



YAMAHA

**FZR600RB
FZR600RBC**

**SUPPLEMENTARY
SERVICE MANUAL**

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the motorcycle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his motorcycle and to conform with federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

NOTE:

This Service Manual contains information regarding periodic maintenance to the emission control system for the FZR600RB/RBC. Please read this material carefully.

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE GROUP
YAMAHA MOTOR CO., LTD.

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.



The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

WARNING

Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander, or a person inspecting or repairing the motorcycle.

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.

NOTE:

A NOTE provides key information to make procedures easier or clearer.

HOW TO USE THIS MANUAL

CONSTRUCTION OF THIS MANUAL

This manual consists of chapters for the main categories of subjects. (See "Illustrated symbols")

- 1st title ① : This is a chapter with its symbol on the upper right of each page.
- 2nd title ② : This title appears on the upper of each page on the left of the chapter symbol. (For the chapter "Periodic inspection and adjustment" the 3rd title appears.)
- 3rd title ③ : This is a final title.

MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspections.

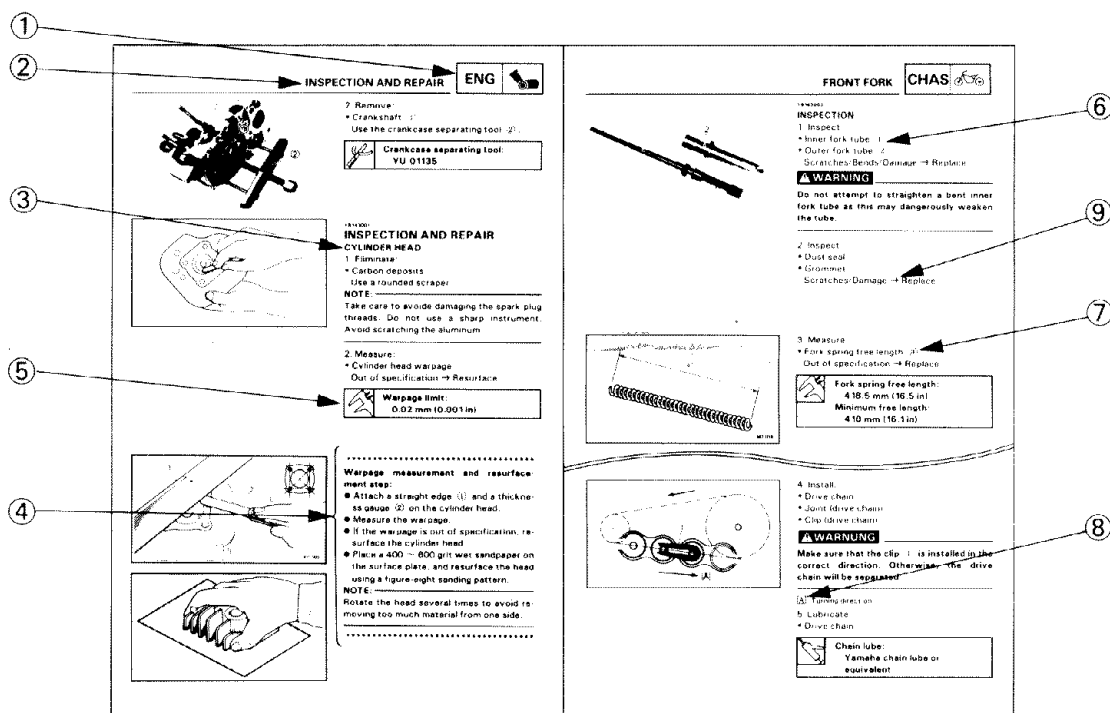
A set of particularly important procedure ④ is placed between a line of asterisks "*" with each procedure preceded by "●".

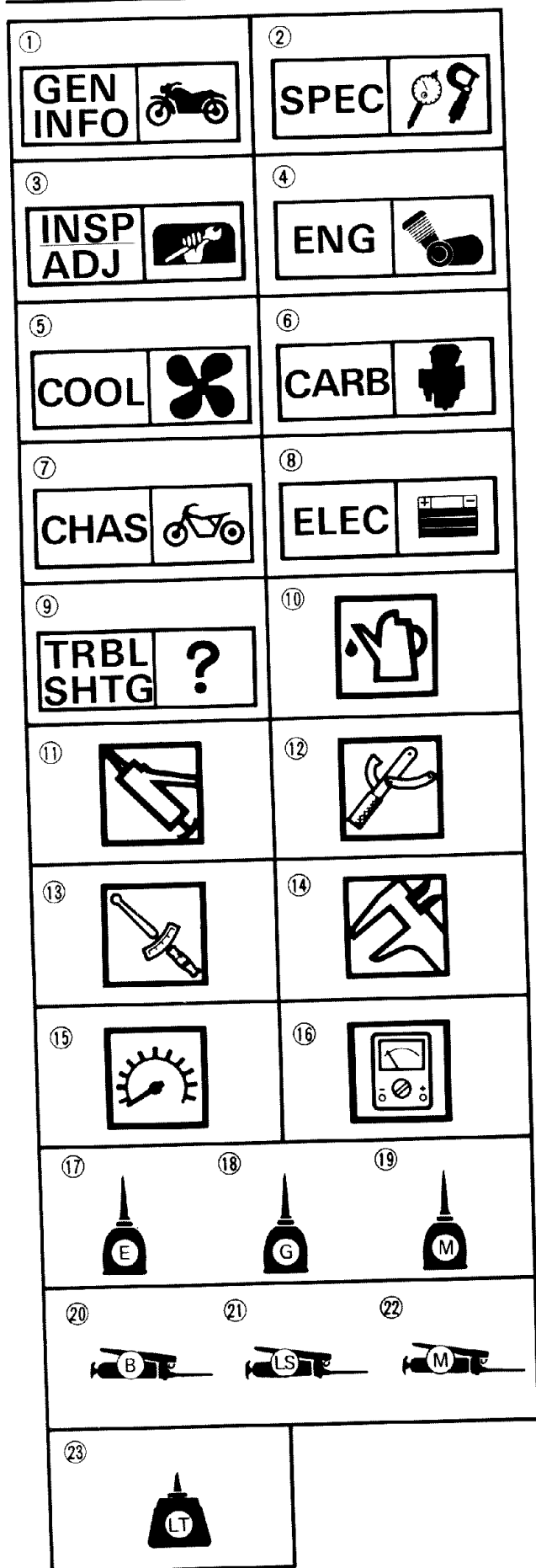
IMPORTANT FEATURES

- Data and a special tool are framed in a box preceded by a relevant symbol ⑤.
- An encircled numeral ⑥ indicates a part name, and an encircled alphabetical letter data or an alignment mark ⑦, the others being indicated by an alphabetical letter in a box ⑧.
- A condition of a faulty component will precede an arrow symbol and the course of action required the symbol ⑨.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.





ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑨ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Specifications
- ③ Periodic inspection and adjustment
- ④ Engine
- ⑤ Cooling system
- ⑥ Carburetion
- ⑦ Chassis
- ⑧ Electrical
- ⑨ Troubleshooting

Illustrated symbols ⑩ to ⑯ are used to identify the specifications appearing.

- ⑩ Filling fluid
- ⑪ Lubricant
- ⑫ Special tool
- ⑬ Tightening
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Ω , V, A

Illustrated symbols ⑰ to ㉓ in the exploded diagram indicate grade of lubricant and location of lubrication point.

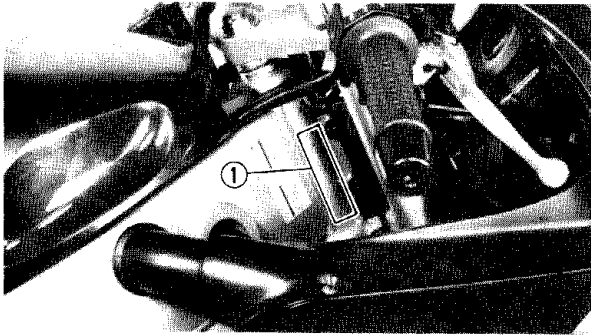
- ⑰ Apply engine oil
- ⑱ Apply gear oil
- ⑲ Apply molybdenum disulfide oil
- ㉑ Apply wheel bearing grease
- ㉒ Apply lightweight lithium-soap base grease
- ㉓ Apply molybdenum disulfide grease
- ㉔ Apply locking agent (LOCTITE®)

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GENERAL INFORMATION



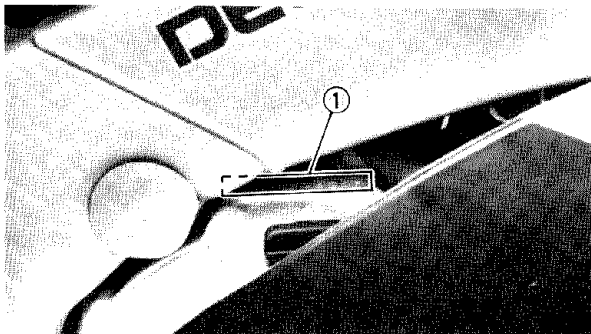
MOTORCYCLE IDENTIFICATION VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the right side of the steering head.

Starting serial number:
FZR600RB (Except for California):
JYA3HHE0 * MA032101
FZR600RBC (For California):
JYA3UUC0 * MA003101

NOTE:

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.



ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the right side of the engine.

Starting serial number:
FZR600RB (Except for California):
3HH-032101
FZR600RBC (For California):
3UU-003101

NOTE:

- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.

**SPECIAL TOOLS**

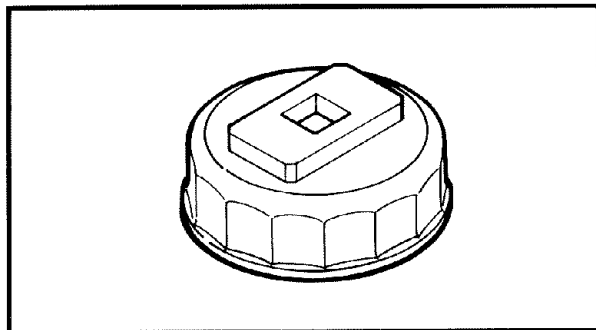
The proper special tools are necessary for complete and accurate tune-up and assembly. Using the correct special tool will help prevent damage caused by the use of improper tools or improvised techniques. The shape and part number used for the special tool differ by country, so two types are provided. Refer to the list provided to avoid errors when placing an order.

P/N. YM-□□□□□ , YU-□□□□□

YS- □□□□□ , YK- □□□□□

ACC- □□□□□

P/N. 90890- □□□□□

For
US, CDNExcept for
US, CDN**FOR ENGINE SERVICE****7. Oil filter wrench**

P/N J-37140A

P/N 90890-01426

This tool is used to loosen or tighten the oil filter.



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	FZR600RB/RBC	
	FZR600RB	FZR600RBC
Model Code Number	3HH6	3UU2
Vehicle Identification Number	JYA3HHE0 * MA032101	JYA3UUC0 * MA003101
Engine Starting Number	3HH-032101	3UU-003101
Dimensions:		
Overall Length	2,095 mm (82.5 in)	
Overall Width	700 mm (27.6 in)	
Overall Height	1,155 mm (45.5 in)	
Seat Height	785 mm (30.9 in)	
Wheelbase	1,425 mm (56.1 in)	
Minimum Ground Clearance	135 mm (5.3 in)	
Basic Weight:		
With Oil and Full Fuel Tank	201 kg (443 lb), 206 kg (454 lb) (FZR600RBC)	
Transmission:		
Primary Reduction System	Spur gear	
Primary Reduction Ratio	82/48 (1.708)	
Secondary Reduction System	Chain drive	
Secondary Reduction Ratio	45/15 (3.000)	
Transmission Type	Constant-mesh, 6-speed	
Operation	Left foot operation	
Gear Ratio	1st	37/13 (2.846)
	2nd	37/19 (1.947)
	3rd	31/20 (1.550)
	4th	28/21 (1.333)
	5th	31/26 (1.192)
	6th	30/27 (1.111)
Tire:	Front	Rear
Type	Tubeless	Tubeless
Size	110/70 VR17-V240	140/60 VR18-V240
	110/70 ZR17	140/60 ZR18
	(FZR600RBC)	(FZR600RBC)
Manufacture (Type)	Michelin (A59)	Michelin (M59)
	Pirelli (MP7)	Pirelli (MP7)
	Dunlop (SPORT MAX)	Dunlop (SPORT MAX)
	Bridgestone	Bridgestone
	(CYROX-17)	(CYROX-16)
Maximum Load*	157 kg (346 lb)	
	152 kg (335 lb) (FZR600RBC)	
Tire Pressure (Cold tire):	Front	Rear
Up to 90 kg (198 lb) load *	225 kPa (2.25 kg/cm ² , 33 psi)	250 kPa (2.5 kg/cm ² , 36 psi)
90 kg (198 lb) ~ Maximum load *	250 kPa (2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)
High speed riding	250 kPa (2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)

*Load is total weight of cargo, rider, passenger, and accessories.

MAINTENANCE SPECIFICATIONS

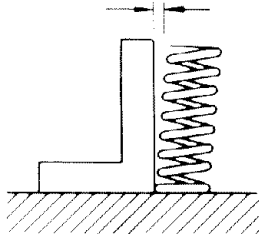

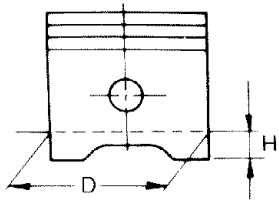
SPEC



Model	FZR600RB/RBC
Shock Absorber: Front Shock Absorber Rear Shock Absorber	Coil-air spring, oil damper Coil-gas spring, oil damper
Electrical: Ignition System Generator System Battery Type or Model Battery Capacity	T.C.I. (Digital ignition) A.C. magneto generator GM12AZ 12V12AH
Headlight Type:	Quartz bulb (Halogen)
Bulb Wattage x Quantity: Headlight Tail/Brake Light Flasher Light Front Position Light Meter Light	12V 60W/55W 12V 8W/27W x 2 12V 27W x 4 12V 8W x 2 12V 1.7W x 8.4

MAINTENANCE SPECIFICATIONS

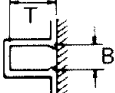
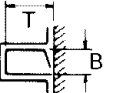
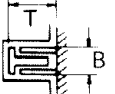
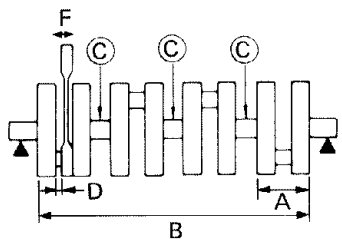
ENGINE

Model	FZR600RB/RBC
Valve Spring: Free Length < Limit > Installed Length (Valve Closed) Compressed Pressure (Valve closed) < Limit > Tilt Limit 	43.15 mm (1.70 in) 43.15 mm (1.70 in) 41.2 mm (1.62 in) 41.2 mm (1.62 in) 37.5 mm (1.48 in) 37.5 mm (1.48 in) 11.6 ~ 13.4 kg (25.9 ~ 29.6 lb) 11.6 ~ 13.4 kg (25.9 ~ 29.6 lb) 10.4 kg (22.1 lb) 10.4 kg (22.1 lb) 2.5°/1.9 mm (0.0748 in) 2.5°/1.9 mm (0.0748 in)
Direction of Winding (Top view) IN. EX.	
Piston: Piston Size "D" Measuring Point "H" 	58.940 ~ 58.955 mm (2.321 ~ 2.322 in) 5 mm (0.197 in) (From bottom line of piston skirt)

MAINTENANCE SPECIFICATIONS

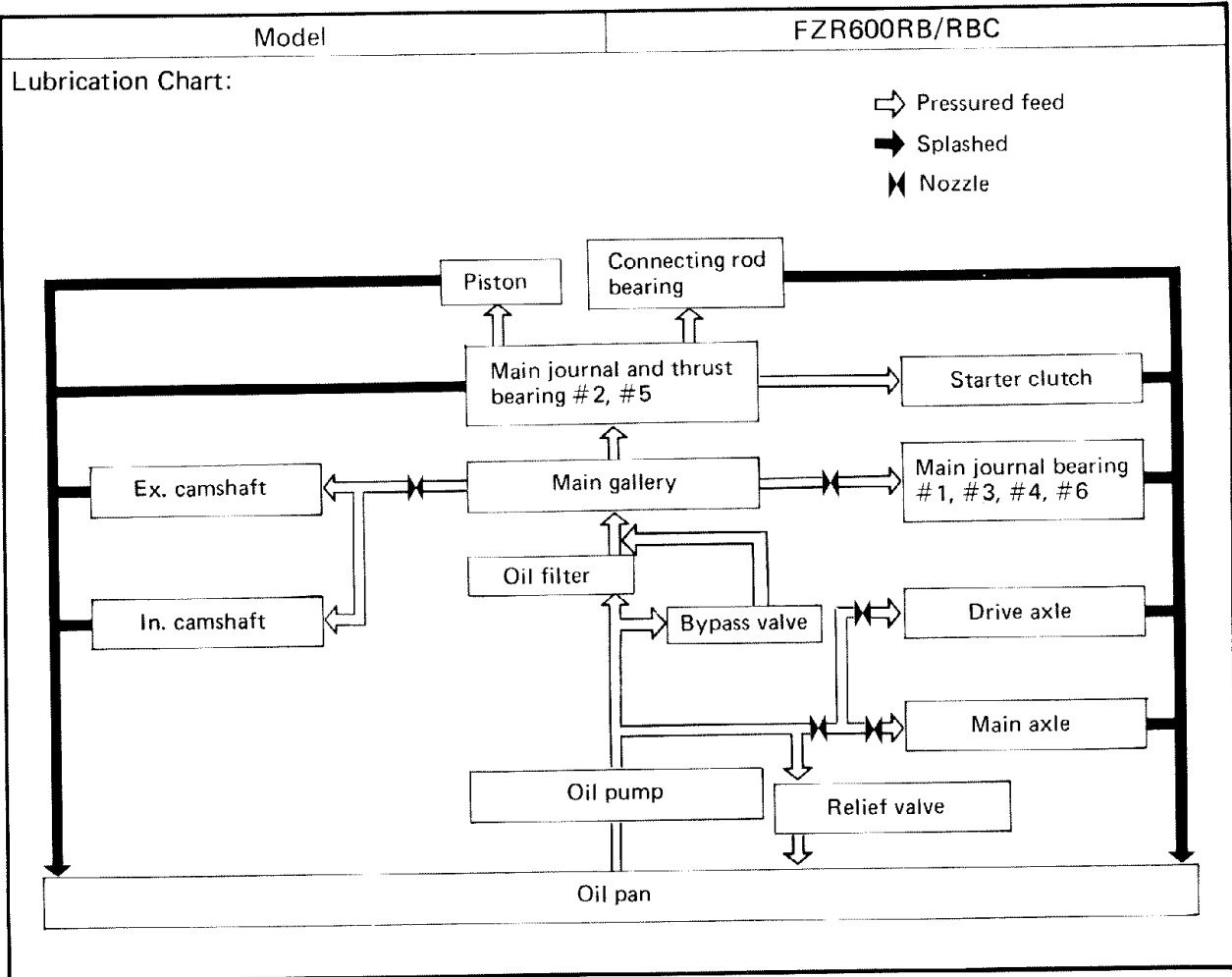
SPEC



Model		FZR600RB/RBC
Piston-to-Cylinder Clearance < Limit > Oversize:		0.045 ~ 0.070 mm (0.0018 ~ 0.0028 in) < 0.15 mm (0.006 in) > 59.5 mm (2.343 in)
Piston Ring: Sectional Sketch	1st 	Top Ring Barrel B = 0.8 mm (0.0315 in) T = 2.1 mm (0.0827 in)
		2nd Ring Taper B = 0.8 mm (0.0315 in) T = 2.1 mm (0.0827 in)
		Oil Ring Expander B = 1.5 mm (0.0591 in) T = 2.2 mm (0.0866 in)
End Gap (Installed):	Top Ring < Limit >	0.15 ~ 0.30 mm (0.0059 ~ 0.0118 in) 0.6 mm (0.0236 in)
	2nd Ring < Limit >	0.15 ~ 0.30 mm (0.0059 ~ 0.0118 in) 0.6 mm (0.0236 in)
	Oil Ring	0.2 ~ 0.6 mm (0.0079 ~ 0.0236 in)
Side Clearance:	Top Ring < Limit >	0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in) 0.10 mm (0.004 in)
	2nd Ring < Limit >	0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in) 0.10 mm (0.004 in)
	Oil Ring	—
Connecting Rod: Connecting Rod Oil Clearance Bearing Size No. Color Code		0.043 ~ 0.066 mm (0.0017 ~ 0.0026 in) < Limit > 0.08 mm (0.0031 in) 1. Blue 2. Black 3. Brown 4. Green
Crankshaft: 		
Crank Width "A"		48.4 mm (1.9055 in)
Assembly Width "B"		296.8 ~ 298.0 mm (11.685 ~ 11.732 in)
Runout Limit "C"		0.03 mm (0.0012 in)
Big End Side Clearance "D"		0.160 ~ 0.262 mm (0.0063 ~ 0.0103 in)
Small End Free Play "F"		0.32 ~ 0.50 mm (0.0126 ~ 0.0197 in)
Main Journal Oil Clearance: Bearing Size No. Color Code:		0.025 ~ 0.043 mm (0.0010 ~ 0.0017 in) 1. Blue 2. Black 3. Brown 4. Green 5. Yellow
Thrust Bearing Position:		#5 JOURNAL



Model		FZR600RB/RBC	
Carburetor:		FZR600RB	FZR600RBC
Type/Manufacture x Quantity		BDST32/MIKUNI x 4	←
I.D. Mark		3HH-03	3UU-03
Main Jet	(M.J.)	# 107.5	←
Main Air Jet	(M.A.J.)	# 65	←
Jet Needle-Clip Position	(J.N.)	5CFZ7-1	←
Needle Jet	(N.J.)	Y-0	←
Pilot Jet	(P.J.)	# 32.5	←
Pilot Outlet Size	(P.O.)	0.8	←
Pilot Air Jet	(P.A.J.)	# 132.5	←
Pilot Screw	(P.S.)	3.0	←
Valve Seat Size	(V.S.)	1.2	←
Starter Jet	(G.S. ₁)	# 52.5	# 50
	(G.S. ₂)	0.6	←
Bypass 1	(B.P. 1)	0.8	←
Bypass 2	(B.P. 2)	0.8	←
Throttle Valve Size	(Th. V)	# 130	←
Fuel Level	(F.L.)	3.8 ~ 4.8 mm (0.15 ~ 0.19 in) Above the float chamber line	
Engine Idle Speed		1.150 ~ 1.250 r/min	
Fuel Pump:		Electrical Type	
Type		3EN/MITSUBISHI	
Model/Manufacturer		0.8A	
Consumption Amperage < Max. >		7 kPa (0.07 kg/cm ² , 0.995 psi)	
Output Pressure			
Lubrication System:		Paper	
Oil Filter Type		Trochoid pump	
Oil Pump Type		0.03 ~ 0.09 mm (0.0012 ~ 0.0035 in)	
Tip Clearance		< 0.15 mm (0.006 in) >	
< Limit >		0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in)	
Side Clearance		< 0.15 mm (0.006 in) >	
< Limit >		80 kPa (0.8 kg/cm ² , 11.4 psi)/1.200 r/min	
Oil Pressure (Hot)		Main Gallery	
Pressure Check Location		80 ~ 120 kPa	
Bypass Valve Setting Pressure		(0.8 ~ 1.2 kg/cm ² , 11.38 ~ 17.06 psi)	
Relief Valve Operating Pressure		450 ~ 550 kPa	
		(4.5 ~ 5.5 kg/cm ² , 63.99 ~ 78.21 psi)	





Tightening torque

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m · kg	ft · lb	
Camshaft Cap	Bolt	M6	24	10	1.0	7.2	
Stud Bolt (Cylinder head)	—	M6	8	10	1.0	7.2	
Cylinder Head	Nut	M8	12	25	2.5	18	
Spark Plug	—	M10	4	13	1.3	9.4	
Cylinder Head Cover	Bolt	M6	8	10	1.0	7.2	
Blind Plug (Sand)	Screw	M12	6	37	3.7	27	
Blind Plug (Water)	Screw	M6	2	7	0.7	5.1	
Connecting Rod	Nut	M7	8	23	2.3	17	
Timing Chain Sprocket	Bolt	M7	4	24	2.4	17	
Timing Chain Tensioner	Bolt	M6	2	10	1.0	7.2	
Timing Chain Guide (Intake)	Bolt	M6	2	10	1.0	7.2	
Timing Chain Tensioner End	Bolt	M6	1	10	1.0	7.2	
Pipe Stopper	Bolt	M6	4	10	1.0	7.2	
Thermostat Housing Assembly	Bolt	M6	2	7	0.7	5.1	
Thermostat Housing Cover	Bolt	M6	2	10	1.0	7.2	
Radiator	Bolt	M6	2	7	0.7	5.1	
Water Pipe Joint	Bolt	M6	4	10	1.0	7.2	
Water Pump	Bolt	M6	2	10	1.0	7.2	
Water Pump Cover	Bolt	M6	2	10	1.0	7.2	
Radiator Cover	Screw	M5	4	7	0.7	5.1	
Oil Pump Housing	Screw	M6	1	7	0.7	5.1	
Oil Pump Mount	Bolt	M6	3	10	1.0	7.2	
Drain Plug	Bolt	M14	1	43	4.3	31	
Oil Delivery Pipe	Bolt	M10	2	20	2.0	14	
Carburetor Joint	Bolt	M6	8	10	1.0	7.2	
Exhaust Pipe	Nut	M6	8	10	1.0	7.2	
Muffler Bracket	Bolt	M8	1	20	2.0	14	
Exhaust Pipe Blind Plug (CO test)	Bolt	M6	4	10	1.0	7.2	
Exhaust Pipe Joint	Bolt	M8	2	20	2.0	14	
Crankcase	Bolt	M8	12	24	2.4	17	
Stud Bolt (Crankcase)	—	M8	12	13	1.3	9.4	
Crankcase	Bolt	M6	21	12	1.2	8.7	
	Bolt	M8	1	24	2.4	17	
Oil Baffle Plate	Screw	M6	4	7	0.7	5.1	
Crankcase Cover (Left)	Bolt	M6	5	10	1.0	7.2	
Crankcase Cover (Right)	Bolt	M6	10	10	1.0	7.2	
Bearing Plate	Bolt	M6	2	10	1.0	7.2	
Generator Cover	Bolt	M6	5	10	1.0	7.2	
Starter Clutch Cover	Bolt	M6	7	10	1.0	7.2	
Starter Clutch	Bolt	M10	1	80	8.0	58	
Starter Clutch Outer and Starter Wheel	Bolt	M8	3	30	3.0	22	
Pressure Plate	Bolt	M5	5	6	0.6	4.3	
Clutch Boss	Nut	M18	1	70	7.0	51	Use lock washer
Push Lever	Screw	M5	2	5	0.5	3.6	
Push Rod	Nut	M8	1	16	1.6	11	Use lock washer
Drive Sprocket	Nut	M18	1	70	7.0	51	
Stopper Plate	Bolt	M6	1	10	1.0	7.2	
Stopper Lever	Bolt	M6	1	10	1.0	7.2	



CHASSIS

Model		FZR600RB/RBC							
Rear Suspension:									
Shock Absorber Travel		43 mm (1.69 in)							
Spring Free Length		180.5 mm (7.11 in)							
< Limit >		170.5 mm (6.71 in)							
Fitting Length		170 mm (6.69 in)							
Spring Rate	K1	130 N/mm (13 kg/mm, 728 lb/in)							
Stroke	K1	0 ~ 43 mm (0.0 ~ 1.69 in)							
Optional Spring		No							
Enclosed Gas Pressure:									
Standard		1.200 kPa (12 kg/cm ² , 171 psi)							
		Hard				STD	Soft		
Adjusting position		7	6	5	4	3	2	1	
Rear Wheel:									
Type		Cast wheel							
Rim Size		MT4.00 x 18							
Rim Material		Aluminum							
Rim Runout Limit	Radial	2.0 mm (0.08 in)							
	Lateral	2.0 mm (0.08 in)							

Parts to be tightened	Thread size	Tightening torque		
		Nm	m · kg	ft · lb
Front Axle and Outer Tube	M14 x 1.5	58	5.8	42
Front Wheel Axle Holder	M8 x 1.25	20	2.0	14
Rear Axle and Nut	M16 x 1.5	107	10.7	77
Handlebar Crown and Inner Tube	M8 x 1.25	26	2.6	19
Handlebar Crown and Steering Stem	M22 x 1.0	110	11.0	80
Steering ring nut (Upper and lower)	—	See "NOTE"		
Brake Caliper (Front/Rear)	M10 x 1.25	35	3.5	25
Bleed Screw and Brake Caliper	M8 x 1.25	6	0.6	4.3
Brake Hose and Union Bolt	M10 x 1.25	26	2.6	19
Front Master Cylinder and Master Cylinder Holder	M6 x 1.0	9	0.9	6.5
Front Master Cylinder and Cylinder Cap	M5 x 0.8	2	0.2	1.4
Front Fender and Outer Tube	M6 x 1.0	6	0.6	4.3
Handlebar Boss and Front Fork	M6 x 1.0	13	1.3	9.4
Handlebar and Handlebar Boss	M8 x 1.25	23	2.3	17
Engine Mounting: Front	M10 x 1.25	55	5.5	40
Rear — Upper	M10 x 1.25	60	6.0	43
Rear — Lower	M10 x 1.25	55	5.5	40
Down Tube and Frame: Front	M10 x 1.25	60	6.0	43
Rear	M8 x 1.25	33	3.3	24
Footrest Bracket and Frame	M8 x 1.25	22	2.2	16
Pivot Axle and Nut	M14 x 1.5	90	9.0	65
Relay Arm and Frame	M10 x 1.25	40	4.0	29
Connecting Rod and Swingarm	M10 x 1.25	40	4.0	29
Connecting Rod and Relay Arm	M10 x 1.25	40	4.0	29
Rear Shock Absorber and Relay Arm	M10 x 1.25	40	4.0	29
Rear Shock Absorber and Frame	M10 x 1.25	40	4.0	29
Footrest and Footrest Bracket	M10 x 1.25	55	5.5	40
Rear Footrest Bracket and Frame	M8 x 1.25	32	3.2	23
Rear Master Cylinder and Rear Arm Bracket	M8 x 1.25	20	2.0	14
Cowling and Stay	M6 x 1.0	4	0.4	2.9
Compression Bar and Brake Caliper Bracket	M8 x 1.25	23	2.3	17
Front Fork Pinch Bolt: Upper	M8 x 1.25	26	2.6	19
Lower	M12 x 1.25	38	3.8	27
Sprocket and Clutch Hub	M8 x 1.25	60	6.0	43
Brake Disc and Clutch Hub	M8 x 1.25	20	2.0	14
Inner Tube and Steering Stem	M8 x 1.25	22	2.2	16
Frame and Rear Frame: Upper	M10 x 1.25	64	6.4	46
Lower	M12 x 1.25	88	8.8	64

NOTE:

1. First, tighten the ring nut (lower) approximately 52 Nm (5.2 m · kg, 37 ft · lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut (lower) approximately 3 Nm (0.3 m · kg, 2.2 ft · lb).
3. Install the ring nut (upper). And finger tighten the ring nut (upper), then align the slots of both ring nuts. If not aligned, hold the lower ring nut and tighten the other until they are aligned.

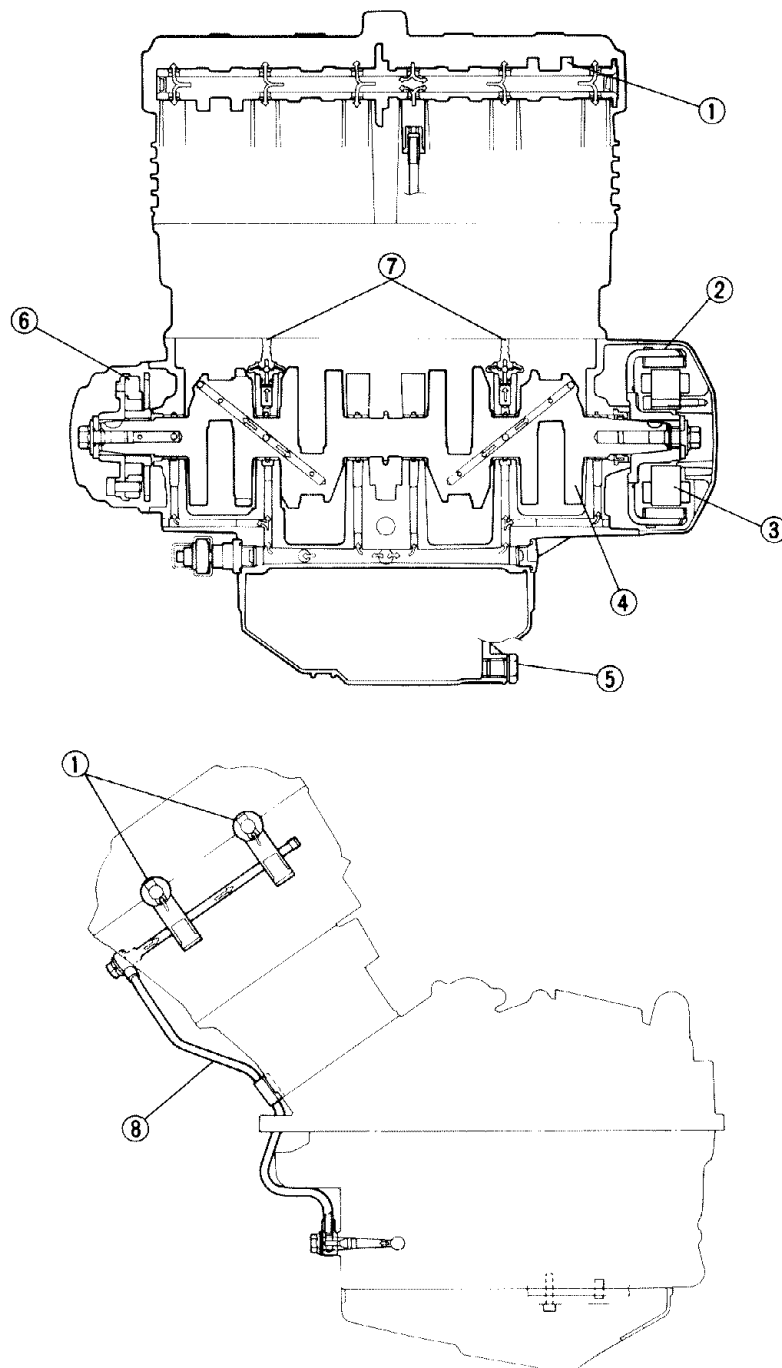


ELECTRICAL

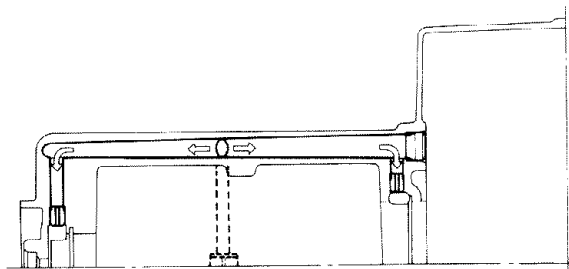
Model	FZR600RB/RBC
Voltage:	12V
Ignition System:	
Ignition Timing (B.T.D.C.)	5° at 1,200 r/min, 5° at 1,300 r/min (FZR600RBC)
Advancer Type	Electrical
T.C.I.:	
Pickup Coil Resistance	80 ~ 120Ω at 20°C (68°F)
(Color)	(White/Red – White/Black)
T.C.I. Unit/Manufacturer	BB7233/HITACHI TID14-73/HITACHI (FZR600RBC)
Rectifier:	
Model/Manufacturer	SH569/SHINDENGEN
Capacity	25A
Withstand Voltage	240V
Electrical Starter System:	
Type	Constant mesh type
Starter Motor:	
Model/Manufacturer	SM-13/MITSUBA
Output	0.7 kW
Brush – Overall Length	12.5 mm (0.49 in)
< Limit >	4 mm (0.16 in)
Commutator Dia.	28 mm (1.10 in)
Wear Limit	27 mm (1.06 in)
Mica Undercut	0.7 mm (0.027 in)
Starter Switch:	
Model/Manufacturer	A104-128/HITACHI
Amperage Rating	100A
Coil Winding Resistance	3.87 ~ 4.73Ω at 20°C (68°F)
Horn:	
Type/	Plane Type/1 pcs.
Model/Manufacturer	YF-12/NIKKO
Maximum Amperage	2.5A, 1.5A (FZR600RBC)
Flasher Relay (Relay Assembly):	
Type	Semi transistor type
Model/Manufacturer	FB257N/NIPPONDENSO
Self Cancelling Device	Yes
Flasher Frequency	60 ~ 120 cycle/min
Wattage	27W x 2 pcs + 3.4W
Thermostat Switch:	
Model/Manufacturer	2EL/NIPPON THERMOSTAT
Circuit Breaker:	
Type	Fuse
Amperage for Individual Circuit x Quantity:	
MAIN	30A x 1
HEADLIGHT	20A x 1
SIGNAL	10A x 1
IGNITION	10A x 1
RESERVE	10A x 1, 30A x 1, 20A x 1

LUBRICATION DIAGRAM

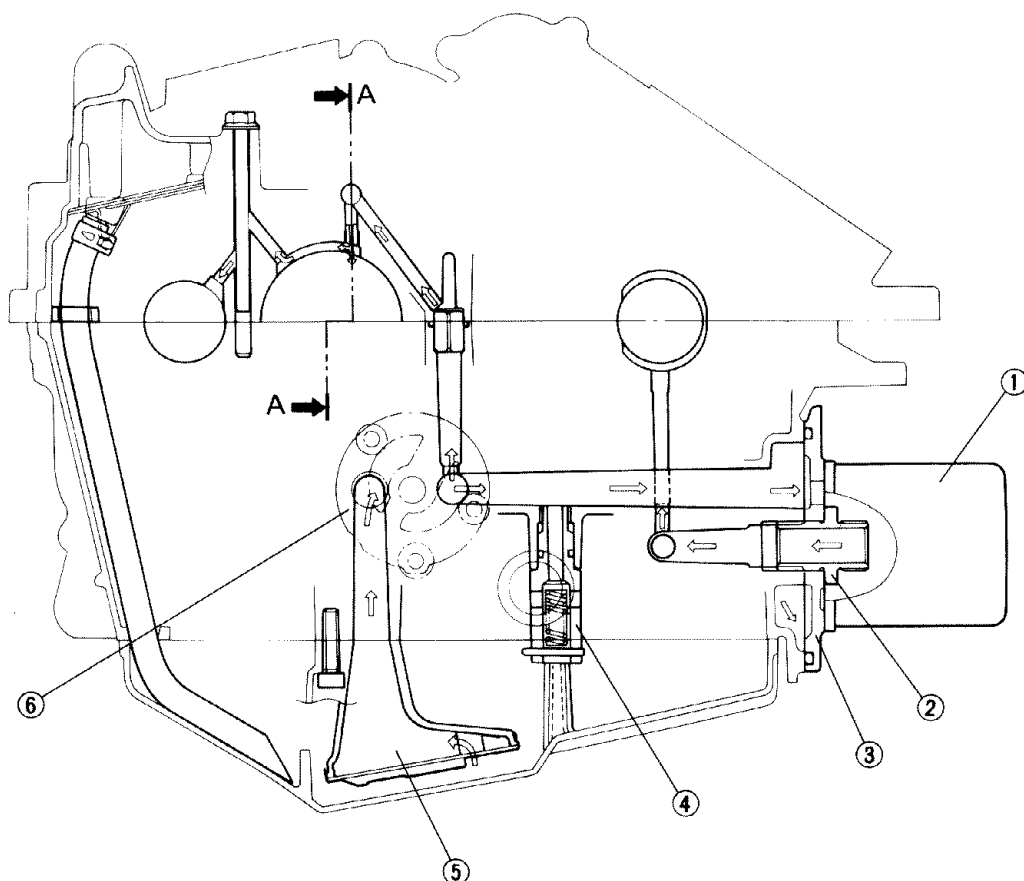
- ① Camshaft
- ② Rotor
- ③ Stator coil
- ④ Crankshaft
- ⑤ Drain plug
- ⑥ Starter clutch
- ⑦ Oil jet nozzle
- ⑧ Oil delivery pipe



- ① Oil filter
- ② Bolt
- ③ Adapter plate
- ④ Relief valve
- ⑤ Oil strainer
- ⑥ Oil pump

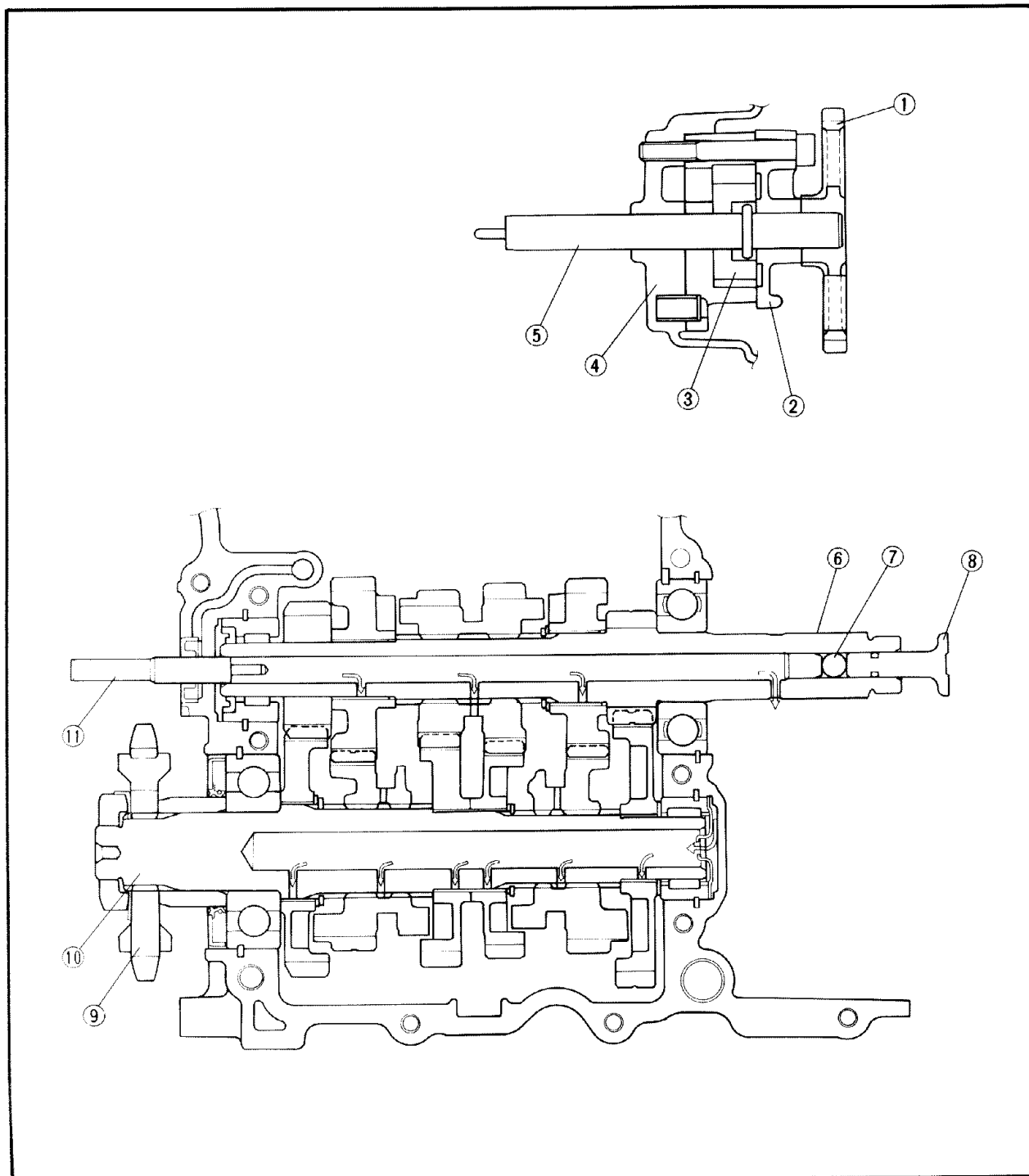


A—A



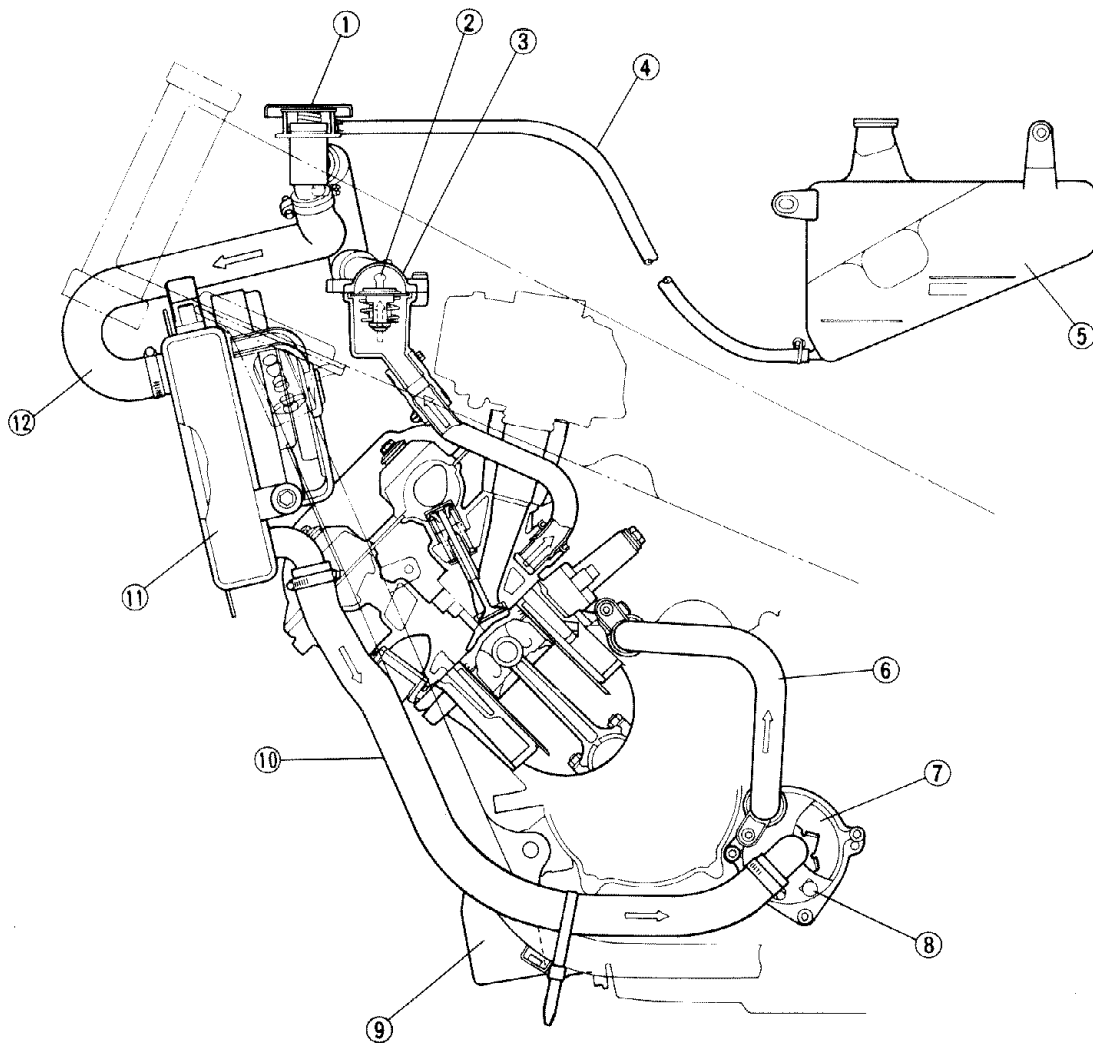


- | | |
|------------------------|------------------|
| ① Oil pump driven gear | ⑧ Push rod # 1 |
| ② Oil pump cover | ⑨ Drive sprocket |
| ③ Inner rotor | ⑩ Drive axle |
| ④ Oil pump housing | ⑪ Push rod # 2 |
| ⑤ Pump shaft | |
| ⑥ Main axle | |
| ⑦ Ball | |



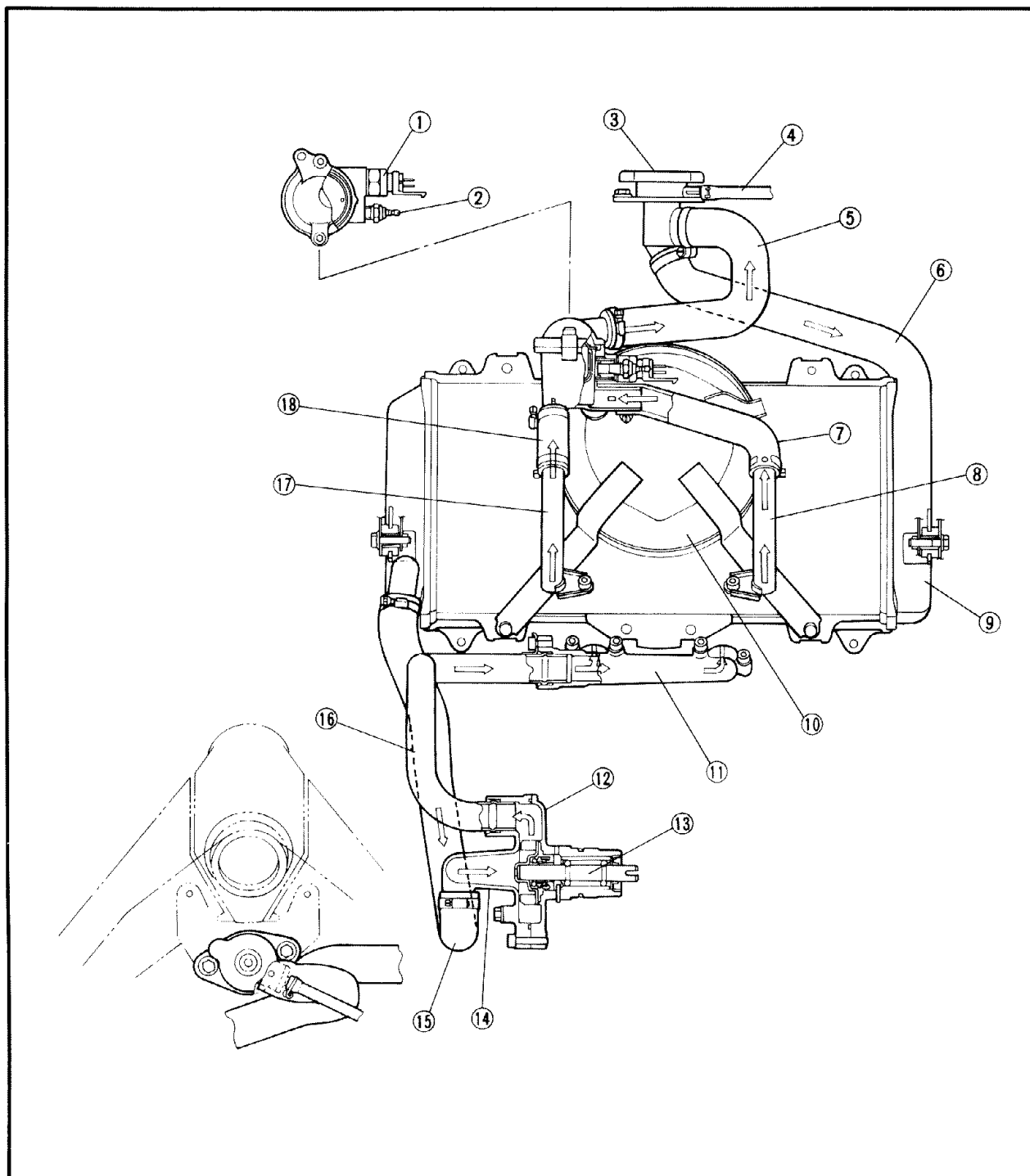
COOLANT DIAGRAM

- ① Radiator cap
- ② Thermostatic valve
- ③ Thermostatic valve housing
- ④ Reservoir tank hose
- ⑤ Coolant reservoir tank
- ⑥ Water pipe
- ⑦ Water pump
- ⑧ Drain bolt
- ⑨ Oil filter
- ⑩ Radiator hose (outlet)
- ⑪ Radiator
- ⑫ Radiator hose (inlet)





- | | |
|-------------------------|--------------------------|
| ① Thermo switch | ⑩ Fan motor assembly |
| ② Thermo unit | ⑪ Water jacket joint |
| ③ Radiator cap | ⑫ Water pump housing |
| ④ Reservoir tank hose | ⑬ Water pump |
| ⑤ Radiator hose 3 | ⑭ Water pump cover |
| ⑥ Radiator hose (inlet) | ⑮ Radiator hose (outlet) |
| ⑦ Radiator hose 2 | ⑯ Water pipe |
| ⑧ Radiator pipe 1 | ⑰ Radiator pipe 2 |
| ⑨ Radiator | ⑱ Radiator hose 1 |

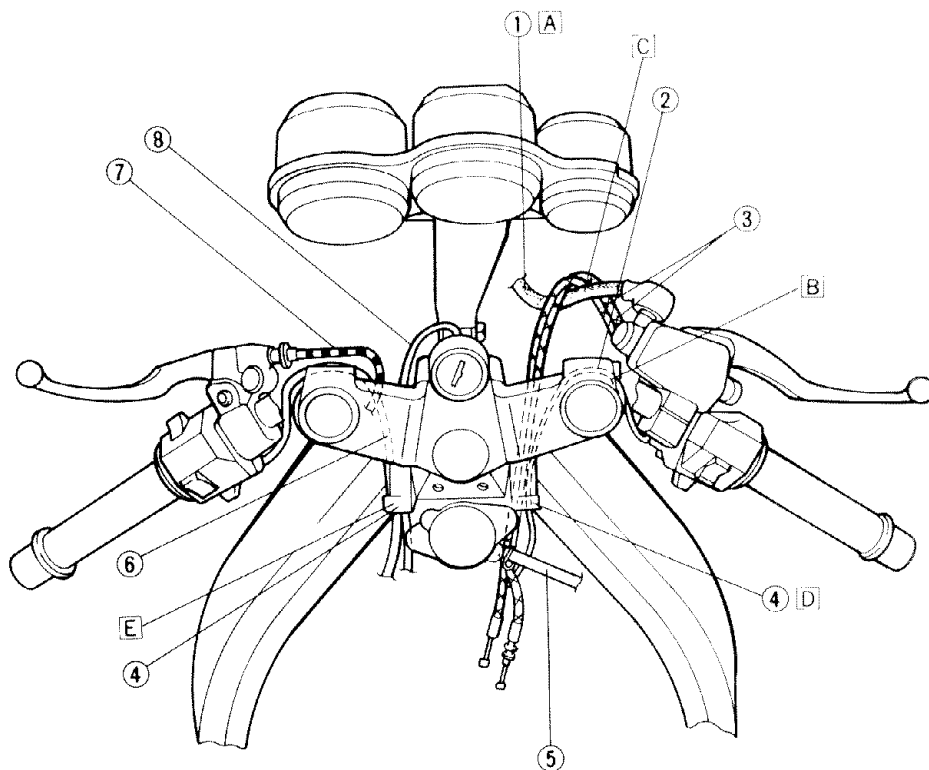




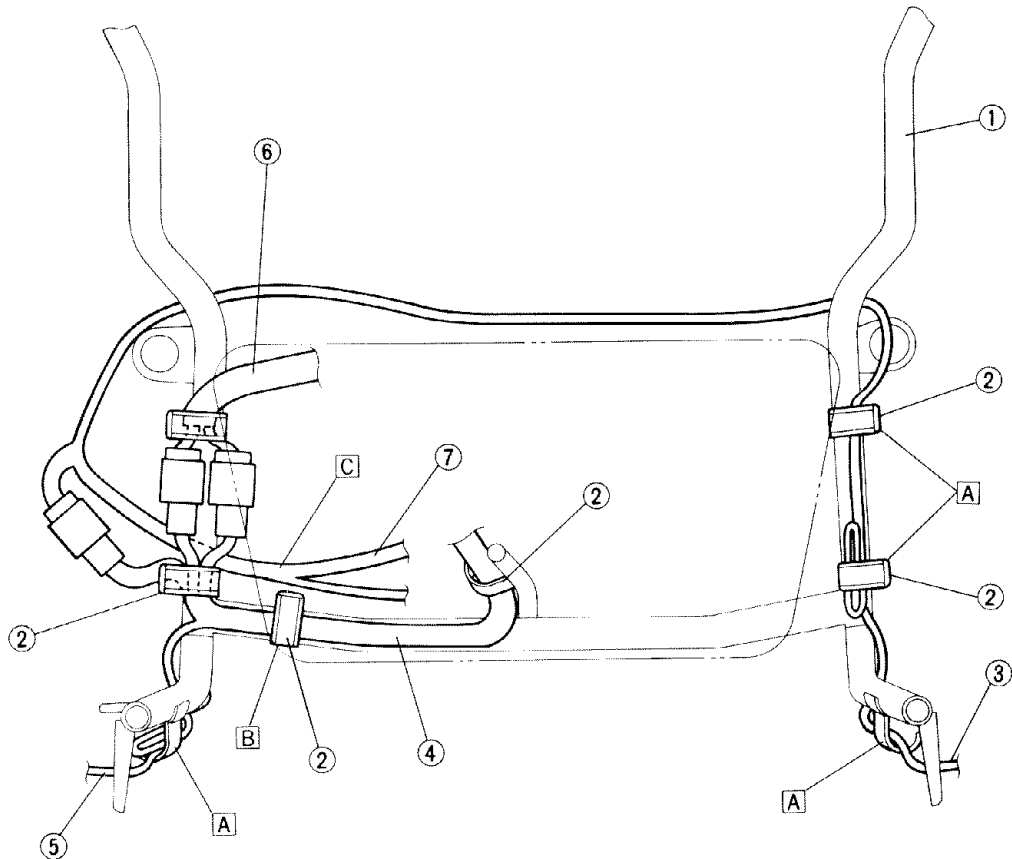
CABLE ROUTING

- ① Front brake hose
- ② Handlebar switch (right)
- ③ Throttle cable
- ④ Clamp
- ⑤ Radiator breather hose
- ⑥ Handlebar switch (left) lead
- ⑦ Clutch cable
- ⑧ Main switch lead

- A Pass the brake hose right side of cowling stay.
- B Pass the handlebar switch (left) lead in front of inner tube.
- C Pass the throttle cables in front of brake hose.
- D Clamp the throttle cables and handlebar switch (left) lead.
- E Clamp the handlebar switch (left) and main switch leads.



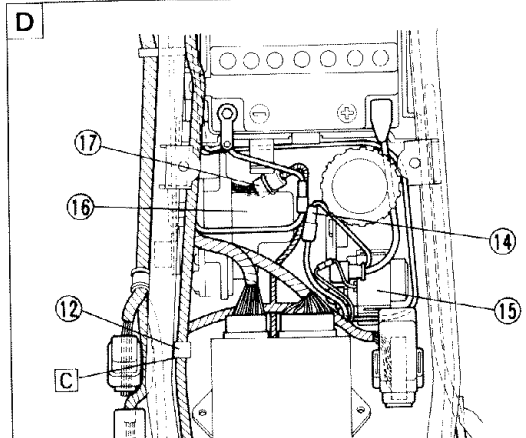
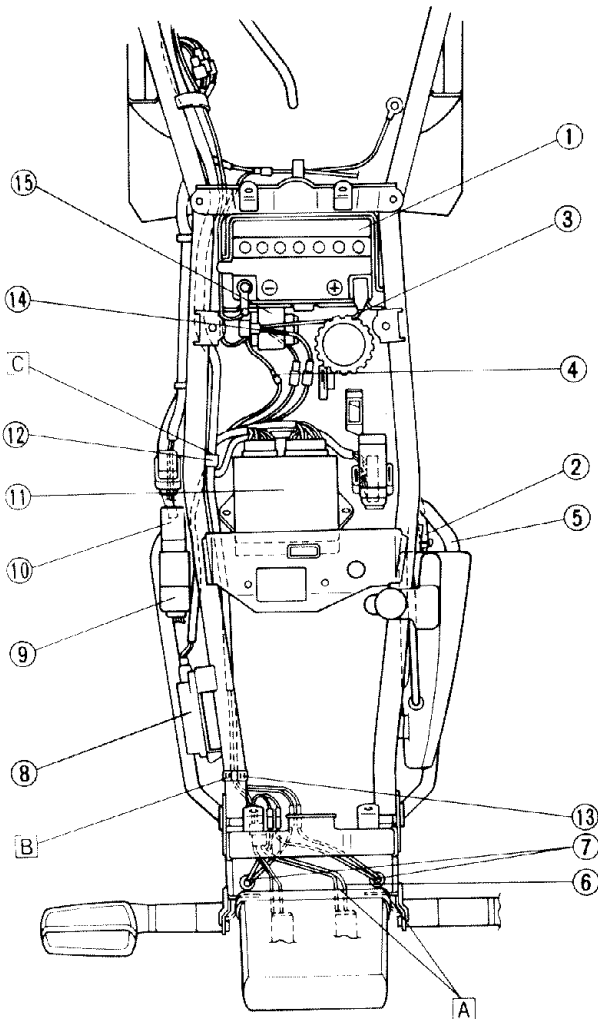
- ① Cowling stay
- ② Clamp
- ③ Flasher light (left) lead
- ④ Wireharness
- ⑤ Flasher light (right) lead
- ⑥ Meter light lead
- A Clamp the flasher light lead.
- B Clamp the wireharness.
- C Pass the headlight lead in front of the cowling stay.





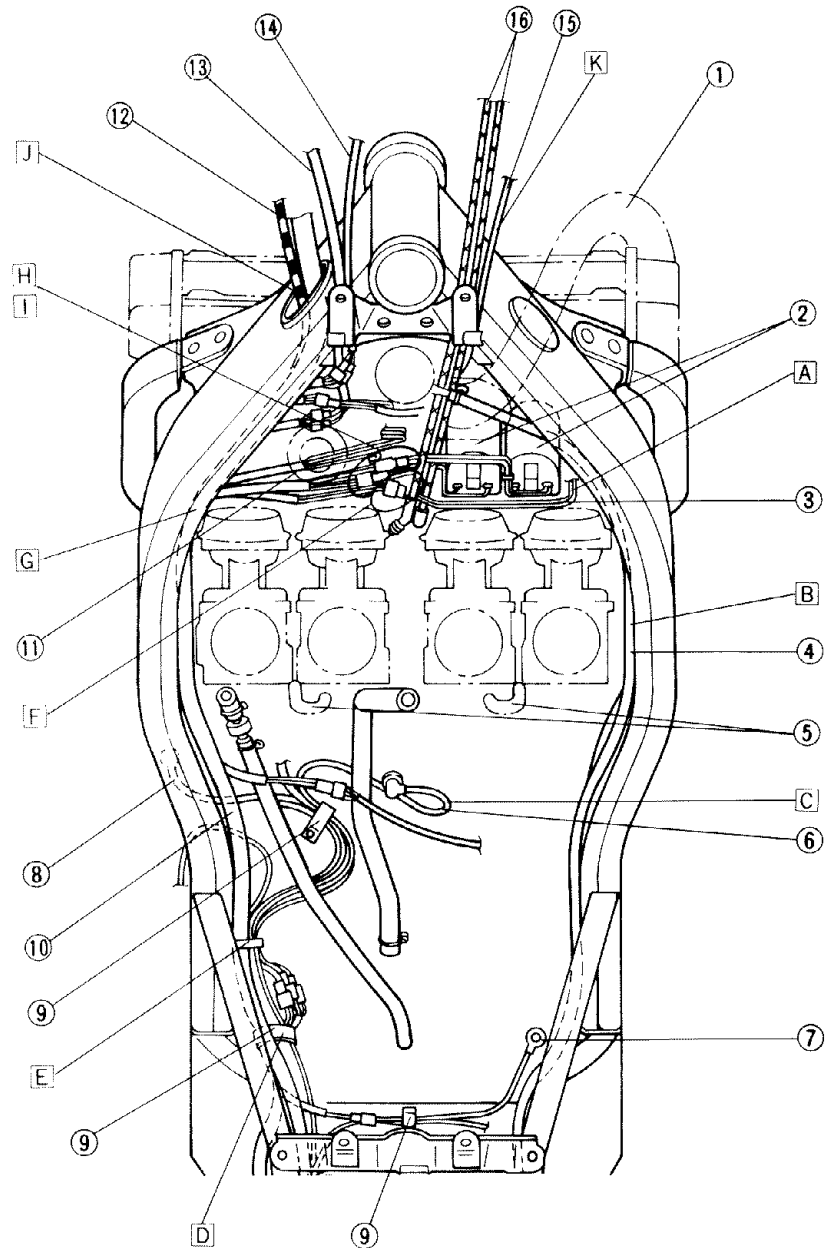
- | | |
|---------------------------|-------------------------|
| ① Battery | ⑩ Relay assembly |
| ② Coolant reservoir hose | ⑪ Ignitor unit |
| ③ Battery positive lead | ⑫ Clamp |
| ④ Starter relay lead | ⑬ Band |
| ⑤ Breather hose | ⑭ Starter relay lead |
| (coolant reservoir hose) | ⑮ Starter relay |
| ⑥ Taillight lead | ⑯ Exup servo motor |
| ⑦ Rear flasher light lead | ⑰ Exup servo motor lead |
| ⑧ Rectifier/regulator | |
| ⑨ Flasher relay | |

- A Pass the flasher light lead through the hole in rear fender.
- B Clamp the taillight and rear flasher light lead.
- C Clamp the wireharness.
- D For California only

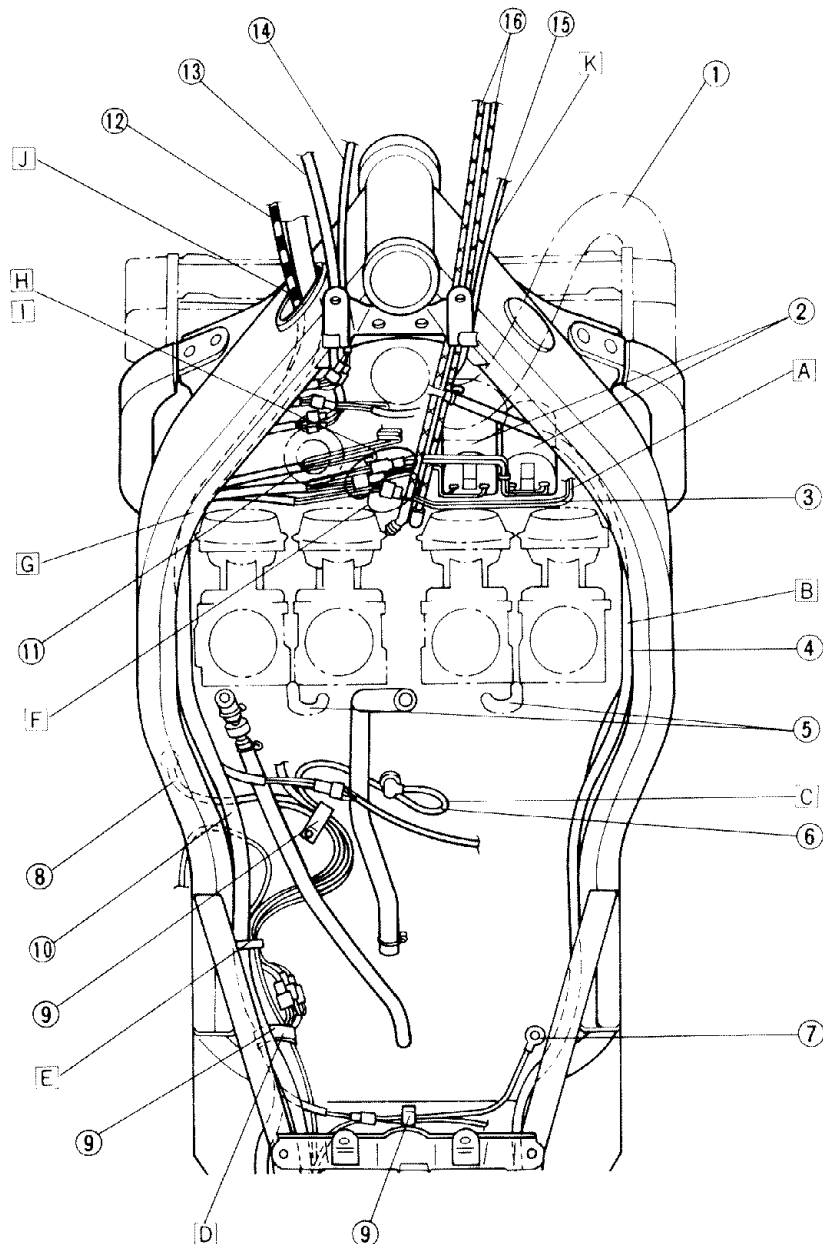




- | | |
|----------------------------|---------------------------------|
| ① Radiator hose | ⑩ Wireharness |
| ② Ignition coil | ⑪ Thermo unit |
| ③ Fan motor lead | ⑫ Clutch cable |
| ④ Radiator breather hose | ⑬ Handlebar switch (left) lead |
| ⑤ Carburetor breather hose | ⑭ Main switch lead |
| ⑥ Starter motor lead | ⑮ Handlebar switch (right) lead |
| ⑦ Ground lead | ⑯ Throttle cable |
| ⑧ A.C. Generator lead | |
| ⑨ Clamp | |



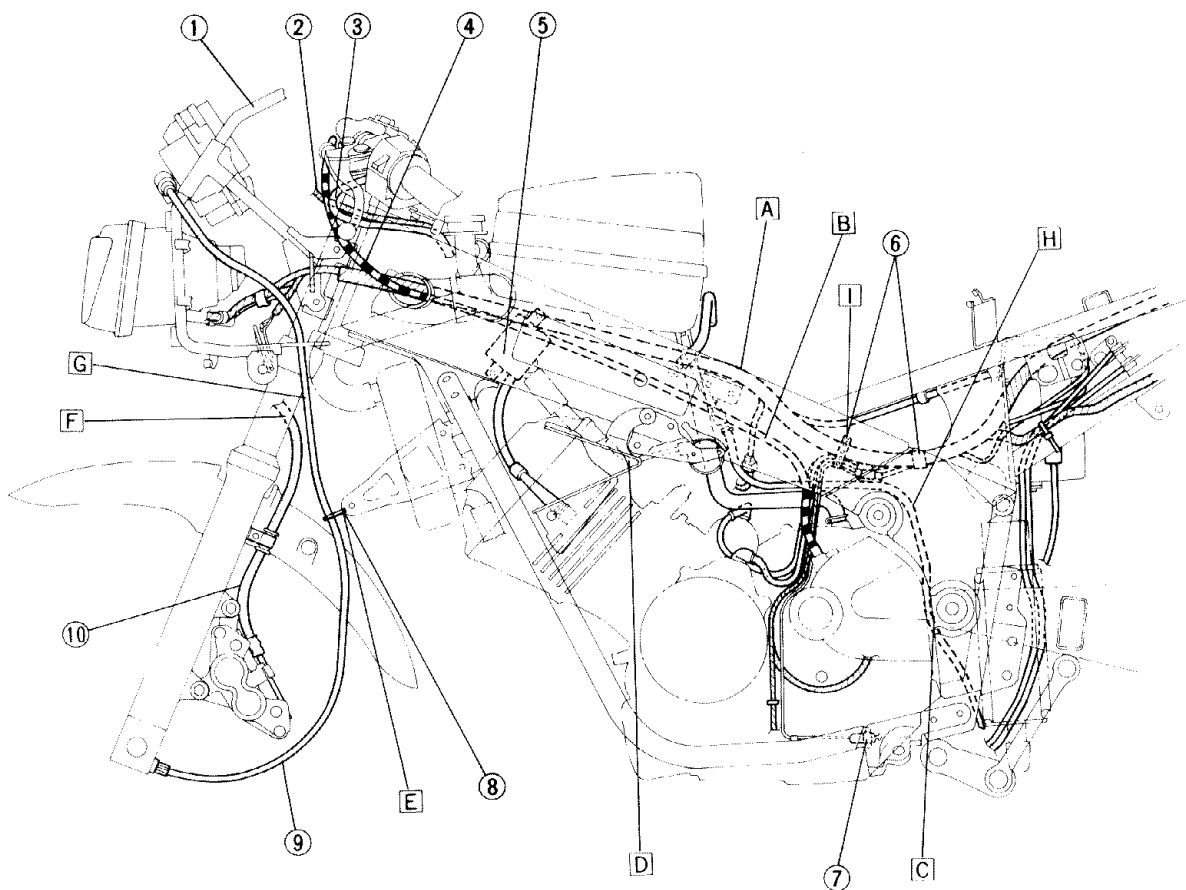
- A** Pass the fan motor lead behind the ignition coil.
- B** Pass the radiator breather hose between the carburetor and frame.
- C** Pass the starter motor lead below the starter motor.
- D** Clamp the wireharness.
- E** Clamp the A.C. magneto, neutral, oil level switch and sidestand switch leads.
- F** Pass the fan motor and ignition coil leads between the throttle cables, and connect them between the conductor and thermo unit.
- G** Position the wireharness so that the white tape is positioned on thermo unit.
- H** Connect the main switch lead between the conductor and thermo unit.
- I** Locate the main switch lead coupler in front of air filter case bracket.
- J** Pass the clutch cable and wireharness through the frame hole.
- K** Pass the throttle cables and handlebar switch lead between the radiator hoses.





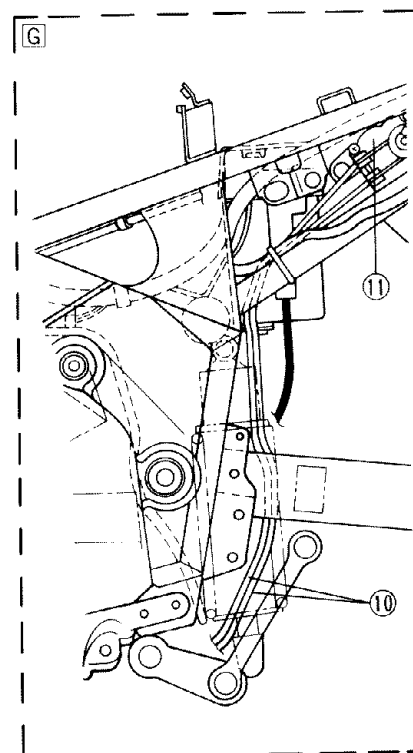
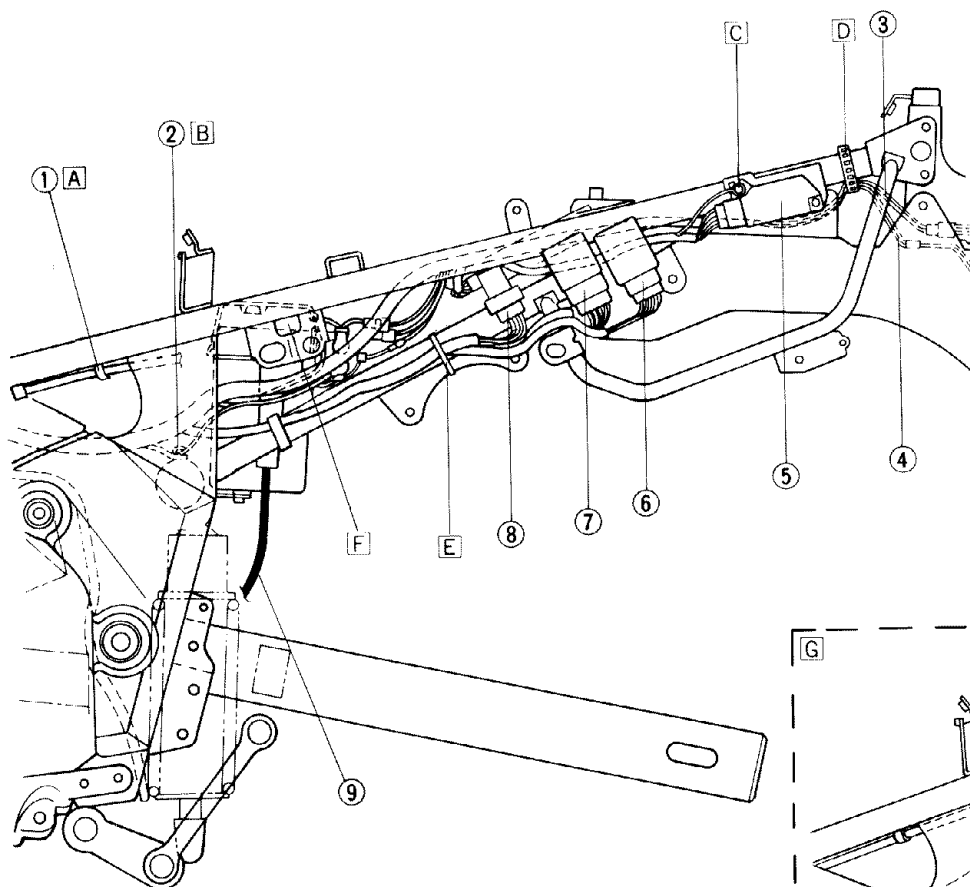
- ① Cowling stay
- ② Main switch lead
- ③ Handlebar switch (left) lead
- ④ Clutch cable
- ⑤ Thermo unit
- ⑥ Clamp
- ⑦ Sidestand switch
- ⑧ Cable guide
- ⑨ Speedometer cable
- ⑩ Front brake hose

- A Pass the wireharness above the fuel tank bracket.
- B Pass the clutch cable inside the frame.
- C Pass the air filter breather hose between the engine and swingarm.
- D Pass the starter cable behind of the air intake duct.
- E Pass the speedometer cable through the holder.
- F Pass the speedometer cable outside of the front fork.
- G Pass the brake hose inside of the front fork.
- H Pass the air filter drain hose above the engine mounting bolt, and in front of pivot shaft.
- I Clamp the sidestand, pickup coil, neutral switch, oil level switch and starter relay leads.



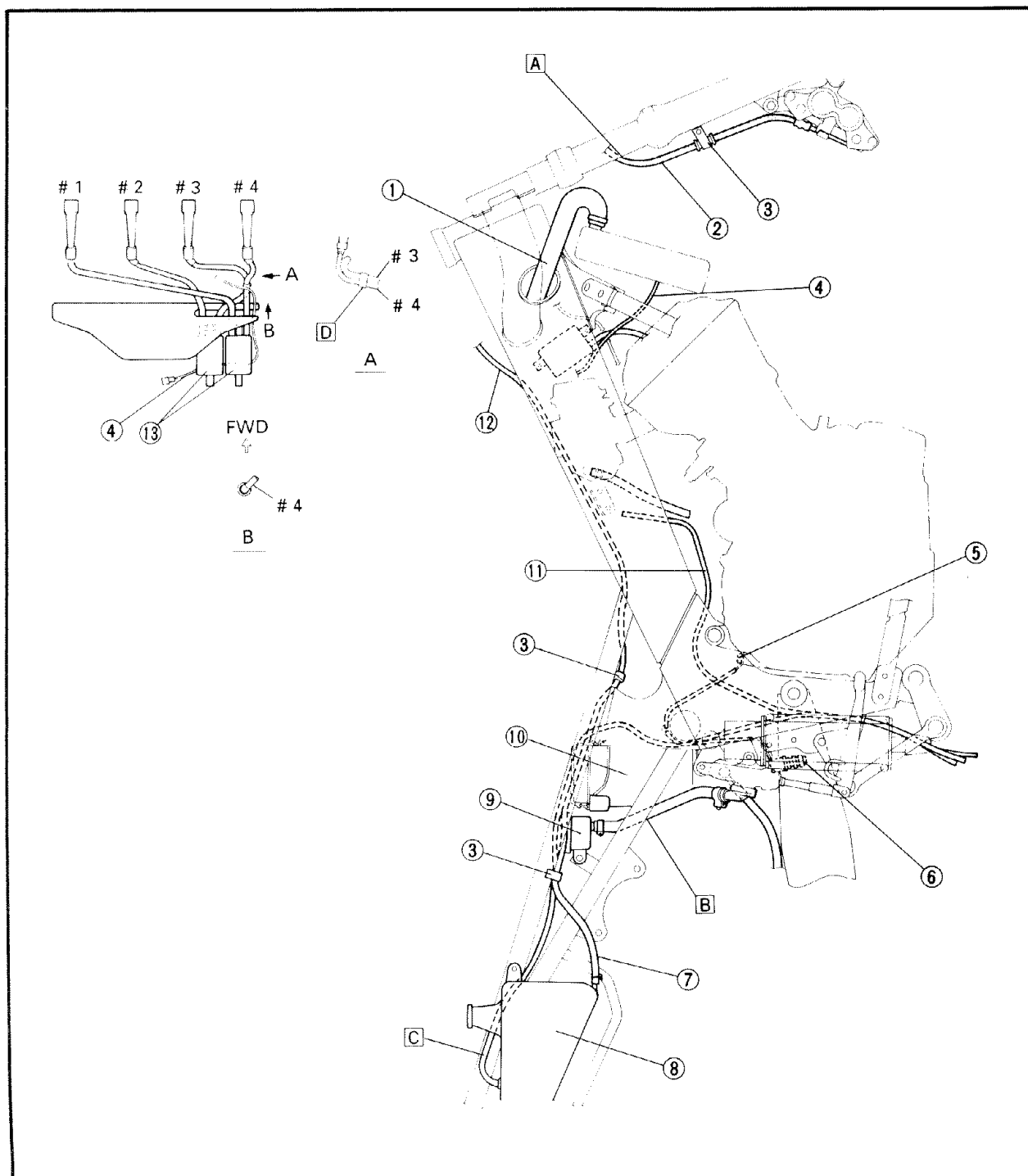


- ① Clamp
 - ② Ground lead
 - ③ Taillight lead
 - ④ Rear flasher lead
 - ⑤ Rectifier/regulator
 - ⑥ Flasher relay
 - ⑦ Relay assembly
 - ⑧ Main fuse
 - ⑨ Battery breather hose
 - ⑩ "EXUP" control cable
 - ⑪ "EXUP" servo motor
- A Clamp the main wireharness.
 - B Clamp the rear brake switch and ground leads.
 - C Secure the ground lead with the screw (rectifier/regulator).
 - D Clamp the flasher light lead and taillight leads.
 - E Clamp the wireharness on left side of frame.
 - F Pass the wireharness above the battery box.
 - G For California only





- ① Radiator hose
- ② Front brake hose
- ③ Clamp
- ④ Fan motor lead
- ⑤ Ground
- ⑥ Rear brake switch
- ⑦ Reservoir tank hose
- ⑧ Coolant reservoir tank
- ⑨ Reservoir tank
(master cylinder-rear brake)
- ⑩ Battery
- ⑪ Bleeder hose (fuel filler cover)
- ⑫ Overflow hose (radiator)
- ⑬ Ignition coil
- A Pass the brake hose inside of the front fork.
- B Pass the reservoir hose inside of the back stay.
- C Pass the overflow hose (radiator) between the coolant reservoir tank and seat rail.
- D Clamp the spark plug leads (#3 and #4) together.
For the spark plug lead #4, be sure to clamp on the white mark.





PERIODIC INSPECTION AND ADJUSTMENT COWLINGS/COVERS REMOVAL AND INSTALLATION

REMOVAL

1. Remove:

- Side cowlings (left ① and right ②)

- ③ Bolt
- ④ Plastic washer
- ⑤ Spring nut
- ⑥ Special nut
- ⑦ Collar
- ⑧ Damper

2. Remove:

- Duct covers (left and right) ①
- Flasher lights (left and right) ②
- Rear view mirror (left and right) ③

- ④ Screw
- ⑤ Nut
- ⑥ Cap
- ⑦ Damper

3. Remove:

- Upper cowling ①

CAUTION:

Remove the headlight together with the upper cowling to prevent the headlight from falling out.

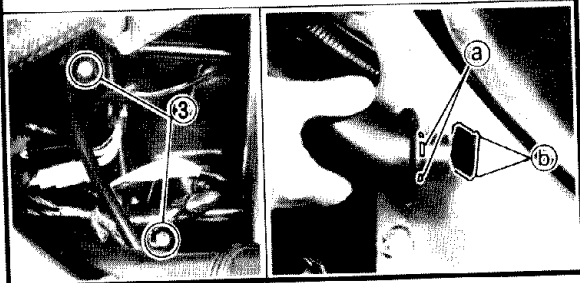
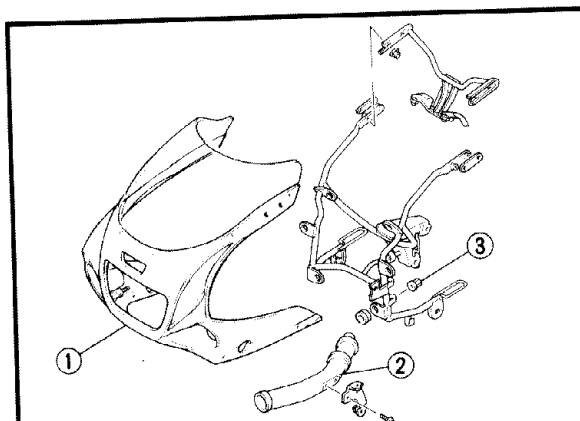
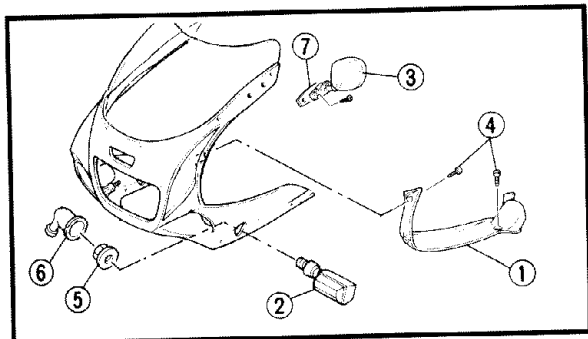
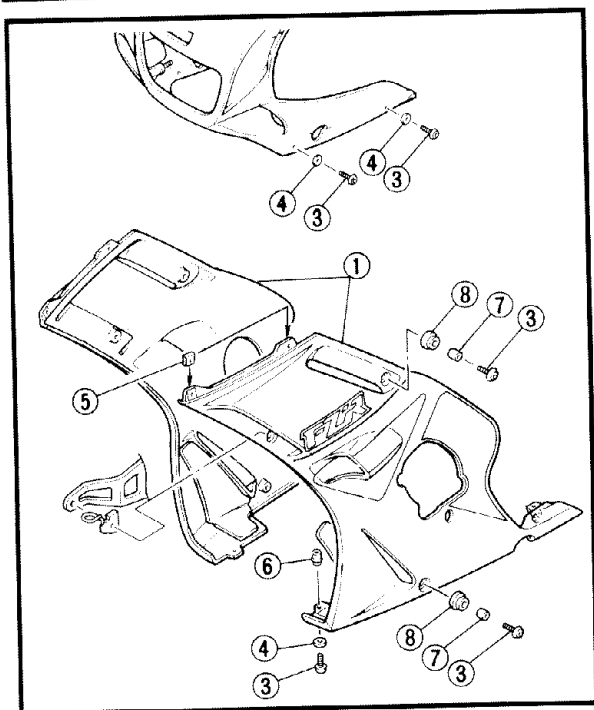
4. Remove:

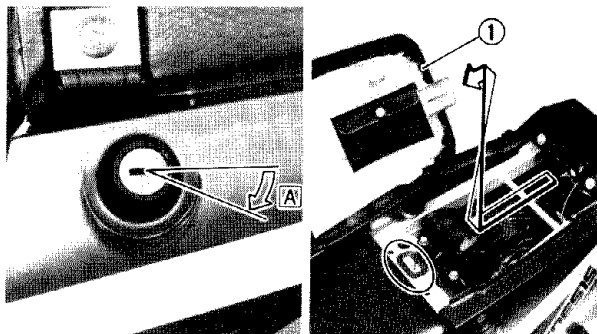
- Air intake ducts (left and right) ②

NOTE:

Align the projections (a) on the duct with the slots (b) in the frame.

- ③ Nut





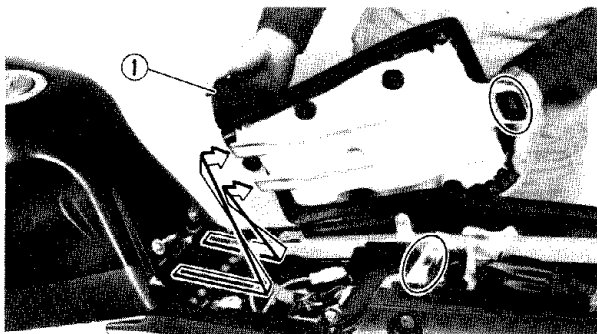
Covers

1. Remove:

- Passenger seat ①

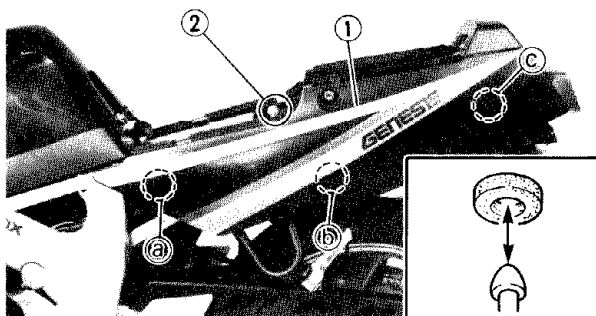
NOTE:

Insert the key into the lock and turn it clockwise **A** to release the seat lock.



2. Remove:

- Rider seat ①

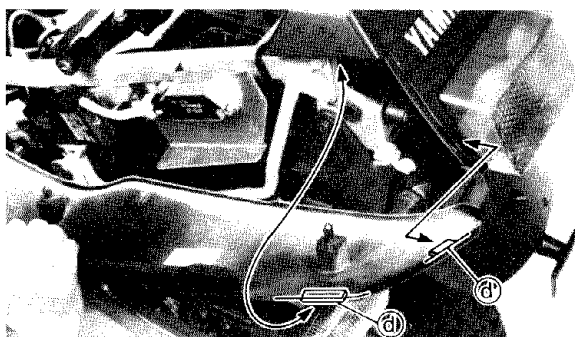


3. Remove:

- Side covers (left and right) ①

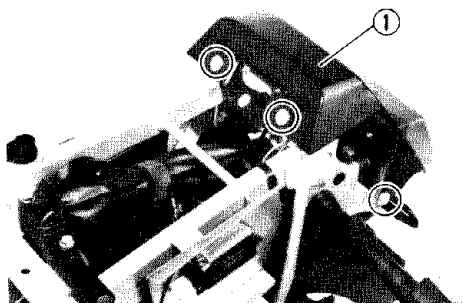
Removal Steps:

- Remove the screws ② .
- Unhook the projections **a** , **b** and **c** on the side cover from the grommets on the frame.
- Unhook the hooks **d** on the side cover from the slots in the trail cover.



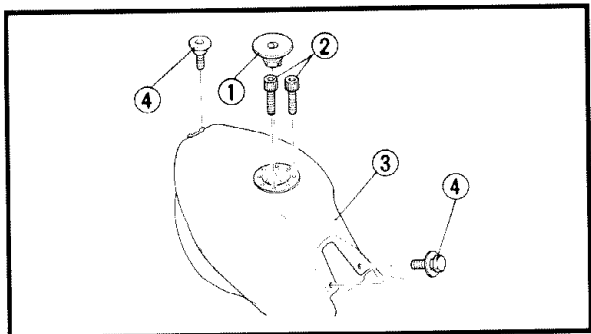
4. Remove:

- Tail cover ①



ENGINE OIL FILTER REPLACEMENT

INSP
ADJ



5. Remove:

- Fuel tank cap ①
- Socket head bolt ②
- Top cover ③

④ Bolt

ENGINE

ENGINE OIL REPLACEMENT

1. Remove:

- Side cowlings

Refer to "COWLING REMOVAL, AND INSTALLATION" section.

2. Warm up the engine for several minutes.

3. Place a drain pan under the engine.

4. Remove:

- Oil filler cap ①

5. Remove:

- Stay (Side cowlings-left) ①
- Drain plug ②

Drain the engine oil.

6. Inspect:

- O-ring (oil filler cap)
 - Gasket (drain plug)
- Damage → Replace.

7. Tighten:

- Drain plug ①



Oil drain plug:
43 Nm (4.3 m·kg, 31 ft·lb)

8. Fill:

- Crankcase

CAUTION:

- Do not add any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.
- Be sure no foreign material enters the crankcase.

**Periodic oil change:**

2.2 L (1.9 Imp qt, 2.4 US qt)

Recommended engine oil:

At 5°C (40°F) or higher:

YAMALUBE-4 (20W40) or

SAE 20W40 type SE motor oil

At 15°C (60°F) or lower:

YAMALUBE-4 (10W30) or

SAE 10W30 type SE motor oil

9. Install:

- Oil filler cap
- Stay (side cowling-left)
- Side cowlings

ENGINE OIL FILTER REPLACEMENT**1. Remove:**

- Side cowlings

Refer to "COWLING/COVERS REMOVAL AND INSTALLATION" section.

2. Drain:

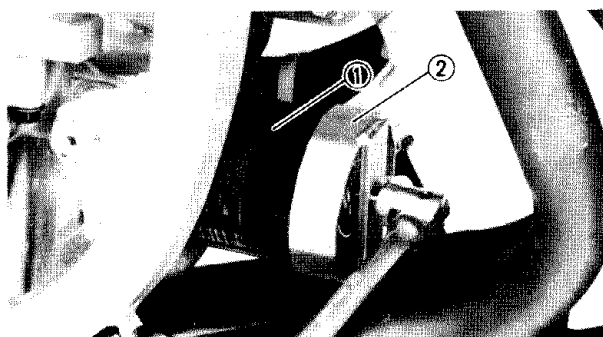
- Engine oil

Refer to "ENGINE OIL REPLACEMENT" section.

3. Remove:

- Oil filter ①

Use the oil filter wrench ②.

**Oil filter wrench:**

J-37140A

90890-04126

4. Inspect:

- O-ring (oil filler cap)
- Gasket (drain plug)

Wear/Damage → Replace.

5. Install:

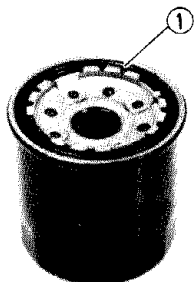
- Drain plug
(with gasket)

**Drain plug:**

43 Nm (4.3 m·kg, 31 ft·lb)

ENGINE OIL FILTER REPLACEMENT

**INSP
ADJ**

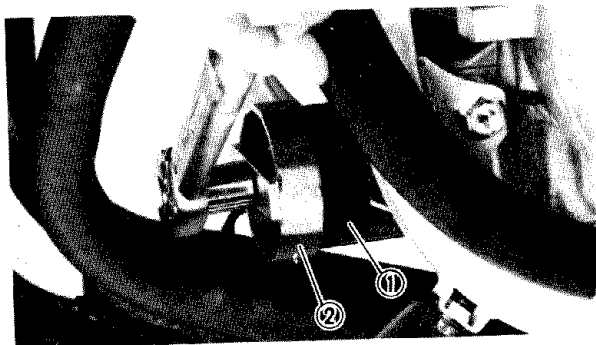


6. Apply:

- Engine oil (lightly)
(to O-ring ① of new oil filter)

NOTE:

Make sure the O-ring ① is positioned properly.



7. Install:

- Oil filter (new) ①

8. Tighten:

- Oil filter ①
Use the oil filter wrench ②.



Oil filter wrench:
J-37140A
90890-04126



Oil filter:
17 Nm (1.7 m·kg, 12 ft·lb)

9. Fill:

- Crankcase

Refer to "ENGINE OIL REPLACEMENT"
Section for recommended engine oil.



With oil filter replacement:
2.5 L (2.2 Imp qt, 2.64 US qt)

10. Warm up the engine for a few minutes, then
stop the engine.

11. Inspect:

- Oil leaks
- Oil level

12. Install:

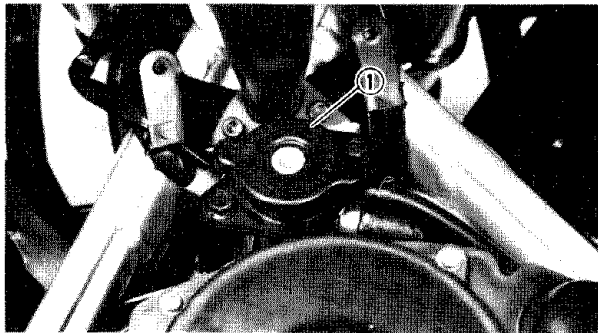
- Side cowlings

COOLANT REPLACEMENT

⚠ WARNING

Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, open the radiator cap by the following procedure:

Place a thick rag, like a towel, over the radiator cap. slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.



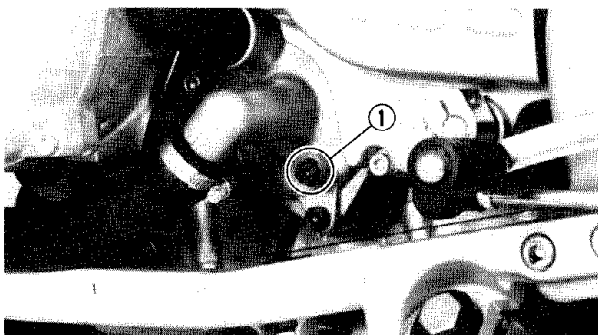
1. Remove:

- Side cowlings (left and right)
- Seats (passenger and rider)
- Top cover

Refer to "COWLINGS/COVERS REMOVAL AND INSTALLATION" section.

2. Remove:

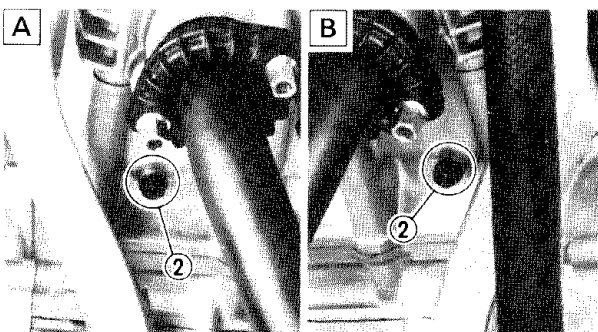
- Radiator cap ①



3. Place a drain pan under the drain bolts.

4. Remove:

- Drain bolt (water pump) ①



5. Remove:

- Drain bolt (cylinder) ②
- Drain the coolant.

A Right

B Left



6. Inspect:

- Gasket (drain bolts — water pump)
 - Gasket (drain bolt — cylinder)
- Damage → Replace.

7. Tighten:

- Drain bolts



Drain bolt:
7 Nm (0.7 m·kg, 5.1 ft·lb)

8. Fill:

- Cooling system

Coolant filling steps:

- Fill the coolant into the radiator until the radiator is full.
- Start the engine (coolant level decreases).

CAUTION:

Always check coolant level, and check for coolant leakage before starting engine.

- Add the coolant while engine is running.
- Stop the engine when coolant level stabilizes.
- Add the coolant again to specified level ①.
- Install the radiator cap.
- Fill the reservoir tank ② with coolant up to "FULL" level ③.
- Install the reservoir tank cap.



Recommended coolant:

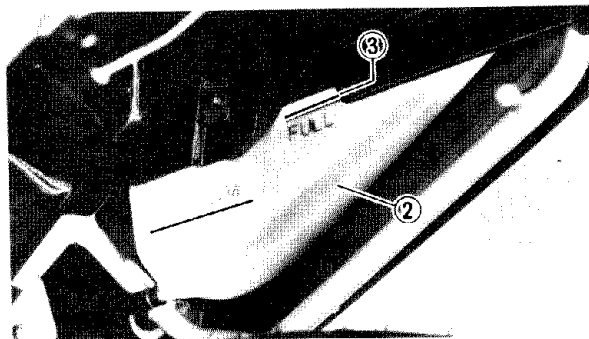
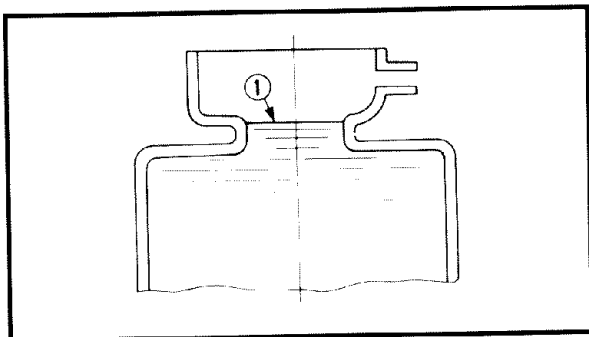
High quality ethylene glycol anti-freeze containing corrosion inhibitors for aluminum engines.

Coolant and water mixed ratio:
50%/50%

Total amount:
2.2 L (1.9 Imp qt, 2.3 US qt)

Reservoir tank capacity:
0.28 L (0.25 Imp qt, 0.30 US qt)

From "LOW" to "FULL" level:
0.18 L (0.16 Imp qt, 0.19 US qt)



Handling notes of coolant:

The coolant is harmful so it should be handled with special care.

⚠ WARNING

- When coolant splashes to your eye.
Thoroughly wash your eye with water and see your doctor.
- When coolant splashes to your clothes.
Quickly wash it away with water and then with soap.
- When coolant is swallowed.
Quickly make him vomit and take him to a doctor.

CAUTION:

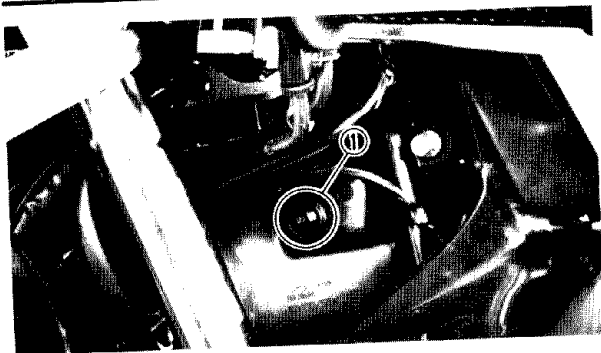
- Hard water or salt water is harmful to the engine parts; use boiled or distilled water if you can't get soft water.
- Do not use water containing impurities or oil.
- Take care so that coolant does not splash to painted surfaces. If splashes, wash it away with water.

9. Install:

- Top cover
- Seats (passenger and rider)
- Side cowlings (left and right)

Refer to "COWLINGS/COVERS REMOVAL AND INSTALLATION" section.

HEADLIGHT BEAM ADJUSTMENT



ELECTRICAL

HEADLIGHT BEAM ADJUSTMENT

1. Adjust:

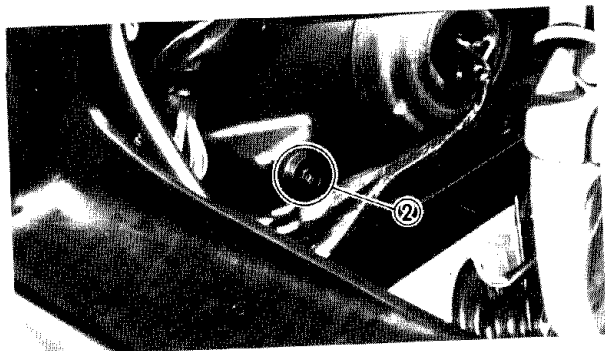
- Headlight beam (horizontally)

Horizontal adjustment	
Right	Turn adjusting screw ① clockwise
Left	Turn adjusting screw ① counter-clockwise

2. Adjust:

- Headlight beam (vertically)

Vertical adjustment	
Higher	Turn the adjusting screw ② counterclockwise
Lower	Turn the adjusting screw ② clockwise



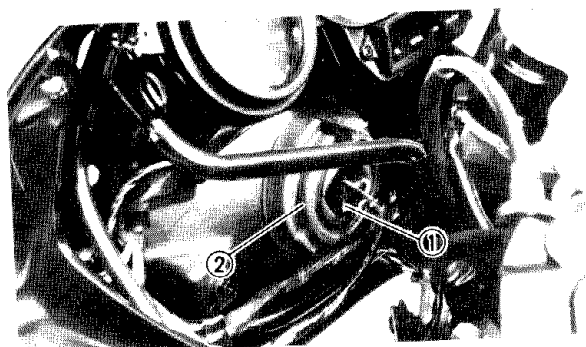
HEADLIGHT BULB REPLACEMENT

1. Disconnect:

- Headlight coupler ①

2. Remove:

- Headlight bulb cover ②

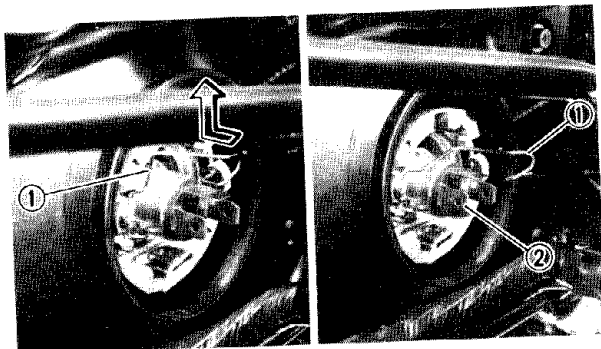


3. Unhook:

- Bulb holding spring ①

4. Remove:

- Bulb (defective) ②



⚠ WARNING

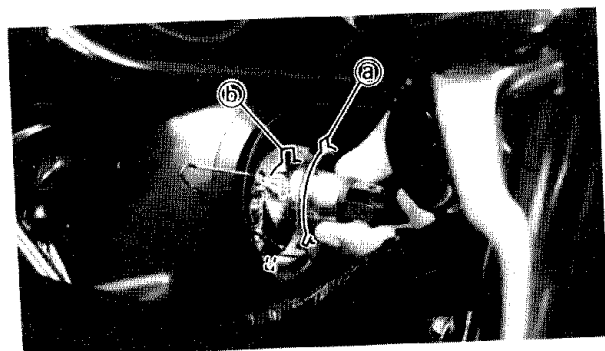
Keep flammable products or your hands away from the bulb while it is on, it will be hot. Do not touch the bulb until it cools down.

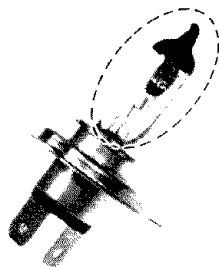
5. Install:

- Bulb (new)

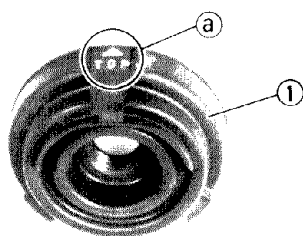
NOTE:

Make sure the projections ① on the bulb are meshed with the slot ② in the bulb case.



**CAUTION:**

Avoid touching the glass part of the bulb. Keep it free from oil; otherwise, the transparency of the glass, life of the bulb, and illuminous flux will be adversely affected. If oil gets on the bulb, thoroughly clean it with a cloth moistened with alcohol or lacquer thinner.



6. Hook:

- Bulb holding spring

7. Install:

- Headlight bulb cover ①

NOTE:

Install the bulb covers so that the "TOP" mark faces upward.

8. Connect:

- Headlight coupler



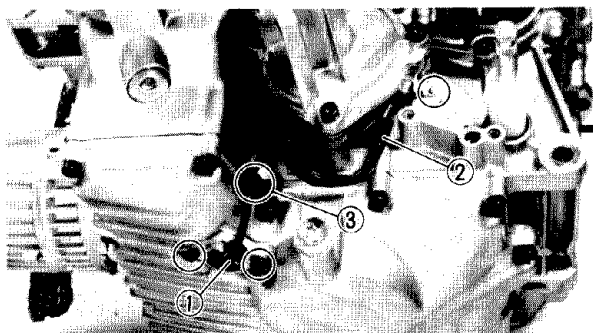
ENGINE OVERHAUL

ENGINE DISASSEMBLY OIL PAN AND OIL STRAINER

NOTE:

With the engine mounted, the oil pan and oil strainer can be maintained by removing the following parts.

- Side cowlings (left and right)
- Cowling stay
- Exhaust pipe assembly



1. Disconnect:

- Oil level switch lead ①
- Neutral switch lead ②

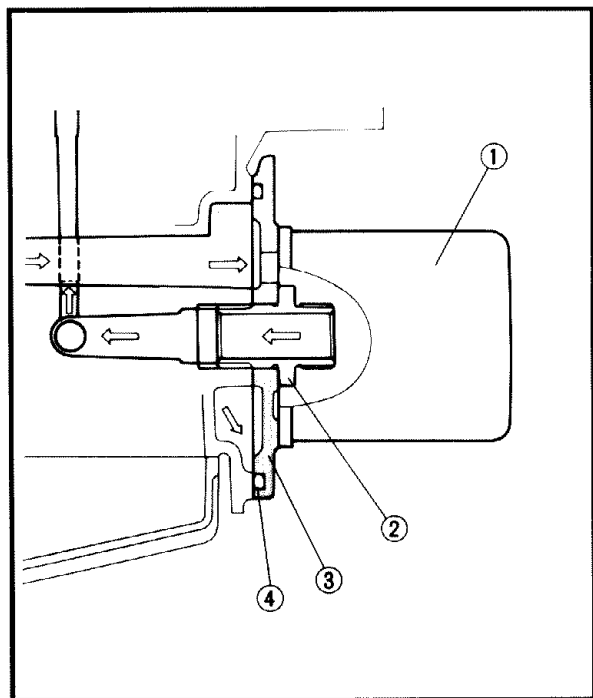
③ Clamp

2. Remove:

- Oil filter ①
- Use the oil filter wrench

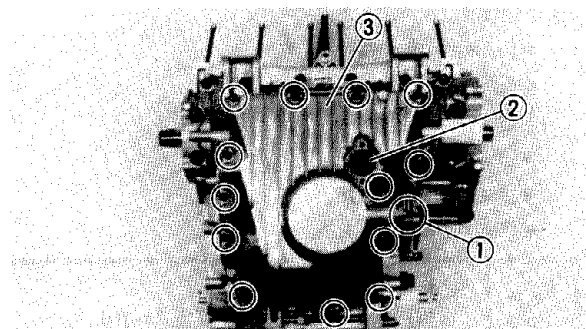


Oil filter wrench:
J-37140A
90890-04126



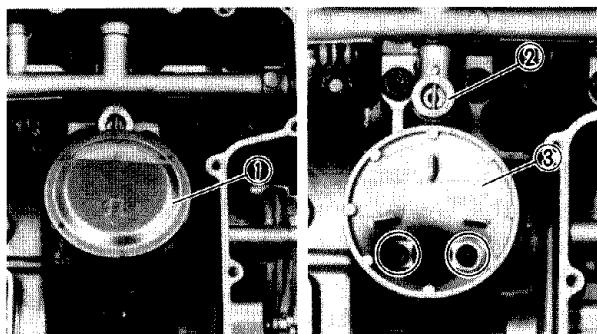
3. Remove:

- Bolt ②
- Adapter plate ③
- O-ring ④



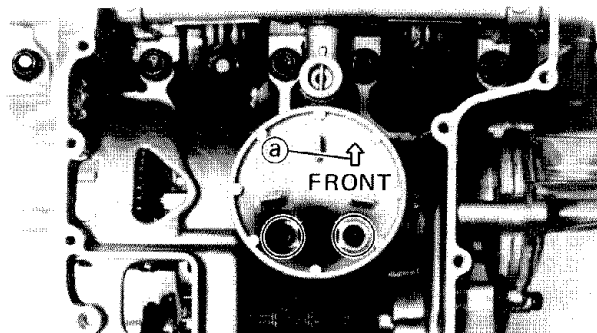
4. Remove:

- Drain plug ①
- Oil level switch ②
- Oil pan ③
- Gasket (oil pan)
- Dowel pins



5. Remove:

- Oil strainer cover ①
- Relief valve ②
- Oil strainer assembly ③



ENGINE ASSEMBLY AND ADJUSTMENT

OIL PAN AND OIL STRAINER

1. Install:

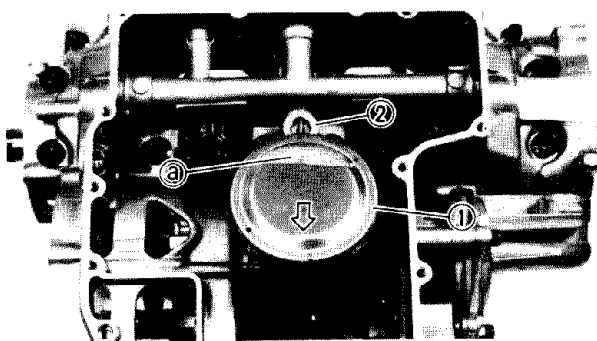
- Oil strainer assembly



Bolts (oil strainer assembly):
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:

Install the oil strainer assembly so that the arrow mark ③ face forward.

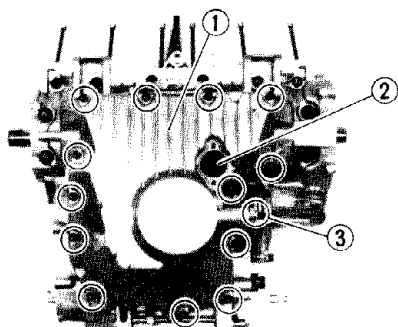


2. Install:

- Oil strainer cover ①
- Relief valve ②

NOTE:

The element (window) ③ must be installed vertically against housing arrow mark.

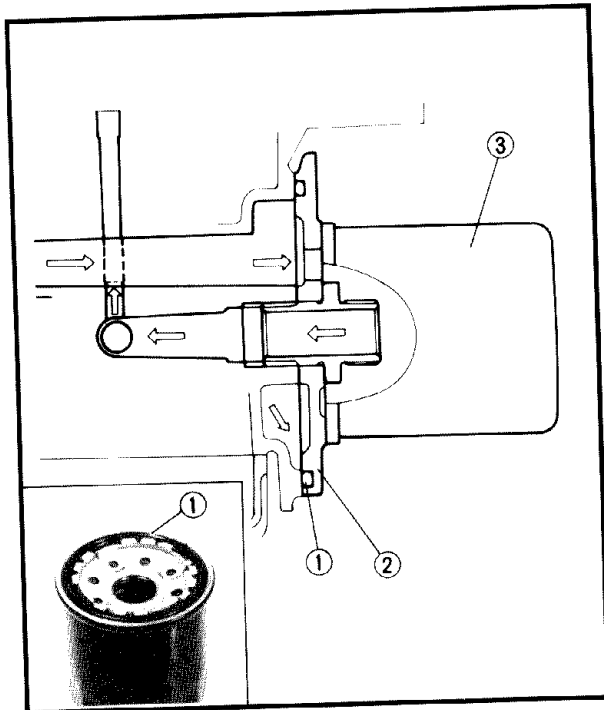


3. Install:

- Dowel pins
- Gasket (new)
- Oil pan ①
- Oil level switch ②
- Drain plug ③
- Clamp



Bolts (oil pan):
10 Nm (1.0 m·kg, 7.2 ft·lb)



4. Apply:

- Engine oil (lightly)
(to O-rings ① of adapter plate ② and new oil filter ③)

NOTE:

Make sure the O-rings ① is positioned properly.

5. Install:

- Adapter plate ②



Bolt (adapter plate):
50 Nm (5.0 m·kg, 36 ft·lb)

6. Install:

- Oil filter (new) ③

7. Tighten:

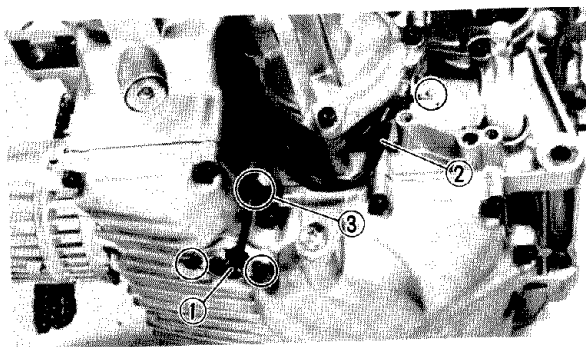
- Oil filter
Use the oil filter wrench



Oil filter wrench:
J-37140A
90890-04126



Oil filter:
17 Nm (1.7 m·kg, 12 ft·lb)



8. Connect:

- Oil level switch lead ①
- Neutral switch lead ②

③ Clamp

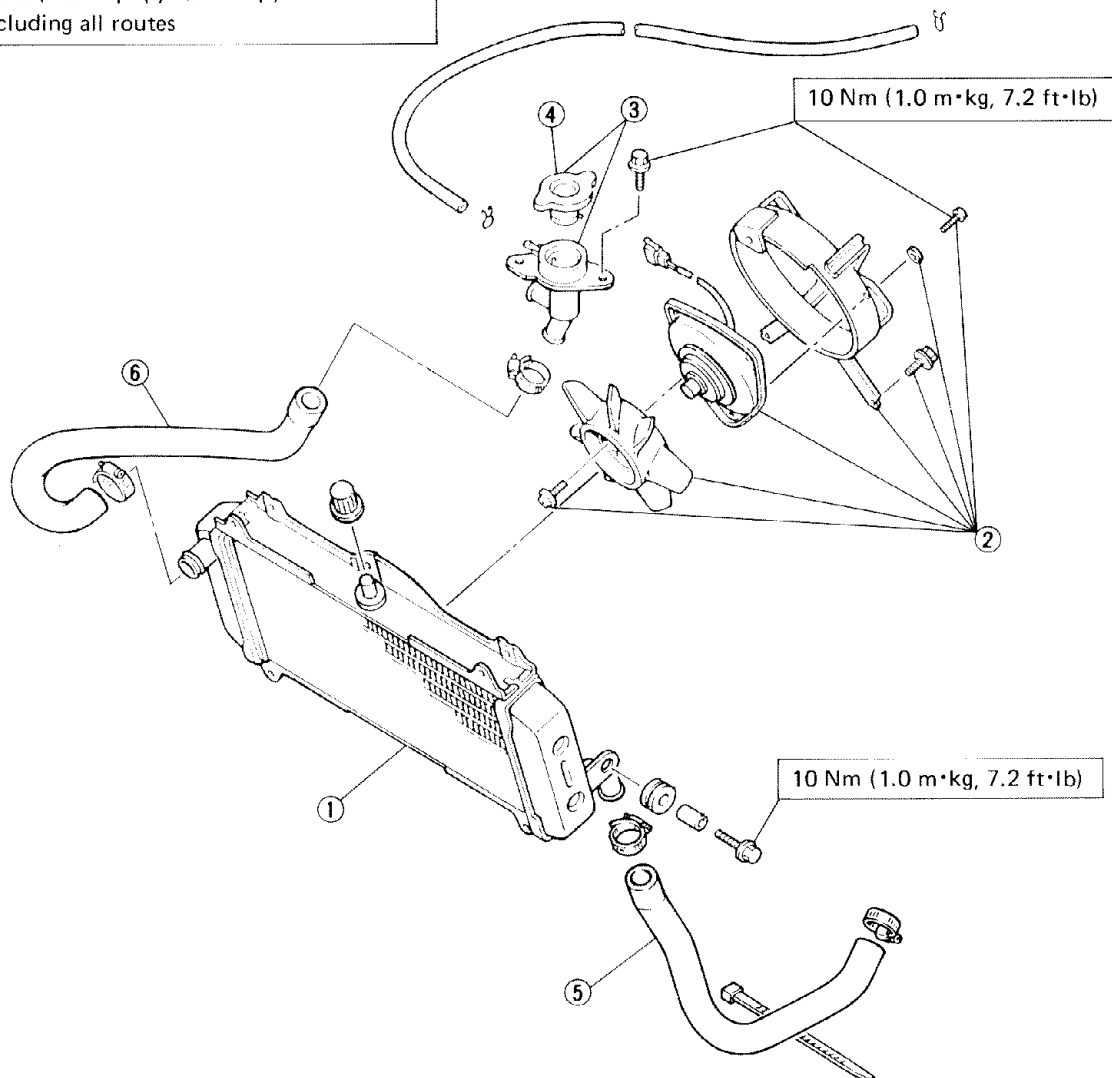


COOLING SYSTEM

RADIATOR

- ① Radiator assembly
- ② Fan motor assembly
- ③ Radiator cap assembly
- ④ Radiator cap
- ⑤ Outlet hose (radiator)
- ⑥ Inlet hose (radiator)

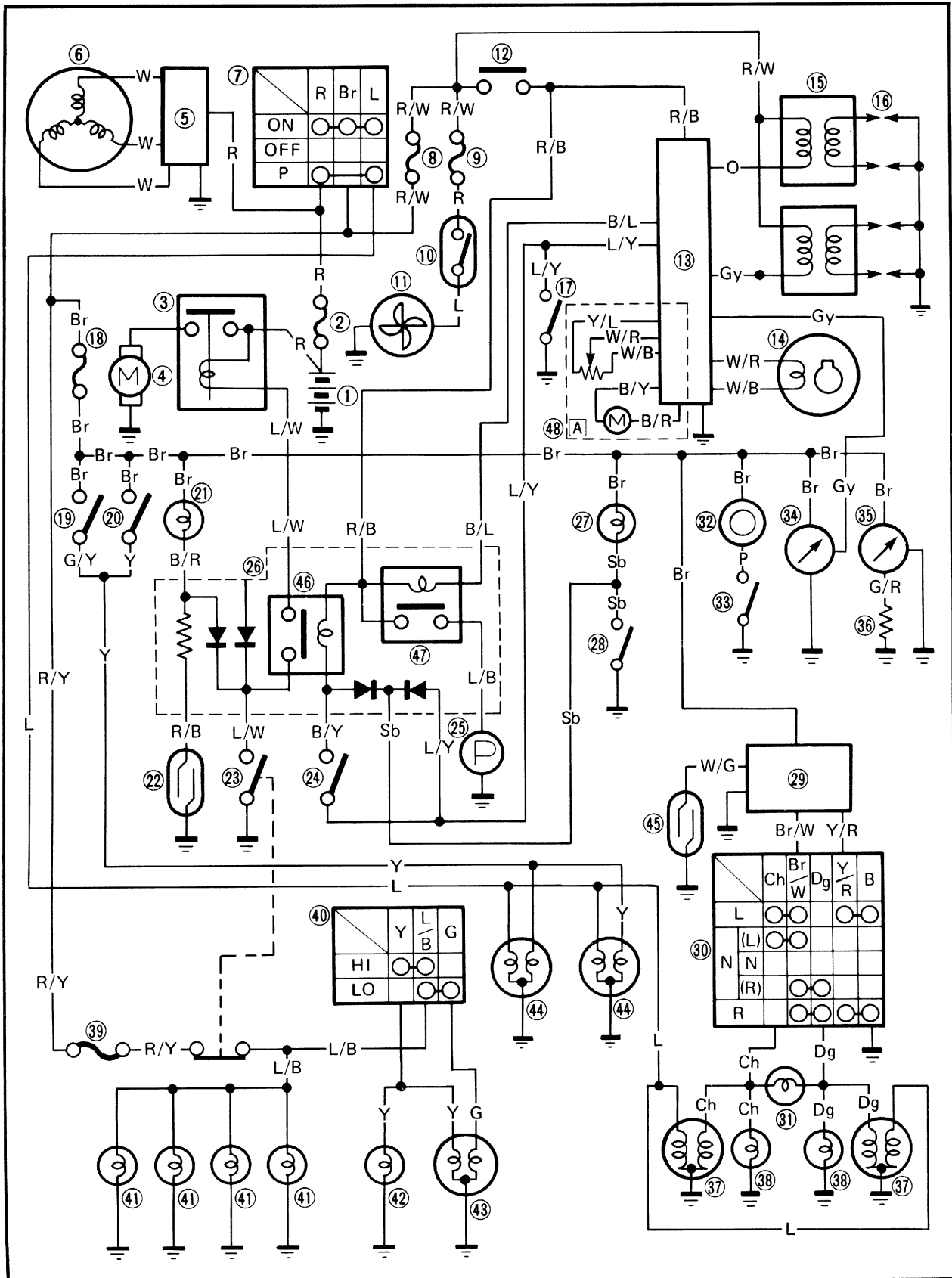
	RADIATOR CAP OPENING PRESSURE:
A	74 ~ 103 kPa (0.75 ~ 1.05 kg/cm ² , 10.7 ~ 14.9 psi)
B	COOLANT CAPACITY: 2.2 L (1.9 Imp qt, 2.3 US qt) Including all routes





ELECTRICAL

FZR600RB/FZR600RBC CIRCUIT DIAGRAM



FZR600RB/FZR600RBC CIRCUIT DIAGRAM

ELEC



- | | |
|-------------------------------|---|
| ① Battery | ②⑦ Neutral indicator light |
| ② Fuse (main) | ②⑧ Neutral switch |
| ③ Starter relay | ②⑨ Flasher relay |
| ④ Starter motor | ③⑩ "TURN" switch |
| ⑤ Rectifier/Regulator | ③⑪ "TURN" indicator light |
| ⑥ A.C. magneto generator | ③⑫ Horn |
| ⑦ Main switch | ③⑬ "HORN" switch |
| ⑧ Fuse (ignition) | ③⑭ Tachometer |
| ⑨ Fuse (fan) | ③⑮ Engine temperature gauge |
| ⑩ Thermo switch | ③⑯ Thermo unit |
| ⑪ Fan motor | ③⑰ Front position light/Front flasher light |
| ⑫ "ENGINE STOP" switch | ③⑱ Rear flasher light |
| ⑬ Ignitor unit | ③⑲ Fuse (head) |
| ⑭ Pickup coil | ④⑰ "LIGHTS" (dimmer) switch |
| ⑮ Ignition coil | ④⑱ Meter light |
| ⑯ Spark plug | ④⑲ "HIGH BEAM" indicator light |
| ⑰ Side stand switch | ④⑳ Headlight |
| ⑱ Fuse (signal) | ④㉑ Tail/brake light |
| ⑲ Front brake switch | ④㉒ Reed switch |
| ⑳ Rear brake switch | ④㉓ Starting circuit cut-off relay |
| ㉑ "OIL LEVEL" indicator light | ④㉔ Fuel pump relay |
| ㉒ Oil level switch | ④㉕ "EXUP" servo motor |
| ㉓ "START" switch | |
| ㉔ Clutch switch | |
| ㉕ Fuel pump | |
| ㉖ Relay assembly | |

A For California only

COLOR CODE

B	Black	Dg	Dark green	L/W	Blue/White
R	Red	W	White	G/R	Green/Red
L	Blue	B/R	Black/Red	G/Y	Green/Yellow
G	Green	B/L	Black/Blue	Y/R	Yellow/Red
O	Orange	B/Y	Black/Yellow	Y/L	Yellow/Blue
Y	Yellow	R/Y	Red/Yellow	Br/W	Brown/White
P	Pink	R/B	Red/Black	W/G	White/Green
Br	Brown	R/W	Red/White	W/R	White/Red
Ch	Chocolate	L/B	Blue/Black	W/B	White/Black
Gy	Gray	L/R	Blue/Red		
Sb	Sky blue	L/Y	Blue/Yellow		

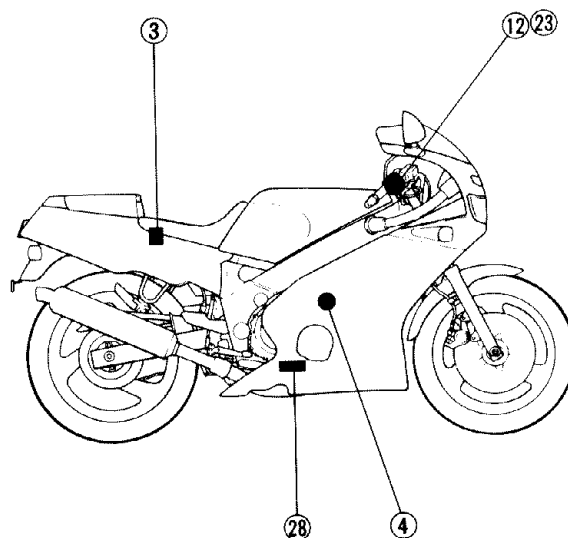
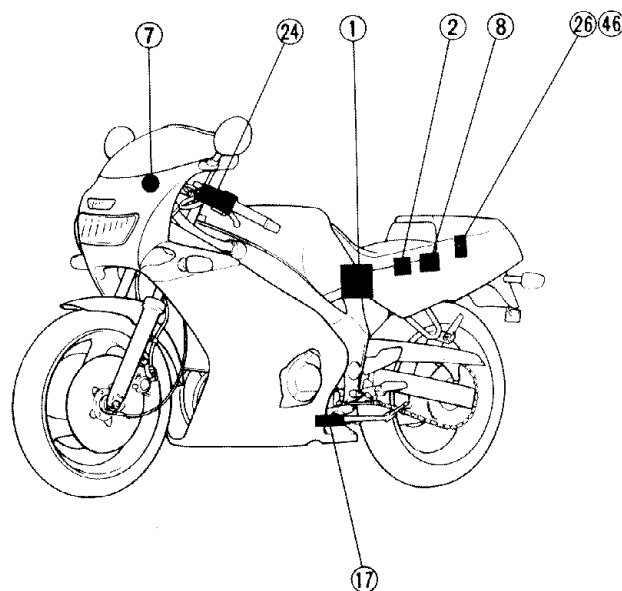


Aformentioned circuit diagram shows electrical starting circuit in circuit diagram.

NOTE:

For the color codes, see page 41.

- ① Battery
- ② Fuse (main)
- ③ Starter relay
- ④ Starter motor
- ⑦ Main switch
- ⑧ Fuse (ignition)
- ⑫ "ENGINE STOP" switch
- ⑰ Sidestand switch
- ⑳ "START" switch
- ㉔ Clutch switch
- ㉖ Relay assembly
- ㉘ Neutral switch
- ㉚ Ignition circuit cut-off relay





TROUBLESHOOTING

STARTER MOTOR DOES NOT OPERATE.

Procedure

Check;

- | | |
|-----------------------------------|-----------------------------------|
| 1. Fuse (main) | 8. Neutral switch |
| 2. Battery | 9. Sidestand switch |
| 3. Starter motor | 10. Clutch switch |
| 4. Starter relay | 11. "START" switch |
| 5. Starting circuit cut-off relay | 12. Wiring connection |
| 6. Main switch | (Entire electric starting system) |
| 7. "ENGINE STOP" switch | |

NOTE:

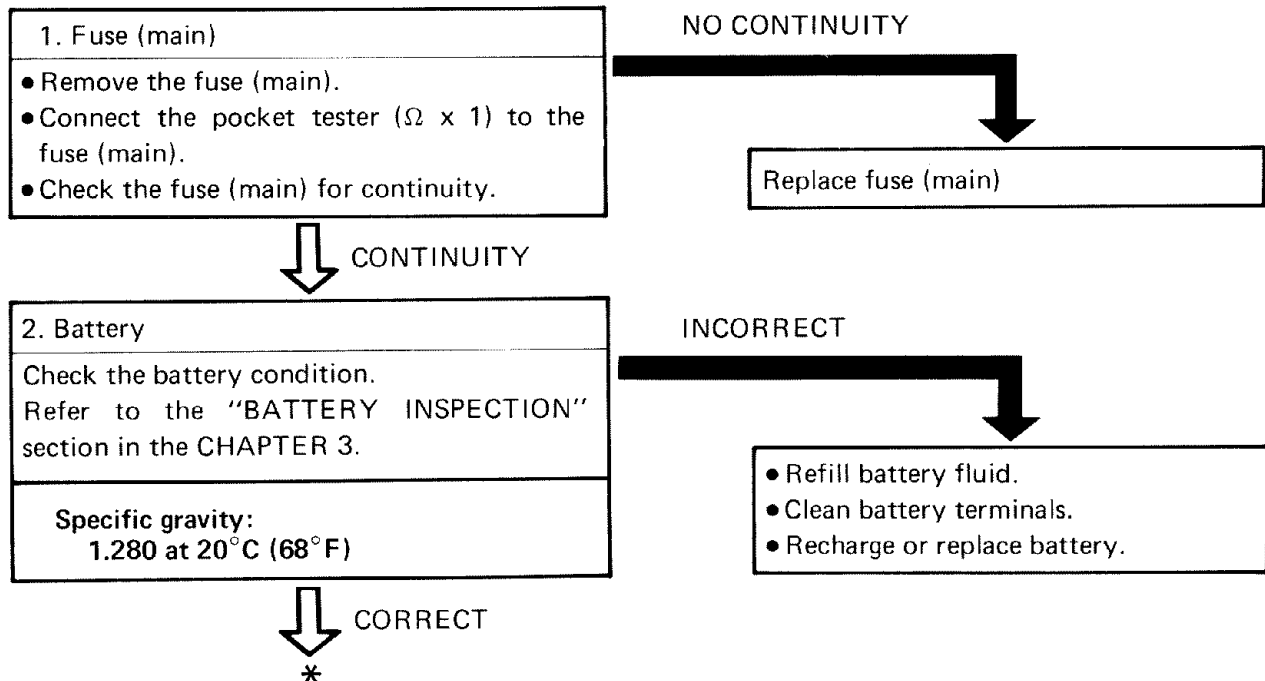
Remove the following before troubleshooting.

- | | |
|--------------------------|--------------------|
| 1) Seat (front and rear) | 4) Top cover |
| 2) Side covers | 5) Air filter case |
| 3) Side cowlings | |

• Use the following special tool in this troubleshooting.



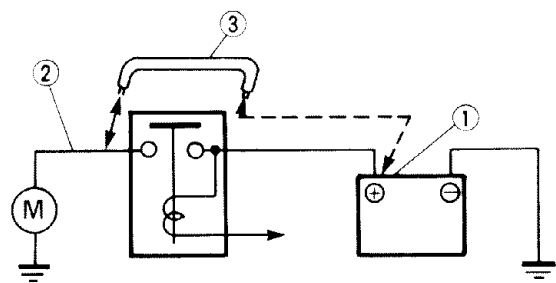
Pocket tester:
P/N. YU-03112
90890-03112





3. Starter motor

- Connect the battery positive terminal ① and starter motor cable ② using a jumper lead ③ * as shown.



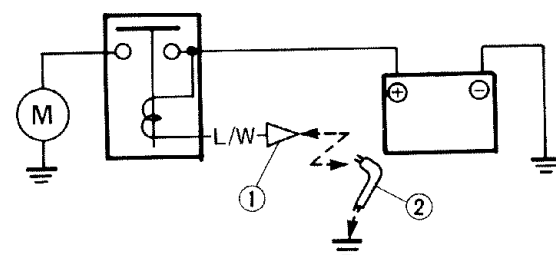
- Check the starter motor operation.



OPERATIVE

4. Starter relay

- Disconnect the starter relay lead.
- Ground the starter relay lead ① to the frame using the jumper lead ② as shown.



- Check the starter motor operation.



OPERATIVE

5. Starting circuit cut-off relay (relay assembly)

- Disconnect the relay assembly coupler from the wireharness.
- Connect the pocket tester ($\Omega \times 1$) and battery (12V) voltage to the relay assembly coupler terminals.

*

! WARNING

A wire for the jumper lead must have the equivalent capacity as that of the battery lead or more, otherwise it may cause the jumper lead to be burned.

This check is likely to produce sparks, so be sure that no flammable gas or fluid is in the vicinity.

NO OPERATIVE



Repair or replace starter motor.

NO OPERATIVE



Replace starter relay.

**Step 1.**

Battery (+) terminal → Red/Black ① terminal.

Battery (-) terminal → Black/Yellow ② terminal.

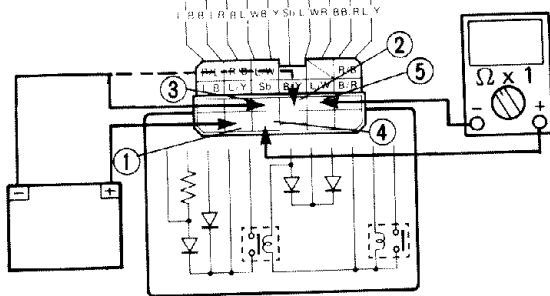
Step 2.

Battery (+) terminal → Red/Black ① terminal.

Battery (-) terminal → Skyblue ③ terminal.

Tester (+) lead → Blue/White ④ terminal

Tester (-) lead → Blue/White ⑤ terminal



- Check the starting circuit cut-off relay for continuity.

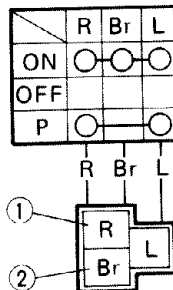
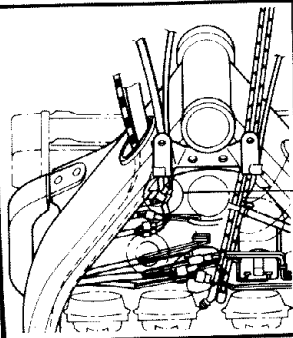
NO CONTINUITY

Replace relay assembly.

CONTINUITY

6. Main switch

- Disconnect the main switch coupler and lead from the wire harness.
- Check the switch component for the continuity between "Red ① and Brown ②". Refer to the "CHECKING OF SWITCHES" section.



INCORRECT

Replace main switch.

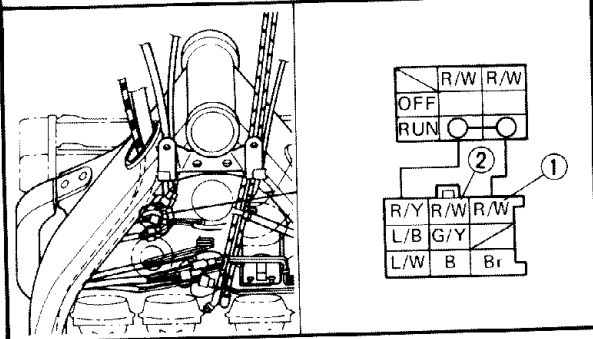
CORRECT

*



7. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler from the wire harness.
- Check the switch component for the continuity between "Red/White ① and Red/White ② ". Refer to the "CHECKING OF SWITCHES" section.



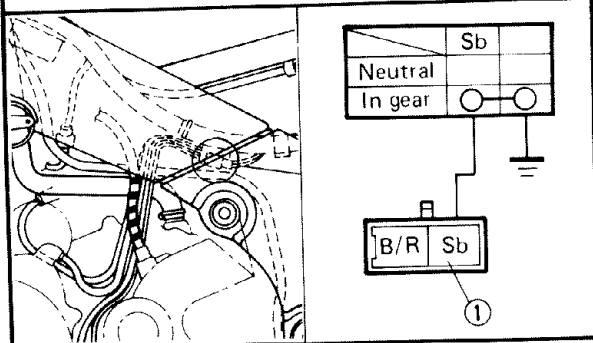
INCORRECT

Replace handlebar switch (right).



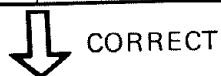
8. Neutral switch

- Disconnect the neutral switch coupler from the wire harness.
- Check the switch component for the continuity between "Sky blue ① and Ground". Refer to the "CHECKING OF SWITCHES" section.



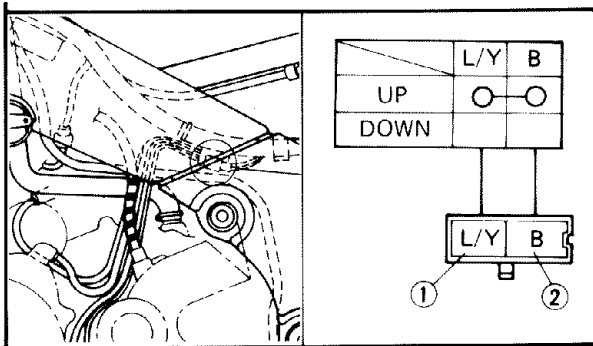
INCORRECT

Replace neutral switch.



9. Sidestand switch

- Disconnect the sidestand switch coupler from the wire harness.
- Check the switch component for the continuity between "Blue/Yellow ① and Black ② ". Refer to the "CHECKING OF SWITCHES" section.



INCORRECT

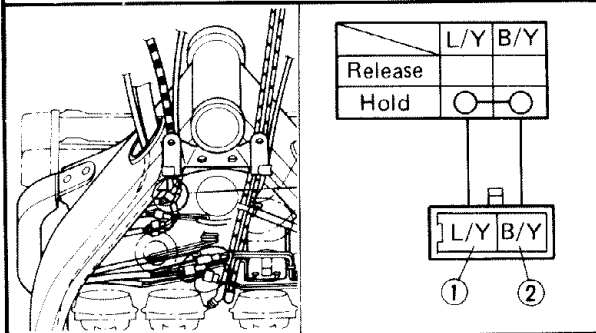
Replace sidestand switch.



CORRECT

10. Clutch switch

- Disconnect the clutch switch coupler from wire harness.
- Check the switch component for the continuity between "Blue/Yellow ① and Black/Yellow ② ". Refer to the "CHECKING OF SWITCHES" section.



INCORRECT

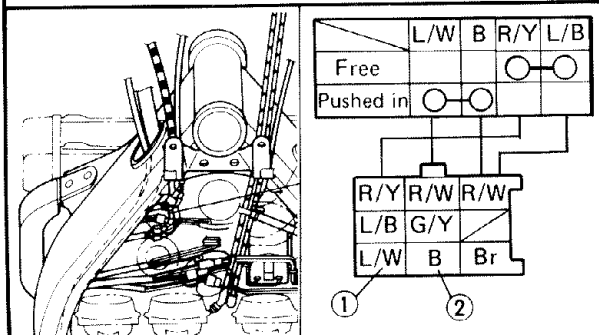
Replace clutch switch.



CORRECT

11. "START" switch

- Disconnect handlebar switch (right) coupler from wire harness.
- Check the "START" switch component for the continuity between "Blue/White ① and Black ② ". Refer to the "CHECKING OF SWITCHES" section.



INCORRECT

Replace handlebar switch (right).



CORRECT

*

**12. Wiring connection**

Check the entire ignition system for connections.
Refer to the "WIRING DIAGRAM" section.

POOR CONNECTION

Correct.