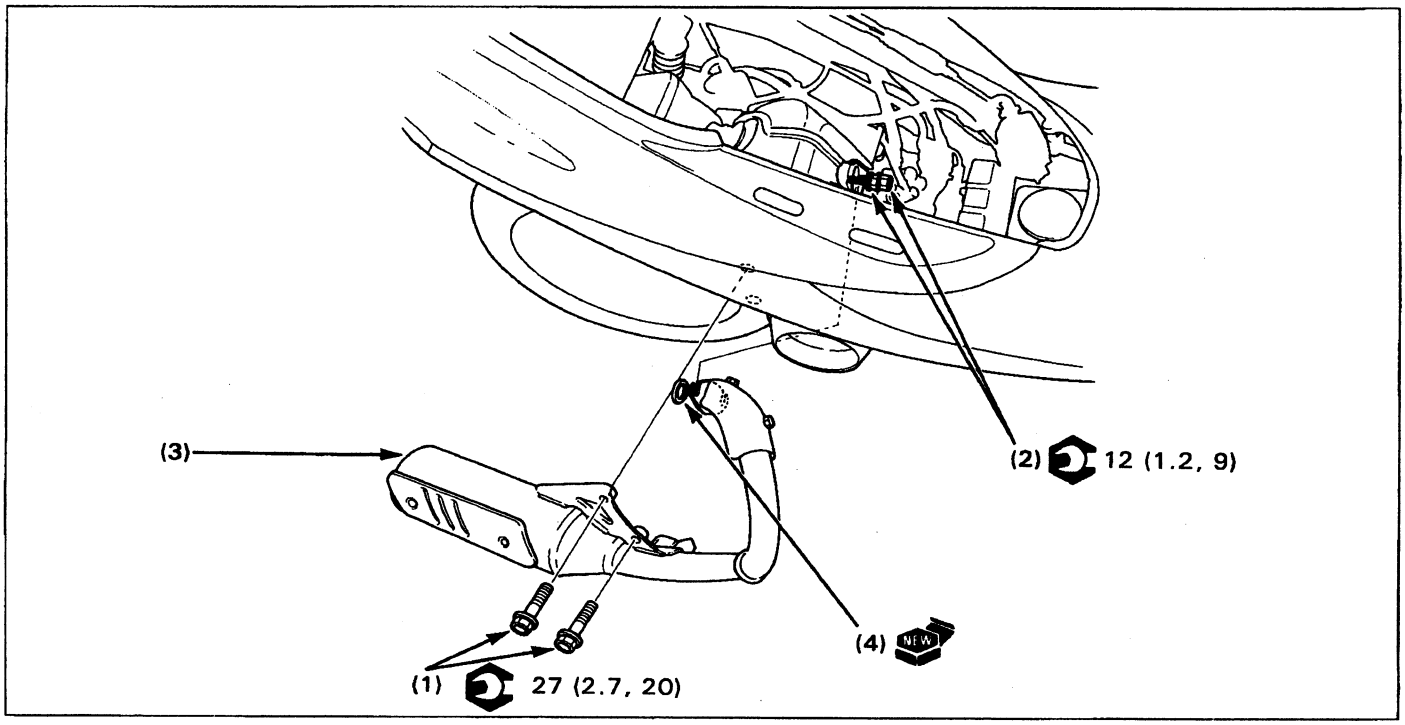
• Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where gasoline is stored can cause a fire or explosion.

Requisite Service

• Front inner cover removal/installation (page 2-6)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
	Fuel tank		
(1)	Fuel unit wire connector	1	
(2)	Fuel line	1	NOTE • Plug or clamp the fuel line to prevent gasoline from flowing out.
(3)	Fuel tank mounting bolt	4	
(4)	Floor plate	1	
(5)	Fuel tank	1	
	Fuel level sensor		
(6)	Retainer	1	
(7)	Fuel level sensor	1	
(8)	Seal rubber	1	

Muffler Removal/Installation



⚠ WARNING

• Serious burns may result if the exhaust system is not allowed to cool before components are removed or serviced.

Requisite Service

• Center cover removal/installation (page 2-4)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Muffler mounting bolt	2	
(2)	Exhaust pipe joint nut	2	Loosen.
(3)	Muffler	1	
(4)	Exhaust pipe gasket	1	

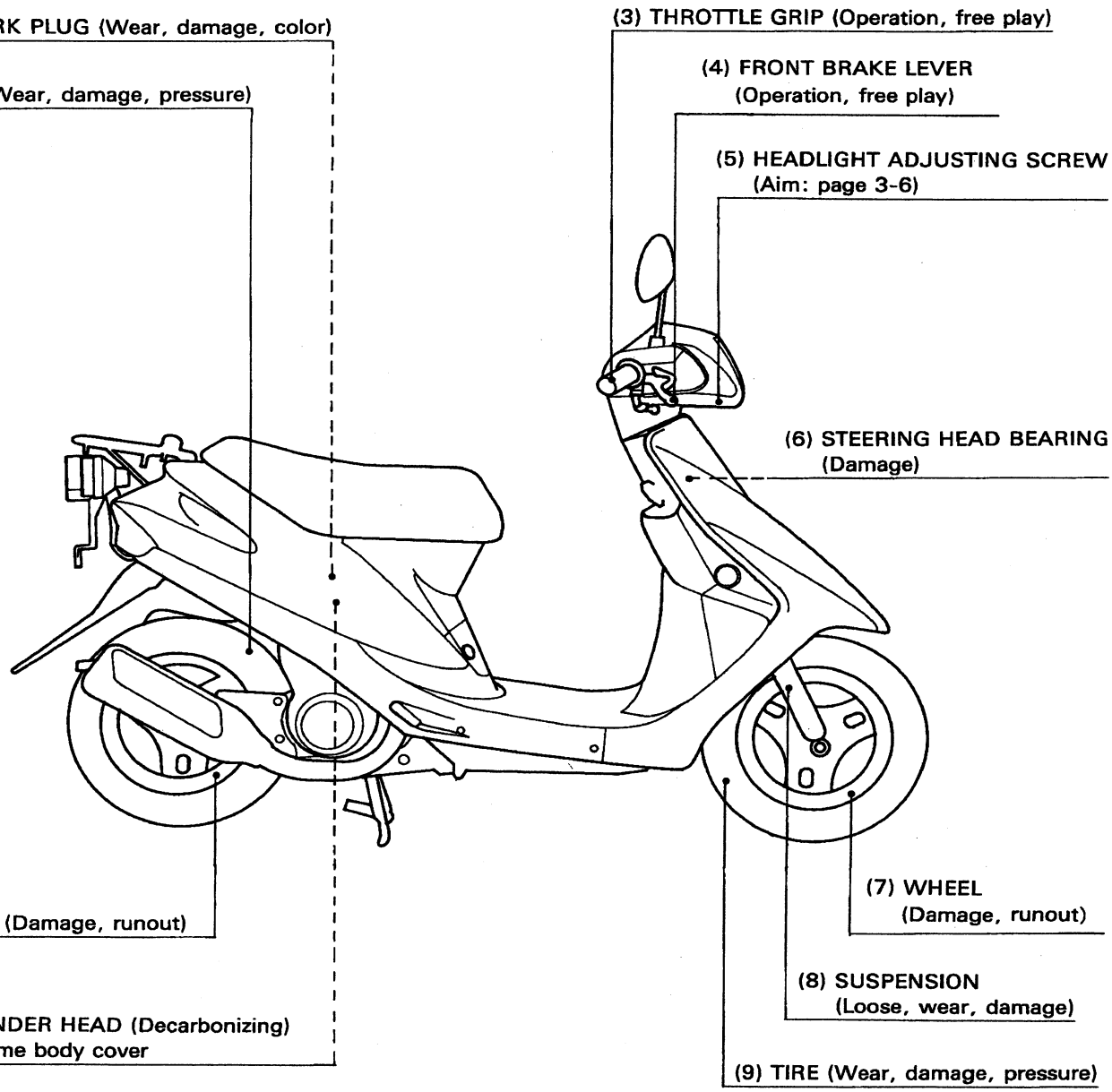
3. Maintenance

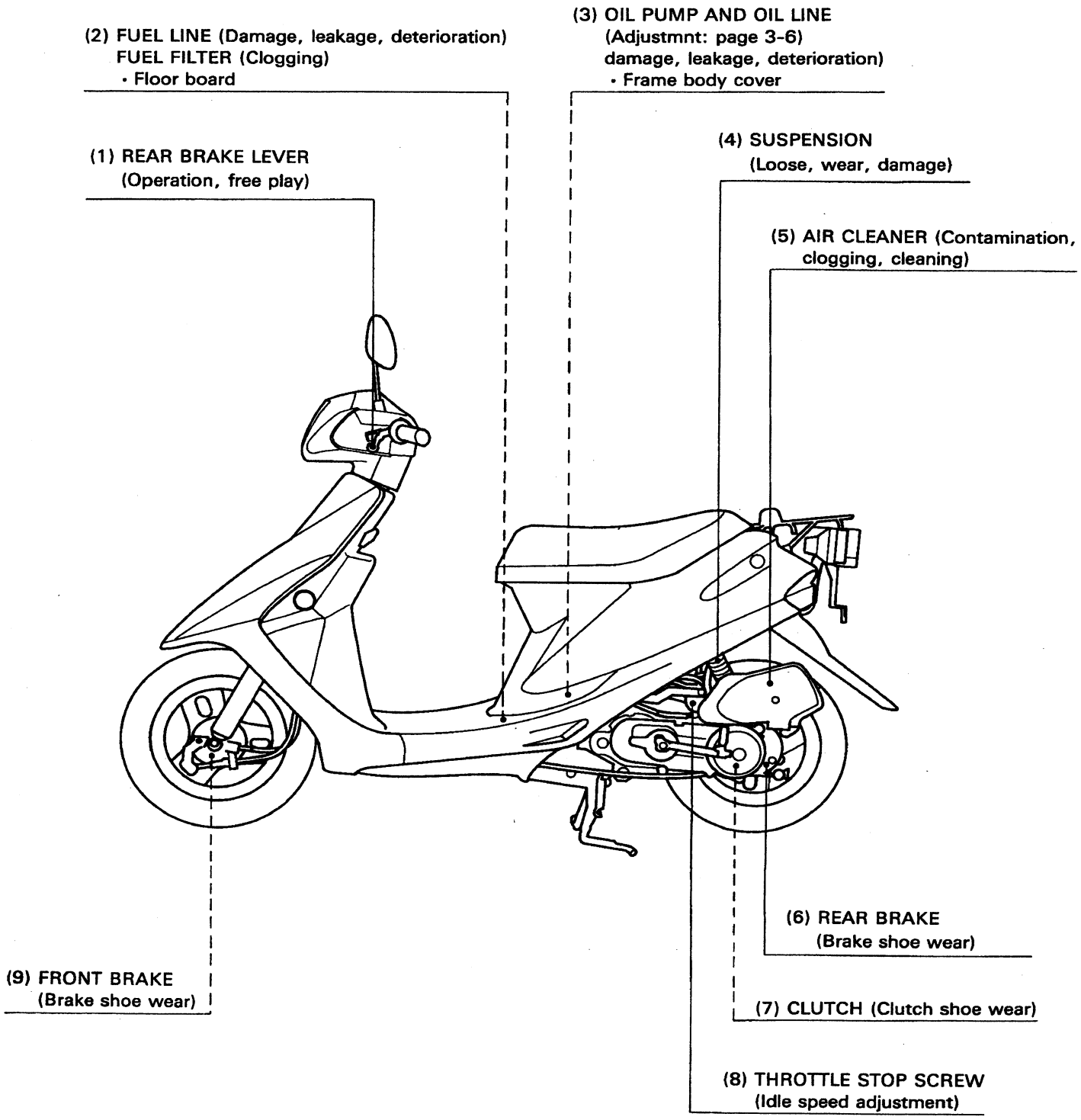
Service Information

- Refer to Common Service Manual for service procedures of items not included in this manual.
- Refer to Specifications (section 1) for maintenance service data.

Service Access Guide

- The following shows the locations of the parts that must be removed for the maintenance items listed below. Refer to the Common Service Manual for items not included in this manual.
- Refer to section 2 (frame/Body Panels/Exhaust System), for the parts that must be removed for service.
  For example: FUEL LINE (Damage, leakage) —— Maintenance part
  • Floor board —— The part that must be removed for service.




(2) FUEL LINE (Damage, leakage, deterioration)
FUEL FILTER (Clogging)
• Floor board
(3) OIL PUMP AND OIL LINE
(Adjustmnt: page 3-6)
damage, leakage, deterioration)
• Frame body cover
(1) REAR BRAKE LEVER
(Operation, free play)
(4) SUSPENSION
(Loose, wear, damage)
(5) AIR CLEANER (Contamination,
clogging, cleaning)
(6) REAR BRAKE
(Brake shoe wear)
(9) FRONT BRAKE
(Brake shoe wear)
(7) CLUTCH (Clutch shoe wear)
(8) THROTTLE STOP SCREW
(Idle speed adjustment)

Maintenance Schedule

Perform the Pre-ride inspection in the Owner's Manual at each scheduled maintenance period.
I : Inspect and clean, adjust, lubricate or replace if necessary.
C : Clean R : Replace A : Adjust L : Lubricate
The following items require some mechanical knowledge. Certain items (particularly those marked * and * *) may require more technical information and tools. Consult your authorized Honda dealer.

U type

	Items / Frequency	Whichever comes first ➡ / ⬇ Note	Odometer Reading (Note 1)				Refer to page
		x 1,000 km	1	4	8	12	
		x 1,000 mi	0.6	2.5	5	7.5	
		Months		6	12	18	
*	Fuel Line			I	I	I	Note 3
*	Throttle Operation			I	I	I	Note 3
**	Oil Pump and Oil Line			I	I	I	3-6
	Air Cleaner	Note 2		C	C	C	Note 3
	Spark Plug		Every 1,600 km (1,000 mi) R				Note 3
**	Decarbonizing		Every 3,000 km (2,000 mi) C				Note 3
*	Carburetor Idle Speed		I	I	I	I	Note 3
	Brake Shoe Wear			I	I	I	Note 3
	Brake System		I	I	I	I	Note 3
*	Brake Light Switch			I	I	I	Note 3
*	Headlight Aim			I	I	I	3-6
**	Clutch Shoe Wear				I		Note 3
*	Suspension			I	I	I	Note 3
*	Nuts, Bolts, Fasteners		I		I		Note 3
**	Wheels/Tires			I	I	I	Note 3
**	Steering Head Brearings		I			I	Note 3

* Should be serviced by your authorized Honda dealer, unless the owner has proper tools and service data and is mechanically qualified.
* *In the interest of safety, we recommend these items be serviced only by your authorized Honda dealer.
Notes: 1. At higher odometer reading, repeat at the frequency interval established here.
2. Service more frequently when riding in unusually wet or dusty areas.
3. Refer to Common Service Manual.

CM type

	Items \ Frequency	Whichever comes first ↓ Note	Odometer Reading (Note 1)					Refer to page
			x 1,000 mi	0.6	2.5	5	7.5	
			x 1,000 km	1	4	8	12	
			Months		6	12	18	
*	Fuel Line				I	I	I	Note 4
*	Throttle Operation				I	I	I	Note 4
**	Oil Pump and Oil Line				I	I	I	3-6
	Air Cleaner	Note 2			C	C	C	Note 4
	Spark Plug	Note 3		Every 1,000 mi (1,600 km) R				Note 4
**	Decarbonizing	Note 3		Every 2,000 mi (3,200 km) C				Note 4
*	Carburetor Idle Speed			I	I	I	I	Note 4
	Brake Shoe Wear				I	I	I	Note 4
	Brake System			I	I	I	I	Note 4
*	Brake Light Switch				I	I	I	Note 4
*	Headlight Aim				I	I	I	3-6
**	Clutch Shoe Wear					I		Note 4
*	Suspension				I	I	I	Note 4
*	Nuts, Bolts, Fasteners			I		I		Note 4
**	Wheels/Tires				I	I	I	Note 4
**	Steering Head Brearings			I			I	Note 4

* Should be serviced by your authorized Honda dealer, unless the owner has proper tools and service data and is mechanically qualified.

** In the interest of safety, we recommend these items be serviced only by your authorized Honda dealer.

Notes:
1. At higher odometer reading, repeat at the frequency interval established here.
2. Service more frequently when riding in unusually wet or dusty areas.
3. HONDA 2 STROKE MOTORCYCLE OIL has been specifically tested in and is recommended for this engine. The use of other oils may cause excessive carbon build-up in the engine and exhaust system, resulting in loss of power and possible engine damage.
4. Refer to Common Service Manual.

Oil Pump and Oil Line

Oil Pump Control Cable Adjustment

NOTE

- The oil pump control cable should be adjusted after the throttle grip free play adjustment.

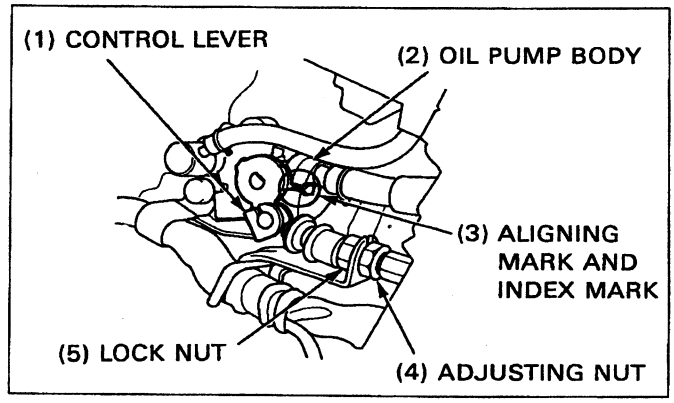
Remove the center cover (page 2-4).

Open the throttle fully and check that the aligning mark on the oil pump control lever is aligned with the index mark on the oil pump body.

Adjust by loosening the oil pump control cable lock nut and turning the adjusting nut.

CAUTION

- **An adjustment within 1 mm (0.04 in) of the index mark on the open side is acceptable. However, the aligning mark must never be on the closed side of the index mark, otherwise engine damage will occur because of insufficient lubrication.**



Headlight Aim

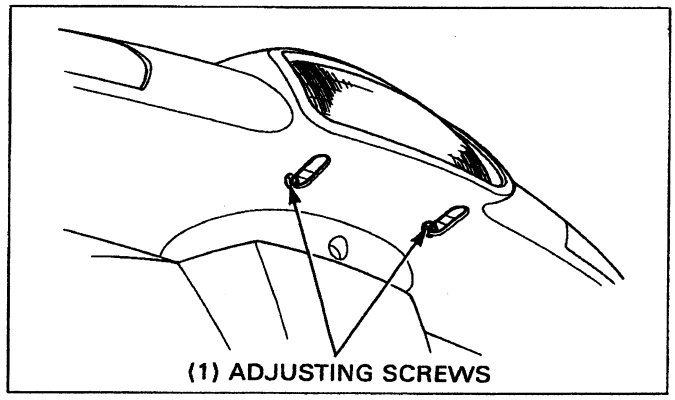
⚠ WARNING

- **An improperly adjusted headlight may blind on-coming drivers, or it may fail to light the road for a safe distance.**

Place the scooter on firm, level ground and suppott it with the center stand.
Start the engine and allow it to idle.
Make sure that the headlight and taillight are on.
Check the operation of the headlight dimmer (Lo-Hi) switch.
Adjust the headlight beam by turning the horizontal adjusting screws.

CAUTION

- **Adjust the headlight beam as specified by local laws and regulations.**



4. Lubrication System

Service Information

CAUTION

- **Air in oil system will block or restrict oil flow and may result in severe engine damage.**
- **Bleed air from the oil lines whenever the oil lines or pump have been removed or there is air in the oil lines**
- **Bleed air from the oil inlet line first, then bleed air from the oil outlet line.**

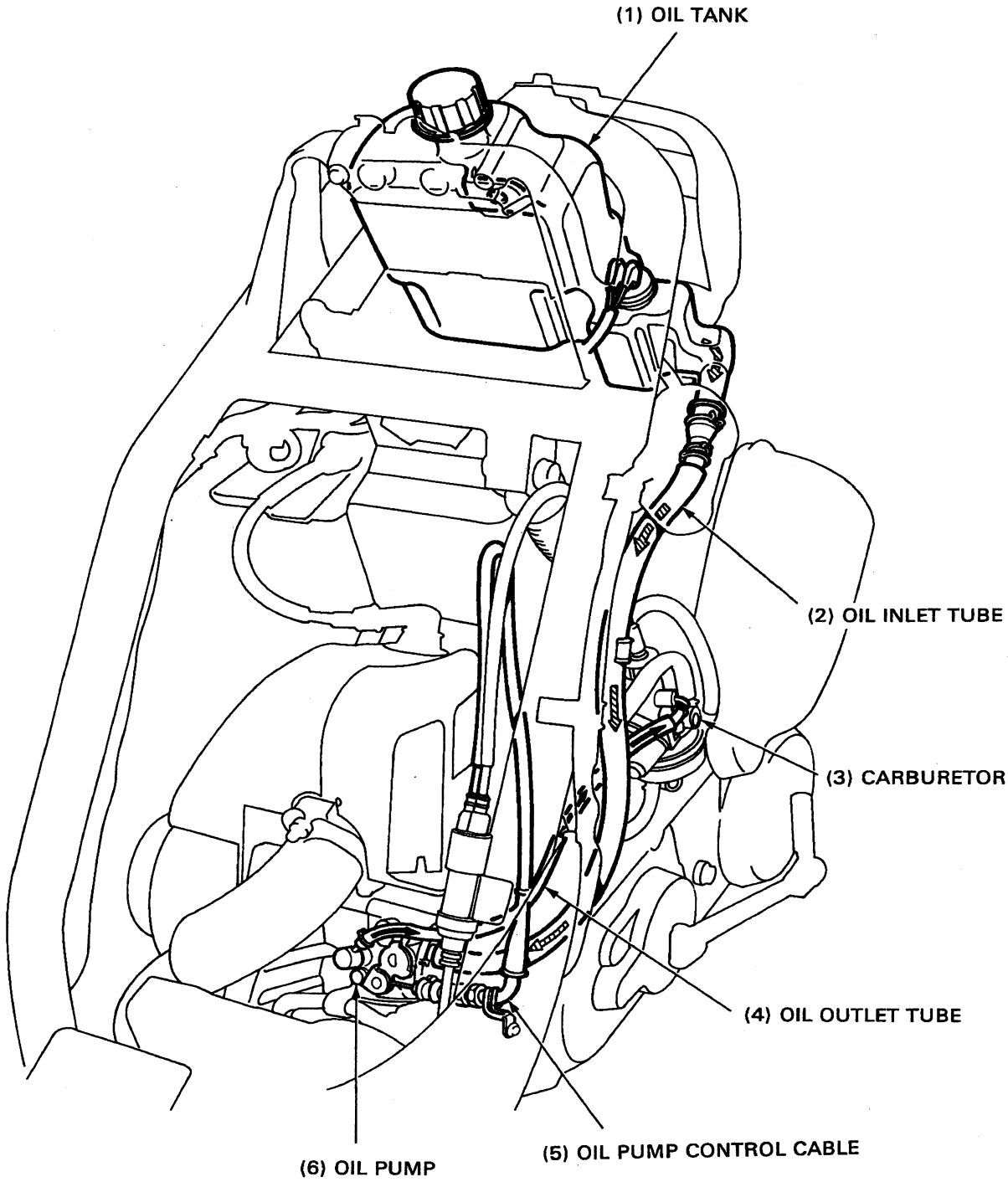
- The oil pump servicing can be performed with the engine installed.
- When removing and installing the oil pump,be careful not to let any foreign material enter the engine.
- Do not attempt to disassemble the oil pump.
- Fill the oil outlet line with oil whenever the oil outlet line is disconnected.
- Refer to section 2 of the Common Service Manual for oil strainer screen cleaning.
- When disconnecting the oil inlet tube, clamp or plug the tube to prevent oil from flowing out.

Troubleshooting

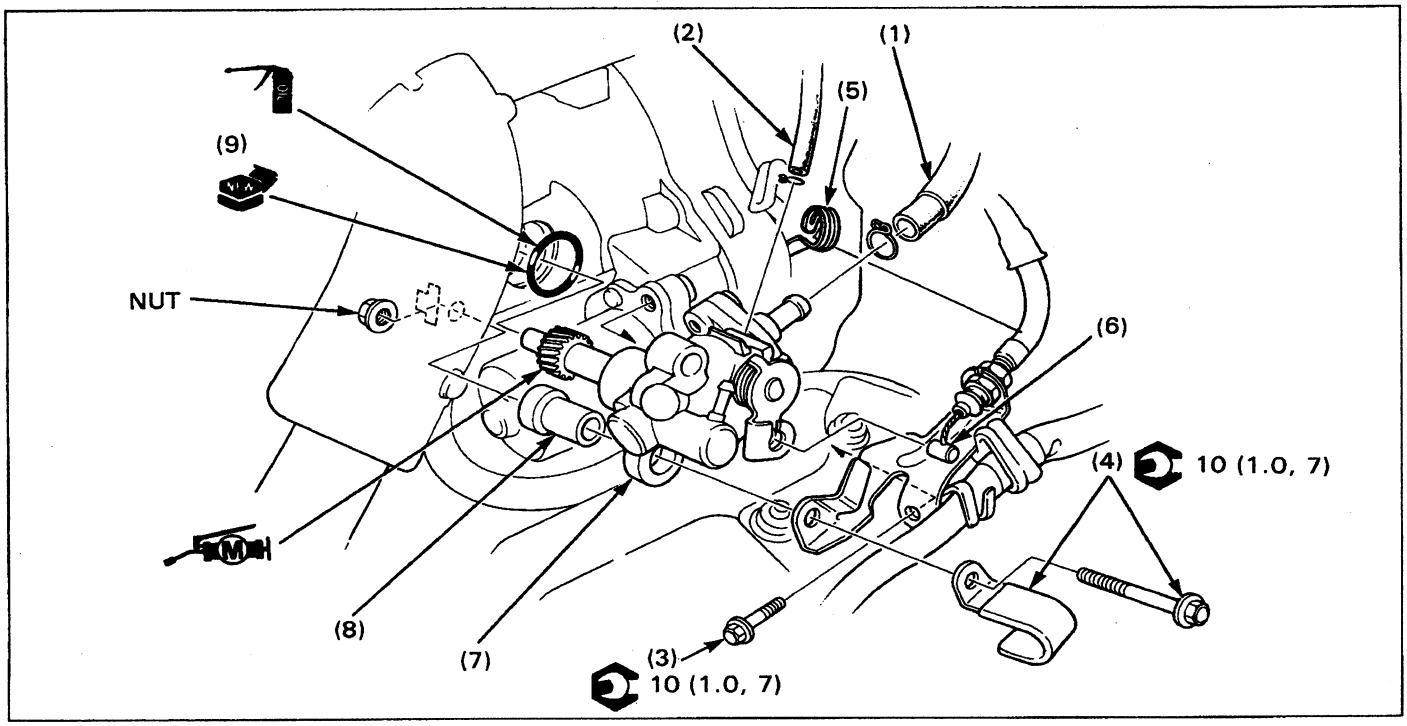
Excessive smoke and/or carbon on spark plug
- Faulty oil pump (too much oil flow)
- Low quality engine oil

Overheating or seized piston
- No oil in tank or clogged oil line
- Air in oil lines or oil pump
- Faulty oil pump (too little oil flow)
- Clogged oil strainer
- Clogged oil tank cap breather hole

Lubrication System Diagram



Oil Pump Removal/Installation



NOTE

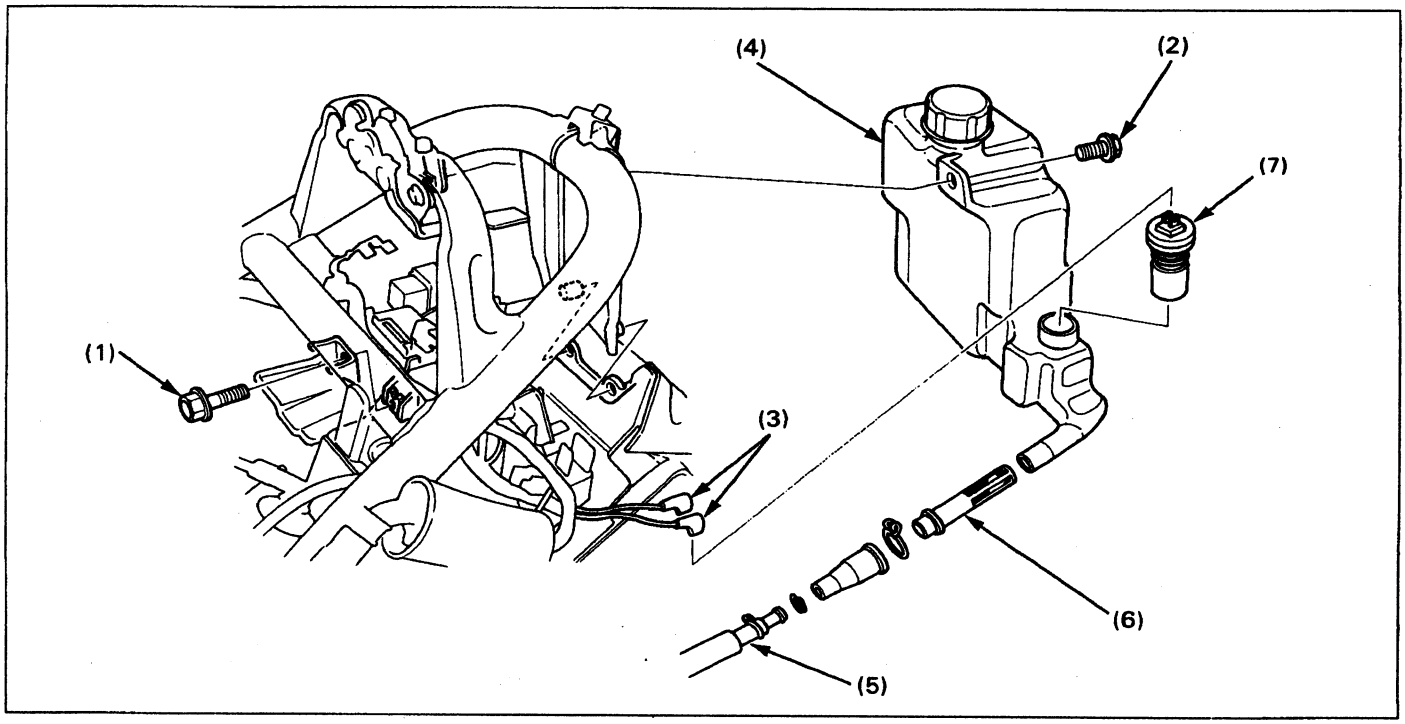
- It is not necessary to loosen the oil pump adjusting nut. If the nut is loosened, perform the oil pump control cable adjustment (page 3-6) after installing the oil pump.
- After installing the oil pump, perform the oil pump/oil line bleeding refering to page 4-11 of the Common Service Manual.

Requisite Service

- Frame body cover removal/installation (page 2-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Oil inlet tube	1	NOTE • Before disconnecting, clamp or plug the tube to prevnt oil from flowing out.
(2)	Oil outlet tube	1	
(3)	Starter motor mounting bolt	1	
(4)	Oil pump mounting bolt/harness clamp	1/1	NOTE • Be careful not to lose the nut at the oil pump side.
(5)	Clamp	1	Remove from oil pump control cable.
(6)	Oil pump control cable	1	
(7)	Oil pump	1	
(8)	Oil pump mounting collar	1	
(9)	O-ring	1	

Oil Tank Removal/Installation



NOTE

- After installing the oil tank, perform the oil pump/oil line bleeding refering to page 4-11 of the Common Service Manual.

Requisite Service

- Battery removal/installation (page 13-4)
- Rear combination dummy removal/installation (page 16-4)
- Ignition coil removal/installation (page 14-6)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Rear fender mounting bolt	1	
(2)	Oil tank mounting bolt	1	
(3)	Oil level switch connector	2	
(4)	Oil tank	1	Slide the rear fender down and remove the tank.
(5)	Oil inlet tube	1	NOTE • Disconnect the tube at the oil pump and drain the oil into the clean container.
(6)	Oil strainer		
(7)	Oil level switch		

5. Fuel System

Service Information

⚠ WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions.**
- **Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where gasoline is stored can cause a fire or explosion.**
- **Bending or twisting the control cables will impair smooth operation and could cause the cables to stick or bind, resulting in loss of vehicle control.**

- When disassembling fuel system parts, note the locations of the O-rings. Replace them with new ones on reassembly.
- Before disassembling the carburetor, place a suitable container under the carburetor drain screw, loosen the screw and drain 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.

NOTE

- If vehicle is to be stored for more than one month, drain the float chamber. Fuel left in the float chamber may cause clogged jets resulting in hard starting or poor driveability.

Troubleshooting

Engine won't start
- No fuel to carburetor
  - No fuel in fuel tank
  - Fuel filter clogged
  - Fuel line clogged
  - Float valve stuck
  - Float level misadjusted
  - Fuel tank breather hole clogged
  - Fuel pump malfunction
- Too much fuel getting to the engine
  - Air cleaner clogged
  - Flooded carburetor
- Intake air leak
- Fuel contaminated/deteriorated
- Bystarter circuit clogged

Lean mixture
- Fuel jets clogged
- Float valve faulty
- Float level too low
- Fuel line restricted
- Carburetor air vent tube clogged
- Intake air leak
- Fuel pump malfunction
- Throttle valve operation faulty

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

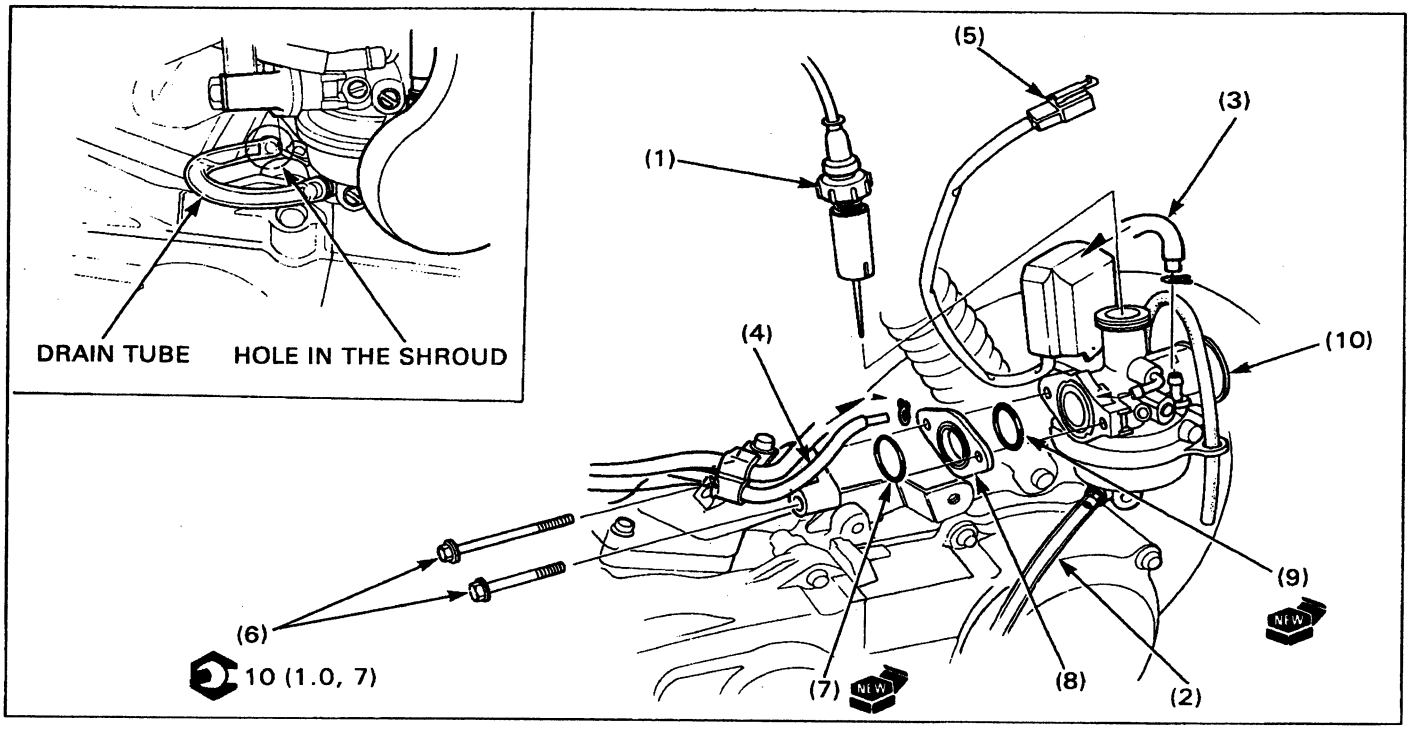
Engine stalls, hard to start, rough idling
- Fuel line restricted
- Ignition malfunction
- Fuel mixture too lean/rich
- Fuel contaminated/deteriorated
- Intake air leak
- Idle speed misadjusted
- Fuel pump malfunction
- Air screw misadjusted
- Bystarter circuit clogged
- Float level misadjusted
- Fuel tank breather hole clogged

Afterburn when engine braking is used
- Lean mixture in slow circuit

Backfiring or misfiring during acceleration
- Ignition system faulty
- Fuel mixture too lean

Poor performance (driveability) and poor fuel economy
- Fuel system clogged
- Ignition malfunction

Carburetor Removal/Installation

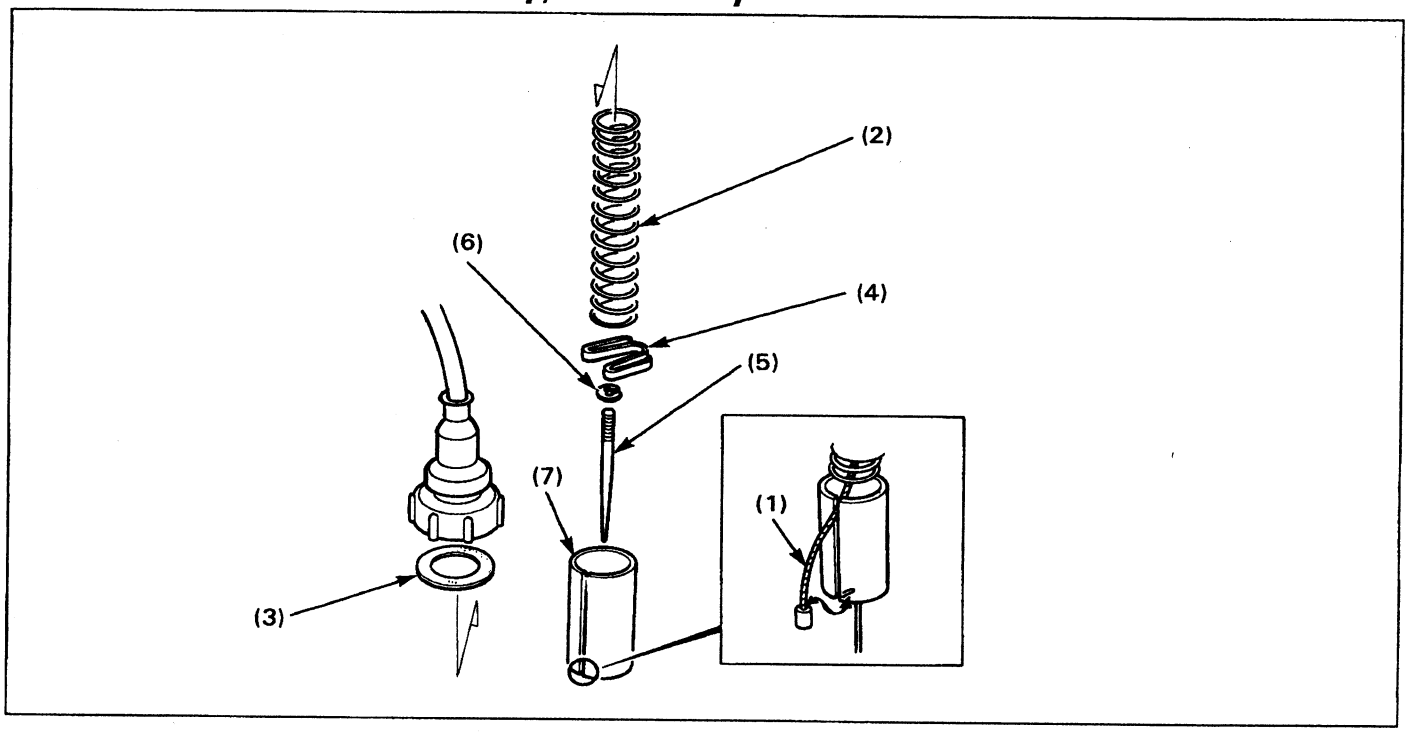


Requisite Service

- Center cover removal/installation (page 2-4)
- Air cleaner case removal/installation (page 5-7)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Carburetor top/throttle valve	1	Disassembly/assembly (page 5-4)
(2)	Drain tube	1	Disconnect from the carburetor. NOTE • When installing, insert the other end of the tube into the hole in the shroud.
(3)	Fuel line	1	
(4)	Oil outlet tube	1	NOTE • Bleed air from the tube when installing.
(5)	Auto bystarter wire connector	1	
(6)	Carburetor mounting bolt	2	
(7)	O-ring	1	
(8)	Insulator	1	
(9)	O-ring	1	
(10)	Carburetor	1	Disassembly/assembly (page 5-5)

Throttle Valve Disassembly/Assembly



CAUTION

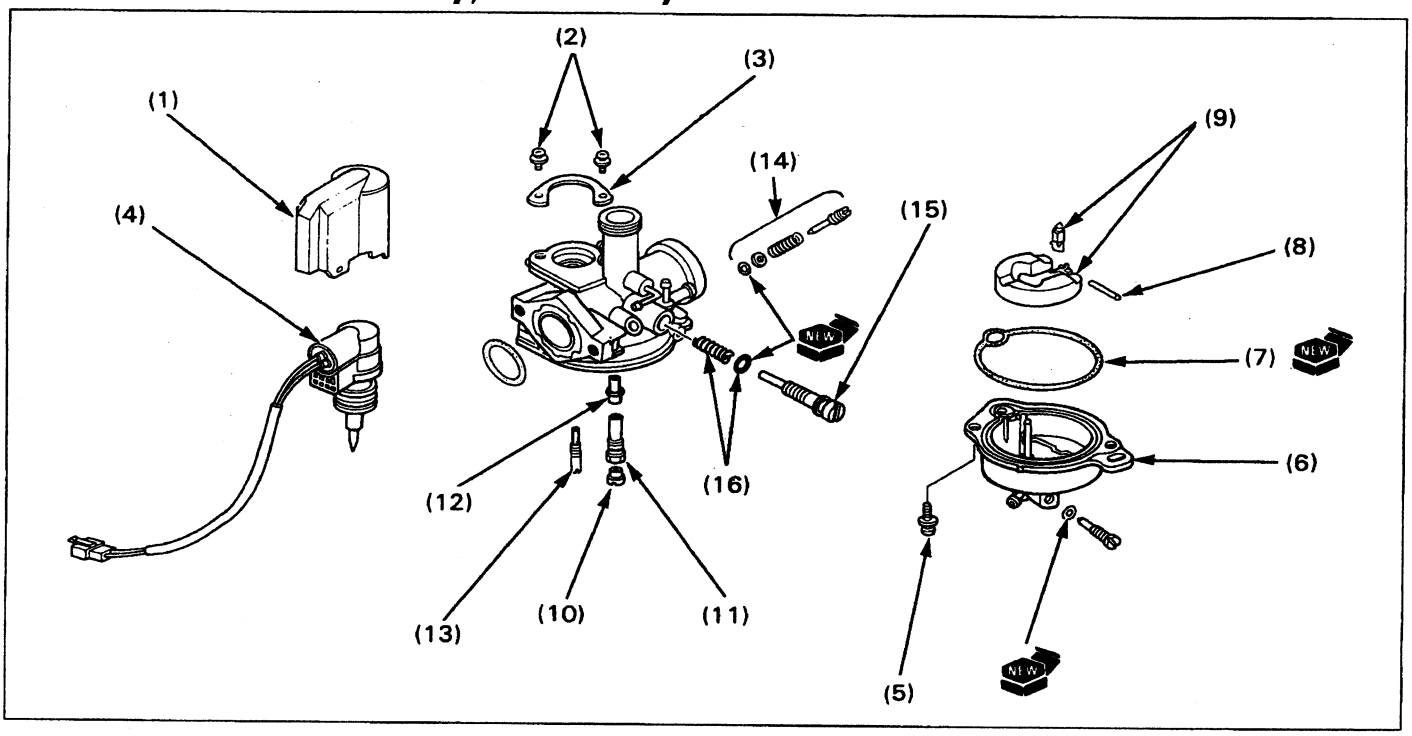
- **The carburetor top is an integral part of the throttle cable assembly. The top cannot be separated from the assembly without causing damage to the cable.**

Requisite Service

- Carburetor top/throttle valve removal/installation (page 5-3)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Throttle cable	1	
(2)	Throttle valve spring	1	
(3)	Carburetor top gasket	1	
(4)	Retainer	1	
(5)	Jet needle	1	
(6)	Needle clip	1	Remove from the jet needle. Standard position: 3rd groove
(7)	Throttle valve	1	

Carburetor Disassembly/Assembly

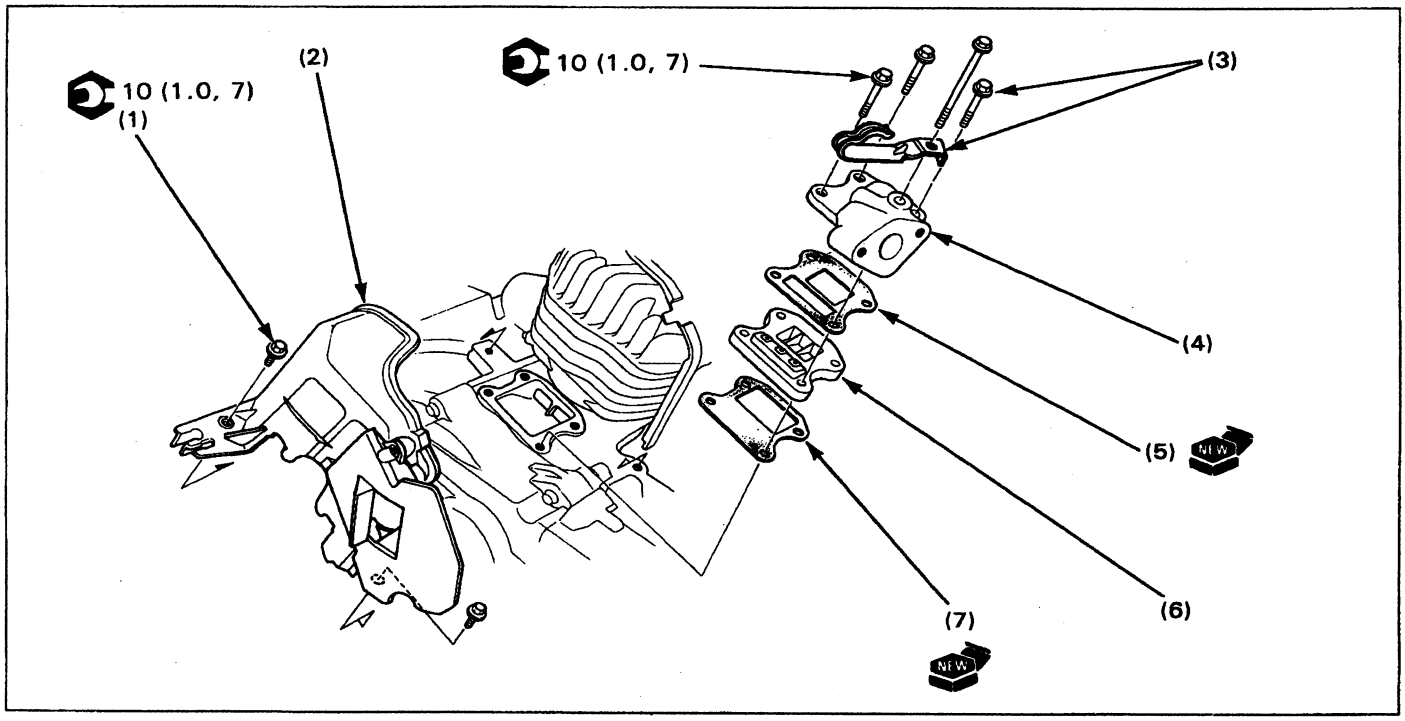


Requisite Service

- Carburetor removal/installation (page 5-3)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
	Auto bystarter		
(1)	Auto bystarter cover	1	
(2)	Screw	2	
(3)	Auto bystarter set plate	1	
(4)	Auto bystarter	1	
	Float chamber		
(5)	Screw	2	
(6)	Float chamber	1	
(7)	O-ring	1	
(8)	Float pin	1	
(9)	Float/float valve	1/1	
	Carburetor body		
(10)	Main jet	1	
(11)	Main jet holder	1	
(12)	Needle jet holder	1	
(13)	Slow jet	1	
(14)	Air screw	1	
(15)	Throttle stop screw	1	NOTE • After installing the carburetor, adjust the idle speed.
(16)	Spring/O-ring	1/1	

Reed Valve Removal/Installation



CAUTION

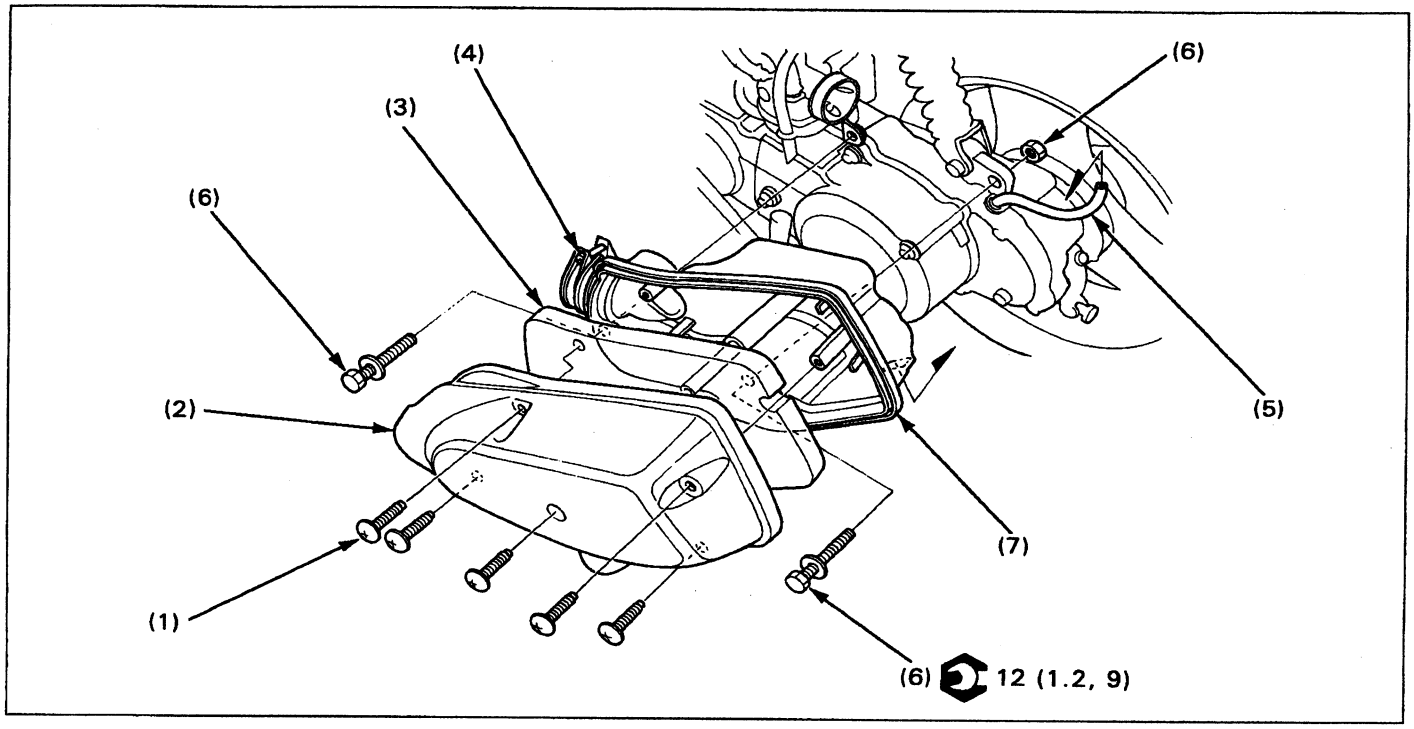
- **Do not disassemble or bend the reed stopper. To do so can cause loss of power and engine damage. If the stopper, reed or valve seat is faulty, replace them as a unit.**

Requisite Service

- Luggage box removal/installation (page 2-4)
- Carburetor removal/installation (page 5-3)

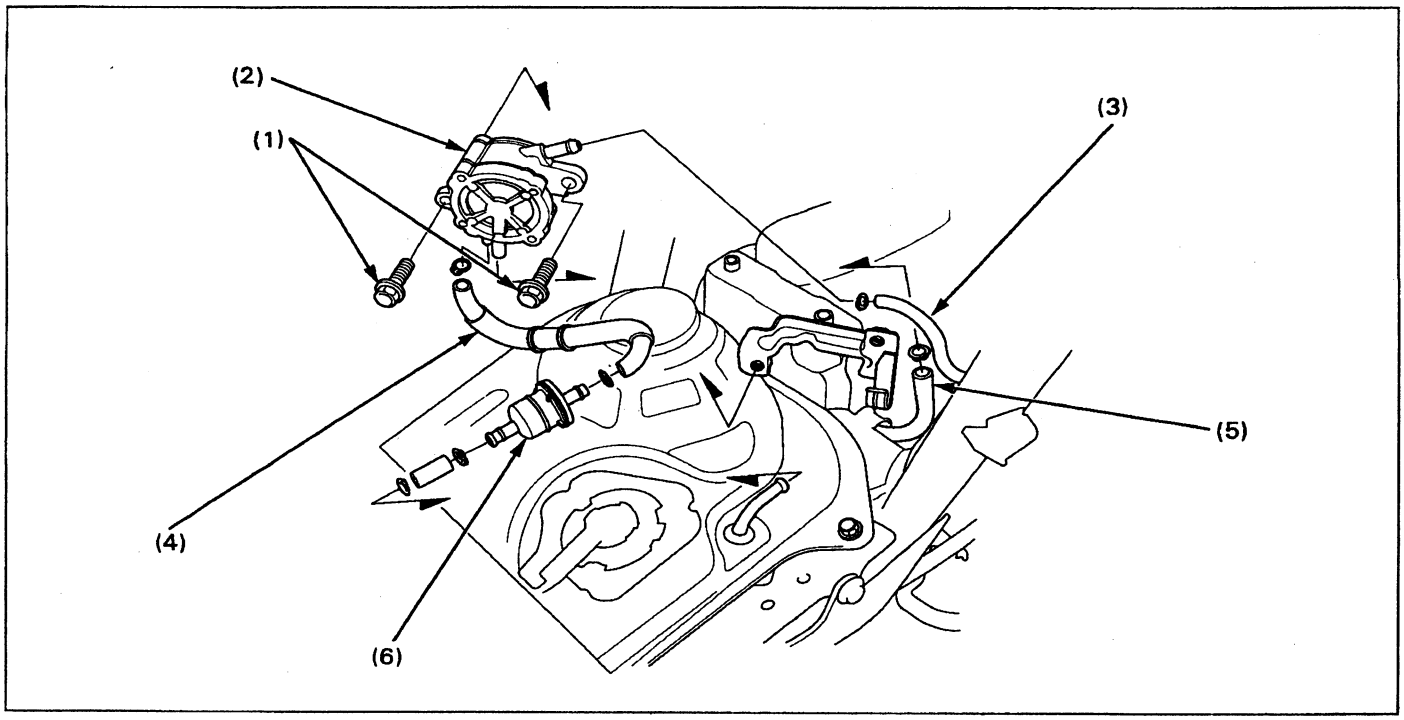
	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Left shroud mounting bolt	2	
(2)	Left shroud	1	
(3)	Intake manifold mounting bolt/clamp	4/1	
(4)	Intake manifold	1	
(5)	Gasket	1	
(6)	Reed valve	1	
(7)	Gasket	1	

Air Cleaner Case Removal/Installation



	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Tapping screw	5	
(2)	Air cleaner case cover	1	
(3)	Air cleaner element	1	
(4)	Connecting tube band screw	1	Loosen.
(5)	Breather tube	1	Disconnect from the air cleaner case.
(6)	Air cleaner case mounting bolt/nut	2/1	NOTE • Do not lose the nut.
(7)	Air cleaner case	1	

Fuel Pump Removal/Installation



NOTE

- Do not attempt to disassemble the fuel pump.
- After installing the fuel pump, bleed air from the fuel lines and pump.

Requisite Service

- Floor board removal/installation (page 2-5)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Bolt	2	
(2)	Fuel pump	1	Inspection (page 5-9) Air bleeding (page 5-9)
(3)	Fuel line (discharge side)	1	
(4)	Fuel line (suction side)	1	
(5)	Vacuum tube	1	NOTE • When installing, do not connect the vacuum tube to the fuel suction pipe of the pump.
(6)	Fuel filter	1	

Fuel Pump Inspection

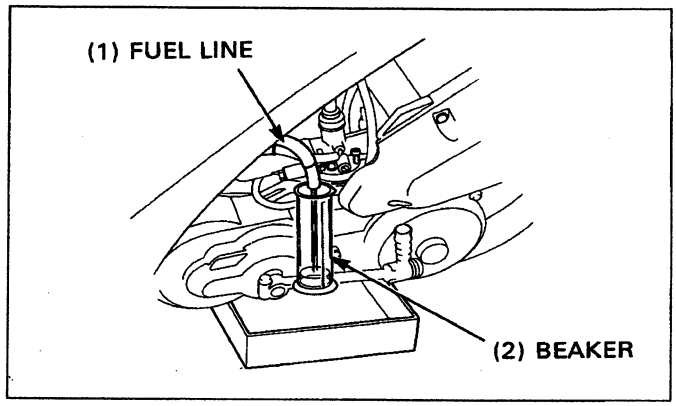
NOTE

- Before inspecting the pump discharge volume, warm up the engine and check that the idle speed is within the specification.

Start the engine and allow it to idle.
Disconnect the fuel line from the carburetor, allow the fuel to flow out of the fuel line for more than 5 seconds, then let the fuel flow into the graduated beaker for 10 seconds. Stop the engine and connect the fuel line.

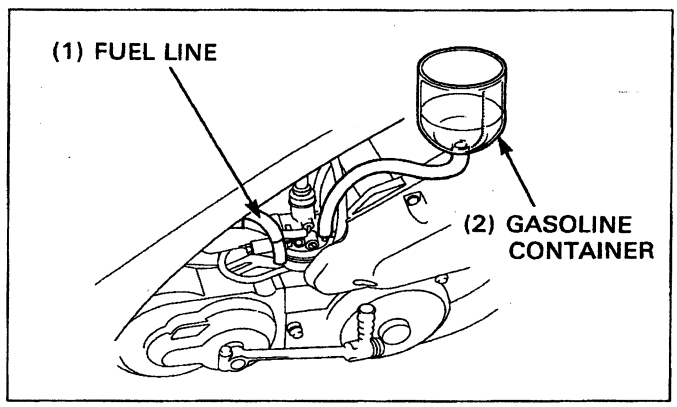
There should be 20 cc (0.70 US oz, 0.67 Imp oz) in the beaker.

If the fuel pump discharge volume is less than specified volume, check the fuel lines, vacuum tube and fuel filter for clogging or damage. If they are OK, replace the fuel pump.



Air Bleeding

After replacing the fuel pump, bleed the air from the pump and fuel lines as follows:
Disconnect the fuel line from the carburetor and feed the gasoline from the other container through the suitable fuel tube.
Start the engine and allow it to idle to operate the fuel pump until the fuel flows out of the fuel line.
Stop the engine and connect the fuel line to the carburetor.

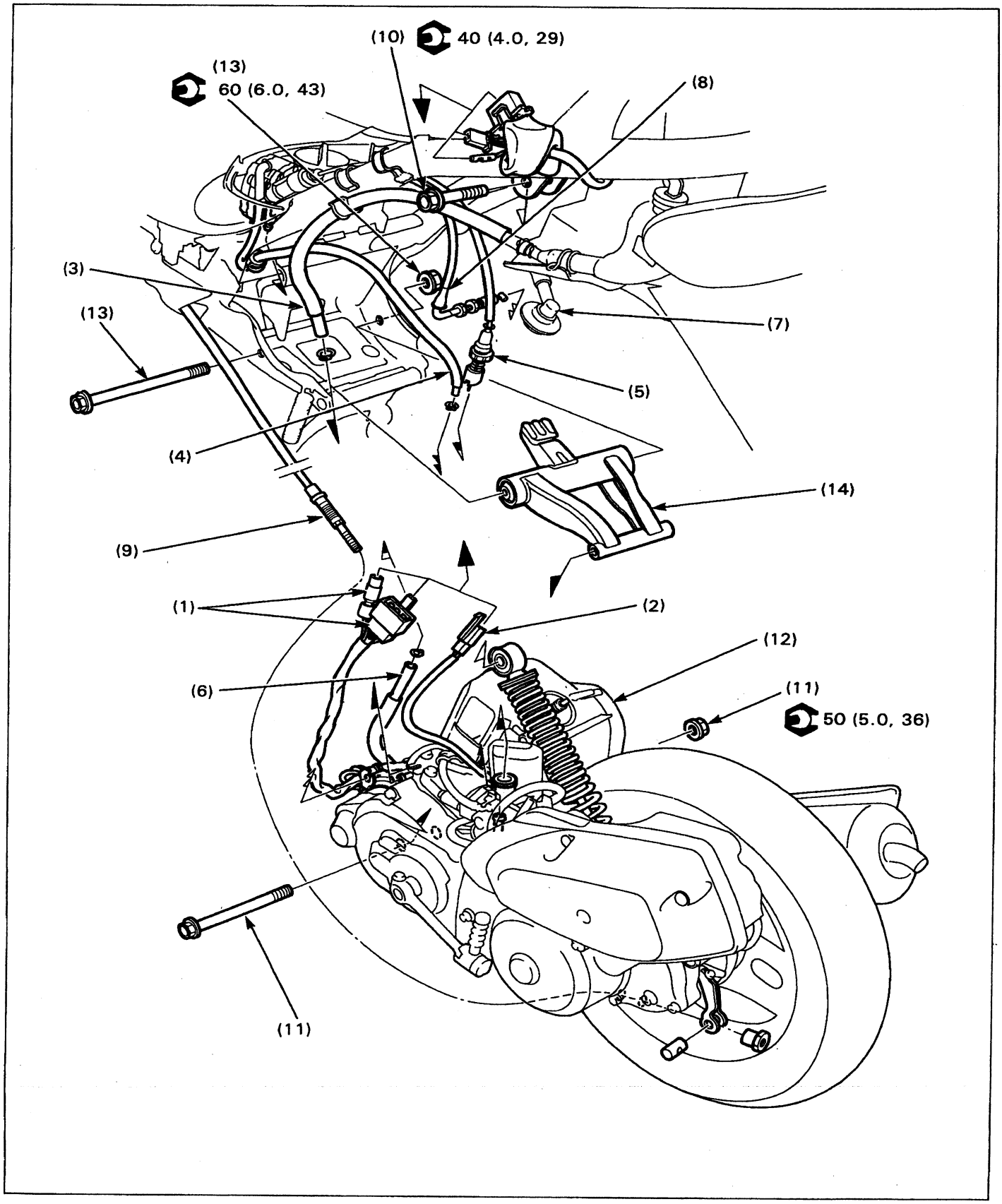


6. Engine Removal/Installation

Service Information

- The following components require engine removal for service:
  - Driveshaft and final gear shaft bearings (section 9)
  - Crankcase (section 10)
  - Crankshaft (section 10)
- After installing the engine, perform the following adjustments:
  - Throttle cable
  - Oil pump control cable (page 3-6)
  - Rear brake cable

Engine Removal/Installation



Requisite Service

- Frame body cover removal/installation (page 2-3)
- Carburetor top/throttle valve removal/installation (page 5-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Alternator/starter motor wire connector	2	
(2)	Auto bystarter wire cennector	1	
(3)	Oil inlet tube	1	NOTE • Before disconnecting, clamp or plug the tube to prevent oil from flowing out.
(4)	Fuel line	1	
(5)	Carburetor top	1	
(6)	Fuel pump vacuum tube	1	
(7)	Spark plug cap	1	
(8)	Oil pump control cable	1	Disconnect from pump and remove from cable stay.
(9)	Rear brake cable	1	Remove from the rear brake arm, crankcase and clamp.
(10)	Rear shock absorber upper mounting bolt	1	
(11)	Engine mounting bolt/nut	1/1	
(12)	Engine	1	NOTE • Support the frame securely.
(13)	Engine mounting bracket bolt/nut	1/1	
(14)	Engine mounting bracket	1	

7. Cylinder Head/Cylinder/Piston

Service Information

- Clean all disassembled parts with cleaning solvent and dry them by blowing them off with compressed air before inspection.
- Be careful not to damage the mating surfaces by using a screwdriver when disassembling the cylinder. Do not strike the cylinder too hard during disassembly, even with a rubber or plastic mallet, to prevent the possibility of damage to the cylinder fins.
- Take care not to damage the cylinder wall and piston.

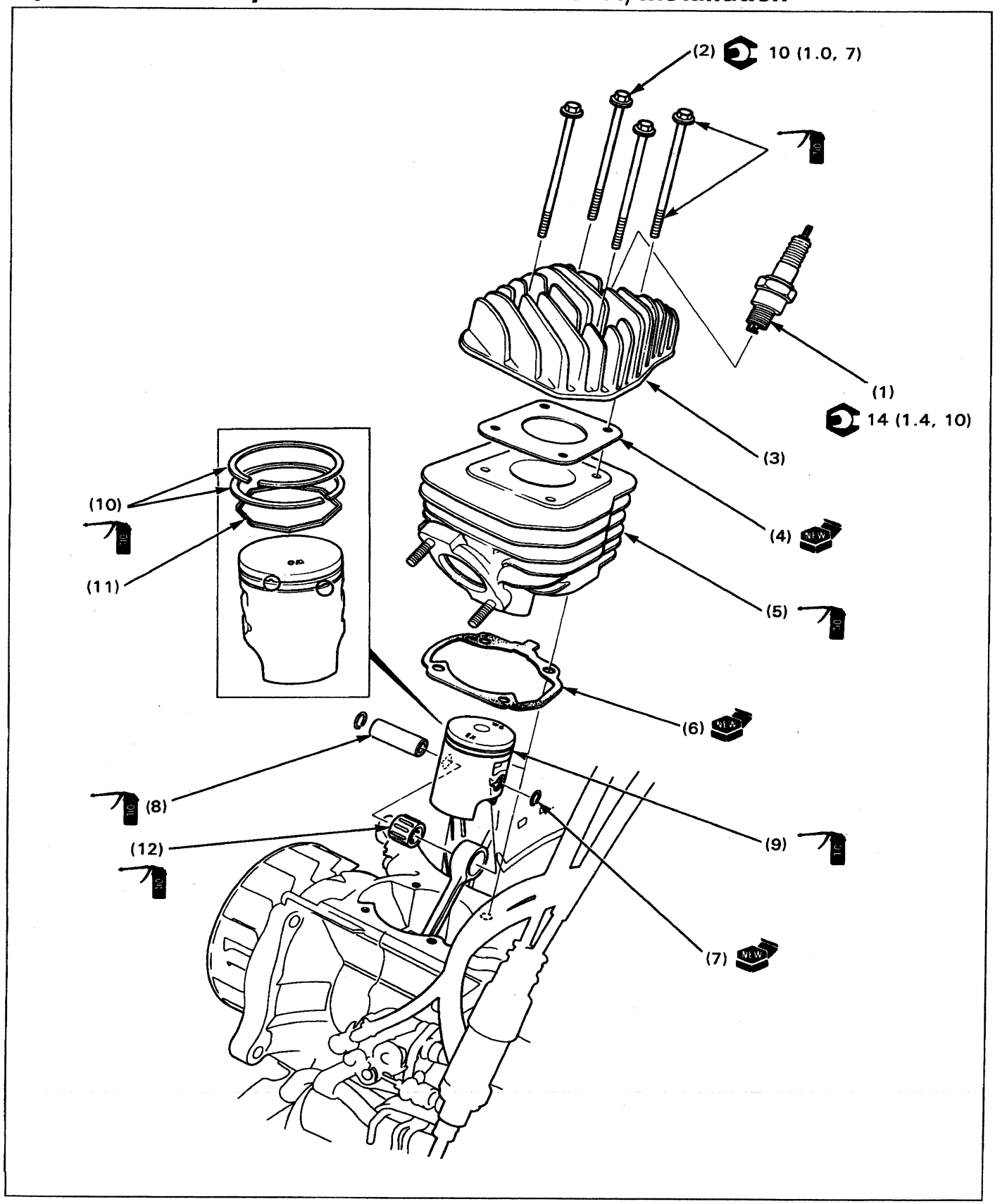
Troubleshooting

Compression too low, hard starting or poor performance at low speed
- Cylinder head
  - Leaking or damaged cylinder head gasket
  - Warped or cracked cylinder head
- Loose spark plug
- Worn, stuck or broken piston rings
- Worn or damaged cylinder and piston
- Leaking crankcase primary compression
  - Blown crankcase gasket
  - Damaged crankshaft oil seal

Compression too high, overheating or knocking
- Excessive carbon build-up on piston or combustion chamber

Abnormal noise
- Worn cylinder, piston, piston ring
- Worn piston pin or piston pin hole
- Worn connecting rod small end bearing

Cylinder Head, Cylinder and Piston Removal/Installation



Requisite Service

- Muffler removal/installation (page 2-9)
- Fan cover removal/installation (page 13-8)
- Left shroud removal/installation (page 5-6)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
	Cylinder head		
(1)	Spark plug	1	
(2)	Cylinder head bolt	4	Loosen the bolts in a crisscross pattern in 2 or 3 steps.
(3)	Cylinder head	1	
(4)	Cylinder head gasket	1	
	Cylinder		
(5)	Cylinder	1	**CAUTION** **• Do not pry between the cylinder and crankcase or strike the fins.**
(6)	Cylinder gasket	1	NOTE • Clean the gasket surfaces of the cylinder and crankcase being careful not to damage them.
	Piston		
(7)	Piston pin clip	2	
(8)	Piston pin	1	
(9)	Piston	1	
(10)	Piston ring	2	
(11)	Expander	1	Install the expander behind the second ring.
(12)	Connecting rod small end bearing	1	

8. Kickstarter/Drive Pulley/Clutch/Driven Pulley

Service Information

NOTE

- **Do not apply grease to the movable drive face and weight rollers.**

- Avoid getting grease and oil on the V-belt and pulley drive faces in order to prevent belt slippage.
- Never operate the starter motor with the left crankcase front cover removed.

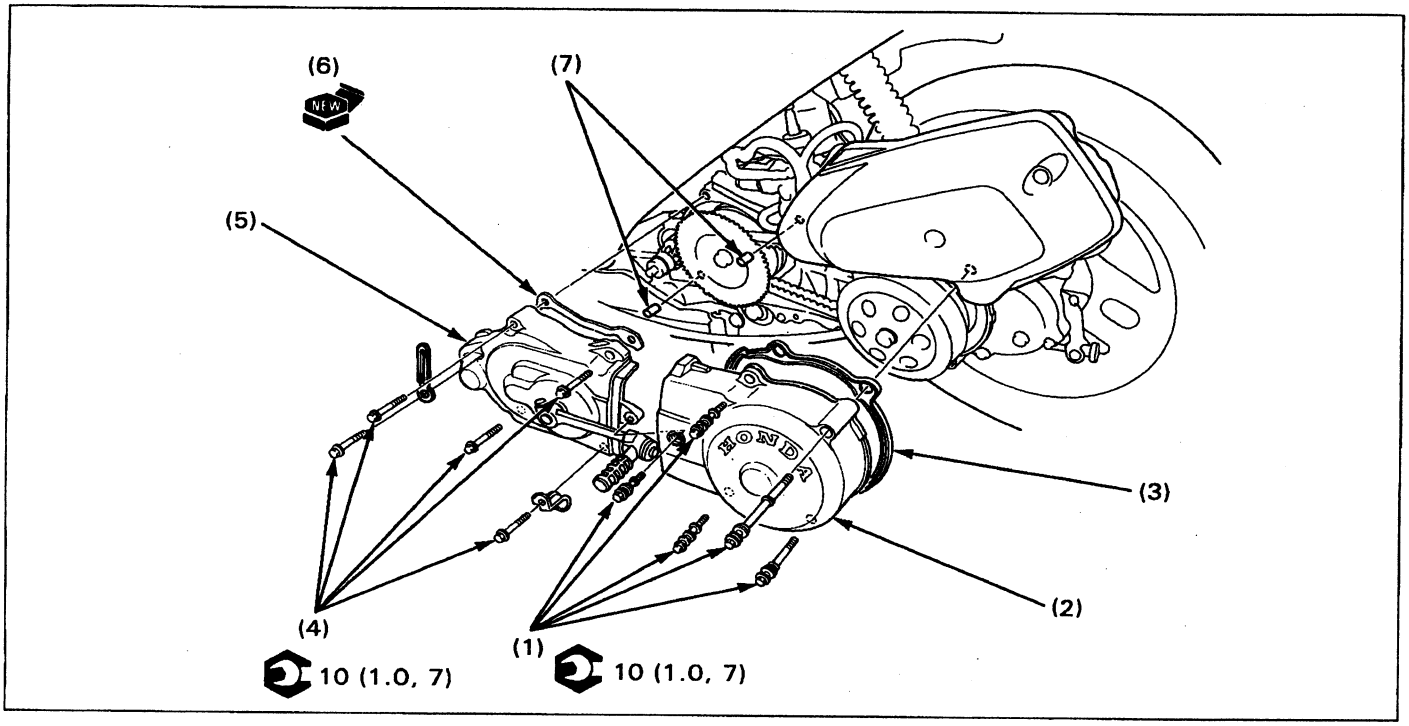
Troubleshooting

Engine starts but scooter won't move
- Worn drive belt
- Damaged ramp plate
- Worn or damaged clutch lining
- Broken driven face spring

Engine stalls or scooter creeps
- Broken clutch shoe spring

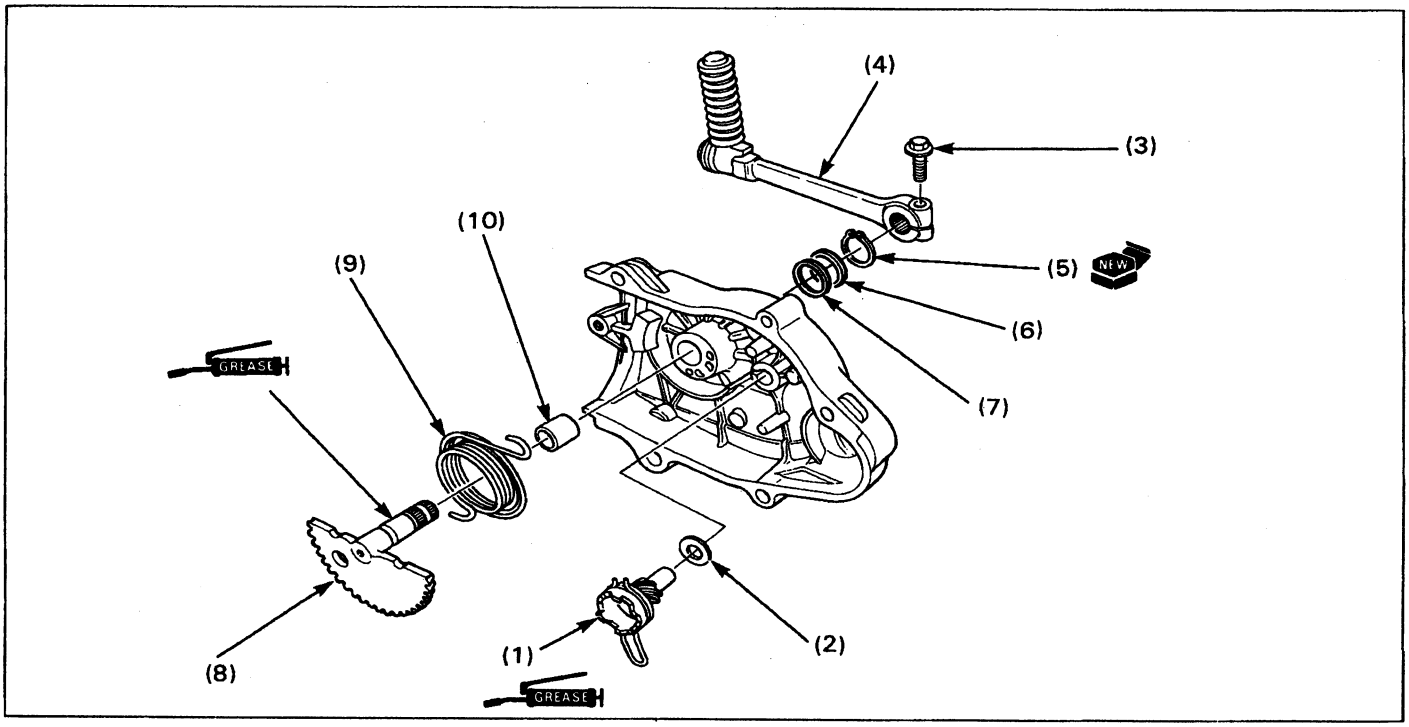
Poor performance at high speed or lack of power
- Worn drive belt
- Weak driven face spring
- Worn weight rollers
- Contaminated pulley faces

Left Crankcase Cover Removal/Installation



	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	6 mm special bolt	5	
(2)	Left crankcase rear cover	1	Push down the kickstarter pedal and remove the cover.
(3)	Rubber gasket	1	NOTE • Replace with a new one if damaged.
(4)	6 mm bolt	5	NOTE • When installing, do not forget to install the cable clamps in position.
(5)	Left crankcase front cover	1	
(6)	Gasket	1	
(7)	Dowel pin	2	

Kickstarter Removal/Installation



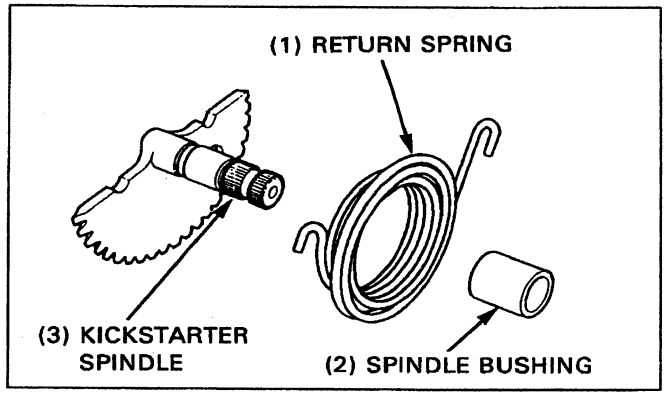
Requisite Service

- Left crankcase cover removal/installation (page 8-2)

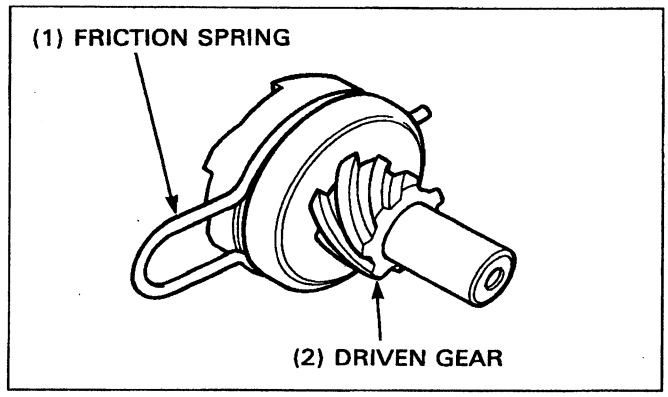
	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Kickstarter driven gear	1	Rmove while turning the kickstarter pedal. Installation (page 8-4)
(2)	Thrust washer	1	
(3)	Bolt	1	
(4)	Kickstarter pedal	1	
(5)	Snap ring	1	
(6)	Washer	1	
(7)	Copper washer	1	
(8)	Kickstarter spindle	1	Uhook the return spring end first and remove.
(9)	Kickstarter return spring	1	Inspectin (page 8-4)
(10)	Spindle bushing	1	

Kickstarter Inspection

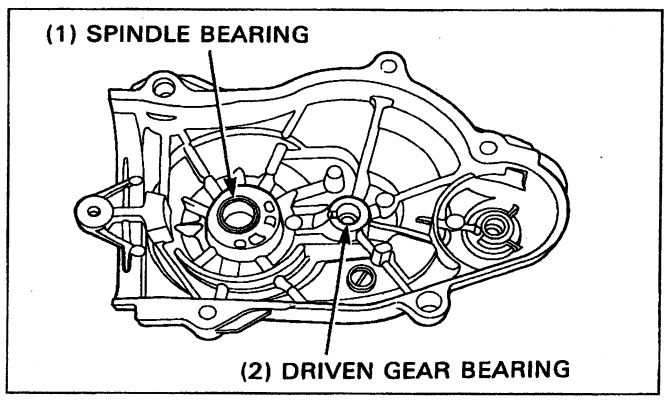
Check the kickstarter spindle for wear or damage.
Check the kickstarter return spring for weakness or damage.
Check the spindle bushing for wear, scratches or scoring.



Check the kickstarter driven gear for wear or damage.
Check the friction spring for weakness or damage.

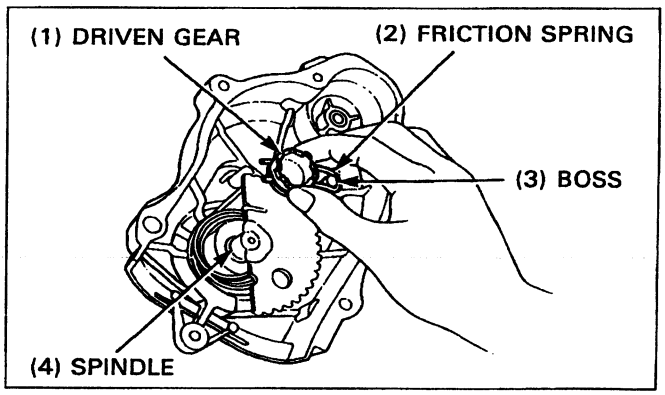


Check the spindle and driven gear bearings for wear or damage.

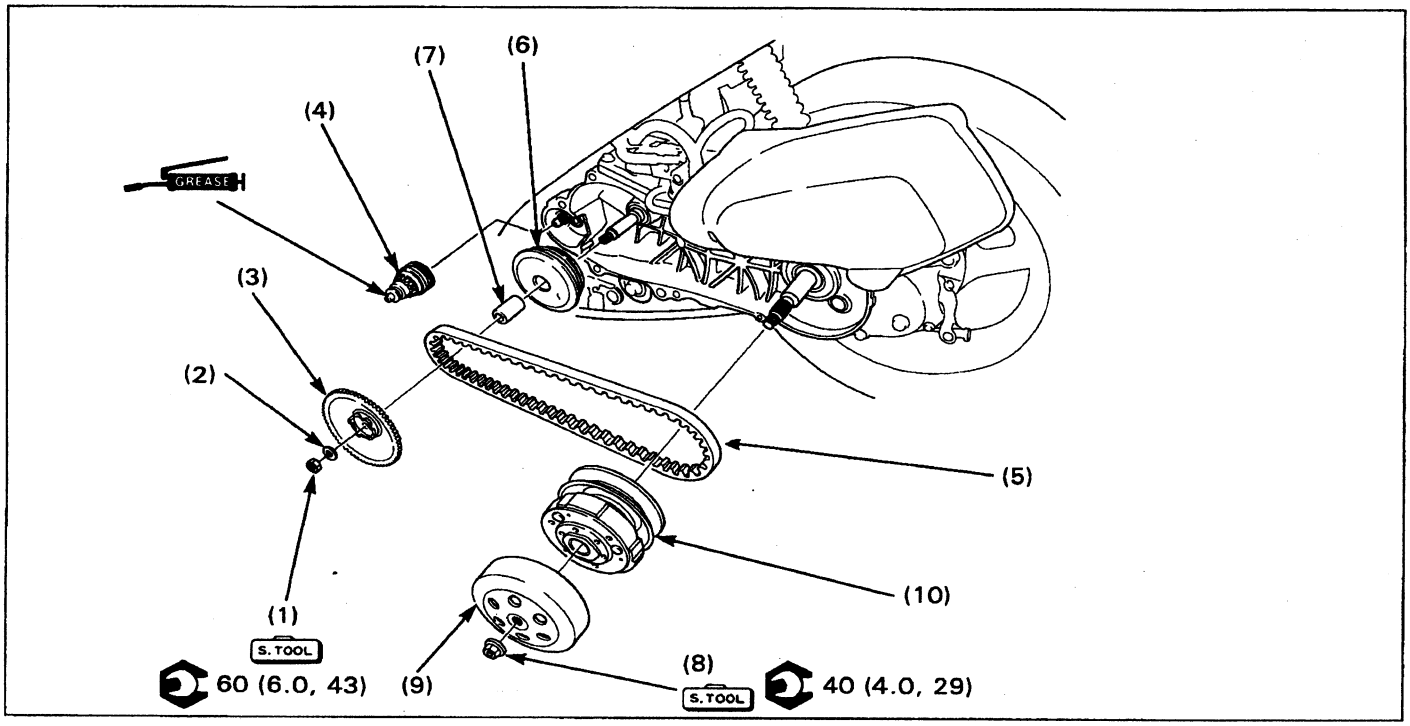


Kickstarter Driven Gear Installation

Align the friction spring with the boss on the crankcase front cover and install the driven gear while turning the kickstarter pedal.
Engage the spindle gear and driven gear while returning the kickstarter pedal.



Drive Pulley and Clutch/driven Pulley Removal/Installation



Requisite Service

- Left crankcase cover removal/installation (page 8-2)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Nut	1	
(2)	Washer	1	
(3)	Drive pulley face	1	Removal/installation (page 8-6)
(4)	Starter pinion	1	
(5)	Drive belt	1	
(6)	Movable drive face	1	Disassembly/assembly (page 8-7)
(7)	Movable drve face boss	1	
(8)	Clutch outer nut	1	Removal/installation (page 8-6)
(9)	Clutch outer	1	
(10)	Clutch/driven pulley	1	Disassembly/assembly (page 8-8)

Drive Pulley Face Removal/Installation

Hold the drive pulley face with the clutch center holder and remove the nut.
Remove the washer and drive pulley face from the crankshaft.

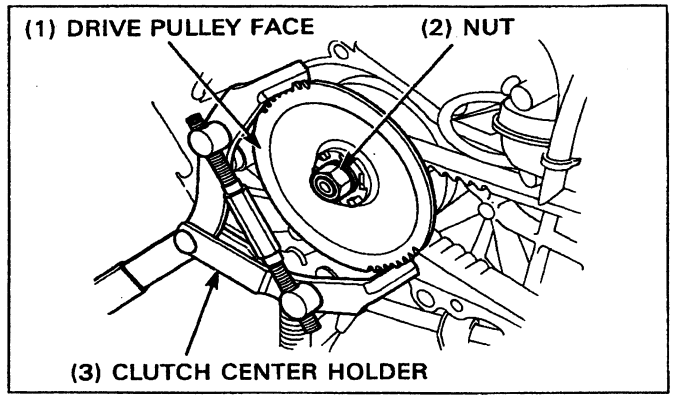
S. TOOL

Clutch center holder **07724-0050001**

Installation is in the reverse order of removal.

NOTE

- Align the splines of the drive pulley face and crankshaft properly.



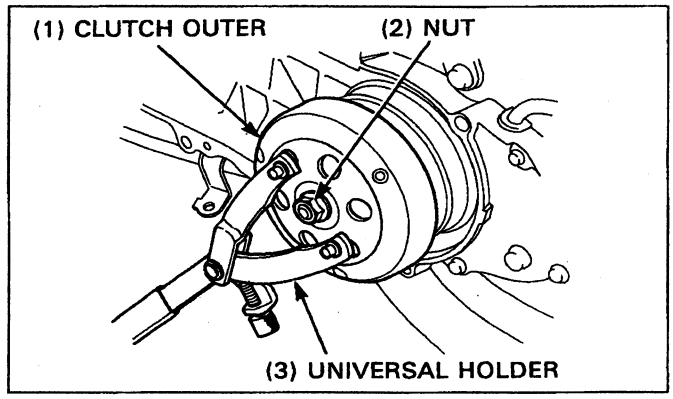
Clutch Outer Nut Removal/Installation

Hold the clutch outer with the universal holder and remove the clutch outer nut.

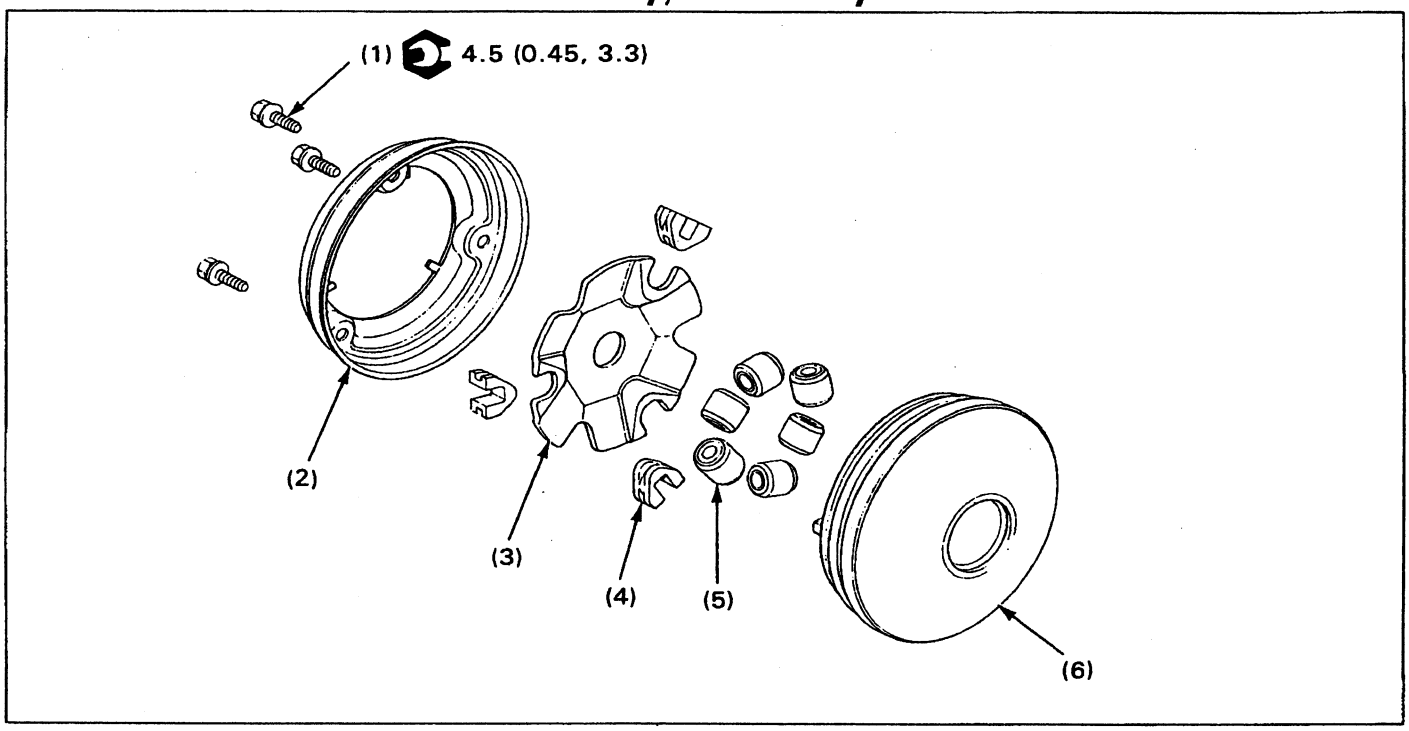
S. TOOL

Universal holder **07725-0030000**

Installation is in the reverse order of removal.



Movable Drive Face Disassembly/Assembly

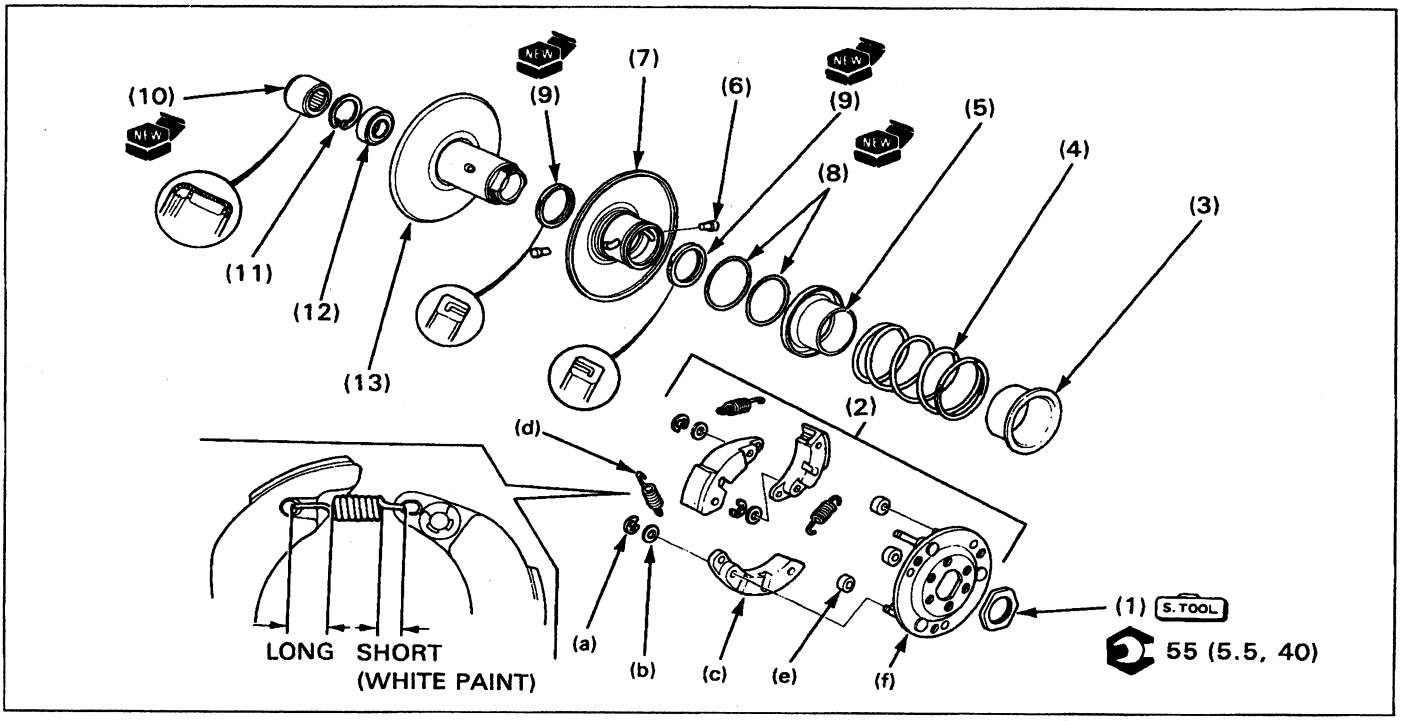


Requisite Service

- Movable drive face removal/installation (page 8-5)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Bolt	3	
(2)	Face seal	1	
(3)	Ramp plate	1	
(4)	Slide piece	3	
(5)	Weight roller	6	NOTE
(6)	Movable drive face	1	• Do not apply grease to the movable drive face and weight rollers.

Clutch/Driven Pulley Disassembly/Assembly



Requisite Service

- Clutch/driven puley removal/installation (page 8-5)

	Procedure	Q'ty	Remarks
	Disassembly Order		
(1)	28 mm special nut	1	
(2)	Clutch assembly	1	
(a)	Snap ring	3	
(b)	Washer	3	
(c)	Clutch shoe	3	
(d)	Clutch shoe spring	3	
(e)	Dampr rubber	3	
(f)	Clutch drive plate	1	
(3)	Spring collar	1	
(4)	Driven face spring	1	
(5)	Seal collar	1	NOTE • When removing, be careful not to damage or deform.
(6)	Guide pin	2	
(7)	Movable driven face	1	
(8)	O-ring	2	
(9)	Oil seal	2	
(10)	Inner bearing	1	
(11)	Snap ring	1	
(12)	Outer bearing	1	
(13)	Driven face	1	

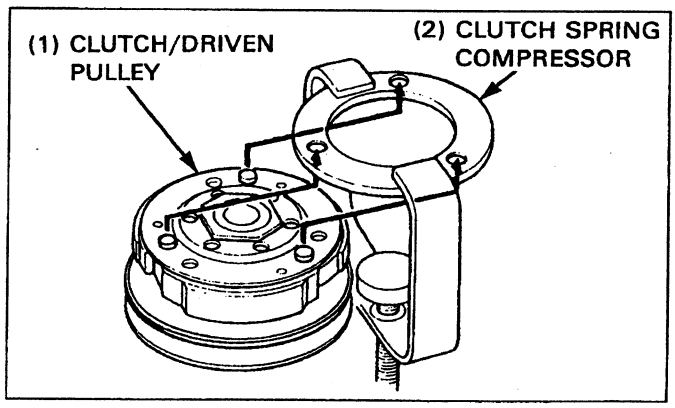
	Procedure	Q'ty	Remarks
	Assembly Order		
(13)	Driven face	1	NOTE • Pack 5.0–5.5 g (0.18–0.19 oz) of specified grease to the inside when installing.
(12)	Outer bearing	1	Drive in with the sealed side facing down.
(11)	Snap ring	1	
(10)	Inner bearing	1	Press in with the sealed side facing up
(9)	Oil seal	2	
(8)	O-ring	2	
(7)	Movable driven face	1	
(6)	Guide pin	2	
(5)	Seal collar	1	
(4)	Driven face spring	1	
(3)	Spring collar	1	
(f)	Clutch drive plate	1	
(e)	Damper rubber	3	
(c)	Cluch shoe	3	
(b)	Washer	3	
(a)	Snap ring	3	
(d)	Clutch shoe spring	3	NOTE • Note the installation direction.
(2)	Clutch assembly	1	
(1)	28 mm special nut	1	

28 mm Special Nut Removal/Installation

Align the holes in the clutch spring compressor with the bosses on the clutch drive plate and install the compressor on the clutch/driven pulley.

S. TOOL

Clutch spring compressor **07960–KM10000**

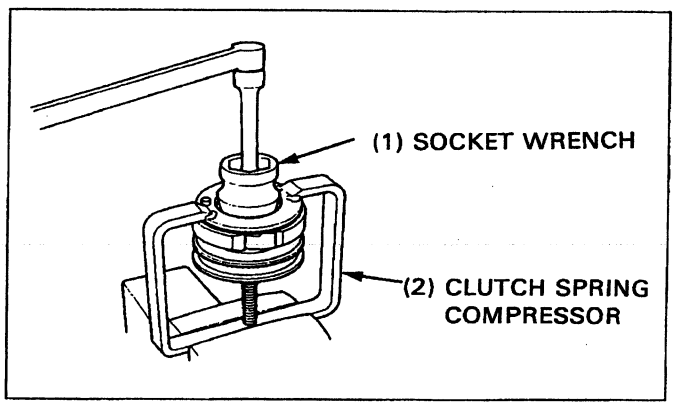


Hold the clutch spring compressor in a vise.
Remove the 28 mm special nut with the socket wrench.

S. TOOL

Socket wrench **07GMA–KS40100**

Installation is in the reverse order of removal.



9. Final Reduction

Service Information

- The final reduction servicing can be performed with the engine installed in the frame. However, it is necessary to remove the engine from the frame and remove the rear brake from the left crankcase to prevent the crankcase from damage when the bearings in the left crankcase are to be replaced.
- When installing the driveshaft, be sure to use the special tool; position the special tool against the bearing inner race and pull the driveshaft into the bearing.

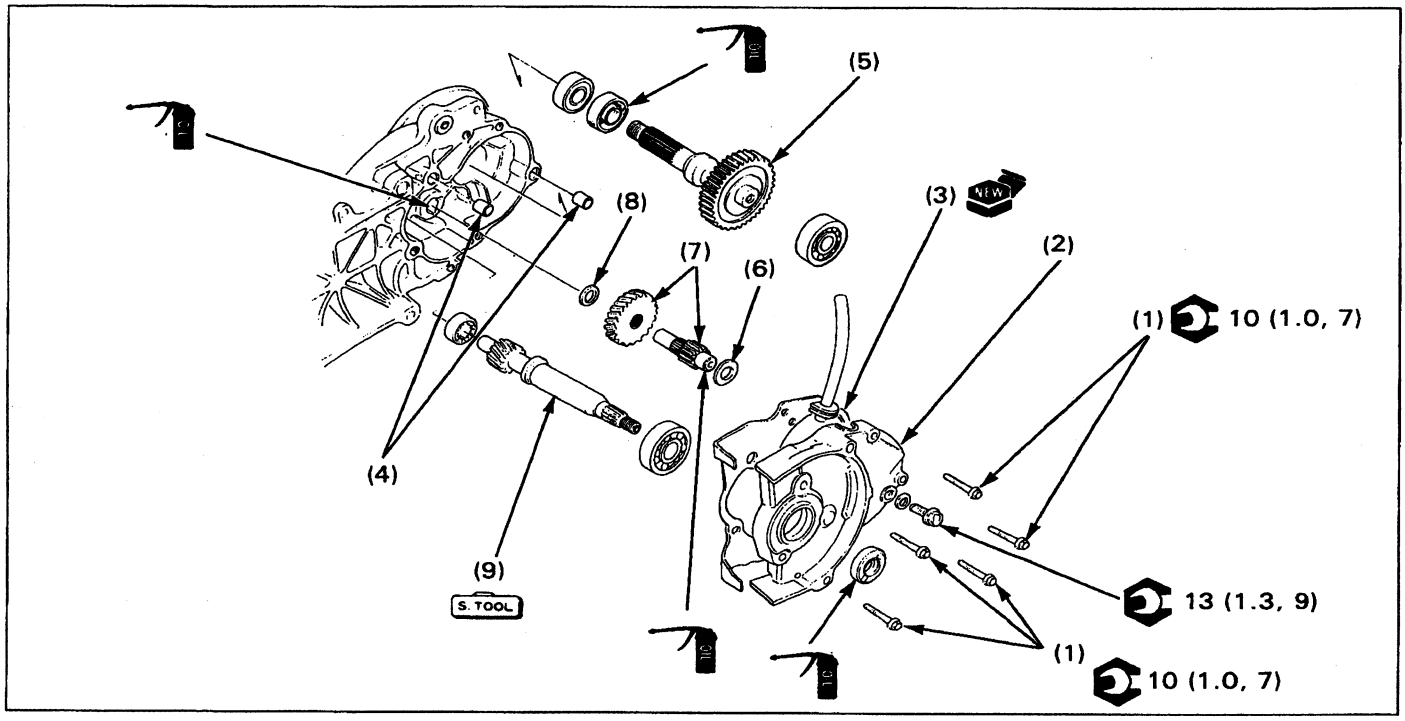
Troubleshooting

Engine starts but scooter won't move
- Damaged transmission
- Seized transmission

Abnormal noise
- Worn, seized or chipped gears
- Worn or damaged bearings

Oil leaks
- Oil level too high
- Worn or damaged oil seal
- Cracked crankcase

Final Reduction Disassembly/Assembly



Requisite Service

- Rear wheel removal/installation (page 12-2)
- Air cleaner case removal/installation (page 5-7)
- Clutch/driven pulley removal/installation (page 8-5)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	6 mm bolt	5	
(2)	Transmisson cover	1	
(3)	Gasket	1	
(4)	Dowel pin	2	
(5)	Final gear shaft	1	
(6)	Thrust washer	1	
(7)	Countershaft/gear	1/1	
(8)	Thrust washer	1	
(9)	Driveshaft	1	Replacement (page 9-3)

Driveshaft Replacement

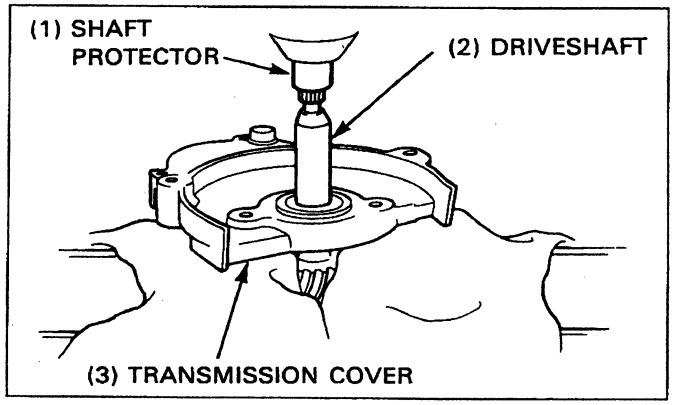
Press the driveshaft out of the transmission cover.

NOTE

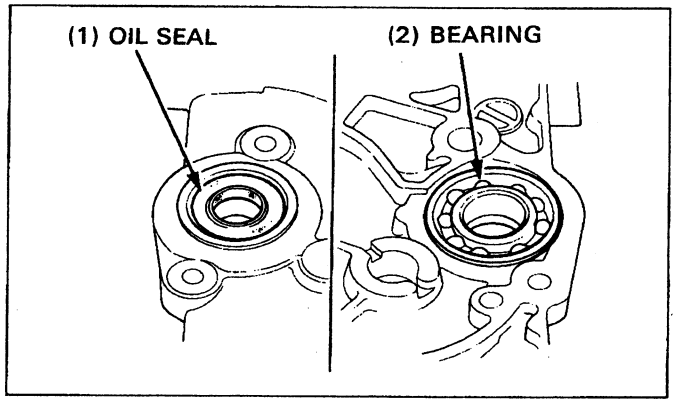
• Be careful not to damage the cover mating surface.

S. TOOL

Shaft protector **07931-1870000**



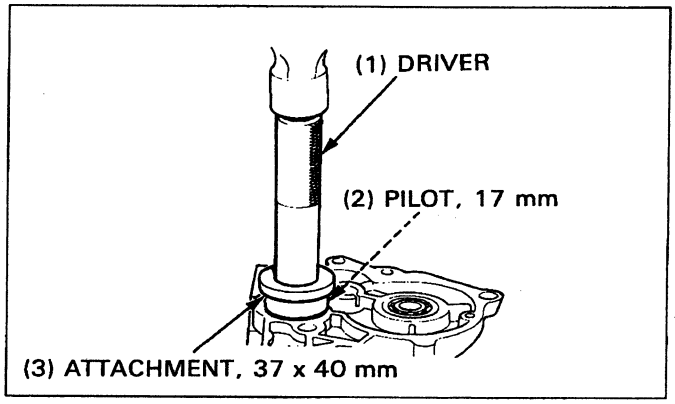
Remove the driveshaft oil seal and bearing from the transmission cover.



Drive a new bearing into the transmission cover with the marking facing out.

S. TOOL

Driver	**07749-0010000**
Attachment, 37 x 40 mm	**07746-0010200**
Pilot, 17 mm	**07746-0040400**

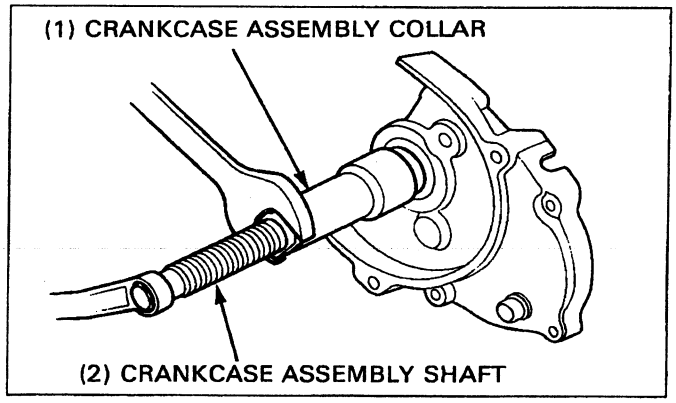


Pull the driveshaft into the bearing in the transmission cover.

S. TOOL

Crankcase assembly collar	**07965-GM00100**
Crankcase assembly shaft	**07965-GM00300**

Install a new driveshaft oil seal.



10. Crankcase/Crankshaft

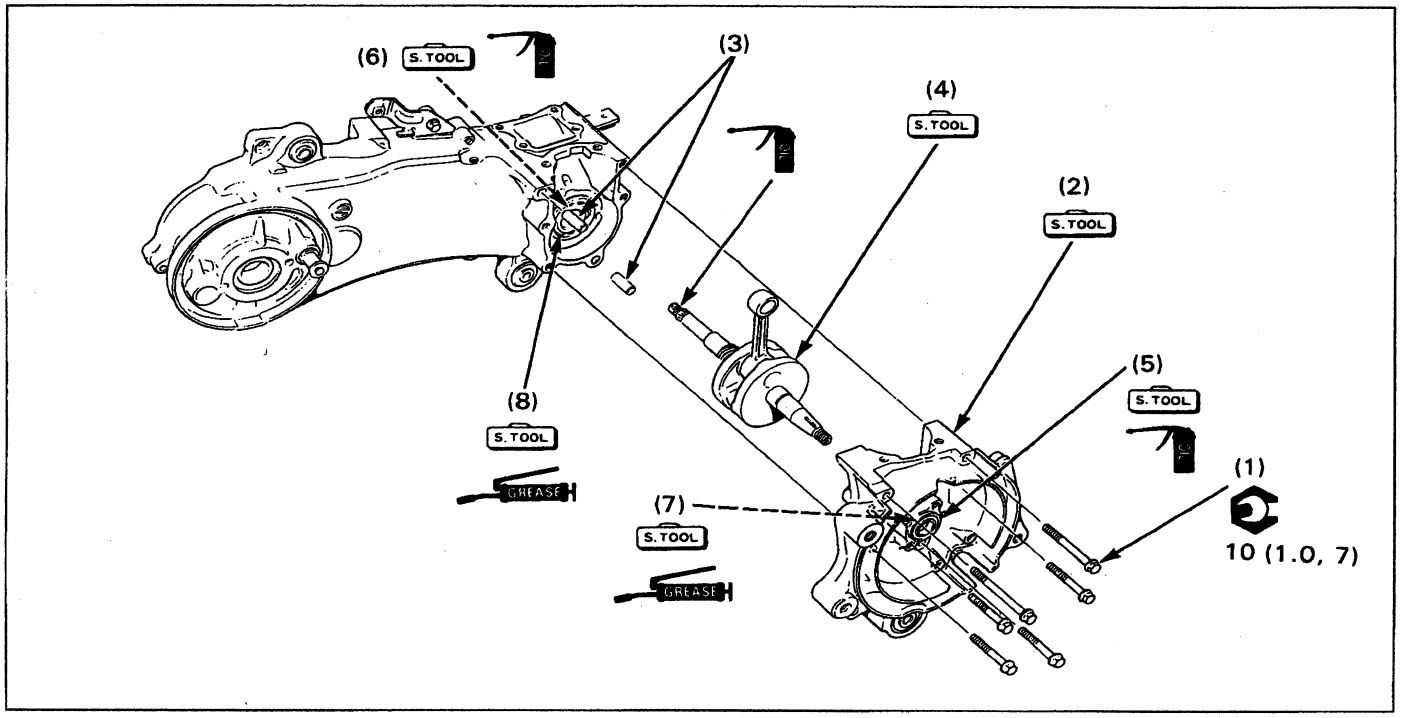
Service Information

- This section covers the crankcase separation to service the crankshaft.
- The following parts must be removed before separating the crankcase:
  - Oil pump (page 4-3)
  - Carburetor (page 5-3)
  - Reed valve (page 5-6)
  - Engine (section 6)
  - Cylinder head, cylinder, piston (page 7-2)
  - Drive pulley (page 8-5)
  - Alternator (page 13-8)
  - Starter motor (page 15-4)
- In addition to the parts listed above, remove the following parts when the left crankcase half must be removed:
  - Driven pulley (page 8-5)
  - Final reduction (page 9-2)
  - Rear brake (page 12-3)
- The crankcase separation/assembly and the crankshaft removal/installation require special tools.
- When assembling the crankcases, be sure to use the special tools; position the special tool against the bearing inner race and pull the crankshaft into the bearing in the crankcase. Therefore, if the bearings stay on the crankshaft after removing the crankshaft, remove them and drive new bearings into the crankcases. Also, be sure to install new oil seals.

Troubleshooting

Excessive noise
- Worn connecting rod big end bearing
- Worn connecting rod small end bearing
- Worn crankshaft main journal bearing

Crankcase Separation/Assembly



Requisite Service

• Refer to page 10-1 for the parts that must be removed before separating the crankcase.

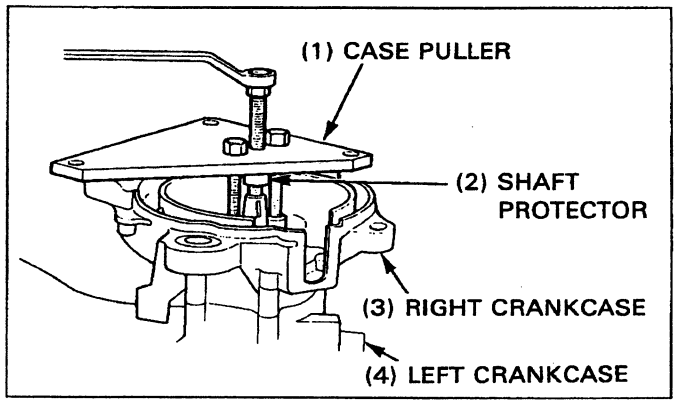
	Procedure	Q'ty	Remarks
	Separation Order		
(1)	Crankcase bolt	6	
(2)	Right crankcase	1	Separation (page 10-3)
(3)	Dowel pin	2	
(4)	Crankshaft	1	
(5)	Right oil seal	1	
(6)	Left oil seal	1	Removal (page 10-3)
(7)	Right bearing	1	
(8)	Left bearing	1	
	Assembly Order		
(7)	Right bearing	1	
(8)	Left bearing	1	Installation (page 10-4)
(4)	Crankshaft	1	
(6)	Left oil seal	1	
(3)	Dowel pin	2	
(2)	Right crankcase	1	Assembly (page 10-5)
(5)	Right oil seal	1	
(1)	Crankcase bot	6	

Crankcase Separation

Screw the case puller shaft onto the crankshaft end.
Attach the case puller by threading the bolts into the bolt holes of the stator.
Separate the crankcase by turning the case puller shaft clockwise.

S. TOOL

Case puller	**07935 – GK80000**
Shaft protector	**07931 – 1870000**



Crankshaft Removal

Attach the case/driven gear puller on the left crankcase as shown, and remove the crankshaft by turning the puller shaft clockwise.

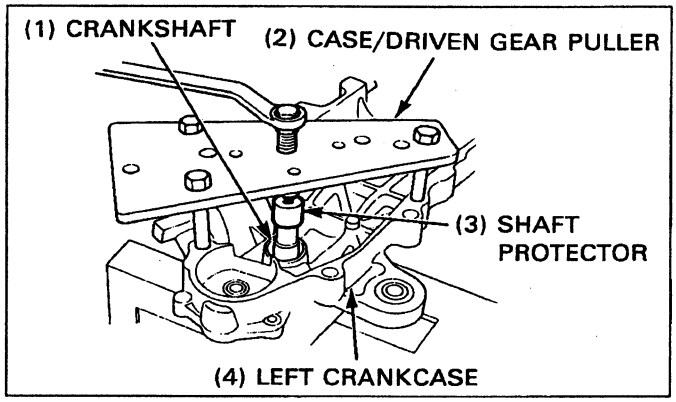
S. TOOL

Case/driven gear puller	**07935 – KG80000**
Shaft protector	**07931 – 1870000**

NOTE

- Do not remove the crankshaft by tapping it.

Remove the right and left oil seals from the crankcases.
Remove the right and left bearings from the crankcases.



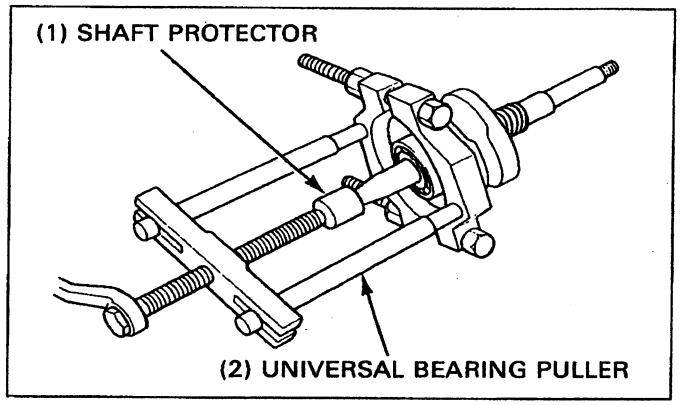
When the bearing stays on the crankshaft, remove it with the universal bearing puller.

S. TOOL

Universal bearing puller	**07631 – 0010000**
Shaft protector	**07931 – 1870000**

NOTE

- Replace the crankshaft bearings and oil seals with new ones when the crankcase is separated.



Crankshaft Installation

Wash the crankcase in solvent and blow dry with compressed air.
Check the crankcases for cranks or other faults.

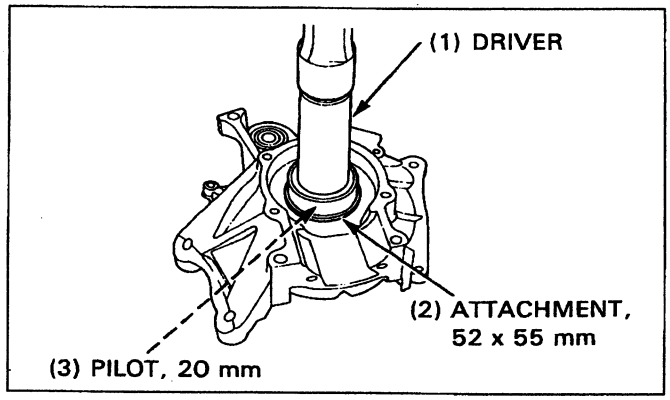
Apply clean 2-stroke engine oil to all moving and sliding surfaces.

Remove all gasket material from the crankcase mating surfaces.
Dress any roughness or irregularities with an oil stone.

Drive a new crankshaft bearing into the right crankcase.

S. TOOL

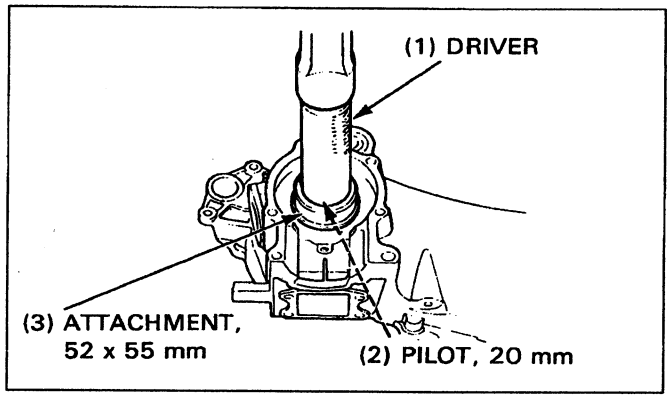
Driver	**07749–0010000**
Attachment, 52 x 55 mm	**07746–0010400**
Pilot, 20 mm	**07746–0040500**



Drive a new crankshaft bearing into the left crankcase.

S. TOOL

Driver	**07749–0010000**
Attachment, 52 x 55 mm	**07746–0010400**
Pilot, 20 mm	**07746–0040500**



Pisition the assembly collar against the crankshaft bearing. Thread the assembly shaft onto the crankshaft.

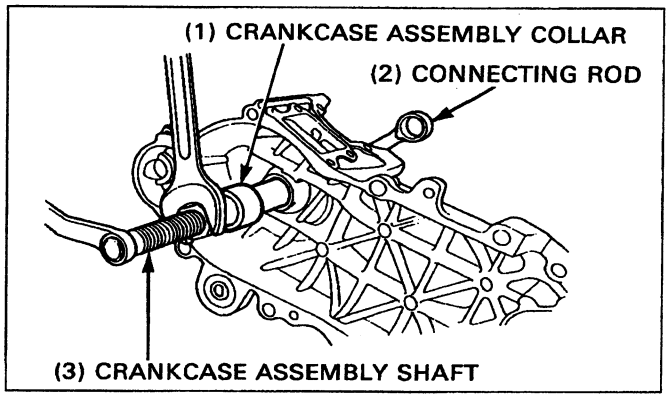
Hold the assembly shaft and turn the nut counterclockwise to draw the crankshaft into the bearing inner race in the left crankcase.

S. TOOL

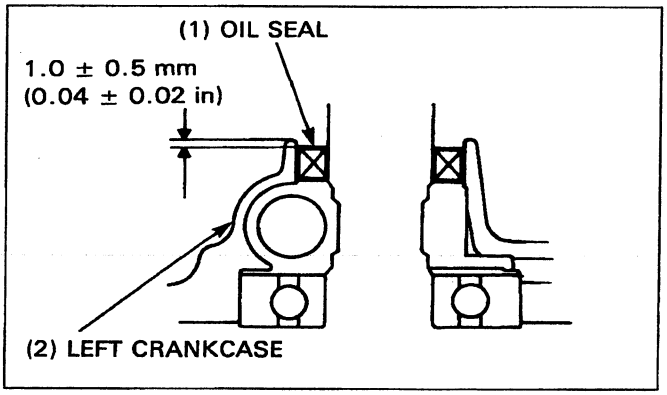
Crankcase assembly collar	**07965–GM00100**
Crankcase assembly shaft	**07965–1660200**

CAUTION

- **Be careful not to let the connecting rod press against the crankcase mating surface while drawing the crankshaft.**



Install a new left crankcase oil seal until it is 1.0 ± 0.5 mm (0.04 ± 0.02 in) below the surface of the left crankcase as shown.



Crankcase Assembly

Apply liquid sealant to the crankcase mating surfaces and install the dowel pins.
Install the right crankcase over the left crankcase.
Place the crankcase assembly collar against the bearing inner race in the right crankcase. Thread the assembly shaft onto the crankshaft.
Hold the assembly shaft and turn the nut counterclockwise to draw the crankcase halves together.

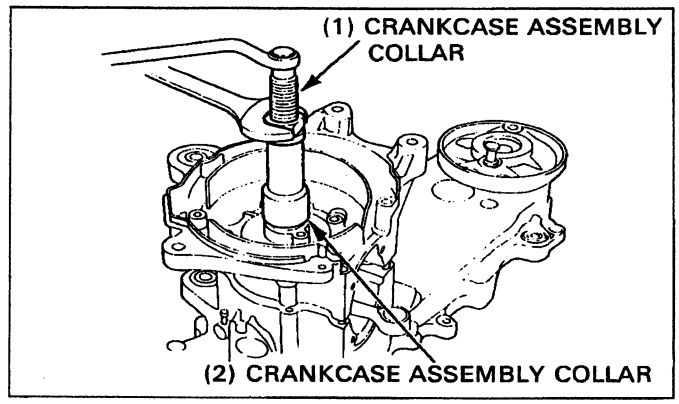
S TOOL

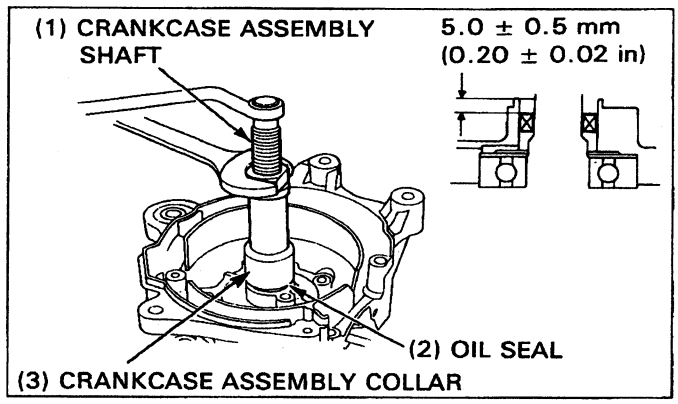
Crankcase assembly collar	**07965-GM00100**
Crankcase assembly shaft	**07965-GM00300**

Install a new right crankcase oil seal using the crankcase assmbly collar and shaft until it is 5.0 ± 0.5 mm (0.20 ± 0.02 in) below the surface of the right crankcase as shown.

S.TOOL

Crankcase assembly collar	**07965-GM00100**
Crankcase assembly shaft	**07965-GM00300**





11. Front Wheel/Suspension/Steering/Brake

Service Information

⚠ WARNING

- **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 a vacuum cleaner or alternate method to minimize the hazard caused by airborne asbestos fibers.**
- **A contaminated brake drum or lining reduces stopping power. Discard contaminated linings and clean a contaminated drum with a high quality brake degreasing agent.**

- Always check the brake operation before riding the scooter.

Troubleshooting

Hard steering
- Steering top cone race too tight
- Worn or damaged steering stem bearings
- Worn or damaged steering stem bearing races
- Insufficient tire pressure

Steers to one side or does not track straight
- Bent fork
- Bent front axle
- Faulty steering stem bearings
- Bent frame
- Worn or damaged wheel bearings

Front wheel wobbling
- Bent rim
- Worn front wheel bearings
- Faulty tire

Wheel turns hard
- Misadjusted brake
- Faulty wheel bearings

Soft suspension
- Weak fork springs

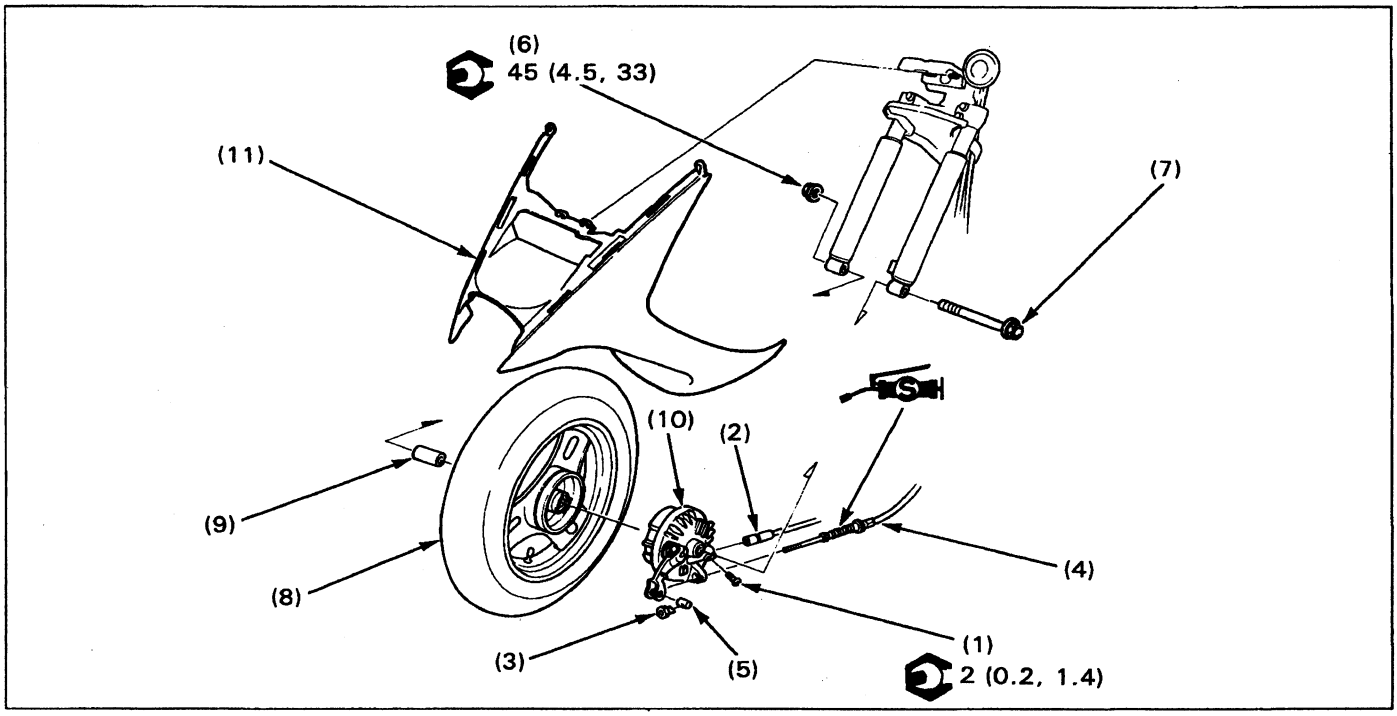
Front suspension noise
- Fork spring binding
- Loose fork fasteners

Poor brake performance
- Improperly adjusted brake
- Worn brake linings
- Worn brake drum
- Worn brake cam
- Improperly installed brake linings
- Brake cable sticking/needs lubrication
- Contaminated brake linings
- Contaminated brake drum
- Worn brake shoes at cam contact areas
- Improper engagement between brake arm and cam serrations

Brake lever hard or slow to return
- Worn/broken return spring
- Improperly adjusted brake
- Sticking brake drum due to contamination
- Worn brake shoes at cam contact areas
- Brake cable sticking/needs lubrication
- Worn brake cam
- Improperly installed brake linings

Brake squeaks
- Worn brake linings
- Worn brake drum
- Contaminated brake linings
- Contaminated brake drum

Front Wheel Removal/Installation



NOTE

- After installing the front wheel, adjust the front brake.

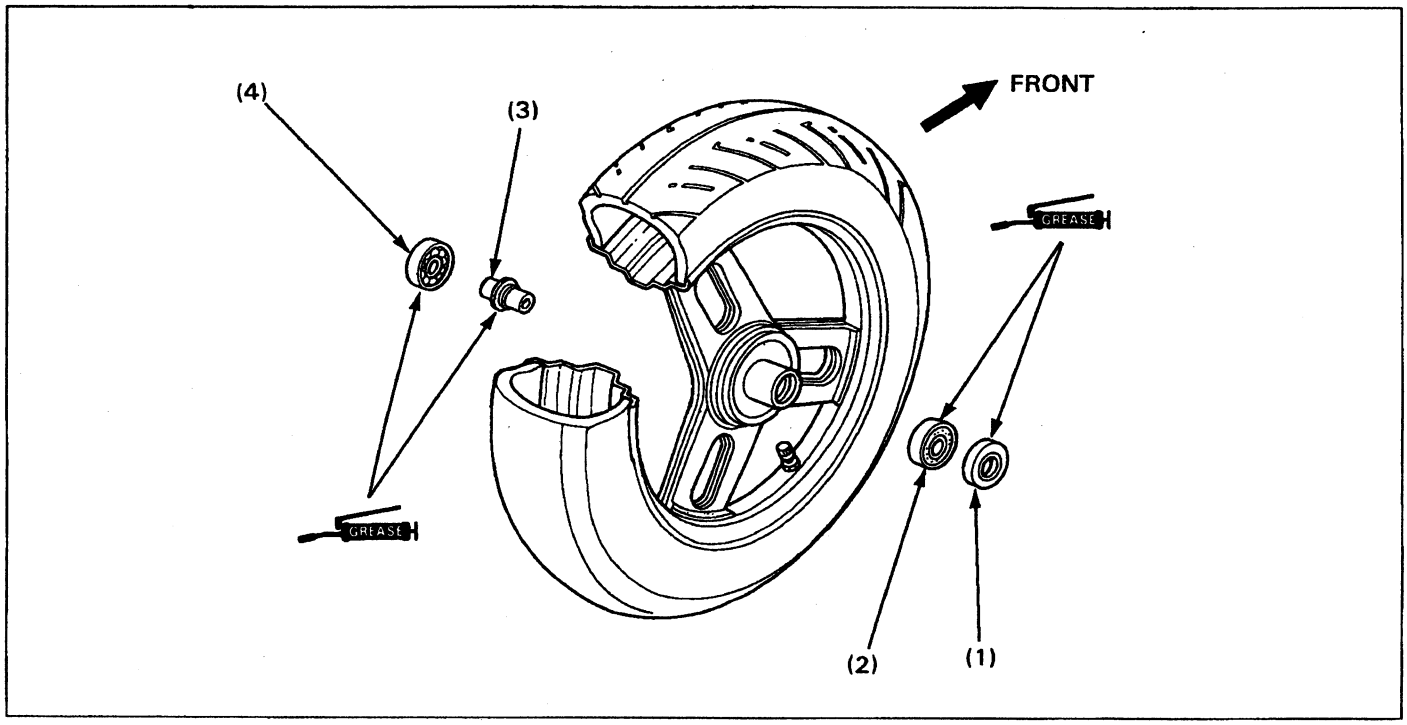
Requisite Service

When removing the front fender:

- Front inner cover (page 2-6)
- Side cover removal/installation (page 2-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Speedometer cable set screw	1	
(2)	Speedometer cable	1	
(3)	Front brake adjusting nut	1	
(4)	Front brake cable	1	
(5)	Brake arm joint	1	
(6)	Front axle nut	1	
(7)	Front axle	1	
(8)	Front wheel	1	Disassembly/Assembly (page 11-3)
(9)	Side collar	1	
(10)	Front brake panel	1	Disassemly/assembly (page 11-4)
(11)	Front fender	1	

Front Wheel Disassembly/Assembly

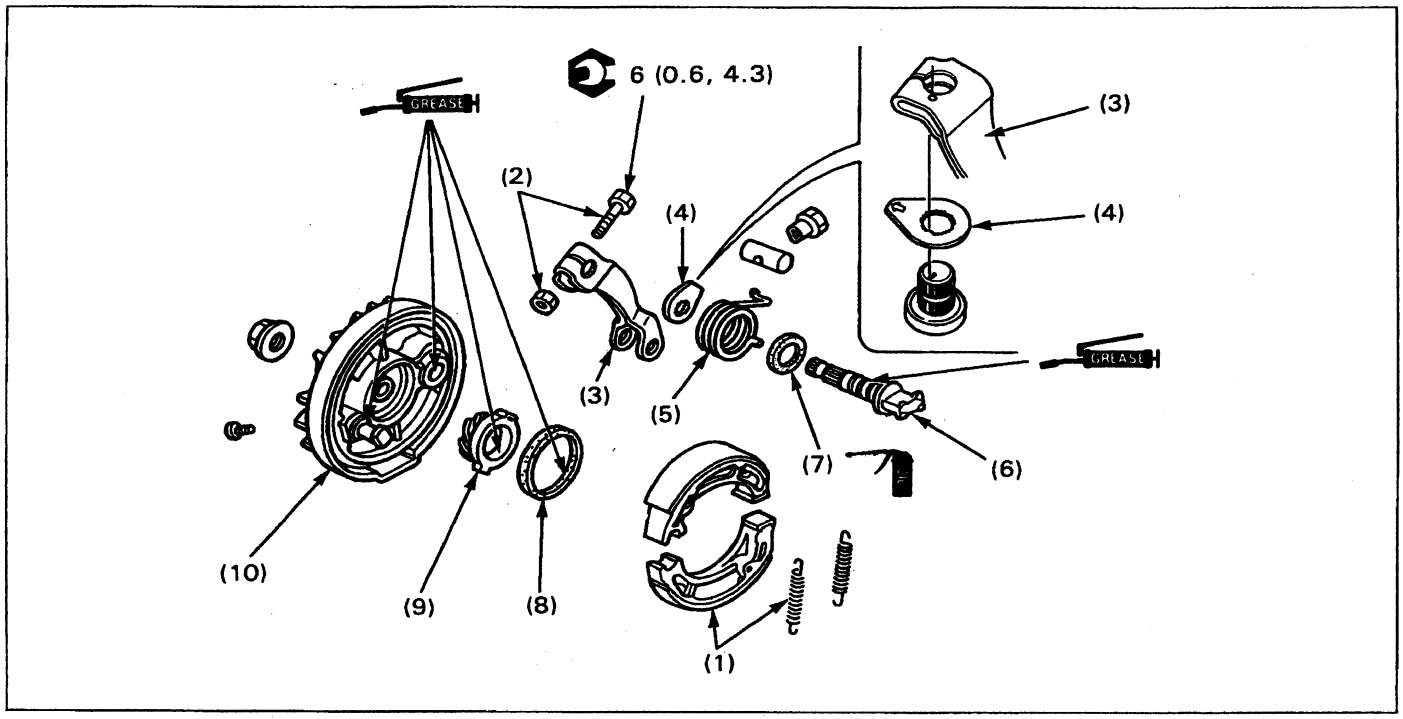


Requisite Service

- Front wheel removal/installation (page 11-2)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Dust seal	1	
(2)	Right wheel bearing (6200U)	1	
(3)	Distance collar	1	
(4)	Left wheel bearing (6200U)	1	

Front Brake Panel Disassembly/Assembly

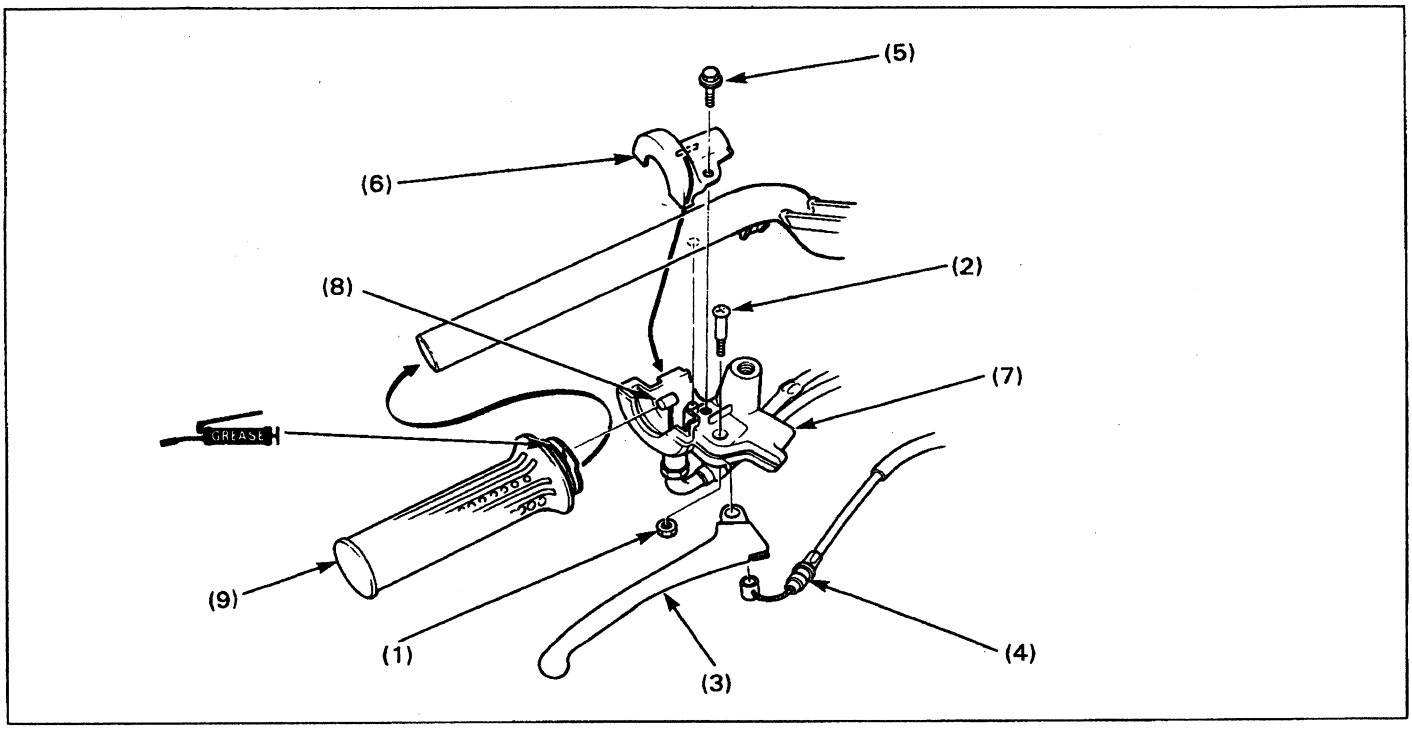


Requisite Service

- Front wheel removal/instalation (page 11-2)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Brake shoe/shoe spring	2/2	
(2)	Brake arm bolt/nut	1/1	
(3)	Brake arm	1	When installing, align the punch mark on the arm with the index mark on the brake cam.
(4)	Wear indicator	1	
(5)	Return spring	1	
(6)	Brake cam	1	
(7)	Felt seal	1	
(8)	Dust seal	1	
(9)	Speedometer drive gear	1	
(10)	Brake panel	1	

Throttle Housing Removal/Installation

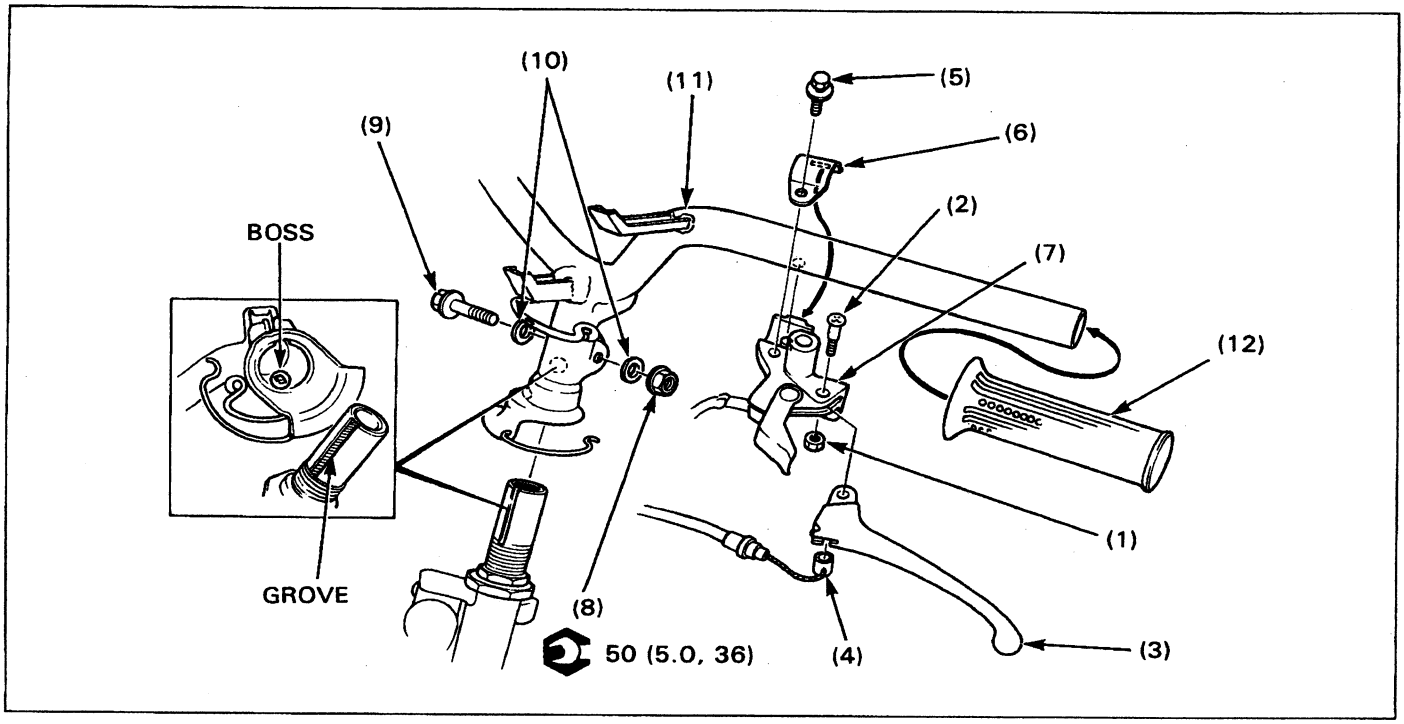


Requisite Service

- Handle cover removal/installation (page 2-7)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
	Front brake lever		
(1)	Nut	1	
(2)	Front brake lever pivot screw	1	
(3)	Front brake lever	1	
(4)	Front brake cable	1	
	Throttle housing		
(5)	Bolt	1	
(6)	Upper throttle housing	1	When installing, hook the slot in the upper housing to the tab of the lower housing.
(7)	Lower throttle housing	1	When installing, align the boss on the housing with the hole in the handlebar.
(8)	Throttle cable	1	
(9)	Throttle grip	1	

Handlebar Removal/Installation

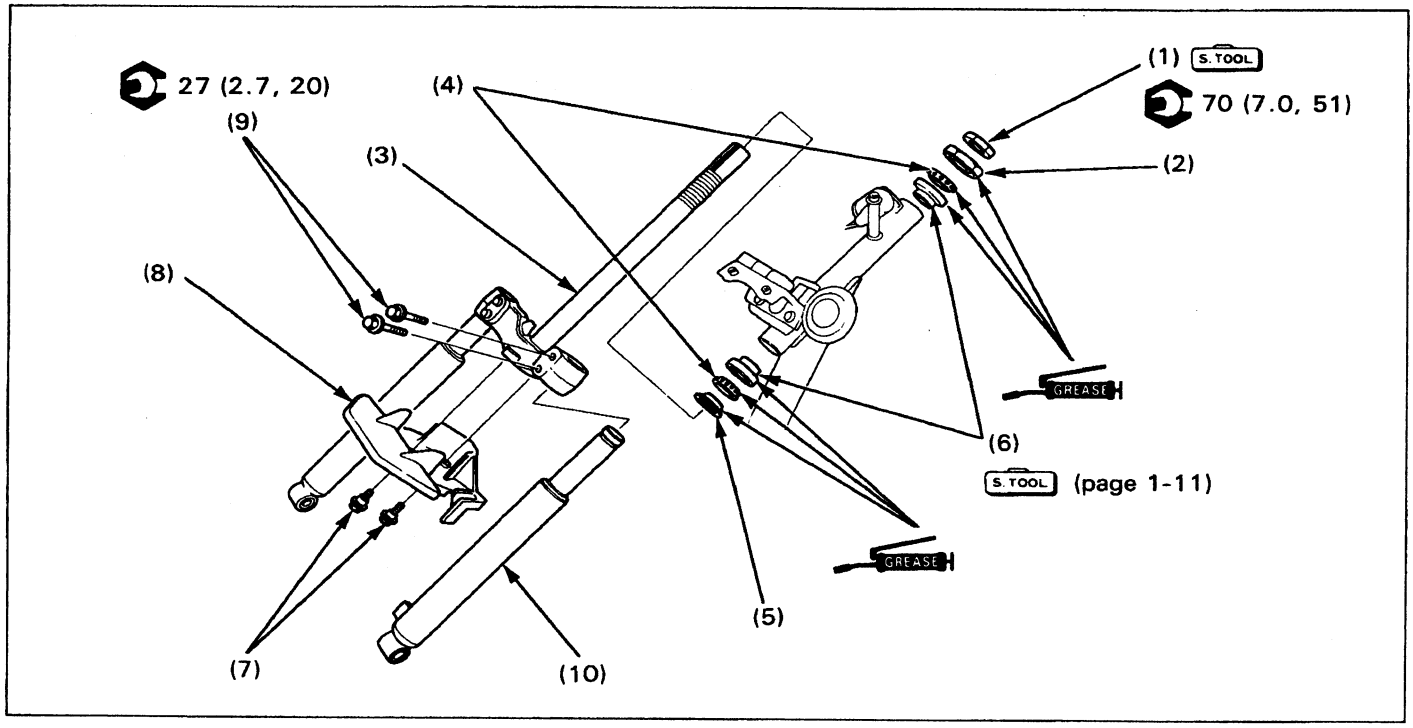


Requisite Service

- Throttle housing removal/installation (page 11-5)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
	Rear brake lever		
(1)	Nut	1	
(2)	Rear brake lever pivot screw	1	
(3)	Rear brake lever	1	
(4)	Rear brake cable	1	
	Rear brake lever bracket		
(5)	Bolt	1	
(6)	Lever bracket band	1	When installing, hook the slot in the band to the tab of the lever bracket.
(7)	Rear brake lever bracket	1	Whn installing, align the boss on the bracket with the hole in the handlebar.
(8)	Nut	1	
(9)	Handlebar pinch bolt	1	
(10)	Washer	2	
(11)	Handlebar	1	When installing, align the boss of the handlebar with the groove in the steering stem.
(12)	Handle grip	1	

Steering Stem Removal/Installation



Requisite Service

- Front wheel removal/installation (page 11-2)
- Handlebar removal/installation (page 11-6)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
	Steering stem		
(1)	Steering stem lock nut	1	Installation (page 11-8)
(2)	Top cone race	1	
(3)	Steering stem	1	
	Steering stem bearings/races		
(4)	Steering stem bearing	2	
(5)	Bottom cone race	1	
(6)	Ball race	2	
	Front inner fender		
(7)	Attaching bolt	2	
(8)	Front inner fender	1	
	Fork		
(9)	Fork pinch bolt	4	NOTE • The upper pinch bolts are the locating bolts.
(10)	Fork	2	Disassembly/Assembly (page 11-9)

Top Cone Race/Stem Lock Nut Installation

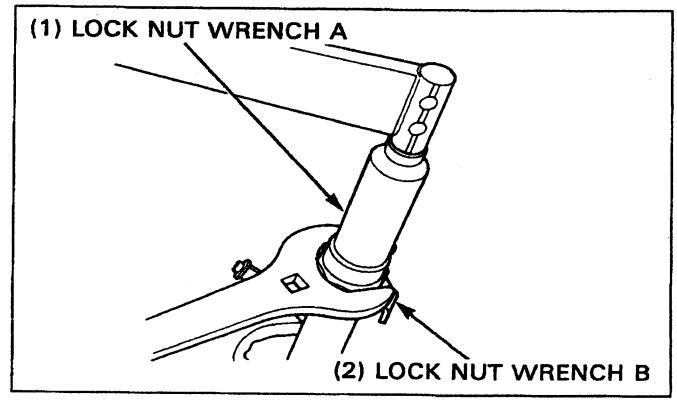
Install the top cone race and hand-tighten it.
Rotate the steering stem lock-to-lock several times to seat the bearings.
Make sure that the steering stem rotates smoothly without vertical play.

Hold the top cone race and tighten the steering stem lock nut.

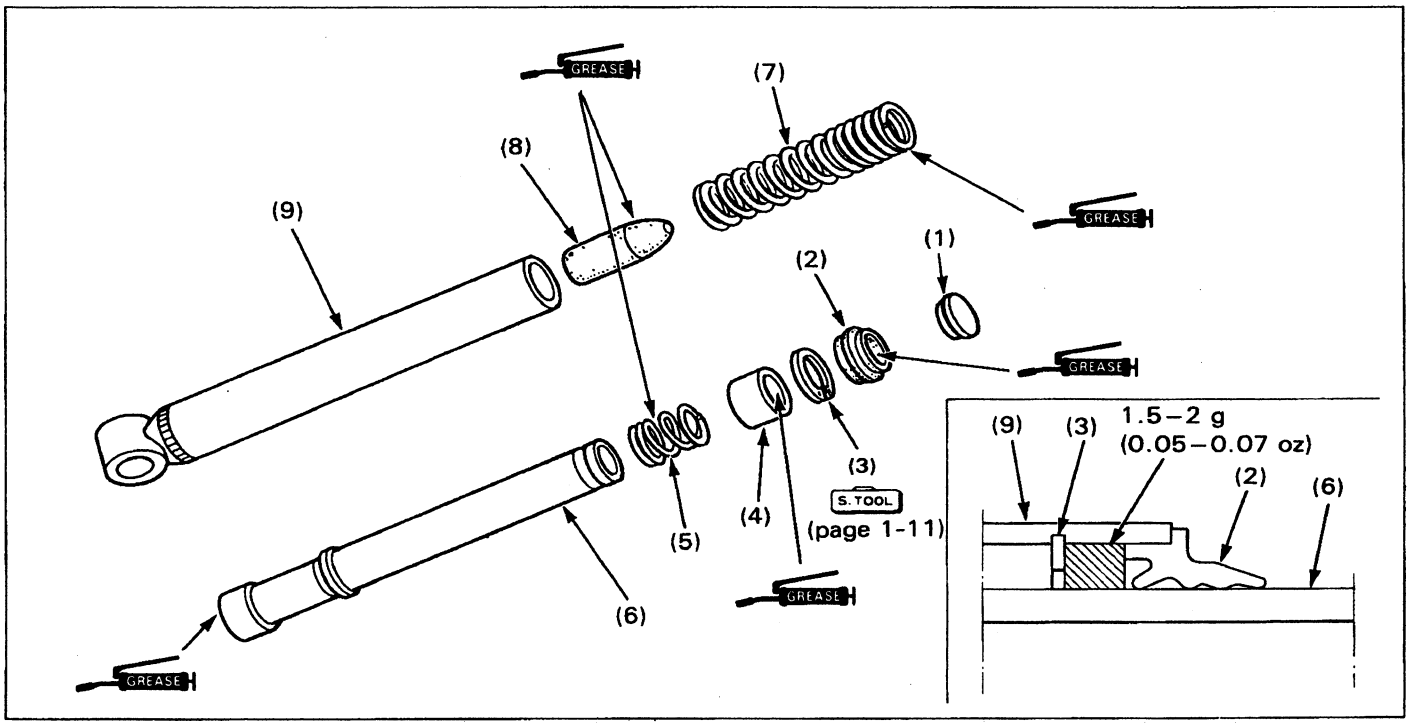
Torque: 70 N·m (7.0 kg-m, 51 ft-lb)

S. TOOL

Lock nut wrench A	**07916-KM10000**
Lock nut wrench B	**07916-1870100**



Fork Disassembly/Assembly



Requisite Service

- Fork removal/installation (page 11-7)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Fork tube cap	1	
(2)	Dust seal	1	
(3)	Snap ring	1	NOTE • After installation, pack 1.5–2 g (0.05–0.07 oz) of grease between the bottom case and fork tube as shown.
(4)	Bushing	1	
(5)	Rebound spring	1	
(6)	Fork tube	1	
(7)	Fork spring	1	
(8)	Stopper rubber	1	
(9)	Bottom case	1	

12. Rear Wheel/Suspension/Brake

Service Information

⚠ WARNING

- **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 a vacuum cleaner or alternate method to minimize the hazard caused by airborne asbestos fibers.**
- **A contaminated brake drum or lining reduces stopping power. Discard contaminated linings and clean a contaminated drum with a high quality brake degreasing agent.**

- Always check the brake operation before riding the scooter.

Troubleshooting

Rear wheel wobbling
- Bent rim
- Axle nut not tightened properly
- Faulty tire
- Insufficient tire pressure

Wheel turns hard
- Misadjusted brake
- Faulty wheel bearings

Soft suspension
- Weak shock absorber spring
- Oil leakage from damper unit

Hard suspension
- Bent damper rod

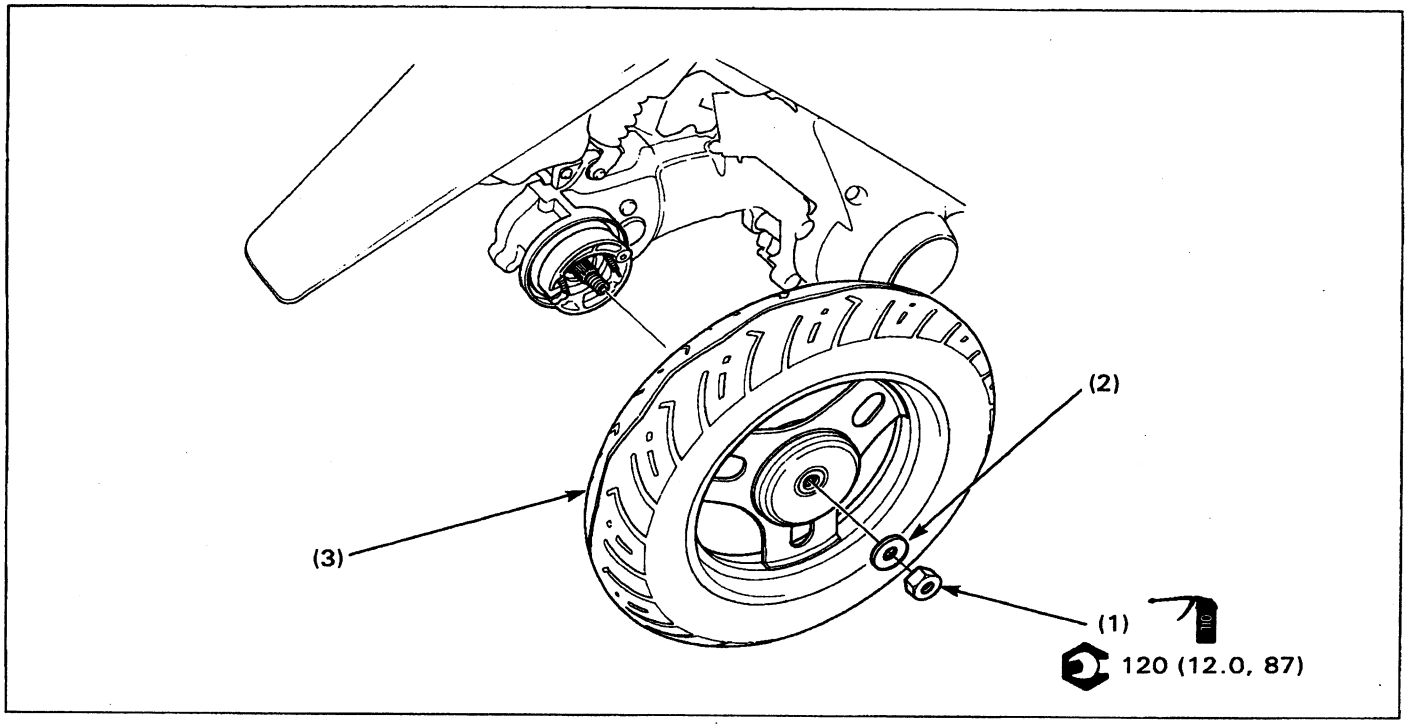
Rear suspension noise
- Shock absorber spring binding

Poor brake performance
- Improperly adjusted brake
- Worn brake linings
- Worn brake drum
- Worn brake cam
- Improperly installed brake linings
- Brake cable sticking/needs lubrication
- Contaminated brake linings
- Contaminated brake drum
- Worn brake shoes at cam contact areas
- Improper engagement between brake arm and cam serrations

Brake lever hard or slow to return
- Worn/broken return spring
- Irproperly adjusted brake
- Sticking brake drum due to contamination
- Worn brake shoes at cam contact areas
- Brake cable sticking/needs lubrication
- Worn brake cam
- Improperly installed brake linings

Brake squeaks
- Worn brake linings
- Worn brake drum
- Contaminated brake linings
- Contaminated brake drum

Rear Wheel Removal/Installation

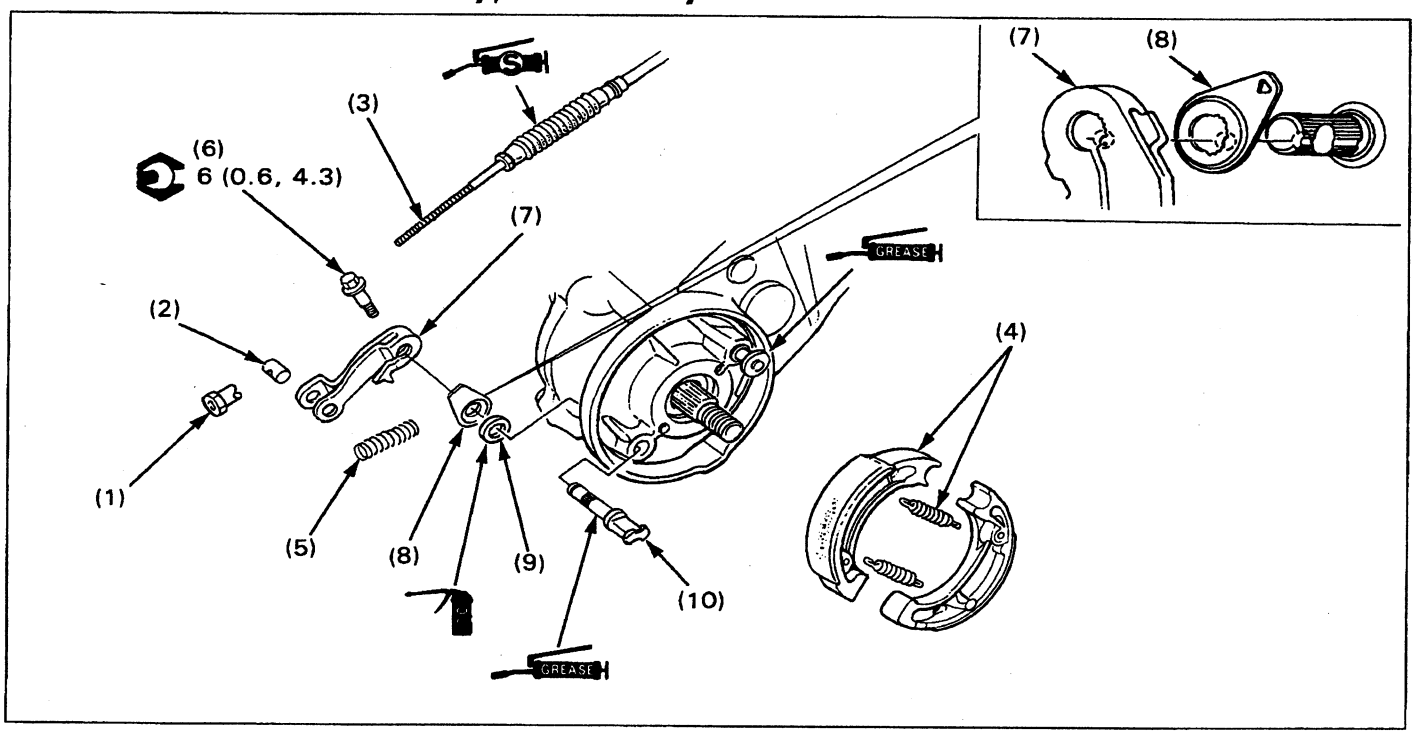


Requisite Service

- Muffler removal/installation (page 2-9)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Rear axle nut	1	
(2)	Washer	1	
(3)	Rear wheel	1	

Rear Brake Disassembly/Assembly



NOTE

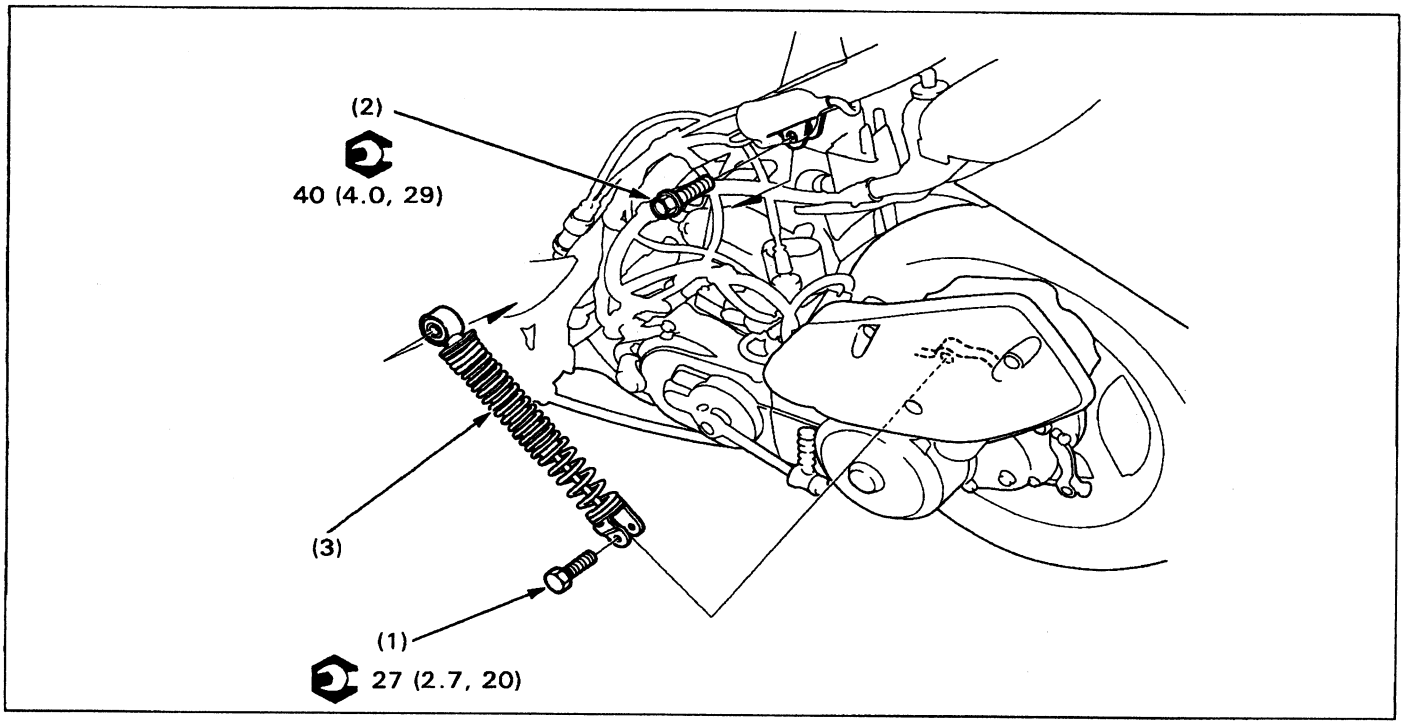
- After installing the rear wheel, adjust the rear brake.

Requisite Service

- Rear wheel removal/installation (page 12-2)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Rear brake adjusting nut	1	
(2)	Rear brake cable	1	
(3)	Brake arm joint	1	
(4)	Brake shoe/shoe spring	2/2	
(5)	Return spring	1	
(6)	Brake arm bolt	1	
(7)	Brake arm	1	When installing, align the punch mark with the wide groove in the brake cam.
(8)	Wear indicator	1	
(9)	Felt seal	1	
(10)	Brake cam	1	

Shock Absorber Removal/Installation



NOTE

- Do not attempt to disassemble the shock absorber. Replace it as an assembly.

Requisite Service

- Frame body cover removal/installation (page 2-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Lower mounting bolt	1	
(2)	Upper mounting bolt	1	
(3)	Shock absorber	1	

13. Charging System/Alternator

Service Information

⚠ WARNING

- **The battery gives off explosive gases; keep sparks, flames, and cigarettes away. Provide adequate ventilation when charging or using the battery in an enclosed space.**
- **The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.**
  - **If electrolyte gets on your skin, flush with water.**
  - **If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician immediately.**
- **Electrolyte is poisonous. If swallowed, drink large quantities of water or milk and follow with milk of magnesia or vegetable oil and call a physician.**
- **KEEP OUT OF REACH OF CHILDREN.**

- Always turn off the ignition switch before disconnecting any electrical component.

CAUTION

- **Some electrical components may be damaged if terminals or connectors are connected or disconnected while the ignition switch is ON and current is present.**

- For extended storage, remove the battery, give it a full charge, and store it in a cool, dry place.
- For battery remaining in a stored scooter, disconnect the negative battery cable from the battery terminal.

NOTE

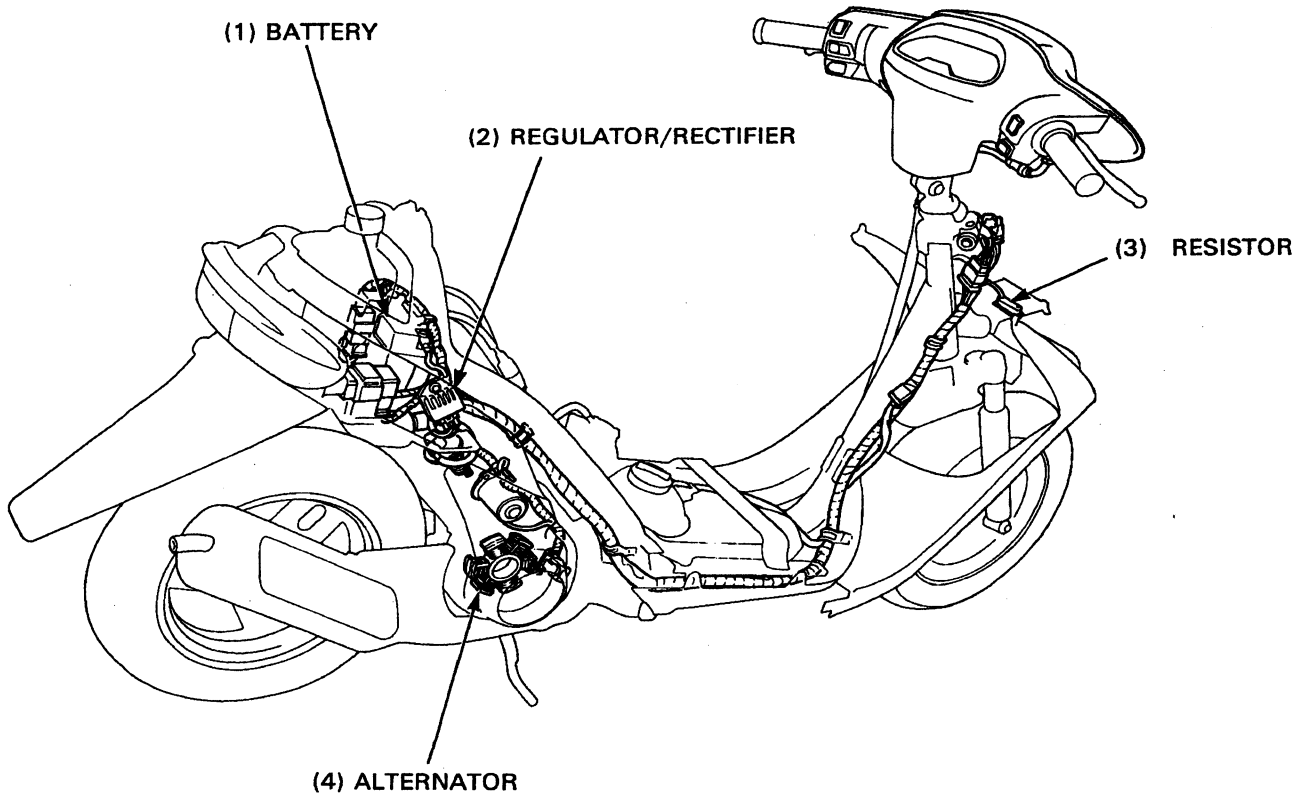
- The maintenance free battery must be replaced when it reaches the end of its service life.

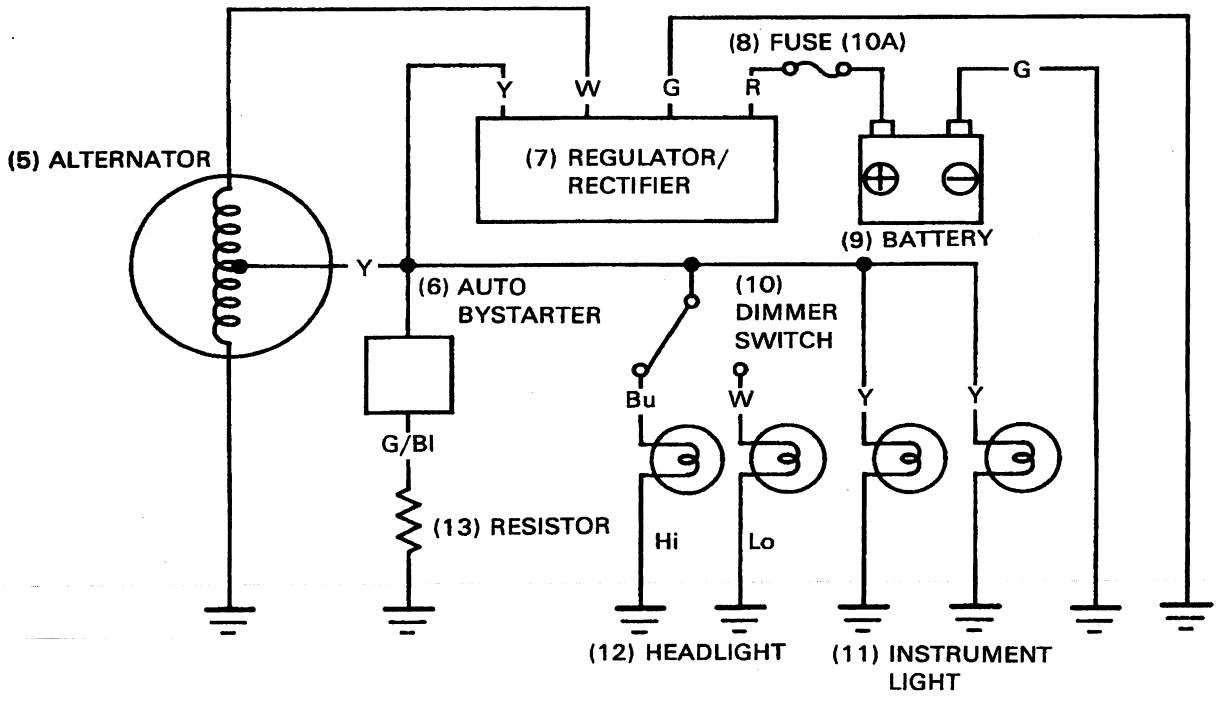
CAUTION

- **The battery caps should not be removed. Attempting to remove the sealing caps from the cells may damage the battery.**

- Battery can be damaged if overcharged or undercharged, or if left to discharge for long periods. These same conditions contribute to shortening the "life span" of the battery. Even under mormal use, the performance of battery deteriorates after 2-3 years.
- Battery voltage may recover after battery charging, but under heavy load, battery voltage will drop quickly and eventually die out. For this reason, the charging system is often suspected to be the problem. Battery overcharge often results from problems in the battery itself, which may appear to be an overcharge symptom. If one of the battery cells is shorted and battery voltage does not increase, the regulator/rectifier supplies excess voltage to the battery. Under these conditions, the electrolyte level goes down quickly.
- Before troubleshooting the charging system, check for proper use and maintenance of the battery. Check if the battery is frequently under heavy load.
- The battery will self-discharge when the scooter is not in use. For this reason, charge the battery every two weeks to prevent sulfation from forming.
- Filling a new battery with electrolyte will produce some voltage, but in order to achieve its maximum performance, always charge the battery. Also, the battery life is lengthened when it is initial-charged.
- When checking the charging system, always follow the steps in the troubleshooting flow chart (page 13-3).
- For battery testing/charging, refer to section 22 of the Common Service Manual.
- For charging system location, see page 13-2.

System Location





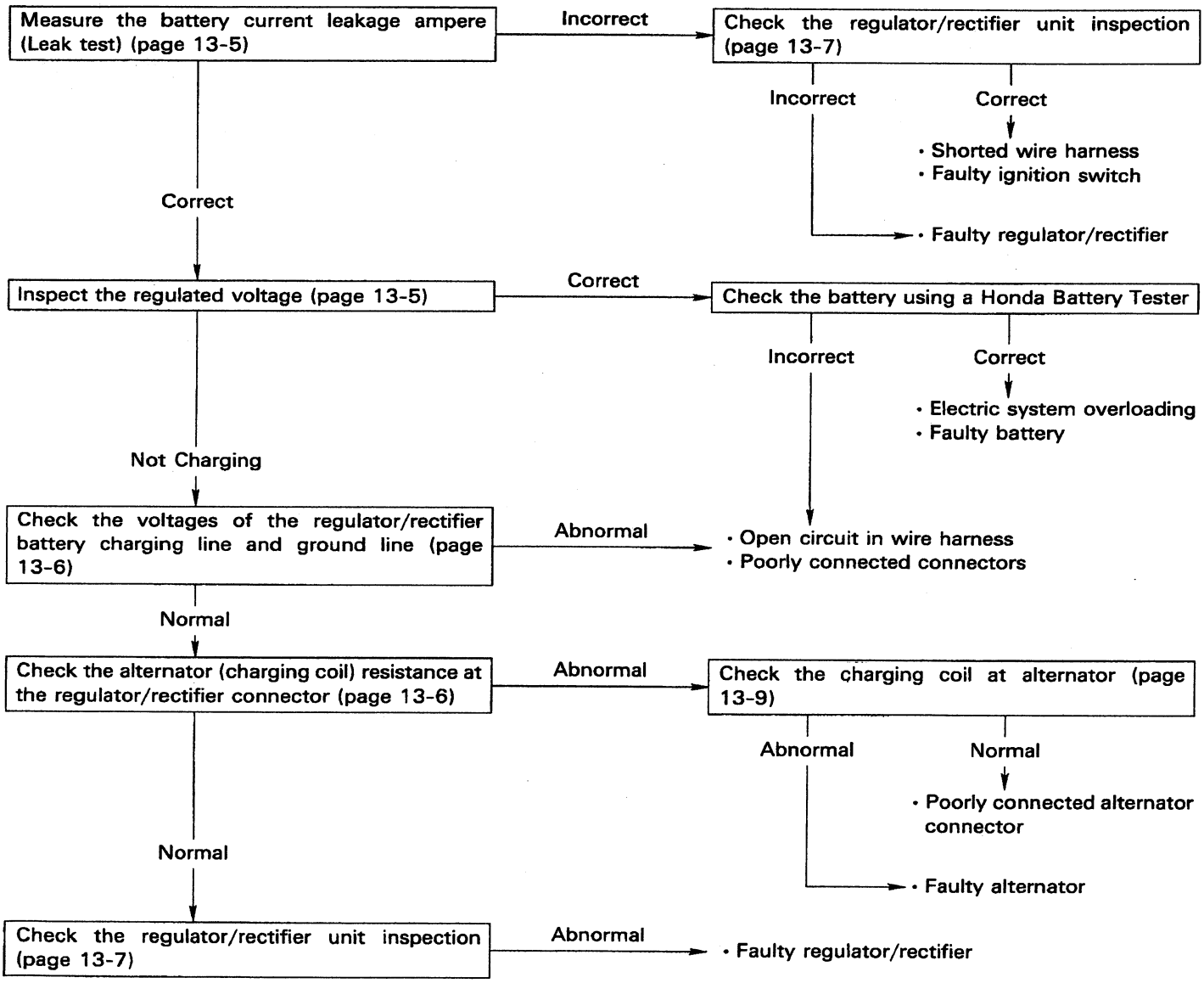
Troubleshooting

Battery Overcharging
- Faulty regulator/rectifier
- Broken regulator/rectifier ground wire or faulty cnnection.

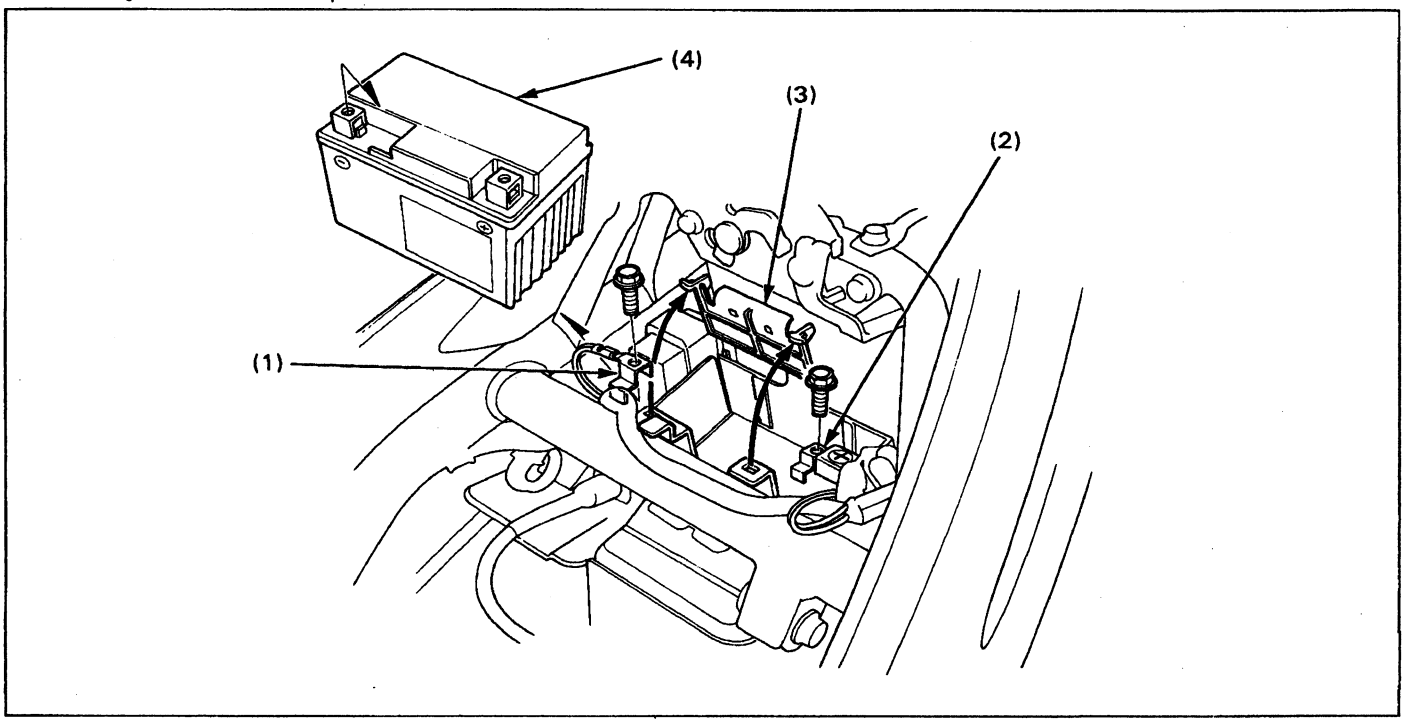
Battery undercharging

NOTE

- In order to obtain accurate test readings for charging system, the battery must be fully charged and in good condition. See Common Service Manual section 22 for check the battery condition.



Battery Removal/Installation

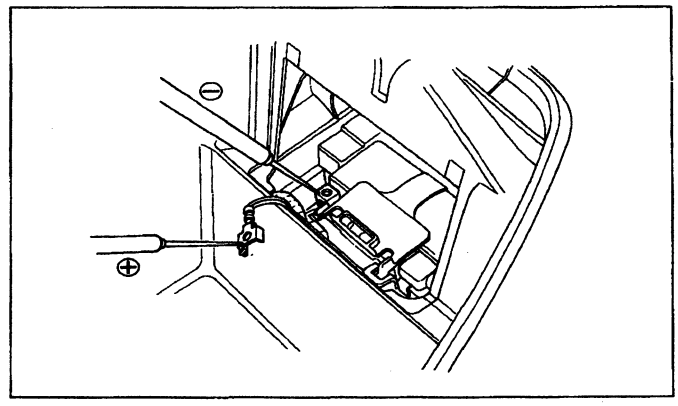


Requisite Service

- Luggage box removal/installation (page 2-4)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Battery negative ⊖ wire terminal	1	**CAUTION** **• With the ignition switch OFF, remove the negative ⊖ terminal first, then the positive ⊕ terminal.**
(2)	Battery positive ⊕ wire terminal	1	**CAUTION** **• When installing, install the posiive ⊕ terminal first, then the negative ⊖ terminal.**
(3)	Battery holder	1	
(4)	Battery	1	

Charging System Inspection



Leak Test

Remove the battery cover (page 2-4).
Turn the ignition switch off and disconnect the ground ⊖ wire from the battery.
Connect the ammeter ⊕ probe to the ground wire and the ammeter ⊖ probe to the battery ⊖ terminal.

With the ignition switch off, check for current leakage.

NOTE

- When measuring current using a tester, set it to a high range, and then bring the range down to an appropriate level. Current flow larger than the range selected may blow out the fuse in the tester.
- While measuring current, do not turn the ignition on. A sudden surge of current may blow out the fuse in the tester.

Specified Current Leakage: 1 mA max.

If current leakage exceeds the specified value, a shorted circuit is likely.
Locate the short by disconnecting connections one by one and measuring the current.

Regulated Voltage/Ampere Inspection

NOTE

- Before performing this test, be sure that the battery is fully charged and that the voltage between its terminals is greater than 13.0 V.

Start the engine and warm it up to operating temperature, then turn the ignition switch OFF.

⚠ WARNING

- **If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in an enclosed area.**
- **The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death.**

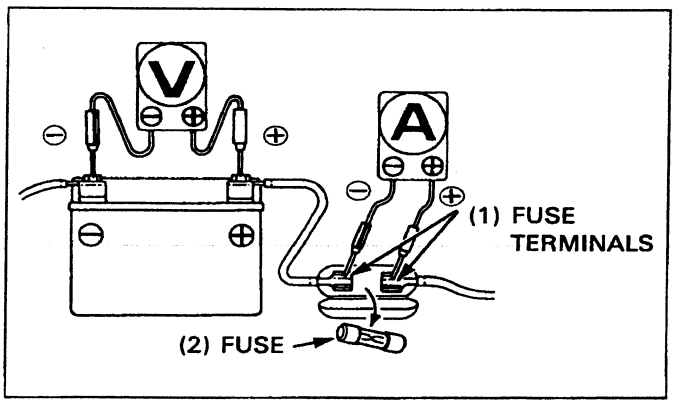
Remove the battery cover (page 2-4)
Connect the tachometer.

Connect a multitester betwen the battery terminals.

S TOOL

Digital Multitester **07411-0020000**

Open the fuse holder and remove the fuse.
Connect the ammeter between the fuse terminals as shown.

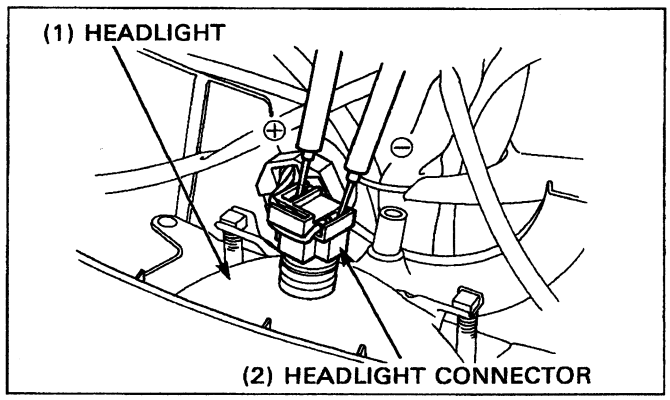


CAUTION

- **Be careful not to short any tester probes.**
- **Although the current could be measured when the ammeter is connected between the battery positive terminal and the positive cable, a sudden surge of current to the starter motor could damage the ammeter.**
- **Always turn the ignition off when conducting the test. Disconnecting the ammeter or wires when current is flowing may damage the ammeter.**

Start the engine and increase the engine speed gradually.

Regulated voltage: 14.0–15.0 V/5,000 min^{-1} (rpm)
Charging current: 0–0.5 A/5,000 min^{-1} (rpm)



Lighting Voltage Inspection

CAUTION

- **Failure to measure the lighting voltage may lead to electrical damage of lighting components.**

Remove the handle front cover (page 2-7).
Connect the tachometer.

Start the engine and turn the headlight dimmer switch to "Hi" position.

With the headlight connector connected, connect the ammeter ⊕ probe to the blue wire terminal, and ⊖ probe to the green wire terminal.

NOTE

- Select the AC range on the multitester.

Gradually increase the engine speed and read the lighting regulated voltage.

Regulated voltage: 12.6–13.6 V/5,000 min^{-1} (rpm)

Regulator/Rectifier

Wire Harness Inspection

NOTE

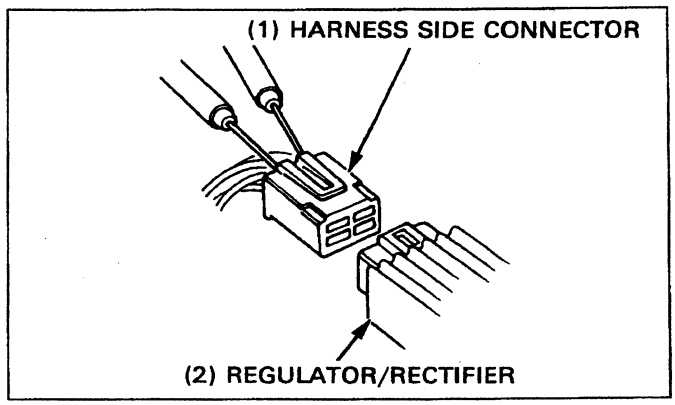
- If the engine has been running, after stopping the engine, wait for 10 minutes or more and perform the inspection.

Disconnect the regulator/rectifier connector and check the connector for loose or corroded terminals.

Measure the following between connector terminals of the wire harness side.

Item	Terminals	Specification
Battery chrging line	Red (+) and ground	Battery voltage should be measured
Ground line	Green and ground	Continuity
Charging line	White and ground	0.4–1.0 Ω (20°C/68°F)
Lighting line	Yellow and ground	0.2–0.8 Ω* (20°C/68°F)

* Disconnect the auto bystarter connector, taillight yellow connector and 9P connector located at the steering head and measure.

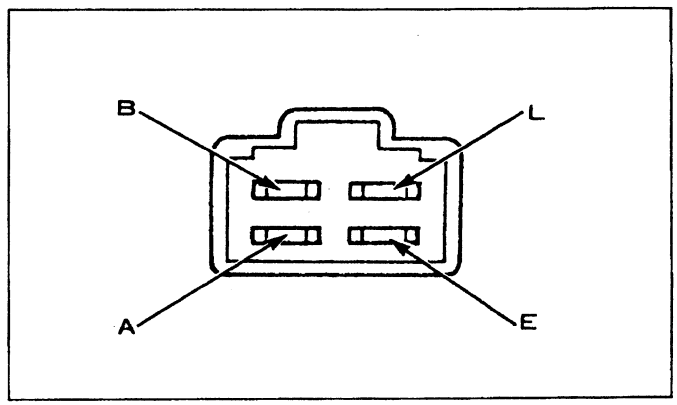


Unit Inspection

Provided the circuit on the wire harness side are normal and there are no loose connections at the connector, inspect the regulator/rectifier unit by measuring the resistance between the terminals.

Unit: kΩ

⊕ Probe / ⊖ Probe	A	L	B	E
A		∞	3–50	∞
L	∞		∞	5–100
B	∞	∞		∞
E	∞	5–100	∞	



NOTE

- You'll get false readings if the probes touch your fingers.
- Use the specified multitesters. Using other equipment may not allow you to obtain the correct results. This is due to the characteristic of semiconductors, which have different resistance values depending on the applied voltage.

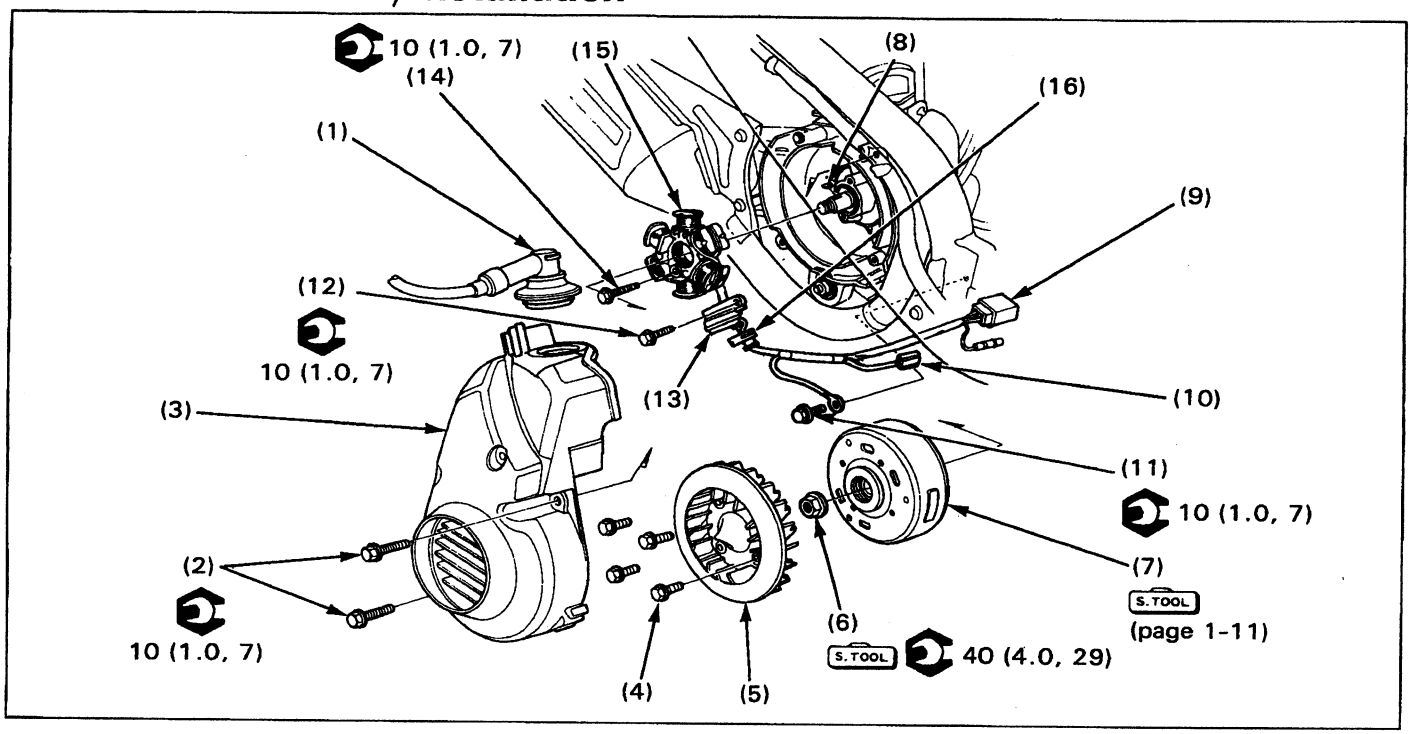
Specific Multitester:

–07411–0020000	**(KOWA Digital type)**
–07308–0020001	**(SANWA Analogue type)**
–TH–5H	**(KOWA Analogue type)**

- Select the following range:
  SANWA: kΩ
  KOWA: x100
- An old battery stored in the multitester could cause inaccurate readings. Check the battery if the multitester registers incorrectly.
- When using the KOWA multitester, remember that all readings should be multiplied by 100.

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

Alternator Removal/Installation



Requisite Service

- Frame body cover removal/installation (page 2-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Spark plug cap	1	
(2)	Bolt	2	
(3)	Fan cover	1	
(4)	Bolt	4	
(5)	Cooling fan	1	
(6)	Flywheel nut	1	Removal/installation (page 13-9)
(7)	Flywheel	1	
(8)	Woodruff key	1	
(9)	Alternator wire connector	2	
(10)	Starter motor connector	1	
(11)	Starter motor lower mounting bolt	1	Remove the starter motor ground wire.
(12)	Pulse generator bolt	2	
(13)	Pulse generator	1	
(14)	Stator bolt	2	
(15)	Stator	1	
(16)	Grommet	1	

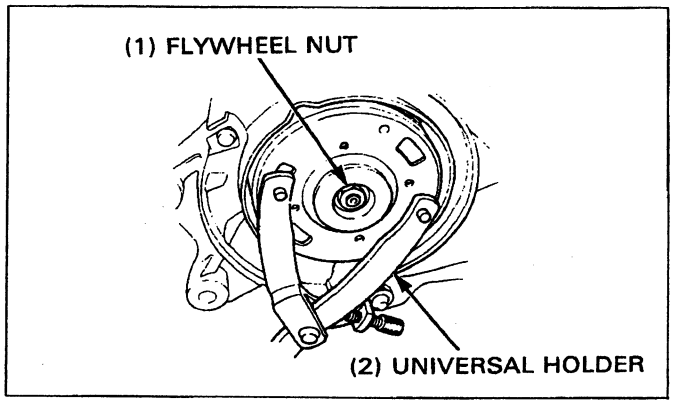
Flywhel Nut Removal/Installation

Hold the flywheel with the universal holder and remove the flywheel nut.

S. TOOL

Universal holder **07725-0030000**

Install the nut in the reverse order of removal.



Alternator Inspection

NOTE

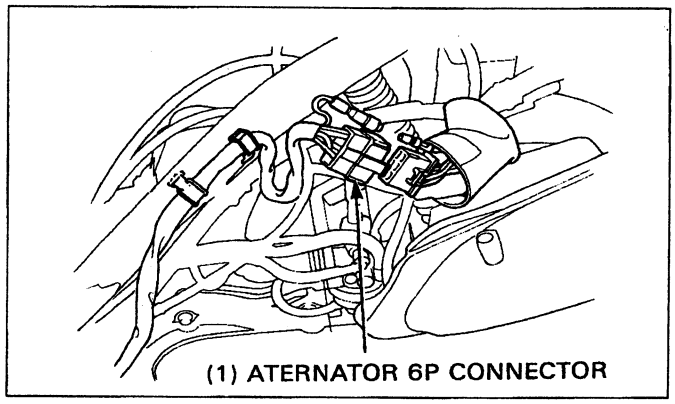
- This inspection can be performed with the stator installed.

Remove the frame body cover (page 2-5).
Disconnect the alternator 6P connector.
Measure the charging coil resistance between the white wire terminal and ground.

Standard: 0.4-1.0 Ω (20°C/68°F)

Measure the lighting coil resistance between the yellow wire terminal and ground.

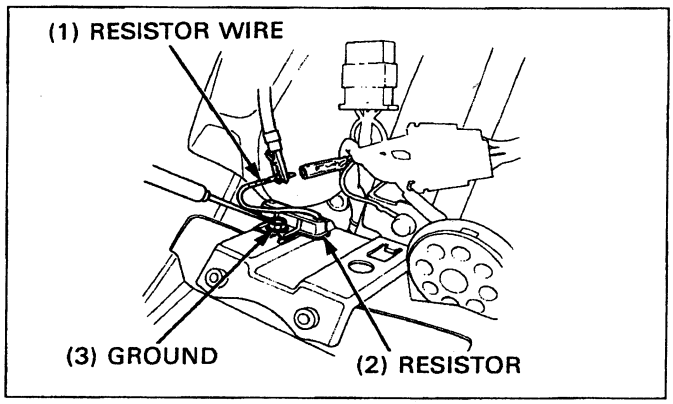
Standard: 0.2-0.8 Ω (20°C/68°F)



Resistor Inspection

Remove the front cover (page 2-5).
Disconnect the resistor wire connector and measure the resistance between the wire terminal and body ground.

Standard: 4.7-5.3 Ω (20°C/68°F)



14. Ignition System

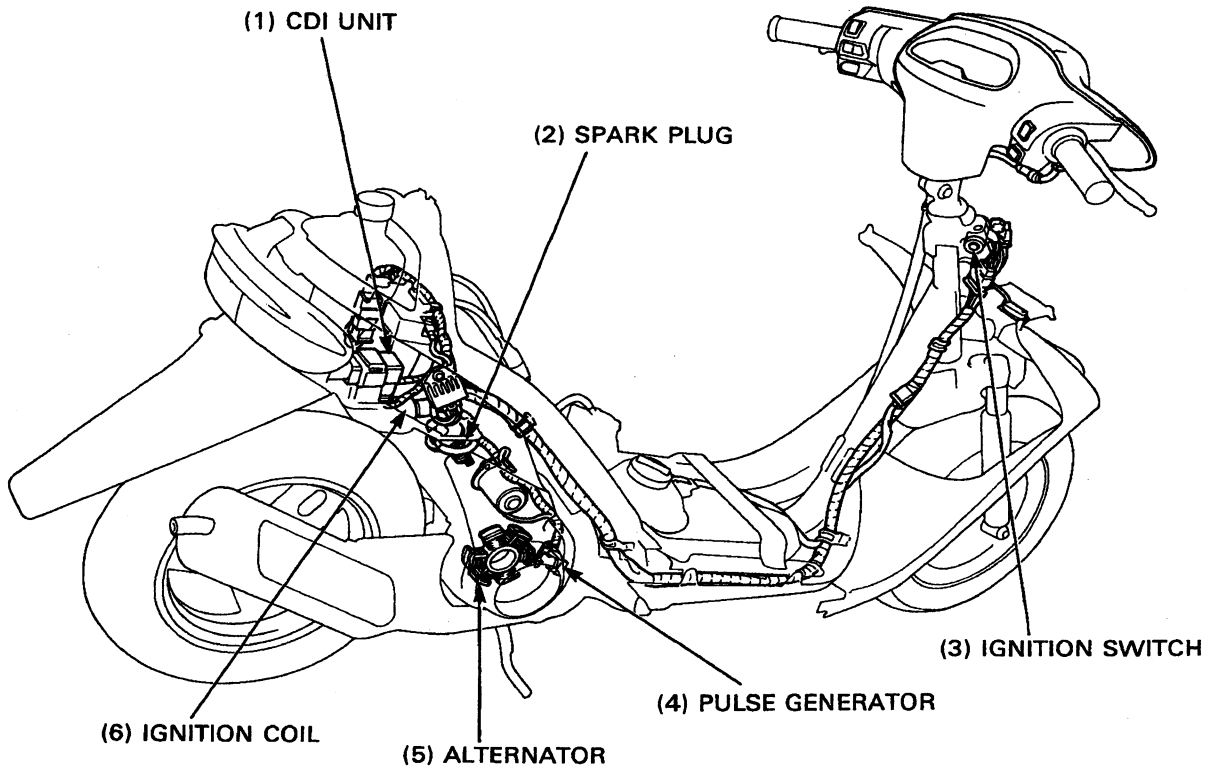
Service Information

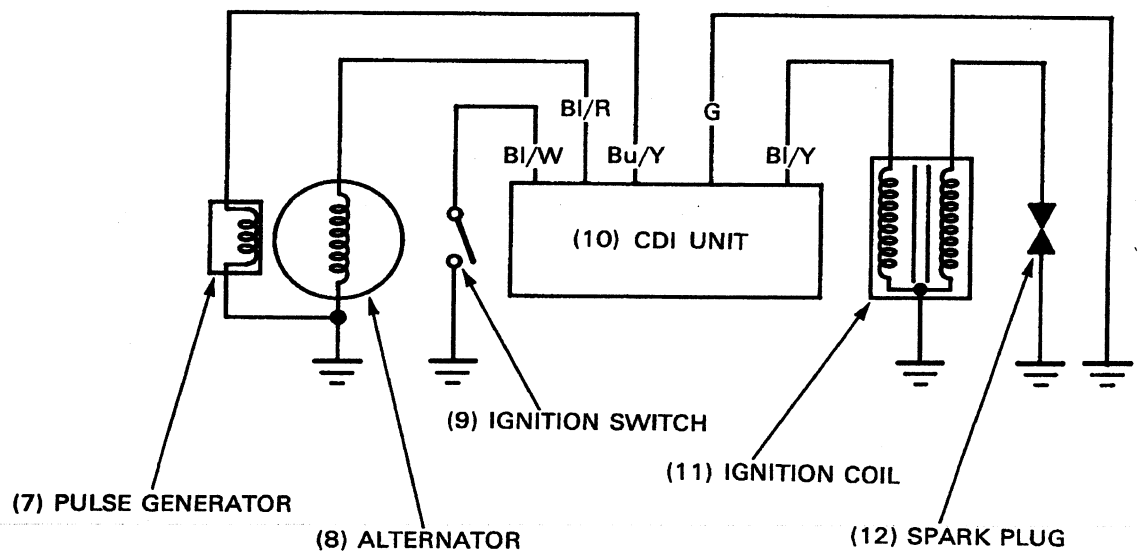
⚠ WARNING

- **If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in an enclosed area.**
- **The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death.**

- When checking the ignition system, always follow the steps in the troubleshooting flow chart (page 14-3).
- The CDI ignition system uses an electrically controlled ignition timing system. No adjustment can be made to the ignition timing.
- The CDI unit may be damaged if dropped. Also, if the connector is disconnected when current is flowing, the excessive voltage may damage the unit. Always turn off the ignition switch before servicing.
- A faulty ignition system is often related to poorly connected connectors. Check those connections before proceeding.
- Make sure the battery is adequately charged. A weak battery may be unable to turn the starter motor quickly enough, or adequate ignition current may not be supplied.
- Use a spark plug of the correct heat range. Using a spark plug with an incorrect heat range can damage the engine. Refer to section 23 of the Common Service Manual.
- For ignition switch inspection, check for continuity on the continuity chart of the Wiring Diagram (section 17).

System Location





Troubleshooting

- Before troubleshooting, check that no spark jumps at the spark plug using a known good spark plug (to ensure that the plug does not cause the problem).
  Moreover, check for proper spark plug gap and loose spark plug wire as well as for leakage of the ignition coil secondary current caused by moisture.

No spark at plug

Unusual condition		Probable cause (Check in numerical order)
Ignition coil primary voltage	Low peak voltage.	①The multitester impedance is too low. ②Cranking speed is too low. • Battery is undercharged or operating force of the kickstarter is weak. ③The sampling timing of the tester and measured pulse were not synchronized. (System is normal if measured voltage is over the standard voltage at least once). ④Poorly connected connectors or an open circuit in ignition system. ⑤Faulty exciter coil. (Measure the peak voltage.) ⑥Faulty ignition coil. ⑦Faulty CDI unit (in case when above No. ①–⑥ are normal).
	No peak voltage.	①Incorrect peak voltage adaptor connections. ②Faulty ignition switch. ③Loose or poorly connected CDI unit connector. ④Open circuit or poor connection in ground wire of the CDI unit. ⑤Faulty peak voltage adaptor. ⑥Faulty exciter coil. (Measure the peak voltage.) ⑦Faulty pulse generator. (Measure the peak voltage.) ⑧Faulty CDI unit (in case when above No. ①–⑦ are normal).
	Peak voltage is normal, but no spark jumps at plug.	①Faulty spark plug or leaking ignition coil secondary current. ②Faulty ignition coil.
Exciter coil	Low peak voltage.	①The multitester impedance is too low. ②Cranking speed is too low. • Battery is undercharged or operating force of the kickstarter is weak. ③The sampling timing of the tester and measured pulse were not synchronized. (System is normal if measured voltage is over the standard voltage at least once). ④Faulty exciter coil (in case when above No. ①–③ are normal).
	No peak voltage.	①Faulty peak voltage adaptor. ②Faulty exciter coil.
Pulse generator	Low peak voltage.	①The multitester impedance is too low. ②Cranking speed is too low. • Battery is undercharged or operating force of the kickstarter is weak. ③The sampling timing of the tester and measured pulse were not synchronized. (System is normal if measured voltage is over the standard voltage at least once). ④Faulty pulse generator (in case when above No. ①–③ are normal).
	No peak voltage.	①Faulty peak voltage adaptor. ②Faulty pulse generator.

Ignition System Inspection

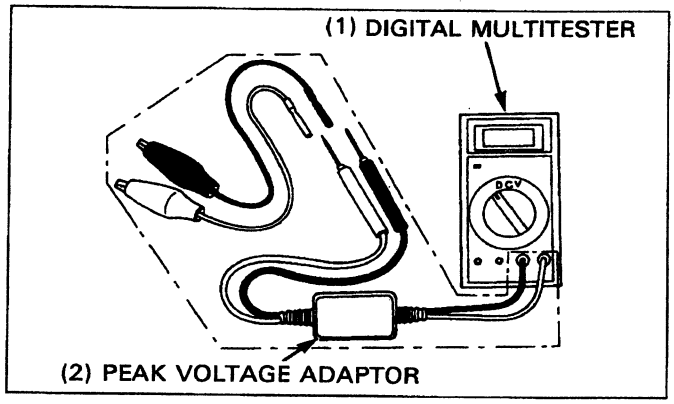
NOTE

- If no spark jumps at the plug, check all connections for loose or poor contact before measuring peak voltage.
- The reading differs depending on the multitester input impedance. Therefore, use only Honda genuine digital multitester or commercially available multitesters with the input impedance higher than 10 MΩ/DCV.
- If using Imrie diagnostic tester (model 625), follow the munufacturer's instructions.

Connect the peak voltage adaptor to the digital multitester.

S. TOOL

Imrie diagnostic tester (model 625) made in Australia or
Peak voltage adaptor 07HGJ-0020100 with
Digital multitester 07411-0020000

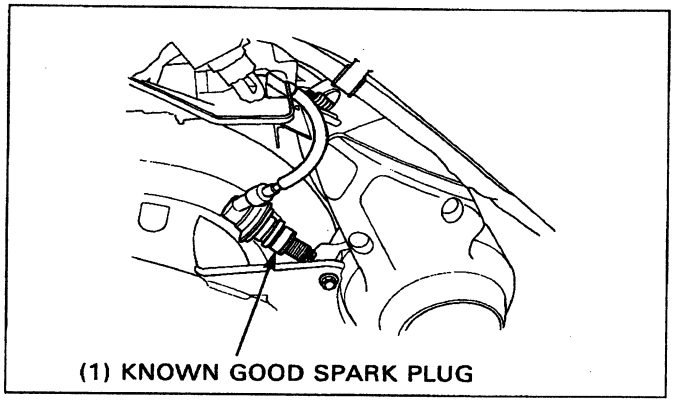


Ignition Coil Primary Peak Voltage

NOTE

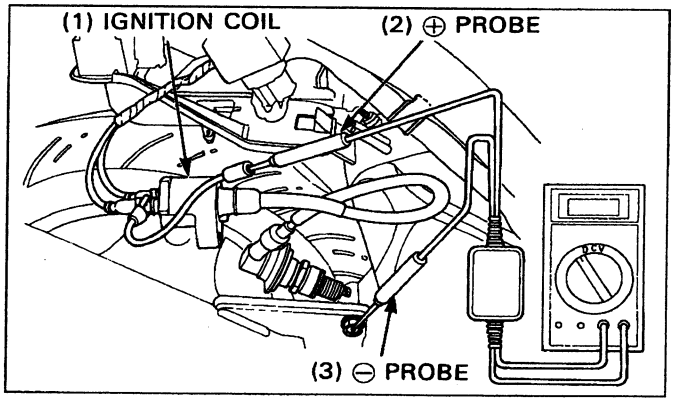
- Check all system connections before inspection. Poor connected connectors can cause incorrect readings.
- Check that the cylinder compression is normal and the spark plug is installed correctly into the cylinder head.

Place the scooter on its center stand.
Remove the frame body cover (page 2-3).
Remove the spark plug cap from the plug, install a known good spark plug to the plug cap and ground it to the engine as shown.



Connect the peak voltage adaptor ⊕ probe to the ignition coil primary (black/yellow) wire terminal and the ⊖ probe to the body ground.
Turn the ignition switch ON.
Crank the engine with the kickstarter or starter motor and read the ignition coil primary peak voltage.

Connection:
Black/yellow wire terminal ⊕—Body ground ⊖
Peak voltage: 100 V minimum



⚠ WARNING

- **To avoid possible electrical shock during voltage measurements, do not touch test probe metal parts.**

If the peak voltage is abnormal, check an open circuit or poorly connected connectors in black/yellow wire.
If no defects are found in the harness, refer to the troubleshooting chart (page 14-3).

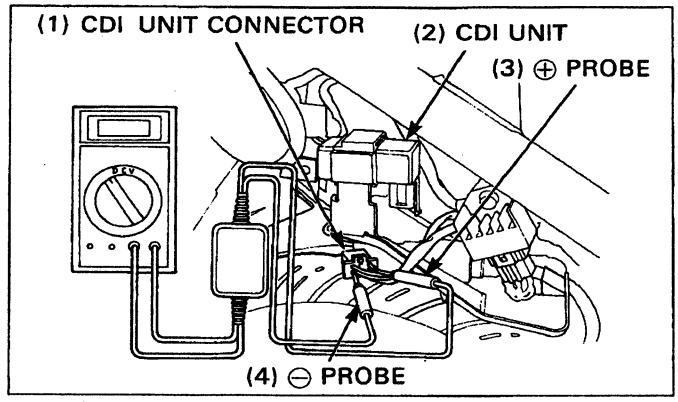
Exciter Coil Peak Voltage

NOTE

- Install the spark plug into the cylinder head and measure the peak voltage under normal cylinder compression.

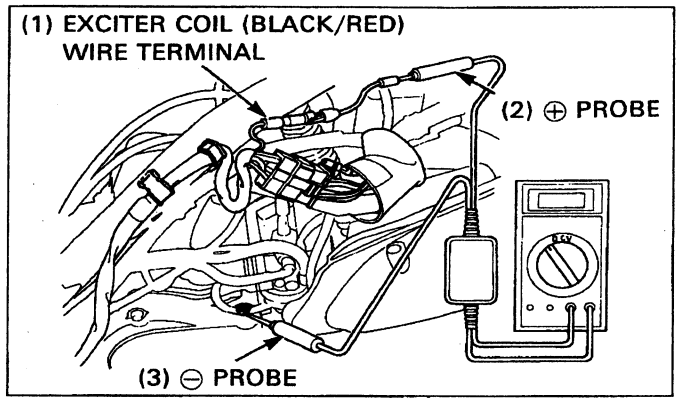
Remove the frame body cover (page 2-3).
Remove the CDI unit from the rear fender and disconnect 6P connector from the CDI unit.
Connect the peak voltage adaptor ⊕ probe to the exciter coil (black/red) wire terminal and the ⊖ probe to the ground (green) wire terminal.
Crank the engine with the kickstarter or starter motor and read the exciter coil peak voltage.

Connection:
Black/red wire terminal ⊕—Green wire terminal ⊖
Peak voltage: 100 V minimum



⚠ WARNING

- **To avoid possible electrical shock during voltage measurements, do not touch test probe metal parts.**



If the peak voltage measured at the CDI unit connector is abnormal, disconnect the alternator wire connector and connect the adaptor probes to the exciter coil terminal and engine ground.
In the same manner as at the CDI unit connector, measure the peak voltage and compare it to the voltage measured at the CDI unit connector.

- If the peak voltage measured at the CDI unit is abnormal and the one measured at the exciter coil is normal, the wire harness has an open circuit or loose connections.
- If both peak voltages measured are abnormal, check each item in the troubleshooting chart. If all items are normal, the exciter coil is faulty.

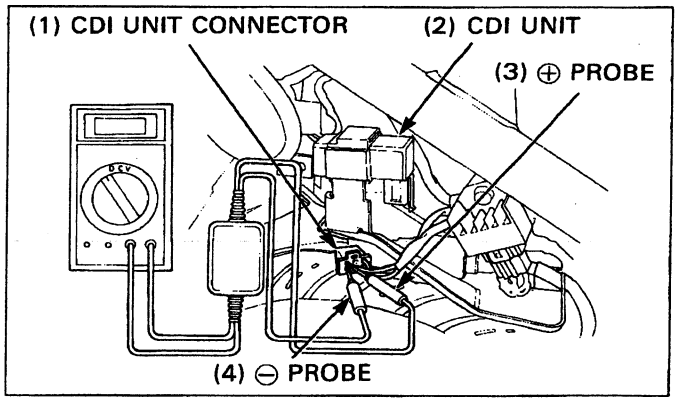
Pulse Generator Peak Voltage

NOTE

- Install the spark plug into the cylinder head and measure the peak voltage under normal cylinder compression.

Remove the frame body cover (page 2-3)
Remove the CDI unit from the rear fender and disconnect 6P connector from the CDI unit.
Connect the peak voltage adaptor ⊕ probe to the pulse generator (blue/yellow) wire terminal and the ⊖ probe to the ground (green) wire terminal.
Crank the engine with the kickstarter or starter motor and read the pulse generator peak voltage.

Connection:
Blue/yellow wire terminal ⊕—Green wire terminal ⊖
Peak voltage: 0.7 V minimum

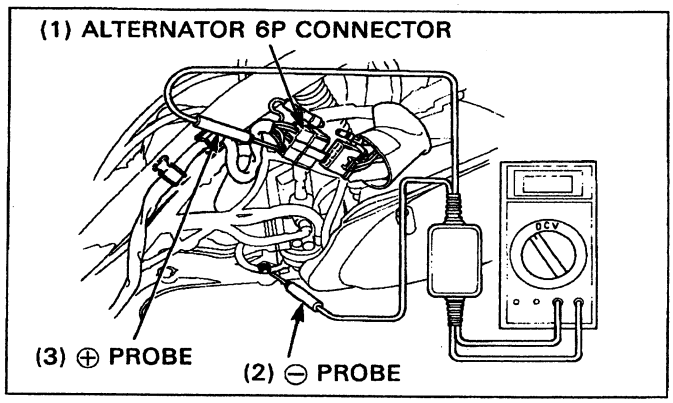


⚠ WARNING

• To avoid possible electrical shock during voltage measurements, do not touch test probe metal parts.

If the peak voltage measured at the CDI unit connector is abnormal, disconnect the alternator wire 6P connector and connect the adaptor probes to the pulse generator terminal and engine ground.
In the same manner as at the CDI unit connector, measure the peak voltage and compare it to the voltage measured at the CDI unit connector.

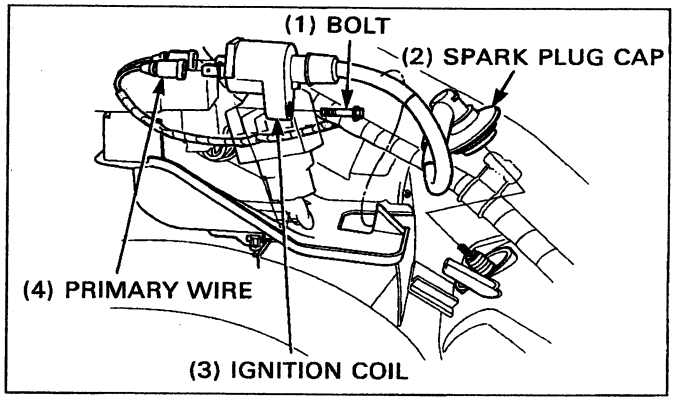
- If the peak voltage measured at the CDI unit is abnormal and the one measured at the pulse generator is normal, the wire harness has an open circuit or loose connections.
- If both peak voltages measured are abnormal, check each item in the troubleshooting chart. If all items are normal, the pulse generator is faulty.



Ignition Coil

Removal

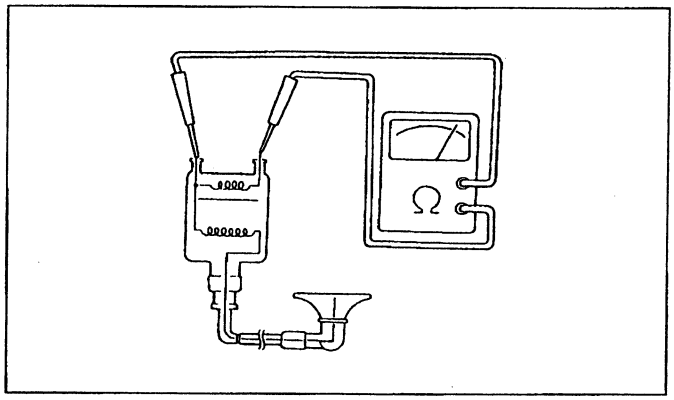
Remove the frame body cover (page 2-3).
Remove the spark plug cap from the spark plug.
Remove the mounting bolt and the ignition coil.
Disconnect the ignition coil primary wires from the coil.



Continuity Test

Measure the primary coil resistance between the primary wire terminals.

Standard: 0.1–0.4Ω (20°C/68°F)



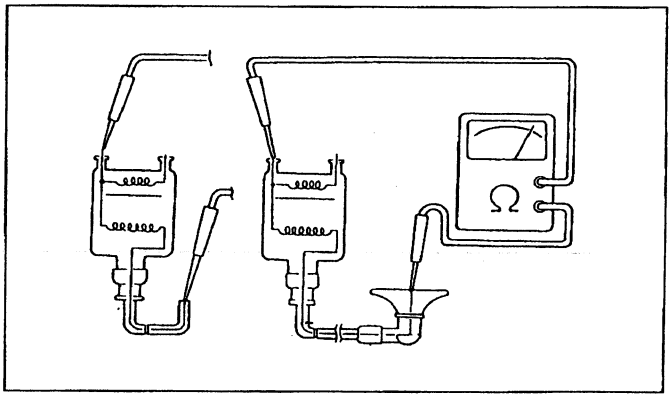
Measure the secondary coil resistance between the spark plug cap and primary wire ⊖ terminal.

Standard (with plug cap): 6.5–9.7 kΩ (20°C/68°C)

Remove the spark plug cap from the spark plug wire.
Measure the secondary coil resistance between the spark plug wire and primary wire ⊖ terminal.

Standard (without plug cap): 2.7–3.5 kΩ (20°C/68°F)

Install the removed parts in the reverse order of removal.



Alternator Inspection

NOTE

- This inspection can be performed with the alternator installed into the engine.

Remove the frame body cover (page 2-3).

Exciter Coil

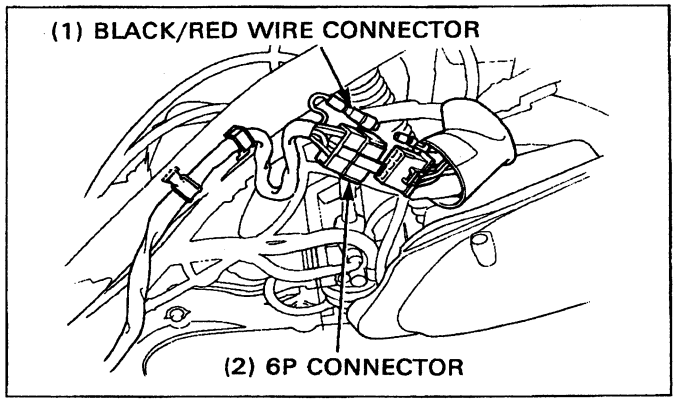
Disconnect the alternator black/red wire connector.
Measure the exciter coil resistance between the black/red wire terminal and engine ground.

Standard: 400–800 Ω (20°C/68°F)

Pulse Generator

Disconnect the alternator wire 6P connector.
Measure the pulse generator resistance between the blue/yellow wire terminal and engine ground.

Standard: 50–200 Ω (20°C/68°F)



Ignition Timing

NOTE

- The CDI ignition timing is not adjustable. If the timing is not correct, check the CDI unit, exciter coil and pulse generator, and replace any faulty parts.

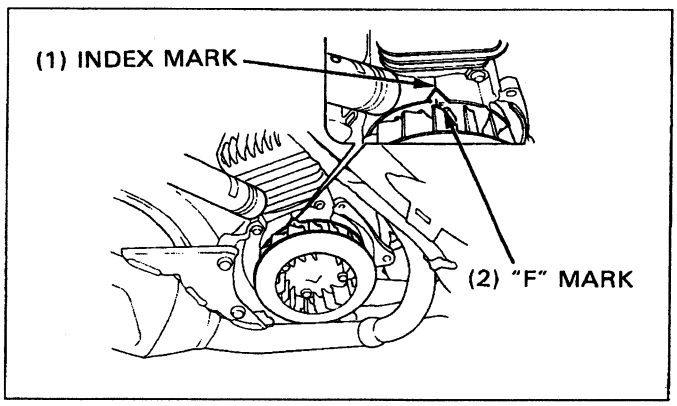
Remove the cooling fan cover (page 13-8).
Warm up the engine and connect the timing light and tachometer.

NOTE

- Follow the timing light and tachometer manufacturer's instructions before operating.

Start the engine and check the ignition timing.
The ignition timing is correct if the "F" mark on the flywheel aligns with the index mark of the crankcase at 1,800 min^{-1} (rpm).

Ignition timing: 17°BTDC at 1,800 min^{-1} (rpm)



15. Electric Starter

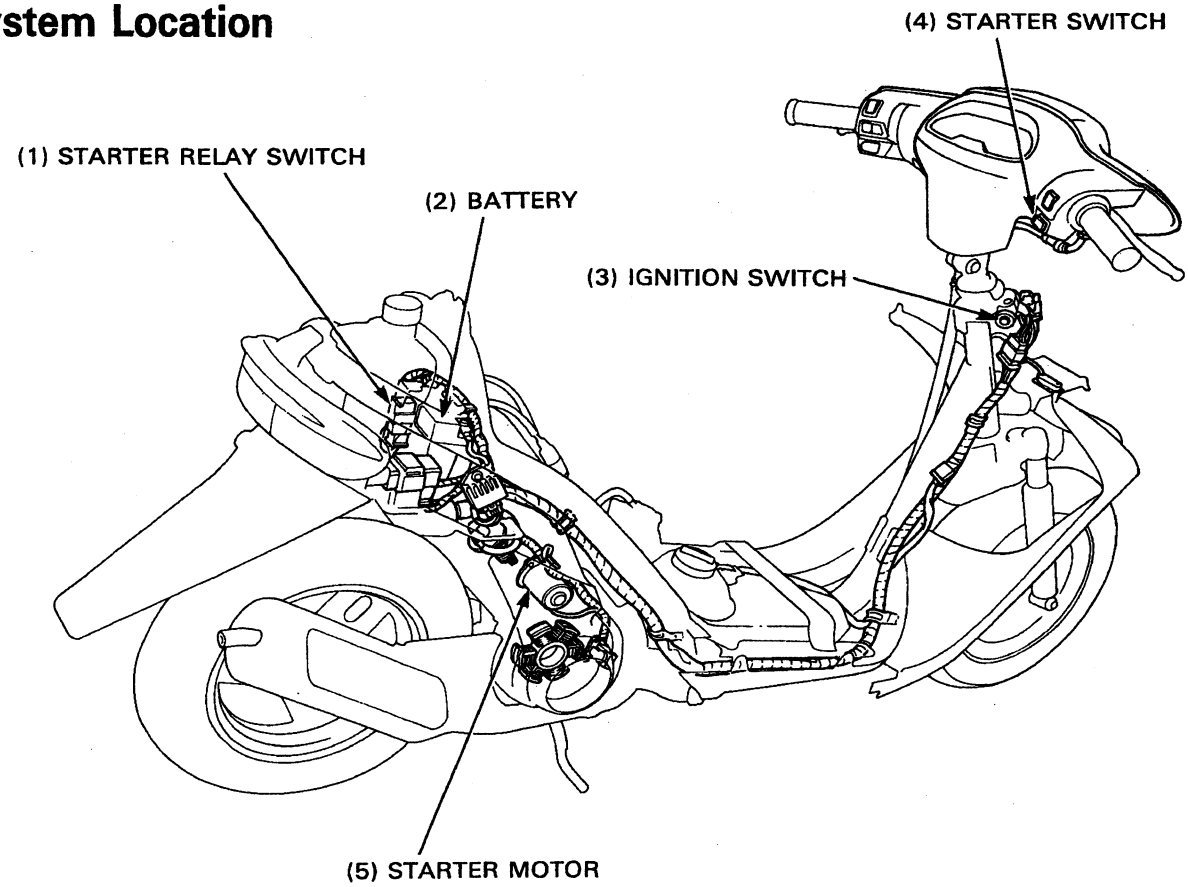
Service Information

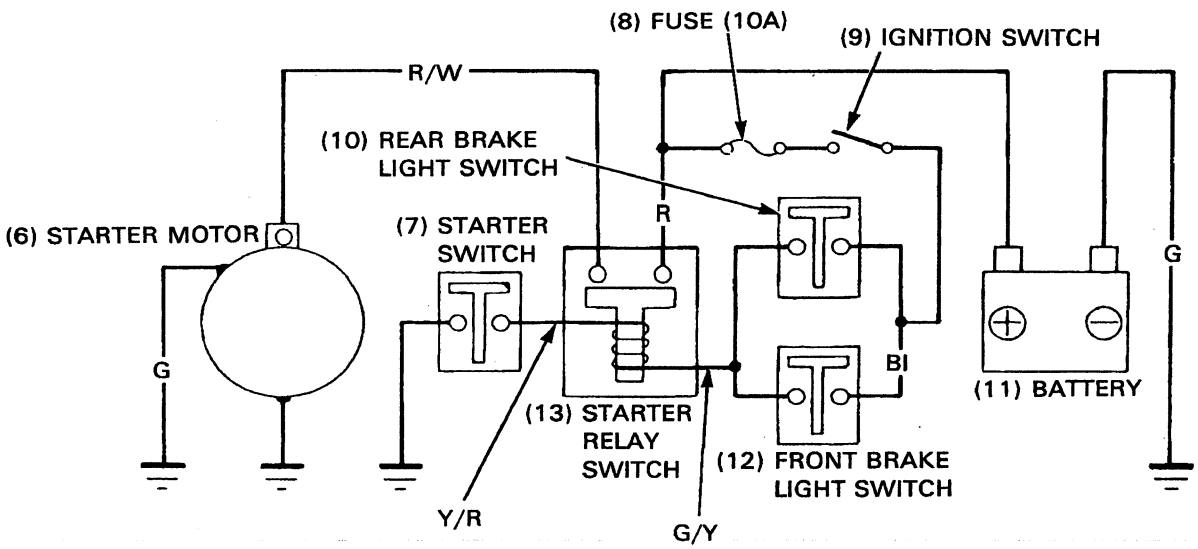
⚠ WARNING

- **Always turn the ignition switch OFF before servicing the starter motor. The motor could suddenly start, causing serious injury.**

- A weak battery may be unable to turn the starter motor quickly enough, or supply adequate ignition current.
- If the current is kept flowing through the starter motor to turn it while the engine is not cranking over, the starter motor may be damaged.

System Location

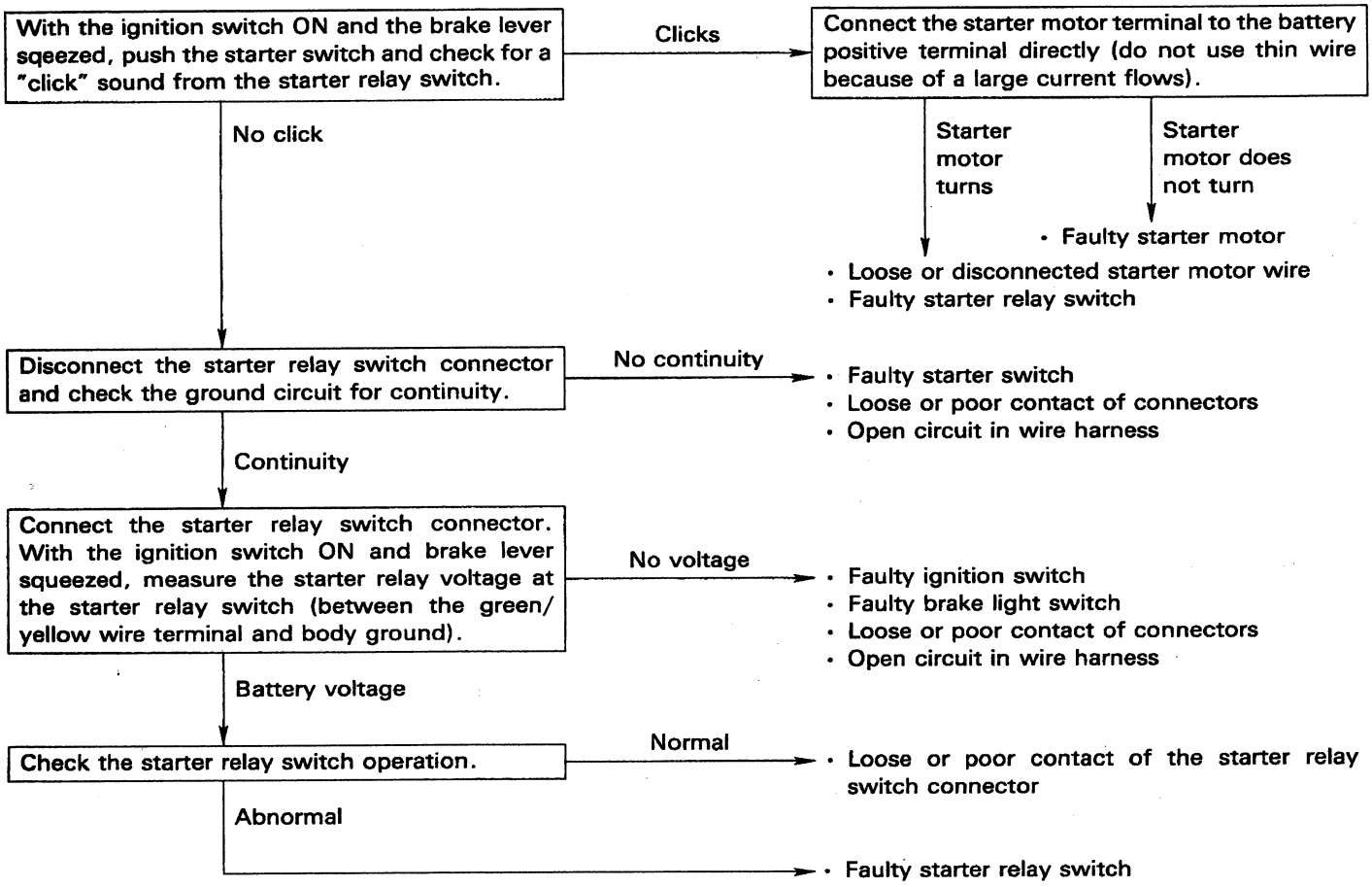




Troubleshooting

Starter motor will not turn

- Check for blown fuse before checking.



Starter motor turns slowly

- Weak battery
- Poorly connected battery wire terminals
- Poorly connected starter motor wire
- Faulty starter motor

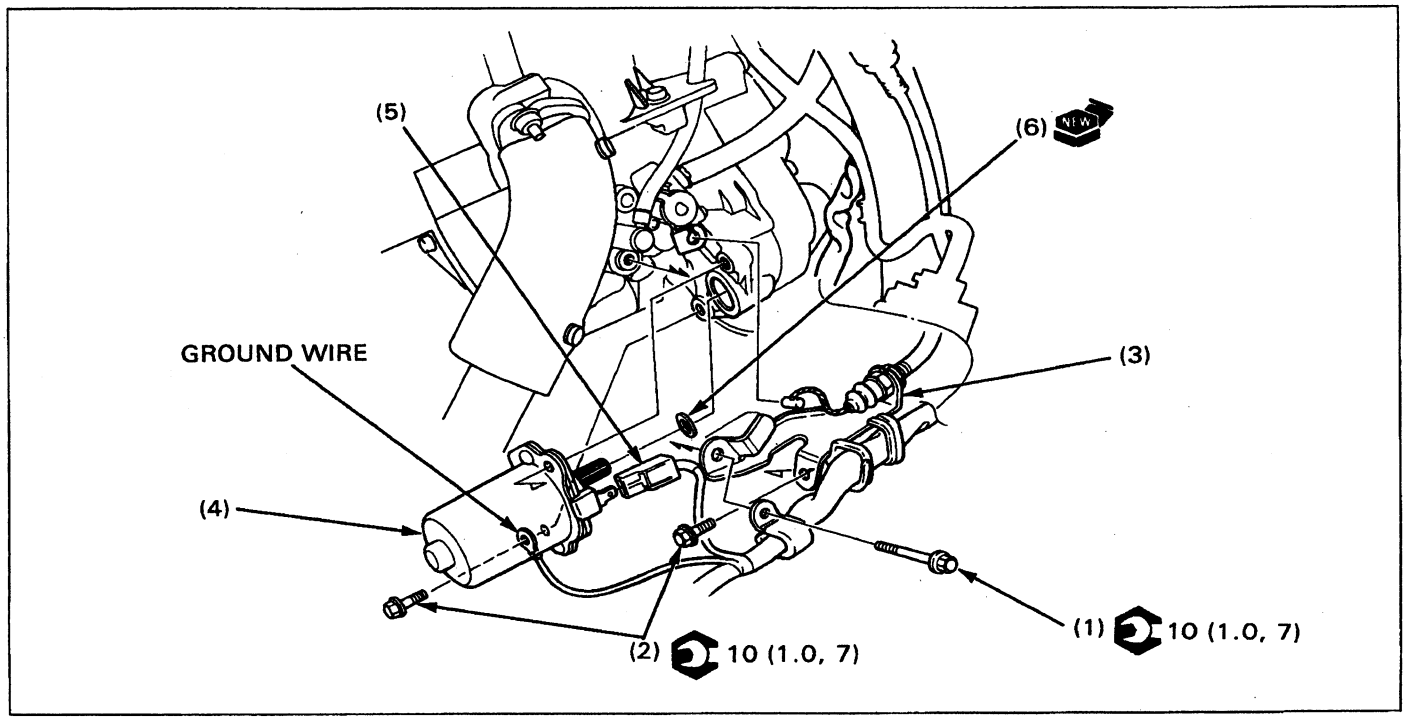
Starter motor turns, but engine does not turn

- Faulty starter pinion

Starter motor and engine turn, but engine does not start

- Faulty ignition system
- Engine problem
  - Low compression
  - Fouled spark plug

Starter Motor Removal/Installation

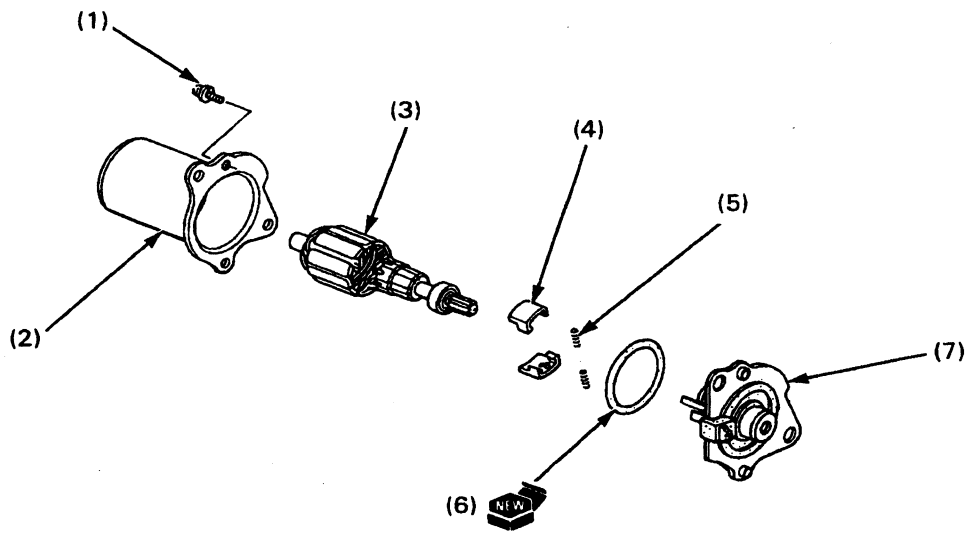


Requisite Service

- Frame body cover removal/installation (page 2-3)

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Oil pump mounting bolt	1	
(2)	Starter motor mounting bolt	2	When installing, do not forget to install the ground wire with the lower mounting bolt.
(3)	Oil pump control cable stay	1	NOTE • Do not loosen the oil pump control cable lock nut and adjusting nut. If they are loosened, perform the oil pump control cable adjustment (page 3-6)
(4)	Starter motor	1	Disassembly/assembly (page 15-5)
(5)	Starter motor wire connector	1	
(6)	O-ring	1	

Starter Motor Disassembly/Assembly



Requisite Service

- Starter motor removal/installation (page 15-4)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Motor case screw	2	
(2)	Motor case	1	NOTE • When installing, make sure that there are no metal particle inside the case.
(3)	Armature	1	
(4)	Brush holder	2	
(5)	Spring	2	
(6)	O-ring	1	
(7)	Front bracket	1	

16. Lights/Meters/Switches

Service Information

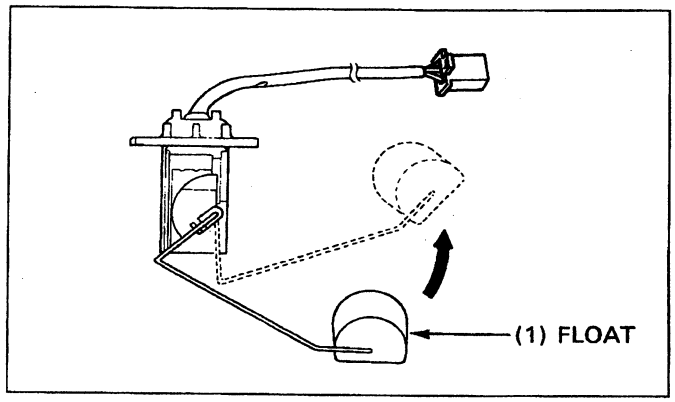
- A continuity test can be made with the switches installed on the scooter. Refer to the continuity chart of the wiring diagram (section 17) for switch continuity.
- Check the battery condition before performing any inspection that requires proper battery voltage.
- Refer to page 25-2 of the Common Service Manual for oil level indicator inspection.
- Refer to page 25-7 of the Common Service Manual for fuel gauge inspection.

Fuel Level Sensor Inspection

Remove the fuel level sensor (page 2-8).

Move the float with your hand and measure the resistances between the terminals with the float at the FULL (upper) and EMPTY (lower) positions.

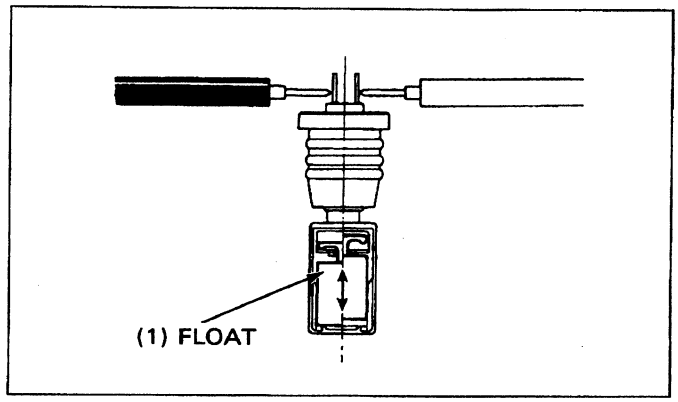
Wire color of terminal	FULL	EMPTY
Green and yellow/white	25–45 Ω	400–700 Ω
Green and blue/white	400–700 Ω	25–45 Ω
Yellow/white and blue/white	450–750 Ω	450–750 Ω



Oil Level Switch Inspection

Remove the oil level switch (page 4-4).

Check for continuity between the terminals.
There should be continuity with the float at upper position and no continuity with the float at lower position.

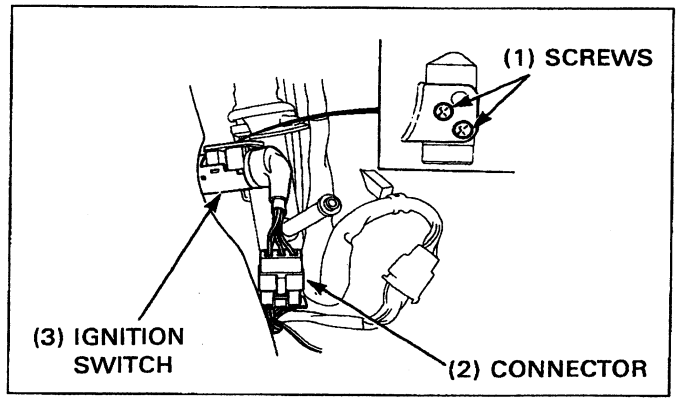


Ignition Switch Replacement

Remove the front cover (page 2-5).

Disconnect the ignition switch wire connector.
Remove the two screws and the ignition switch.

Install the ignition switch in the reverse order of removal.



Bulb Replacement

Headlight

NOTE

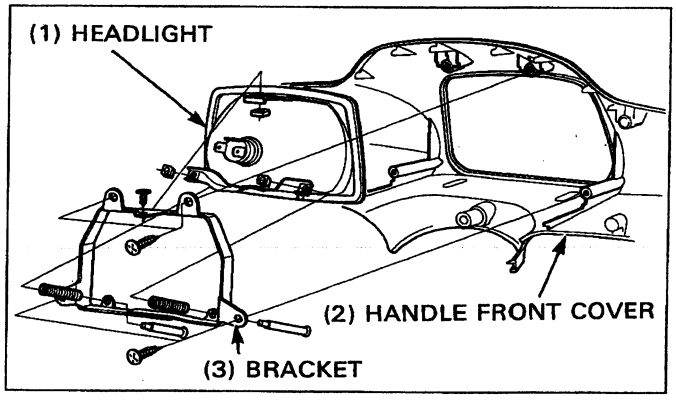
- If the headlight bulb has been blown, replace the headlight unit.

Remove the handle front cover (page 2-7).

Remove the four screws and the headlight with the bracket from the handle front cover.
Remove the two adjusting screws, attaching screw and the headlight from the bracket.

Install a new headlight in the reverse order of removal.

After installing, adjust the headlight aim (page 3-6).

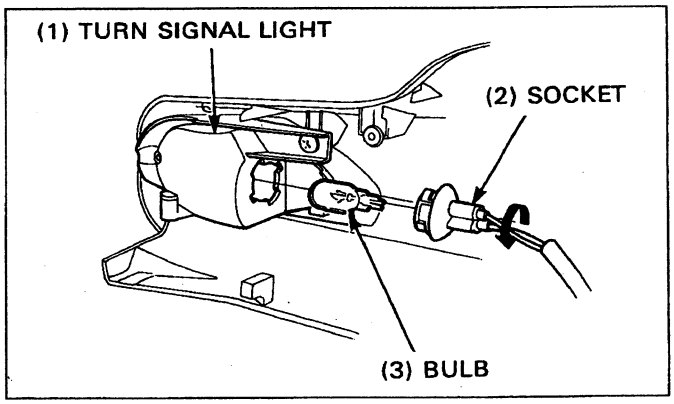


Front Turn Signal Light

Remove the handle front cover (page 2-7).

Remove the bulb socket from the turn signal light by turning it counterclockwise.
Pull the bulb out of the socket.

Install a new bulb and removed parts in the reverse order of removal.

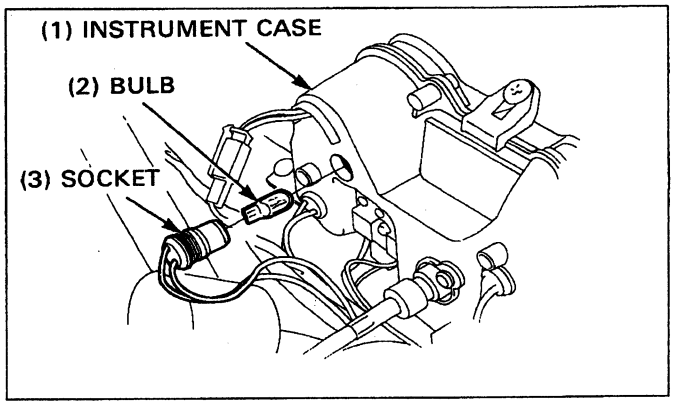


Instrument/Indicator light

Remove the handle rear cover (page 2-7).

Remove the bulb socket from the instrument case.
Pull the bulb out of the socket.

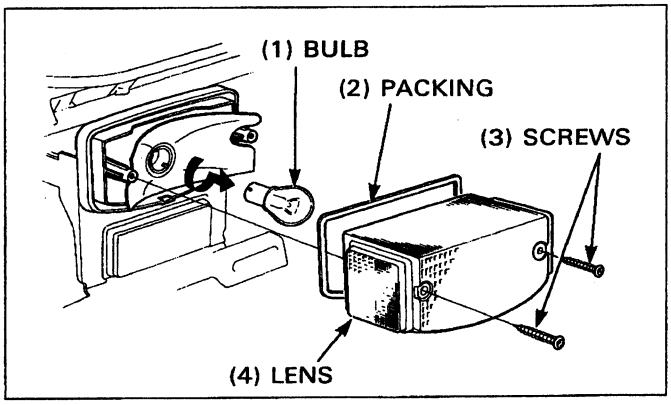
Install a new bulb and removed parts in the reverse order of removal.



Taillight

Remove the two screws, taillight lens and packing.
Turn the bulb counterclockwise while pushing it in, and remove it.

Install a new bulb and removed parts in the reverse order of removal.



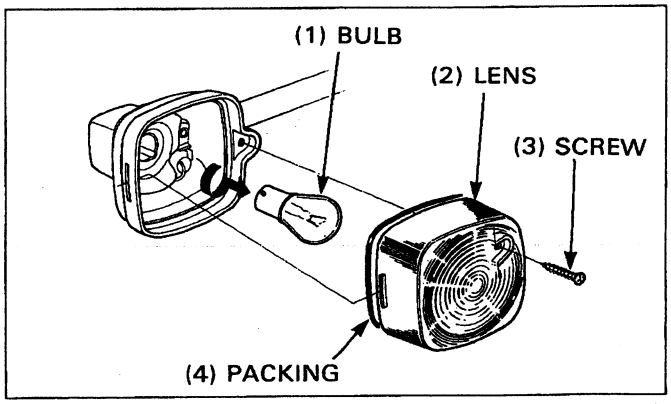
Rear Turn Signal Light

Remove the screw, turn signal light lens and packing.
Turn the bulb counterclockwise while pushing it in, and remove it.

Install a new bulb and removed parts in the reverse order of removal.

NOTE

- Align the lug on the lens with the slot in the light case properly.



Rear Combination Dummy Removal/Installation

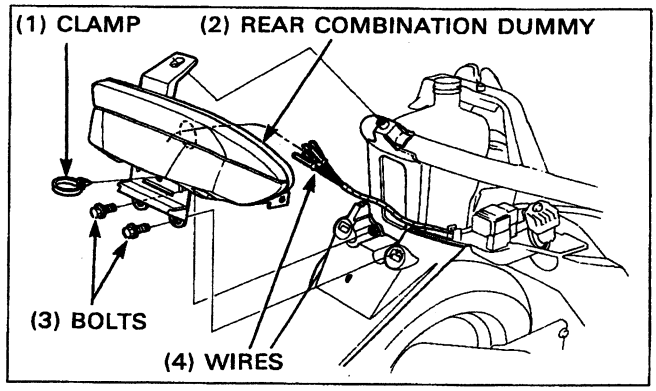
Remove the frame body cover (page 2-3).

Remove the two bolts and the rear combination dummy. Remove the taillight/turn signal light wires and wire clamp from the rear combination dummy.

Install in the reverse order of removal.

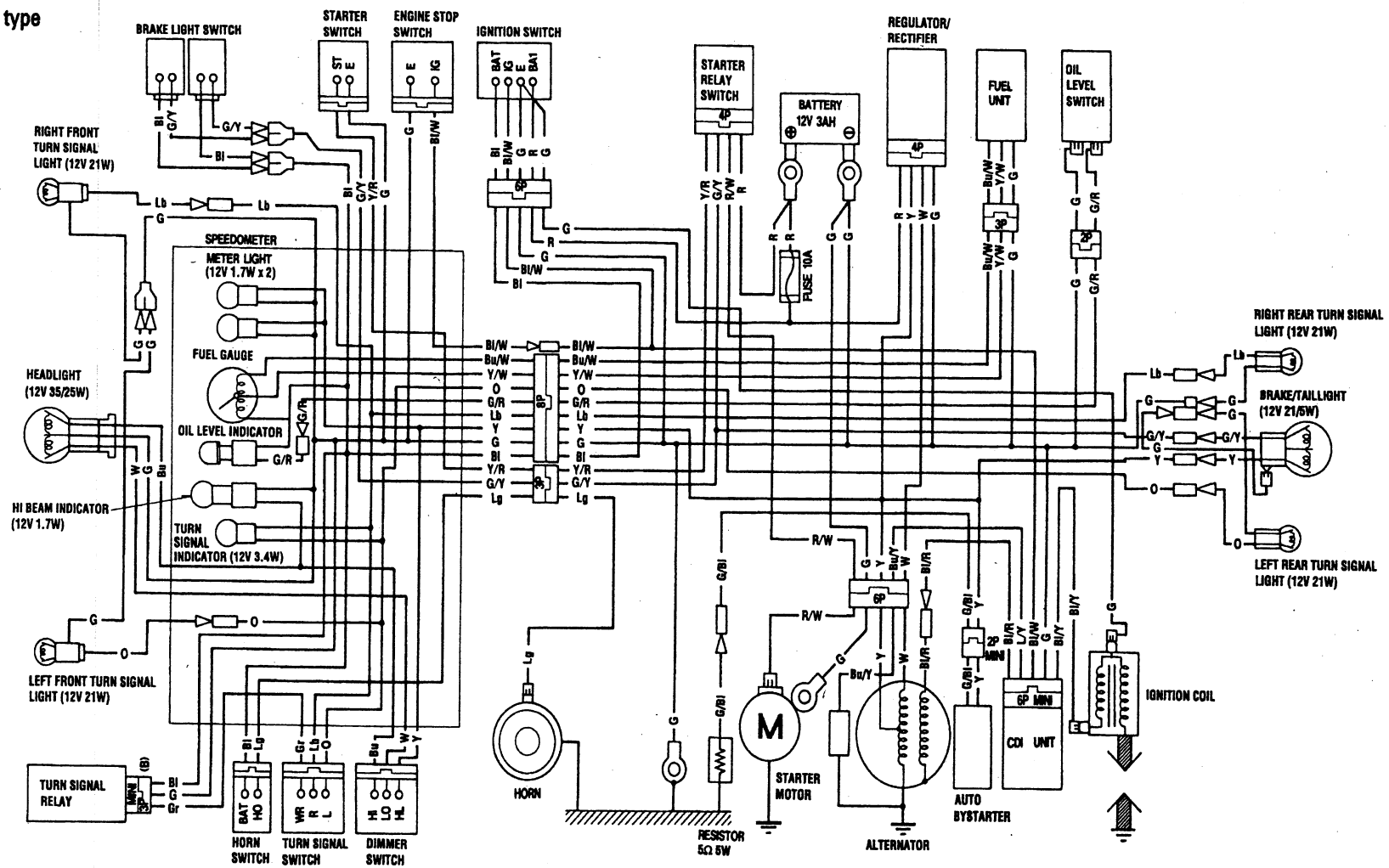
NOTE

- Route the taillight/turn signal light wires properly.



17. Wiring Diagram

U type



HORN SWITCH	HO	BAT
FREE		
PUSH	●	●

STARTER SWITCH	ST	E
FREE		
PUSH	●	●

ENGINE STOP SWITCH	E	IG
OFF	●	
RUN		

IGNITION SWITCH	BAT	IG	E	BA1
LOCK		●	●	
OFF		●	●	
ON	●			●

TURN SIGNAL SWITCH	R	L	WR
L		●	
N			
R	●		

DIMMER SWITCH	HI	LO	HL
LO		●	
N	●	●	
HI	●		

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

0030Z-GAH-6500

18. Troubleshooting

Engine Does Not Start or is Hard to Start

1. Check if fuel is getting to carburetor by loosening drain screw

   GETTING TO CARBURETOR ↓

2. Try spark test

   SPARK ↓

3. Test cylinder compression

   NORMAL COMPRESSION ↓

4. Start by following normal starting procedure

   ENGINE DOES NOT FIRE ↓

5. Remove spark plug

   DRY

NOT GETTING TO CARBURETOR →
- No fuel in fuel tank
- Clogged fuel tube to carburetor
- Clogged fuel filter
- Clogged float valve
- Clogged fuel tank cap breather hole
- Faulty fuel pump

WEAK OR NO SPARK →
- Faulty spark plug
- Fouled spark plug
- Fauty CDI unit
- Fauty alternator
- Broken or shorted spark plug wire
- Broken or shorted ignition coil
- Faulty ignition switch

LOW COMPRESSION →
- Stuck piston rings
- Faulty or deteriorated reed valve
- Worn cylinder and piston rings
- Compression leak past crankcase
- Leaking cylinder head gasket

ENGINE FIRES BUT SOON STOPS →
- Faulty auto bystarter
- Air leaking past intake pipe
- Improper ignition timing
- Misadjusted idle speed

WET PLUG →
- Carburetor flooded
- Faulty auto bystarter
- Throttle valve excessively open
- Clogged air cleaner element

Engine Lacks Power

		Probable cause
1. Lightly accelerate engine ENGINE SPEED INCREASES	ENGINE SPEED DOES NOT INCREASE SUFFICIENTLY →	• Clogged air cleaner element • Restricted fuel flow • Clogged fuel tank cap breather hole • Clogged muffler
2. Check ignition timing CORRECT	INCORRECT →	• Faulty CDI unit • Faulty alternator
3. Test cylinder compression NORMAL	TOO LOW →	• Worn cylinder or piston rings • Blown cylinder head gasket • Compression leak past crankcase • Faulty or deteriorated reed valve
4. Check carburetor for clogging NOT CLOGGED	CLOGGED →	Carburetor not serviced frequently enough
5. Remove spark plug NOT FOULED OR DISCOLORED	FOULED OR DISCOLORED →	• Plug not serviced frequently enough • Use of plug with improper heat range
6. Check if engine overheats NOT OVERHEATED	OVERHEATED →	• Worn cylinder or piston • Fuel-air mixture too lean • Use of improper grade of fuel • Excessive carbon build-up in combustion chamber • Ignition timing too advanced
7. Try rapid acceleration or run at high speed ENGINE DOES NOT KNOCK	ENGINE KNOCKS →	• Excessive carbon build-up in combustion chamber • Use of improper grade of fuel • Ignition timing too advance • Fuel-air mixture too lean

Poor Performance at Low and Idle Speeds

		Probable cause
1. Check ignition timing	INCORRECT →	• Faulty CDI unit • Faulty alternator
CORRECT ↓		
2. Check carburetor air screw for proper adjustment	INCORRECT →	• Fuel air mixture too rich (Screw out to correct) • Fuel air mixture too lean (Screw in to correct)
CORRECT ↓		
3. Check if air is leaking past intake pipe	LEAKING →	• Loose carburetor • Deteriorated intake pipe gasket • Deteriorated insulator O-ring
NOT LEAKING ↓		
4. Try spark test	WEAK OR INTERMITTENT SPARK →	• Faulty, carbon or wet fouled spark plug • Faulty CDI unit • Faulty alternator • Faulty ignition coil • Broken or shorted spark plug wire • Faulty ignition switch
GOOD SPARK ↓		
5. Check auto bystarter	ABNORMAL →	Faulty auto bystarter
NORMAL		

Poor Performance at High Speed

		Probable cause
1. Check ignition timing	INCORRECT →	• Faulty CDI unit • Faulty alternator
CORRECT ↓		
2. Disconnect fuel tube at carburetor	FUEL FLOW RESTRICTED →	• No fuel in fuel tank • Clogged fuel tube or fuel filter • Clogged fuel tank cap breather hole • Faulty fuel pump
FUEL FLOWS FREELY ↓		
3. Remove carburetor and check for clooged jet	CLOGGED →	• Clean
NOT CLOGGED ↓		
4. Check auto bystarter	ABNORMAL →	• Faulty auto bystarter
NORMAL		

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