YAMAHA

FZR600RB
FZR600RBC

SUPPLEMENTARY SERVICE MANUAL

LIT-11616-07-60

3HH-28197-13

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 cleaer.

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

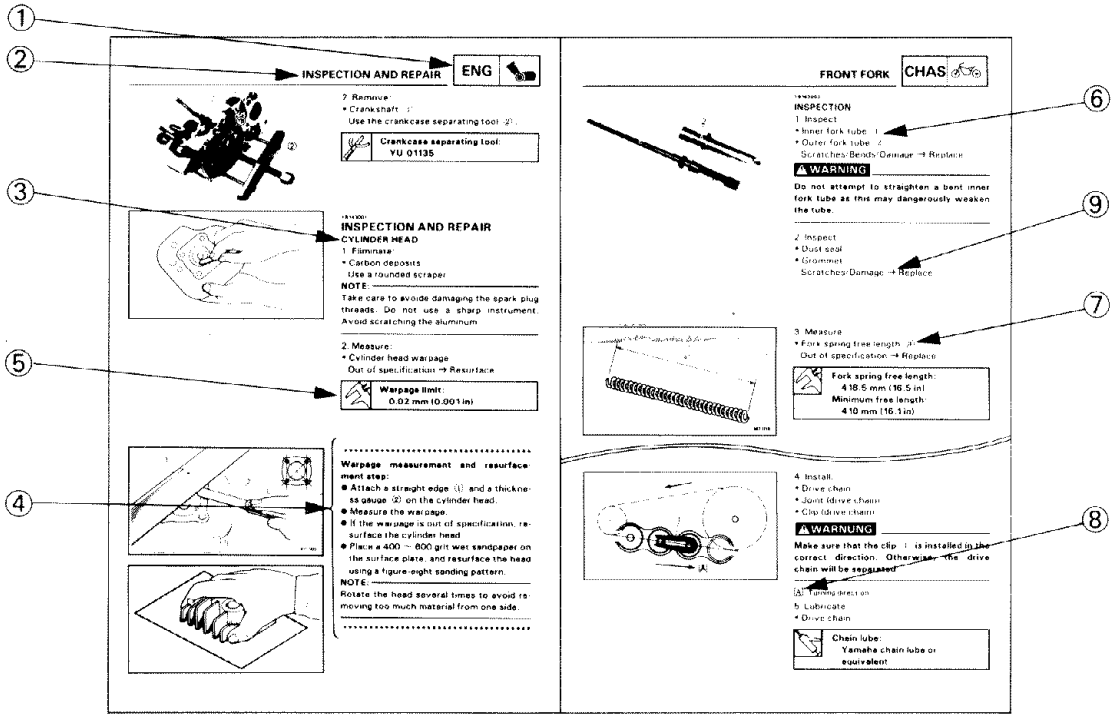
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspections.
A set of particularly important procedure ④ is placed between a line of asterisks "*" with each procedure preceded by " ● ".

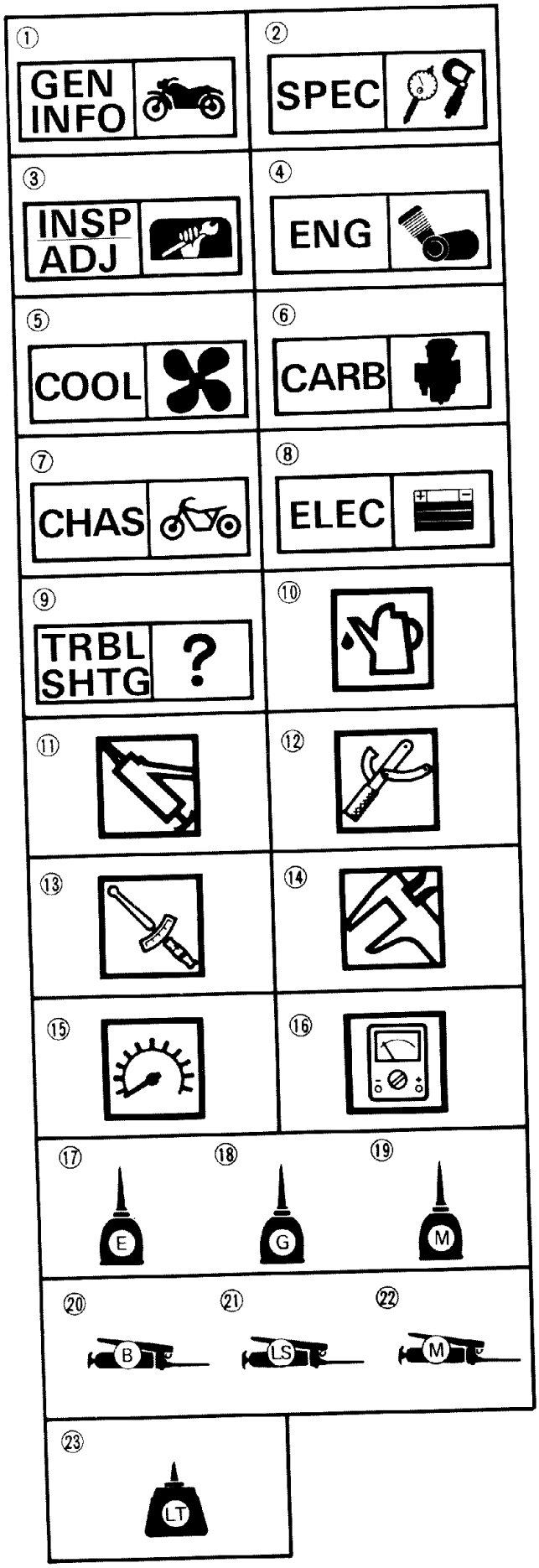
IMPORTANT FEATURES

- 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
⑳ Apply wheel bearing grease
㉑ Apply lightweight lithium-soap base grease
㉒ Apply molybdenum disulfide grease
㉓ Apply locking agent (LOCTITE®)

CONTENTS

GENERAL INFORMATION 1
MOTORCYCLE IDENTIFICATION NUMBER 1
VEHICLE IDENTIFICATION NUMBER 1
ENGINE SERIAL NUMBER 1
SPECIAL TOOLS 2
FOR ENGINE SERVICE 2

SPECIFICATIONS 3
GENERAL SPECIFICATIONS 3
MAINTENANCE SPECIFICATIONS 4
ENGINE 4
CHASSIS 9
ELECTRICAL 11
LUBRICATION DIAGRAM 12
COOLANT DIAGRAM 15
CABLE ROUTING 17

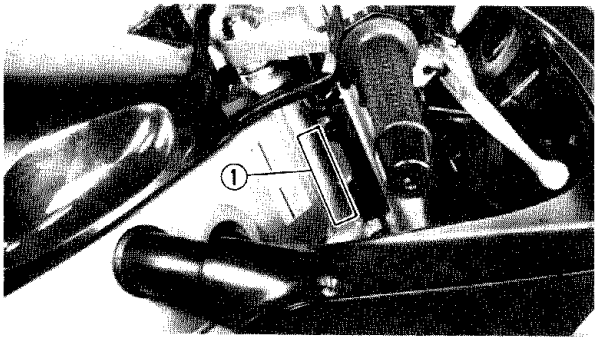
PERIODIC INSPECTION AND ADJUSTMENT 25
COWLINGS/COVERS REMOVAL AND INSTALLATION 25
REMOVAL 25
ENGINE 27
ENGINE OIL REPLACEMENT 27
ENGINE OIL FILTER REPLACEMENT 28
COOLANT REPLACEMENT 30
ELECTRICAL 33
HEADLIGHT BEAM ADJUSTMENT 33
HEADLIGHT BULB REPLACEMENT 33

ENGINE OVERHAUL 35
ENGINE DISASSEMBLY 35
OIL PAN AND OIL STRAINER 35
ENGINE ASSEMBLY AND ADJUSTMENT 36
OIL PAN AND OIL STRAINER 36

COOLING SYSTEM 38
RADIATOR 38
THERMOSTATIC VALVE AND WARTER PUMP 39

ELECTRICAL 40
CIRCUIT DIAGRAM 40
ELECTRICAL STARTING SYSTEM 42
CIRCUIT DIAGRAM 42
TROUBLESHOOTING 44
FUEL PUMP SYSTEM 50
CIRCUIT DIAGRAM 50
FUEL PUMP CIRCUIT OPERATION 52
TROUBLESHOOTING 53
EXUP SYSTEM (FOR CALIFORNIA ONLY) 58
CIRCUIT DIAGRAM 58
TROUBLESHOOTING 60
FZR600RB/FZR600RBC WIRING DIAGRAM

GENERAL INFORMATION



MOTORCYCLE IDENTIFICATION

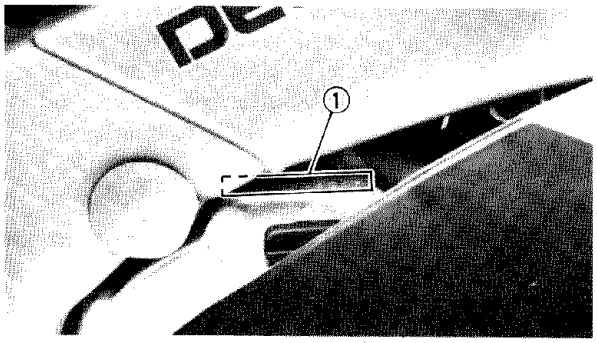
VEHICLE IDENTIFICATION NUMBER

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:

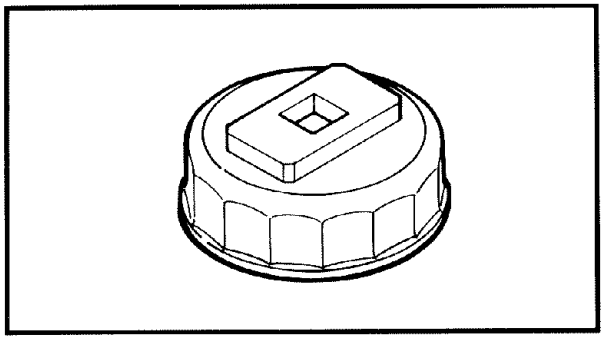
- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.

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 orimprovised techniques. The shape and part number used for the special tool differ by country, so two types are prouided. Refer to the list prouided to avoid errors when placing an order.

P/N. YM-□□□□□ , YU-□□□□□
YS- □□□□□ , YK-□□□□□
ACC-□□□□□ — For US, CDN

P/N. 90890-□□□□□ — Except 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

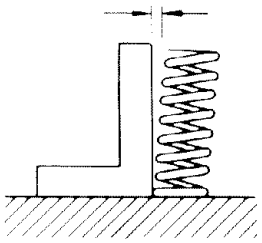
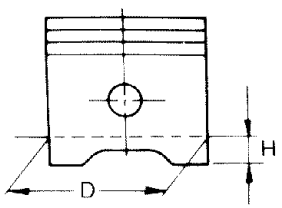
GENERAL SPECIFICATIONS

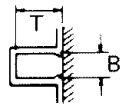
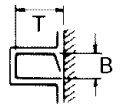
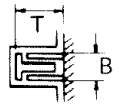
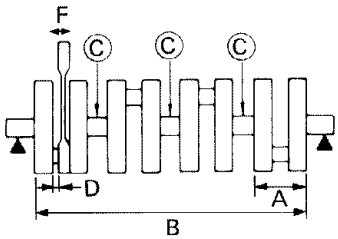
Model	FZR600RB/RBC	
	FZR600RB	FZR600RBC
Model Code Number	3HH6	3UU2
Vehicle Identification Number	JYA3HHE0 * MA032101	JYA3UUC0 * MA003101
Engine Starting Number	3HH-032101	3UU-003101
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	 2,095 mm (82.5 in) 700 mm (27.6 in) 1,155 mm (45.5 in) 785 mm (30.9 in) 1,425 mm (56.1 in) 135 mm (5.3 in)	
Basic Weicht: With Oil and Full Fuel Tank	201 kg (443 lb), 206 kg (454 lb) (FZR600RBC)	
Transmission: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio 1st 2nd 3rd 4th 5th 6th	 Spur gear 82/48 (1.708) Chain drive 45/15 (3.000) Constant-mesh, 6-speed Left foot operation 37/13 (2.846) 37/19 (1.947) 31/20 (1.550) 28/21 (1.333) 31/26 (1.192) 30/27 (1.111)	
Tire:	Front	Rear
Type Size Manufacture (Type)	Tubeless 110/70 VR17-V240 110/70 ZR17 (FZR600RBC) Michelin (A59) Pirelli (MP7) Dunlop (SPORT MAX) Bridgestone (CYROX-17)	Tubeless 140/60 VR18-V240 140/60 ZR18 (FZR600RBC) Michelin (M59) Pirelli (MP7) Dunlop (SPORT MAX) Bridgestone (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/cm², 33 psi)	250 kPa (2.5 kg/cm², 36 psi)
90 kg (198 lb) ~ Maximum load*	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
High speed riding	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
*Load is total weight of cargo, rider, passenger, and accessories.		

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

MAINTENANCE SPECIFICATIONS

ENGINE

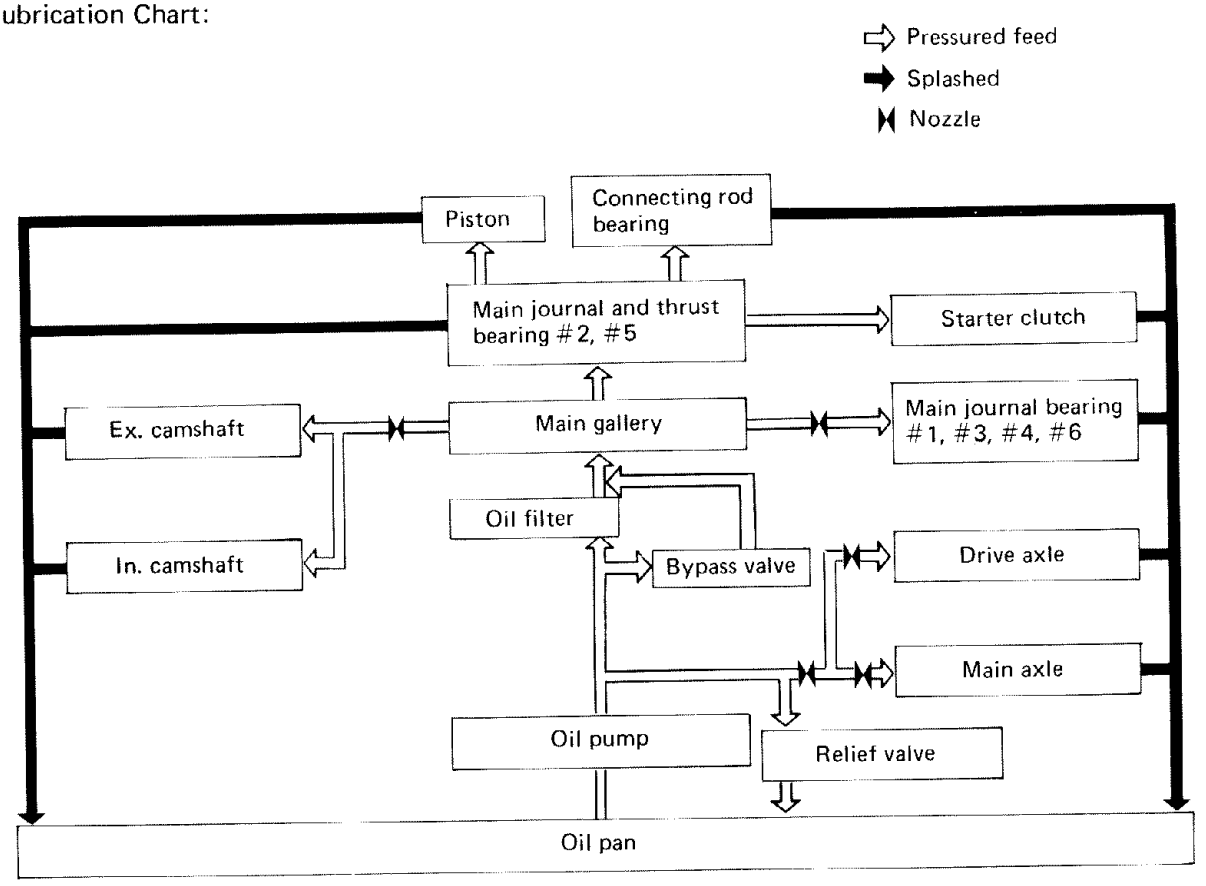
Model		FZR600RB/RBC
Valve Spring:		
Free Length	IN.	43.15 mm (1.70 in)
	EX.	43.15 mm (1.70 in)
< Limit >	IN.	41.2 mm (1.62 in)
	EX.	41.2 mm (1.62 in)
Installed Length (Valve Closed)	IN.	37.5 mm (1.48 in)
	EX.	37.5 mm (1.48 in)
Compressed Pressure	IN.	11.6 ~ 13.4 kg (25.9 ~ 29.6 lb)
(Valve closed)	EX.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

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	0.15 ~ 0.30 mm (0.0059 ~ 0.0118 in)
		< Limit >	0.6 mm (0.0236 in)
		2nd Ring	0.15 ~ 0.30 mm (0.0059 ~ 0.0118 in)
		< Limit >	0.6 mm (0.0236 in)
		Oil Ring	0.2 ~ 0.6 mm (0.0079 ~ 0.0236 in)
Side Clearance:		Top Ring	0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in)
		< Limit >	0.10 mm (0.004 in)
		2nd Ring	0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in)
		< Limit >	0.10 mm (0.004 in)
		Oil Ring	—
Connecting Rod: Connecting Rod Oil Clearance		< Limit >	0.043 ~ 0.066 mm (0.0017 ~ 0.0026 in) 0.08 mm (0.0031 in)
Bearing Size No. Color Code			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 x4	←
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:			
Type		Electrical Type	
Model/Manufacturer		3EN/MITSUBISHI	
Consumption Amperage < Max. >		0.8A	
Output Pressure		7 kPa (0.07 kg/cm², 0.995 psi)	
Lubrication System:			
Oil Filter Type		Paper	
Oil Pump Type		Trochoid pump	
Tip Clearance		0.03 ~ 0.09 mm (0.0012 ~ 0.0035 in)	
< Limit >		< 0.15 mm (0.006 in) >	
Side Clearance		0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in)	
< Limit >		< 0.15 mm (0.006 in) >	
Oil Pressure (Hot)		80 kPa (0.8 kg/cm², 11.4 psi)/1.200 r/min	
Pressure Check Location		Main Gallery	
Bypass Valve Setting Pressure		80 ~ 120 kPa (0.8 ~ 1.2 kg/cm², 11.38 ~ 17.06 psi)	
Relief Valve Operating Pressure		450 ~ 550 kPa (4.5 ~ 5.5 kg/cm², 63.99 ~ 78.21 psi)	

Model	FZR600RB/RBC

Lubrication Chart:



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	E
Stud Bolt (Cylinder head)	—	M6	8	10	1.0	7.2	E
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	LT
Blind Plug (Water)	Screw	M6	2	7	0.7	5.1	
Connecting Rod	Nut	M7	8	23	2.3	17	M
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	LT
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	LT
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	E
Stud Bolt (Crankcase)	—	M8	12	13	1.3	9.4	E
Crankcase	Bolt	M6	21	12	1.2	8.7	E
	Bolt	M8	1	24	2.4	17	E
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	LT
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	LT
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	LT
Push Rod	Nut	M8	1	16	1.6	11	
Drive Sprocket	Nut	M18	1	70	7.0	51	Use lock washer
Stopper Plate	Bolt	M6	1	10	1.0	7.2	LT
Stopper Lever	Bolt	M6	1	10	1.0	7.2	LT

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/cm², 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:

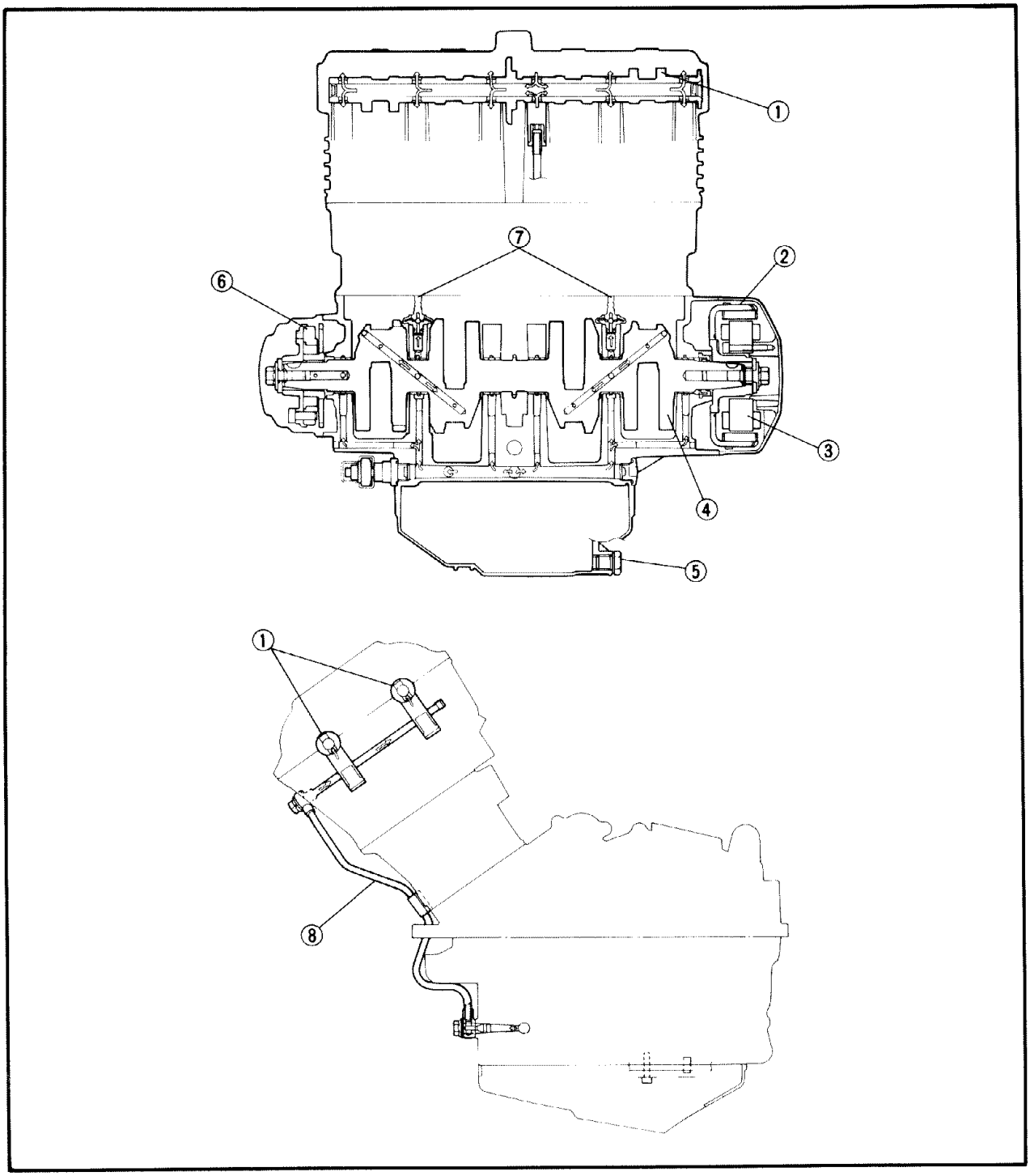
1. First, tighten the ring nut (lower) approximately 52 Nm (5.2 m · kg, 37 ft · lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut (lower) approximately 3 Nm (0.3 m · kg, 2.2 ft · lb).
3. Install the ring nut (upper). And finger tighten the ring nut (upper), 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

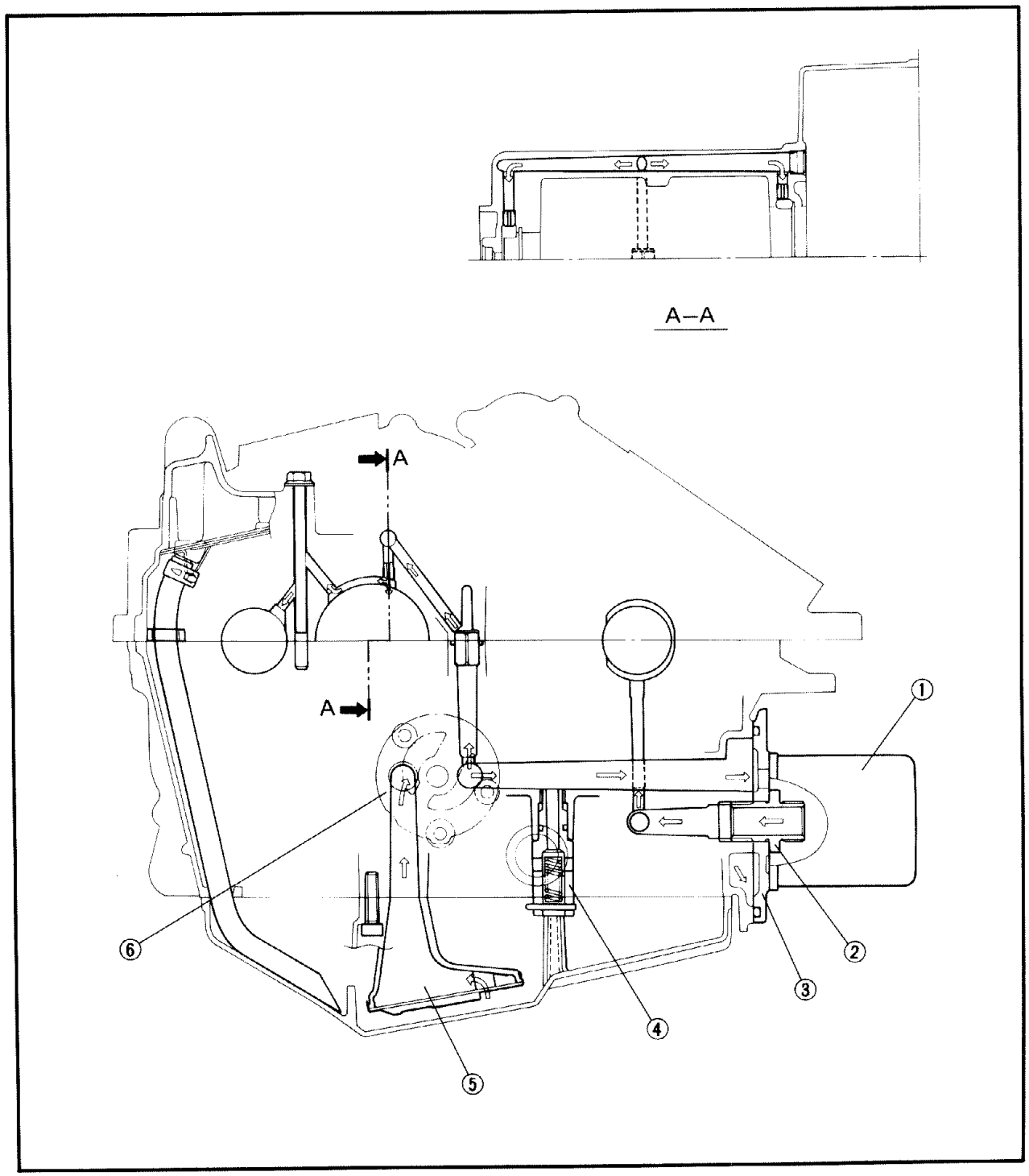
Model	FZR600RB/RBC
Voltage:	12V
Ignition System:	
Ignition Timing (B.T.D.C.)	5° at 1,200 r/min, 5° at 1,300 r/min (FZR600RBC)
Advancer Type	Electrical
T.C.I.:	
Pickup Coil Resistance	80 ~ 120Ω at 20°C (68°F)
(Color)	(White/Red – White/Black)
T.C.I. Unit/Manufacturer	BB7233/HITACHI TID14-73/HITACHI (FZR600RBC)
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

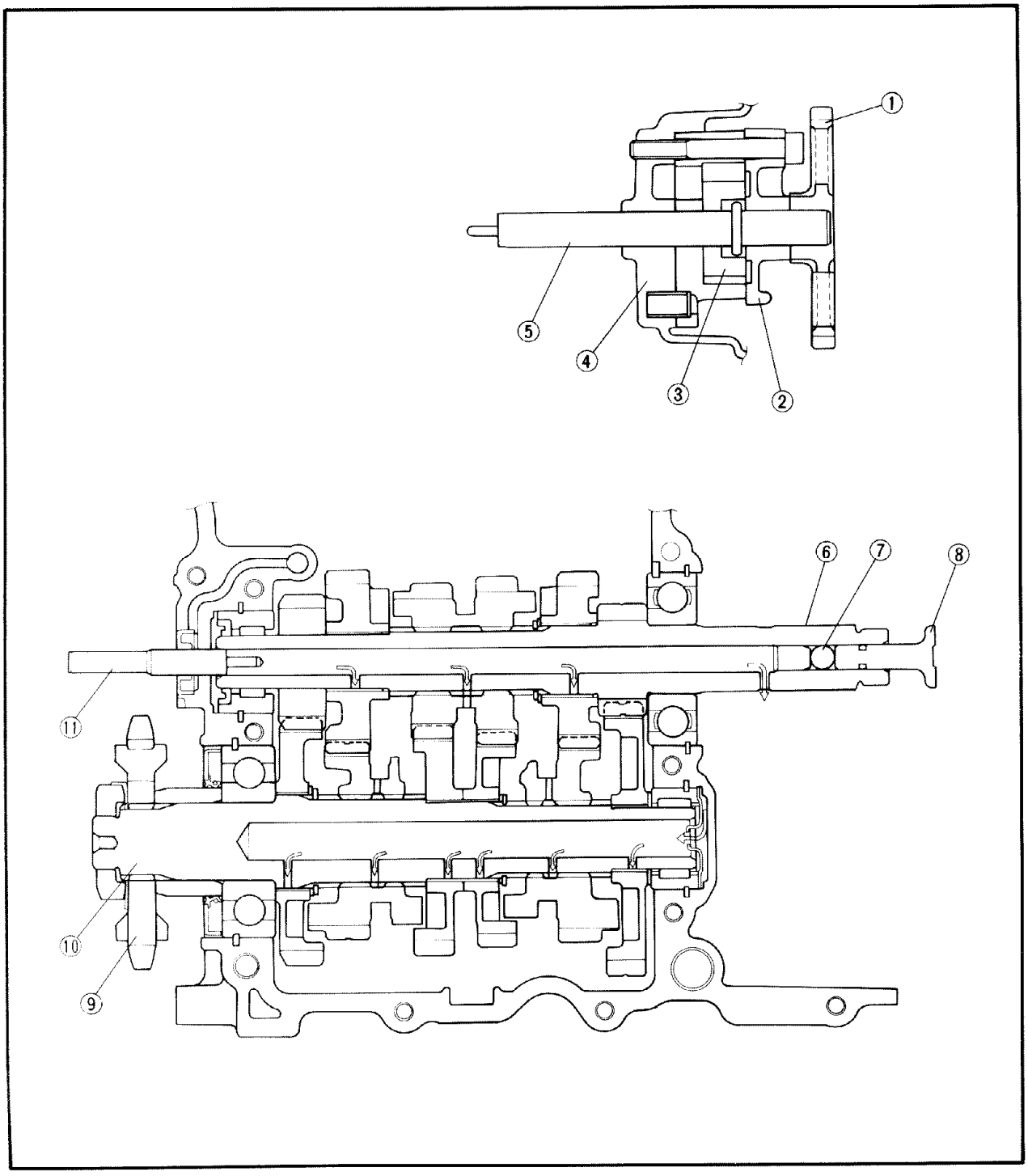
① Camshaft
② Rotor
③ Stator coil
④ Crankshaft
⑤ Drain plug
⑥ Starter clutch
⑦ Oil jet nozzle
⑧ Oil delivery pipe



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

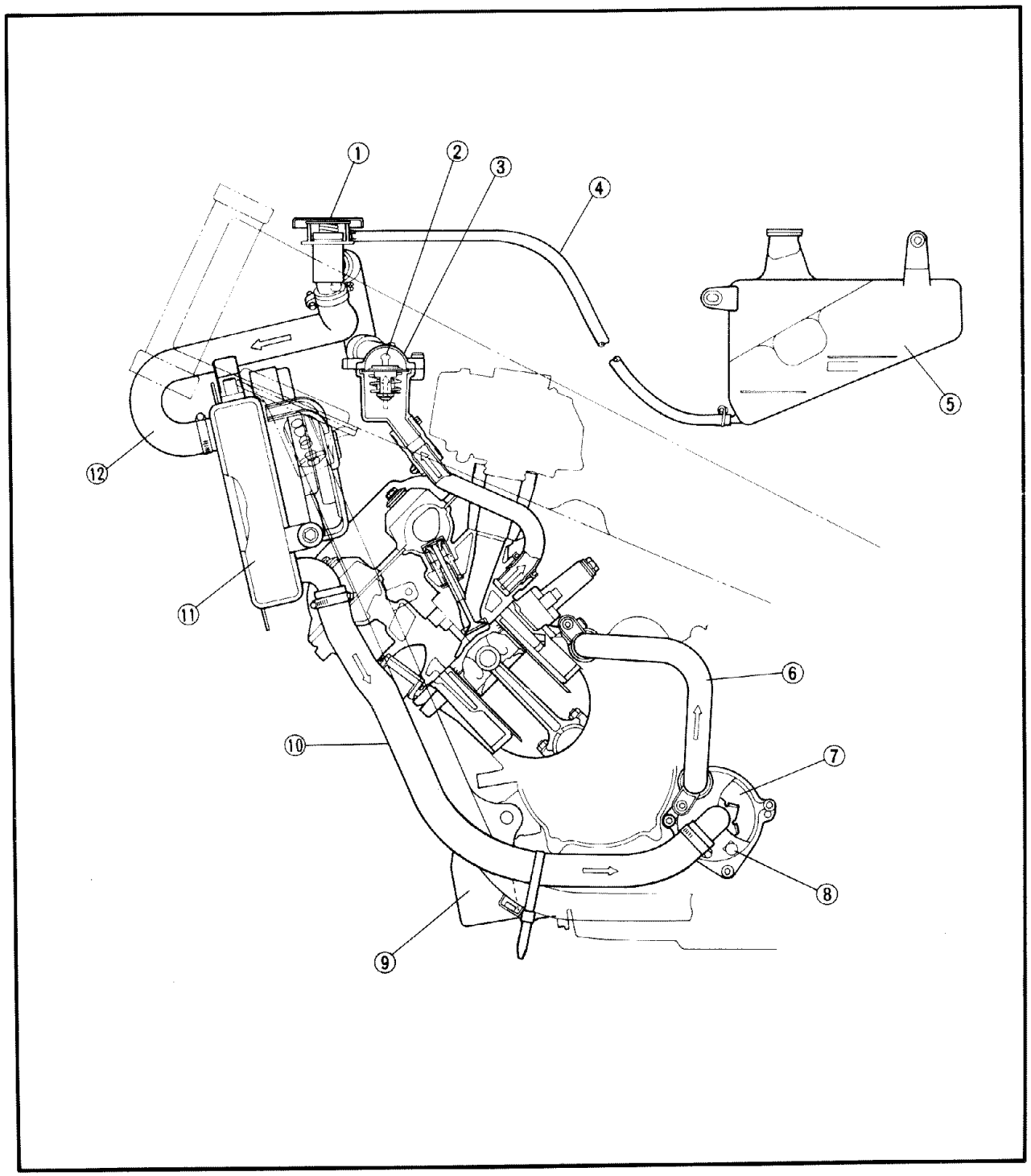


① Oil pump driven gear
② Oil pump cover
③ Inner rotor
④ Oil pump housing
⑤ Pump shaft
⑥ Main axle
⑦ Ball
⑧ Push rod #1
⑨ Drive sprocket
⑩ Drive axle
⑪ Push rod #2

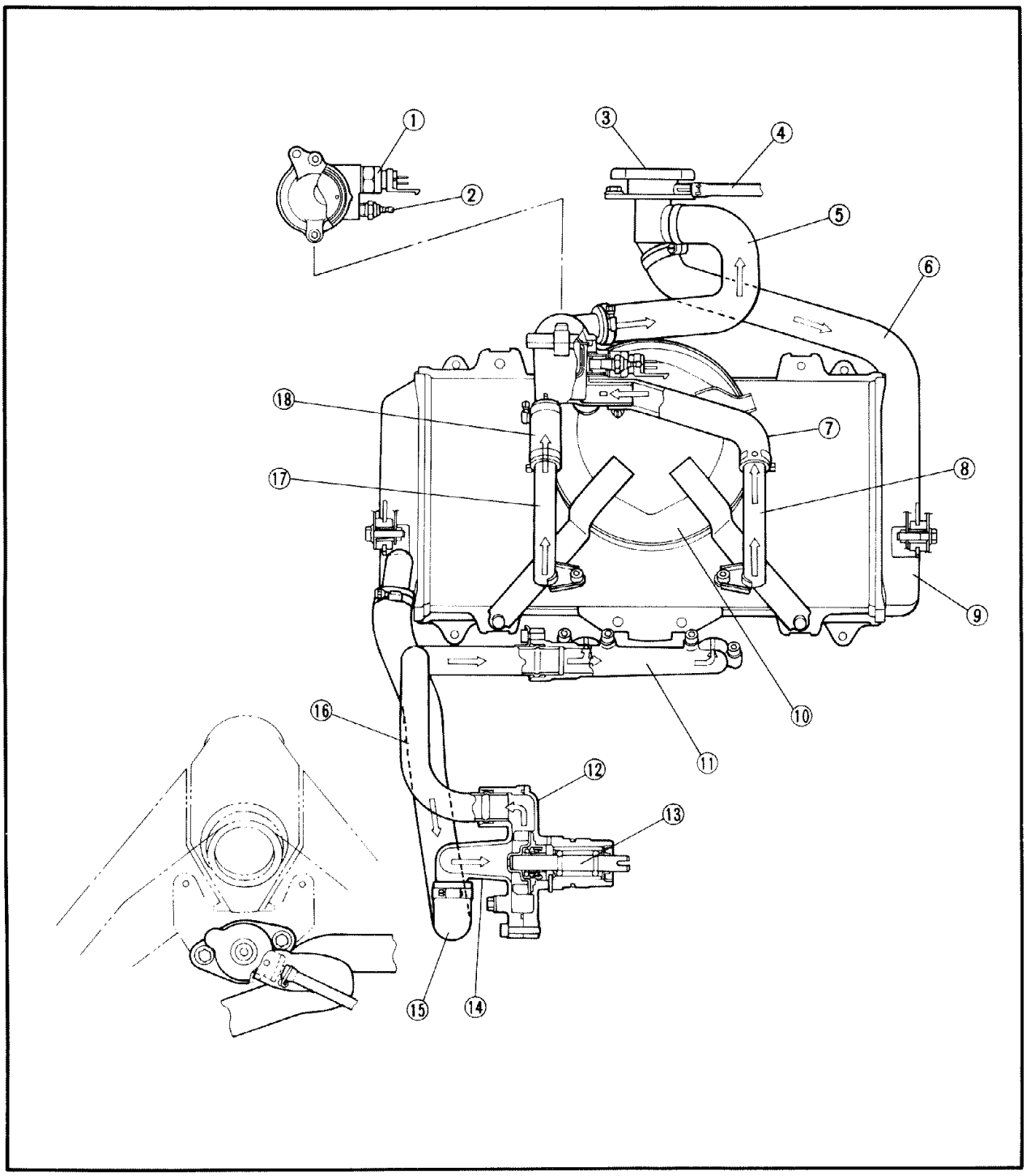


COOLANT DIAGRAM

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)



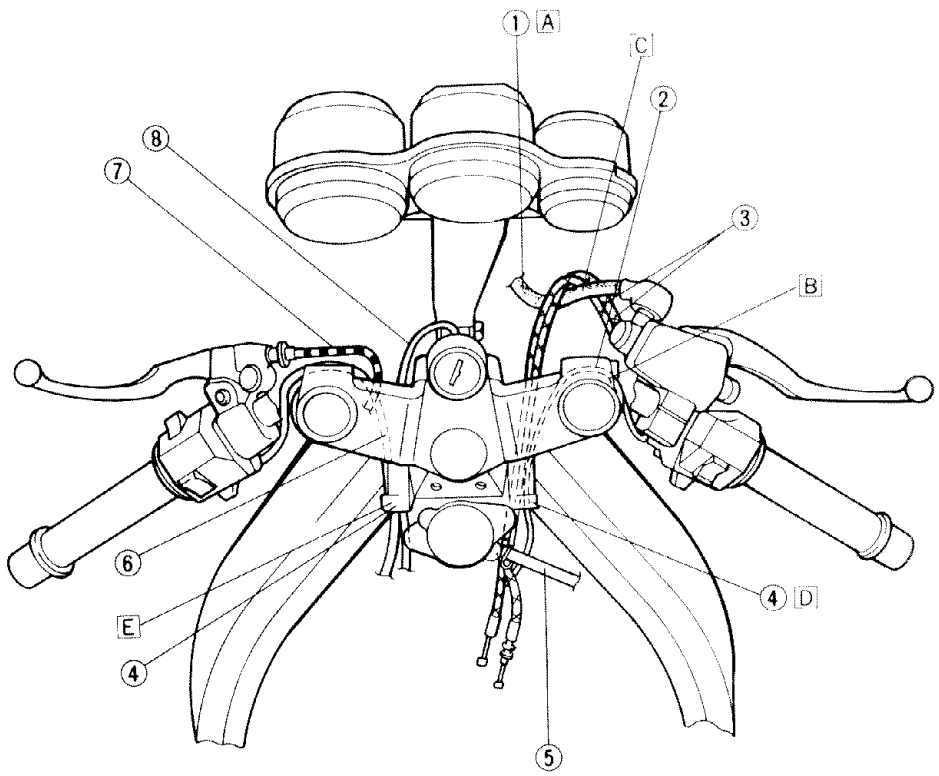
① Thermo switch
② Thermo unit
③ Radiator cap
④ Reservoir tank hose
⑤ Radiator hose 3
⑥ Radiator hose (inlet)
⑦ Radiator hose 2
⑧ Radiator pipe 1
⑨ Radiator
⑩ Fan motor assembly
⑪ Water jacket joint
⑫ Water pump housing
⑬ Water pump
⑭ Water pump cover
⑮ Radiator hose (outlet)
⑯ Water pipe
⑰ Radiator pipe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



CABLE ROUTING

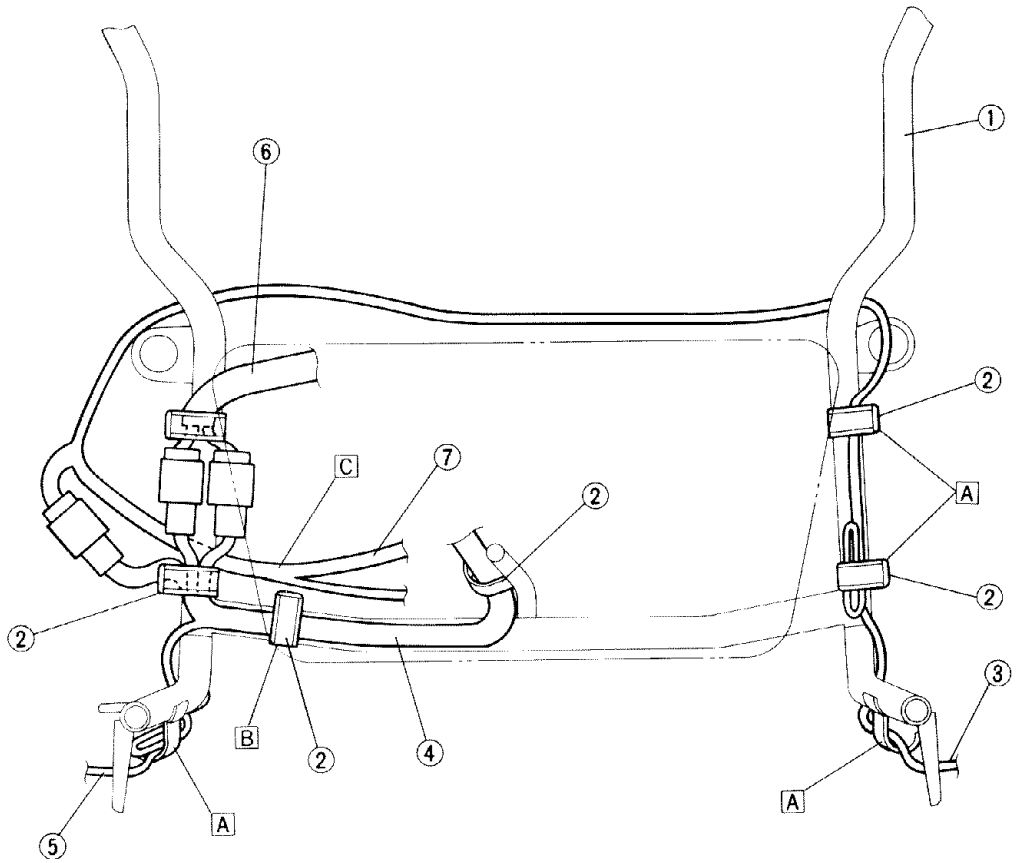
① Front brake hose
② Handlebar switch (right)
③ Throttle cable
④ Clamp
⑤ Radiator breather hose
⑥ Handlebar switch (left) lead
⑦ Clutch cable
⑧ Main switch lead

[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.



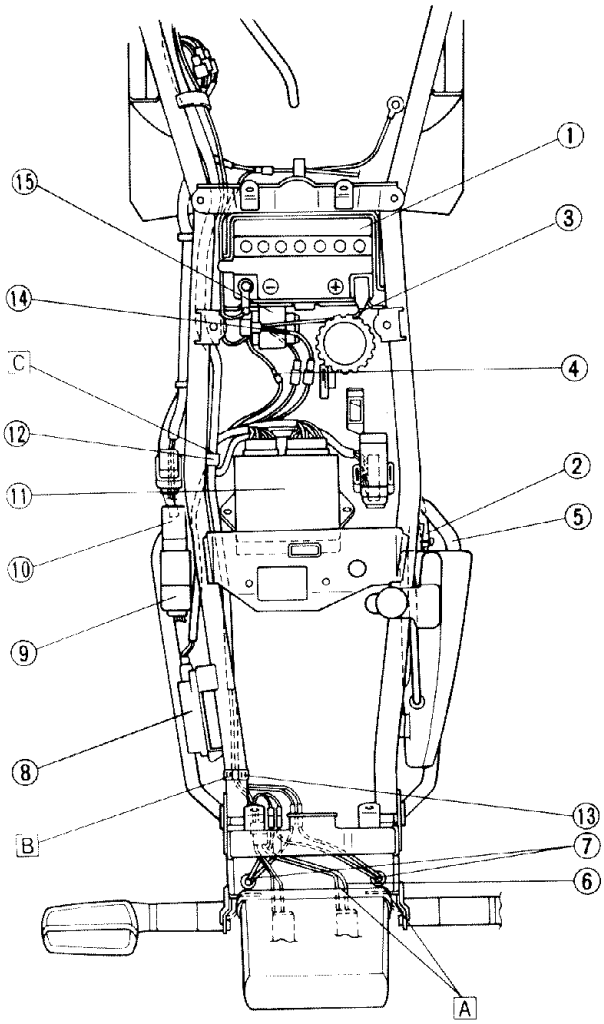
① Cowling stay
② Clamp
③ Flasher light (left) lead
④ Wireharness
⑤ Flasher light (right) lead
⑥ Meter light lead

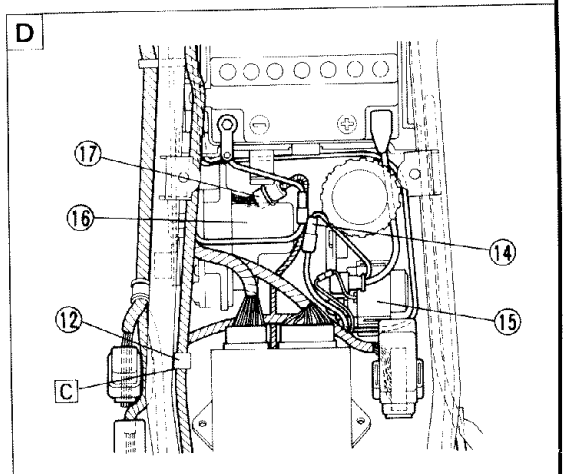
[A] Clamp the flasher light lead.
[B] Clamp the wireharness.
[C] Pass the headlight lead in front of the cowling stay.



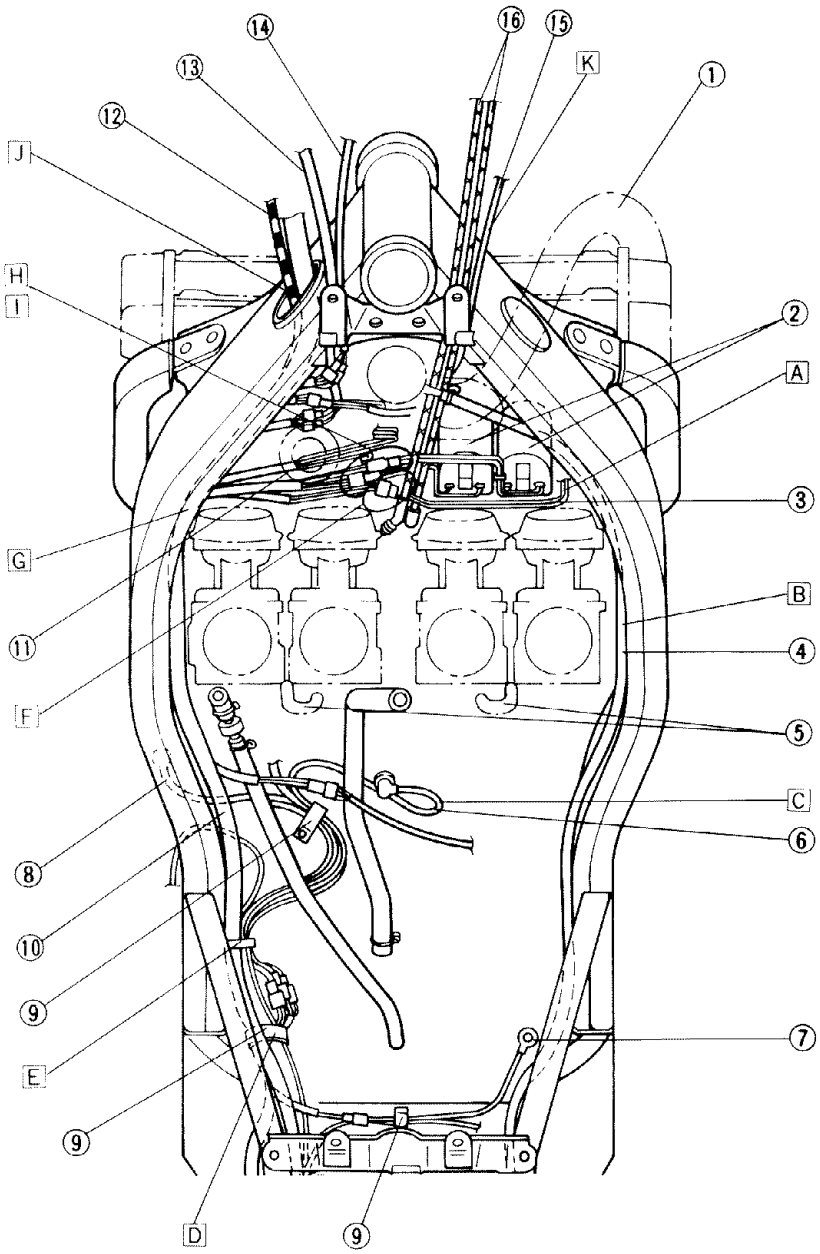
① Battery
② Coolant reservoir hose
③ Battery positive lead
④ Starter relay lead
⑤ Breather hose (coolant reservoir hose)
⑥ Taillight lead
⑦ Rear flasher light lead
⑧ Rectifier/regulator
⑨ Flasher relay
⑩ Relay assembly
⑪ Ignitor unit
⑫ Clamp
⑬ Band
⑭ Starter relay lead
⑮ Starter relay
⑯ Exup servo motor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

[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

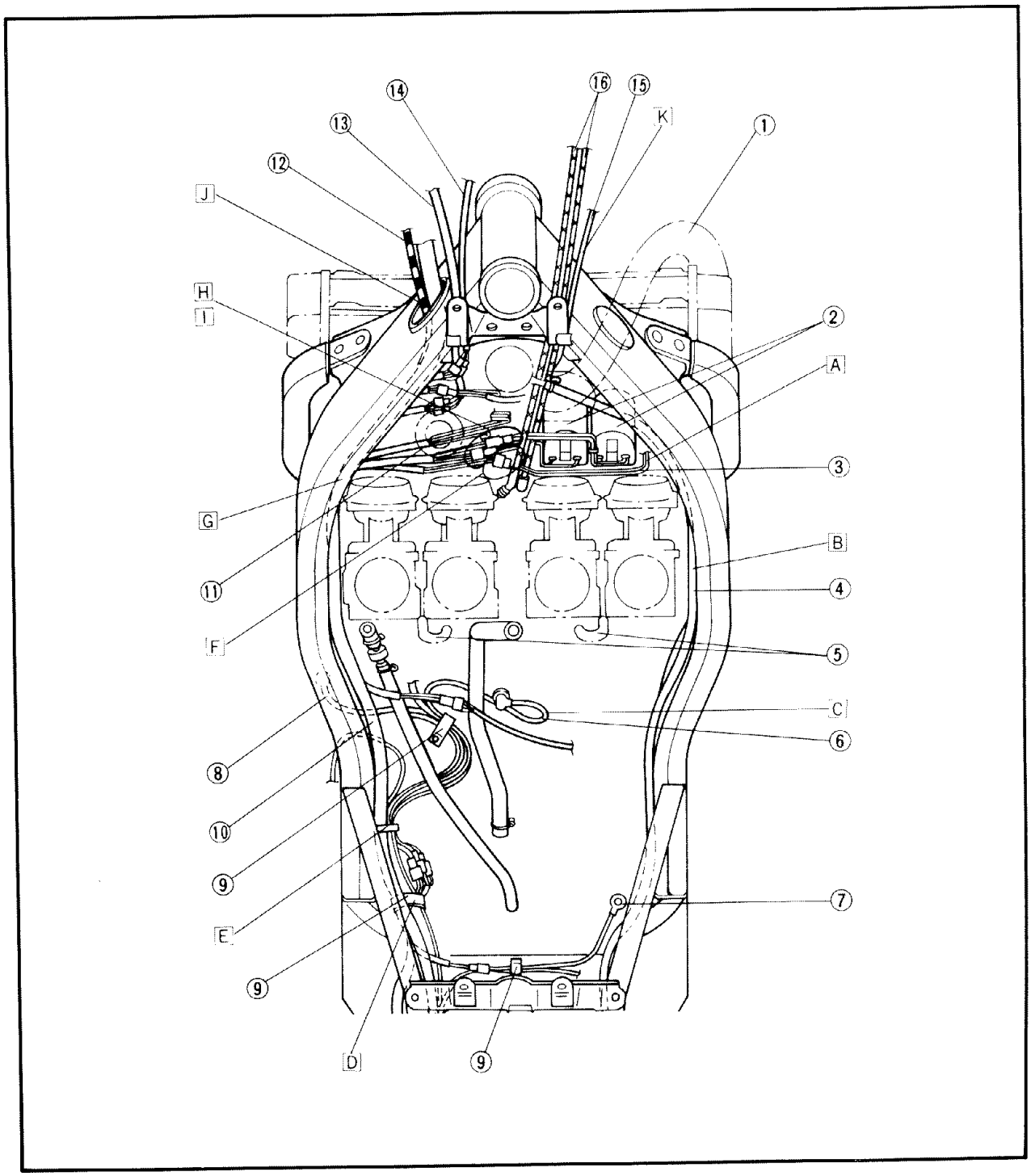




① Radiator hose
② Ignition coil
③ Fan motor lead
④ Radiator breather hose
⑤ Carburetor breather hose
⑥ Starter motor lead
⑦ Ground lead
⑧ A.C. Generator lead
⑨ Clamp
⑩ Wireharness
⑪ Thermo unit
⑫ Clutch cable
⑬ Handlebar switch (left) lead
⑭ Main switch lead
⑮ Handlebar switch (right) lead
⑯ Throttle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

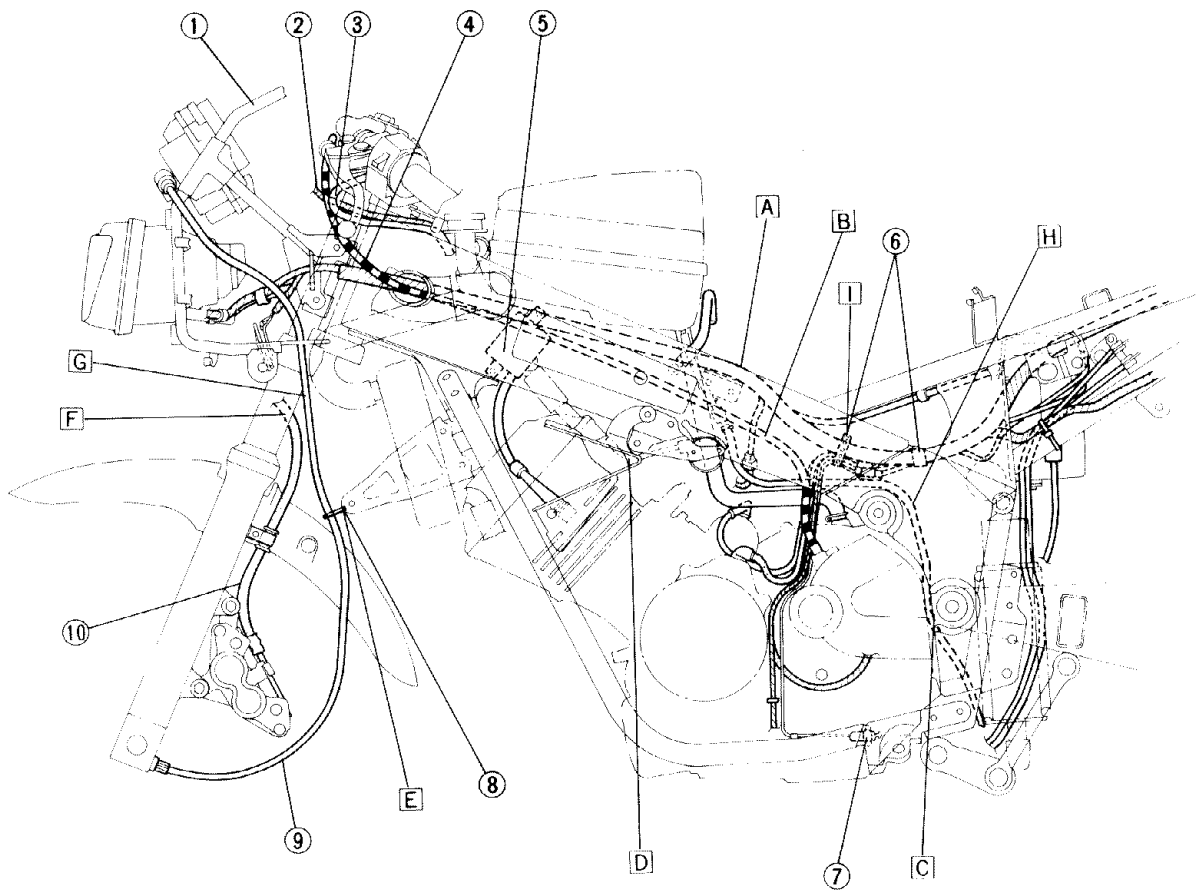


[A] Pass the fan motor lead behind the ignition coil.
[B] Pass the radiator breather hose between the carburetor and frame.
[C] Pass the starter motor lead below the starter motor.
[D] Clamp the wireharness.
[E] Clamp the A.C. magneto, neutral, oil level switch and sidestand switch leads.
[F] Pass the 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.



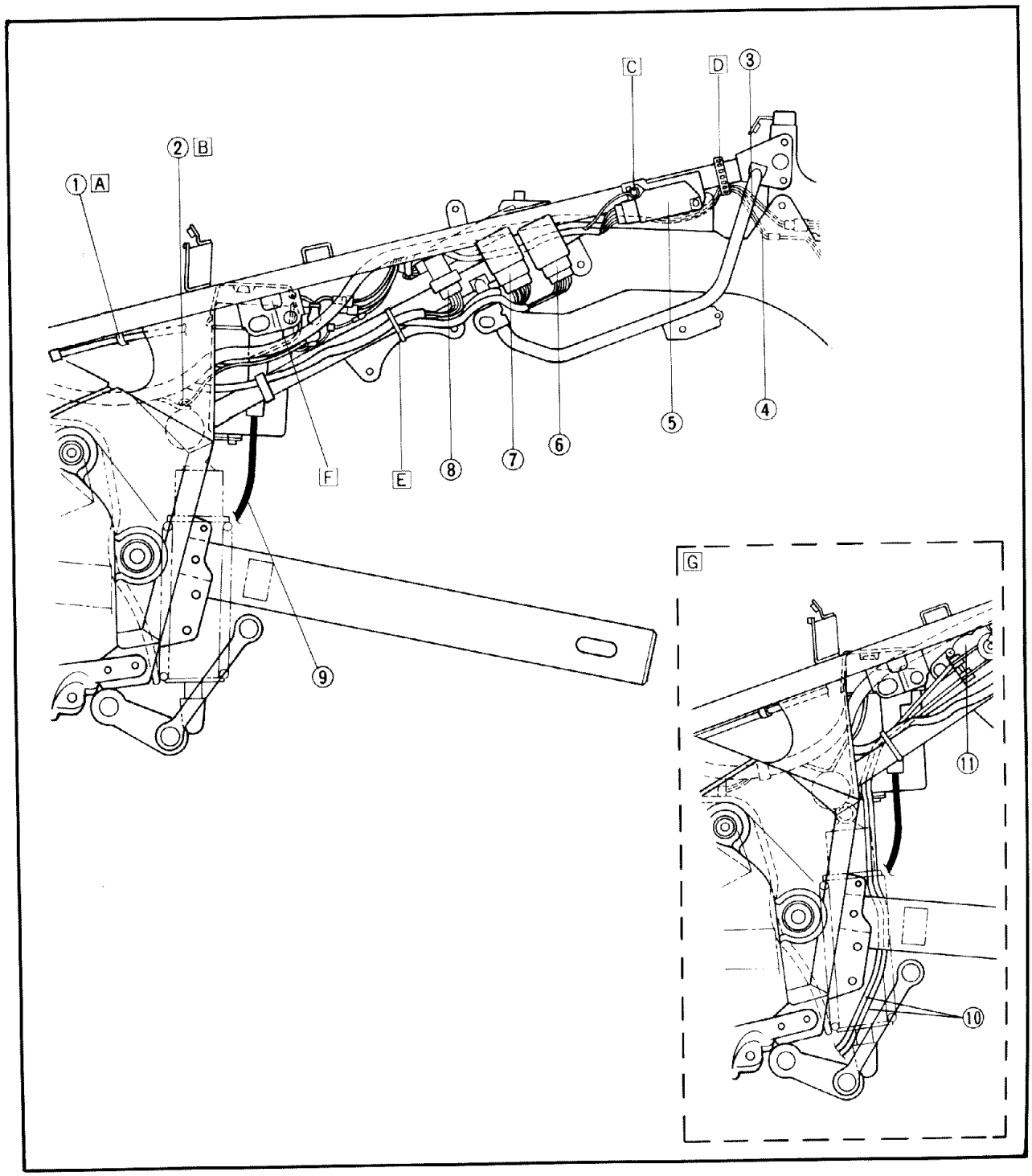
① Cowling stay
② Main switch lead
③ Handlebar switch (left) lead
④ Clutch cable
⑤ Thermo unit
⑥ Clamp
⑦ Sidestand switch
⑧ Cable guide
⑨ Speedometer cable
⑩ Front brake hose

[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.

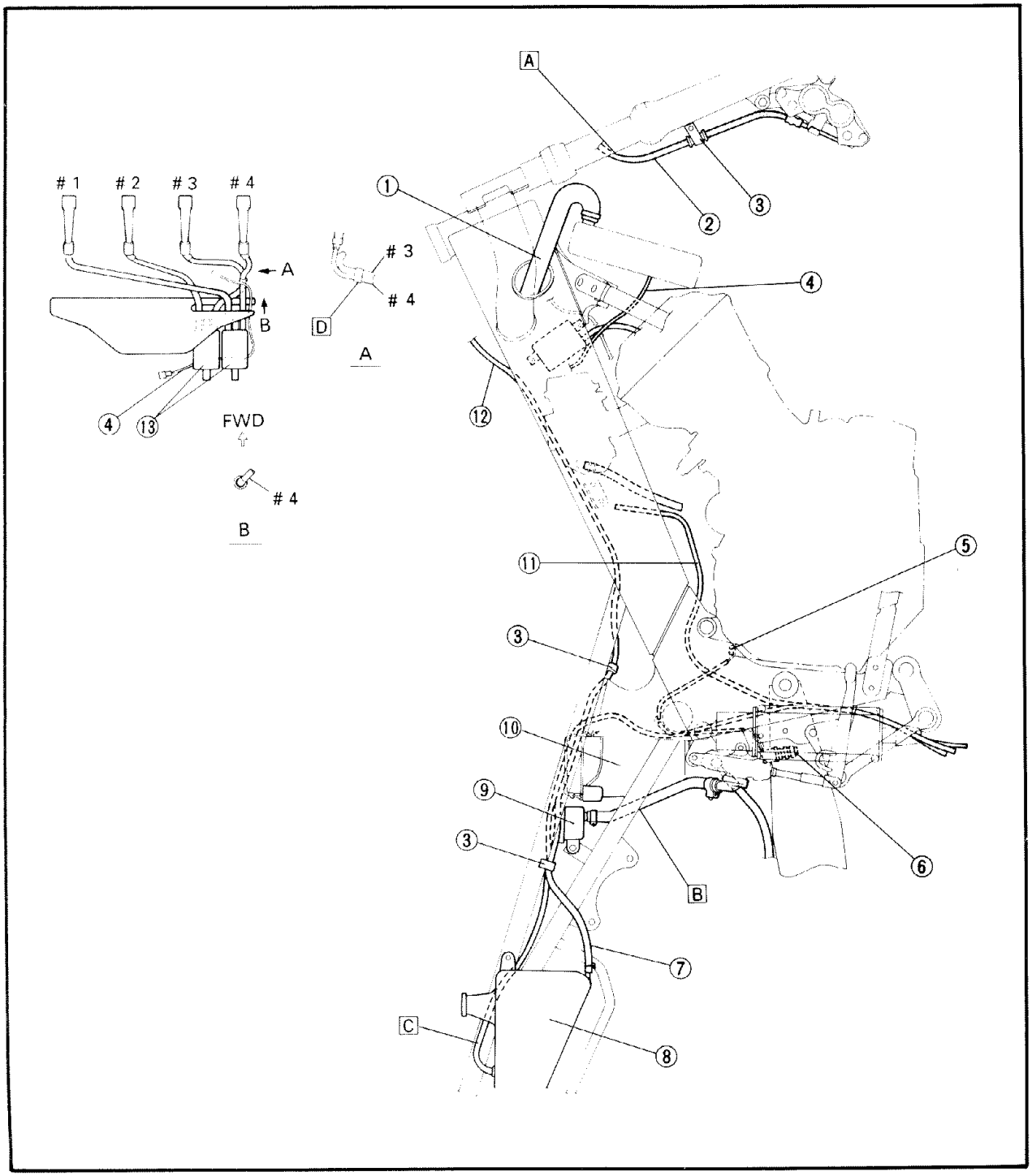


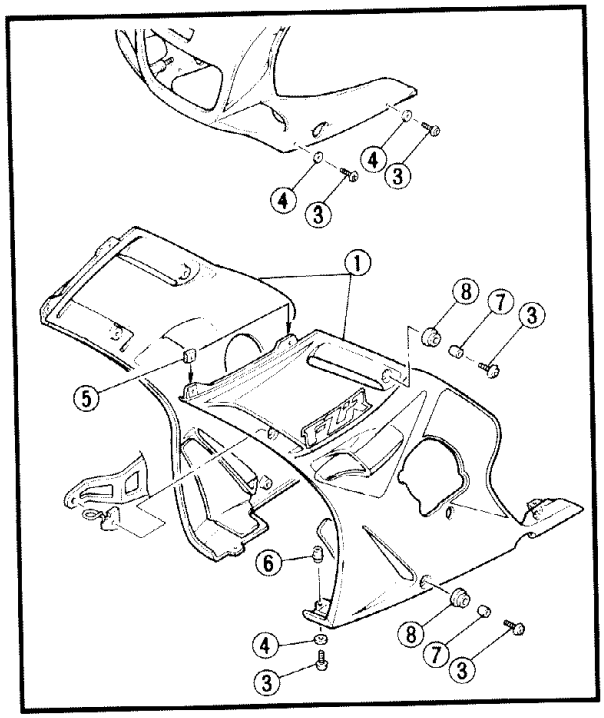
① Clamp
② Ground lead
③ Taillight lead
④ Rear flasher lead
⑤ Rectifier/regulator
⑥ Flasher relay
⑦ Relay assembly
⑧ Main fuse
⑨ Battery breather hose
⑩ "EXUP" control cable
⑪ "EXUP" servo motor

[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 while mark.





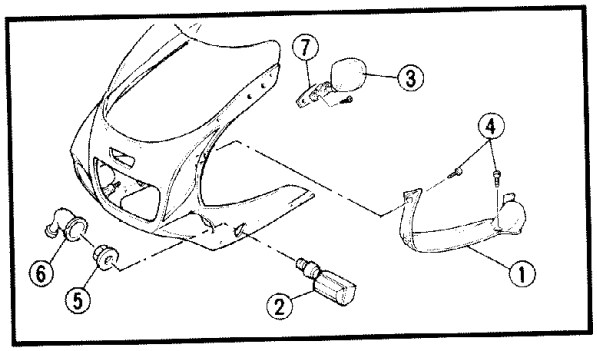
PERIODIC INSPECTION AND ADJUSTMENT

COWLINGS/COVERS REMOVAL AND INSTALLATION

REMOVAL

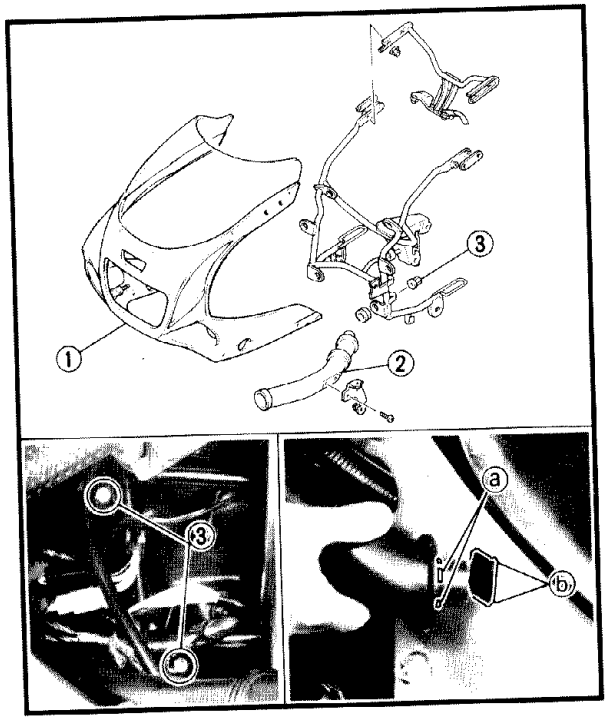
1. Remove:
   - Side cowlings (left ① and right ②)

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:

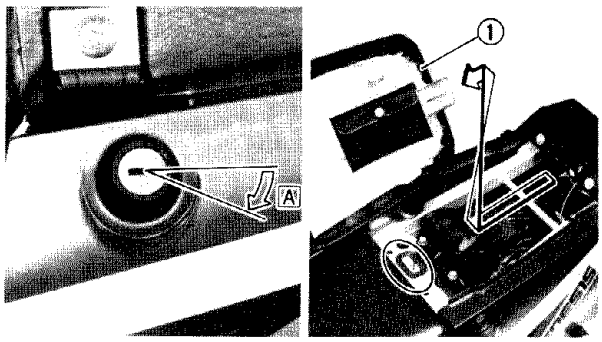
Remove the headlight together with the upper cowling to prevent the headlight from falling out.

4. Remove:
   - Air intake ducts (left and right) ②

NOTE:

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

③ Nut

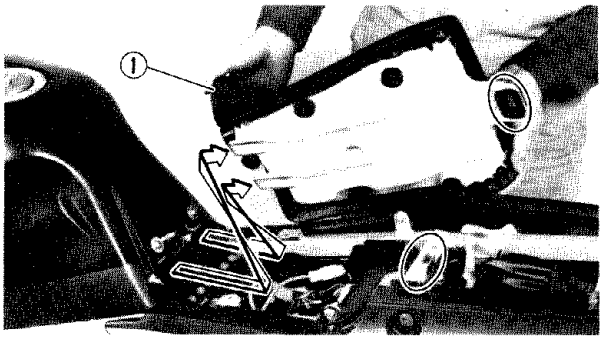


Covers

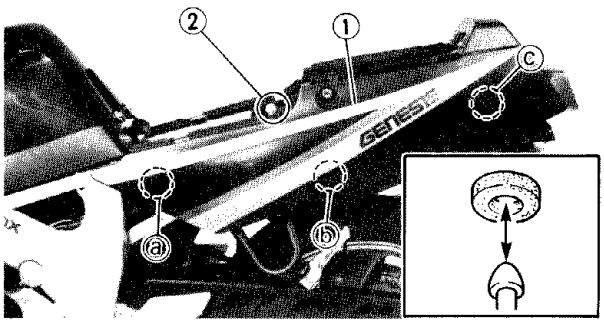
1. Remove:
   - Passenger seat ①

NOTE:

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



2. Remove:
   - Rider seat ①



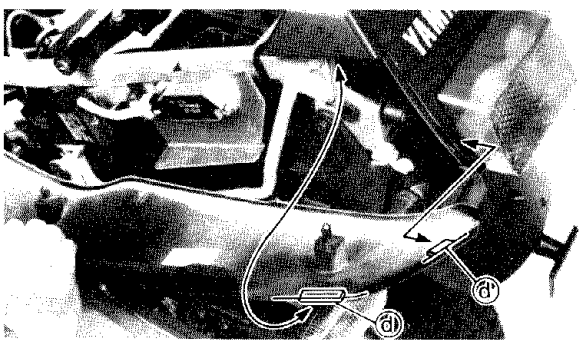
3. Remove:
   - Side covers (left and right) ①

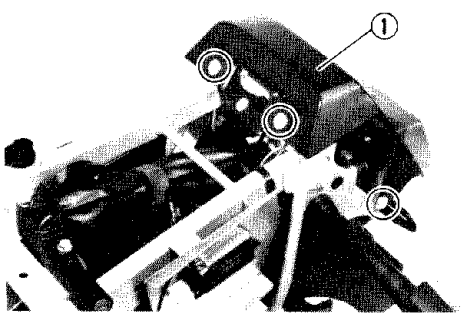
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Removal Steps:

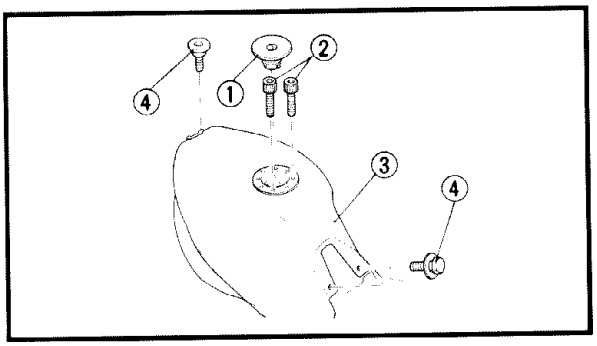
- Remove the screws ②.
- Unhook the projections ⓐ, ⓑ and ⓒ on the side cover from the grommets on the frame.
- Unhook the hooks ⓓ on the side cover from the slots in the trail cover.

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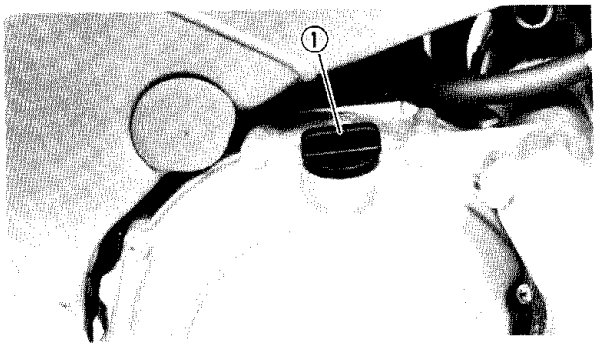


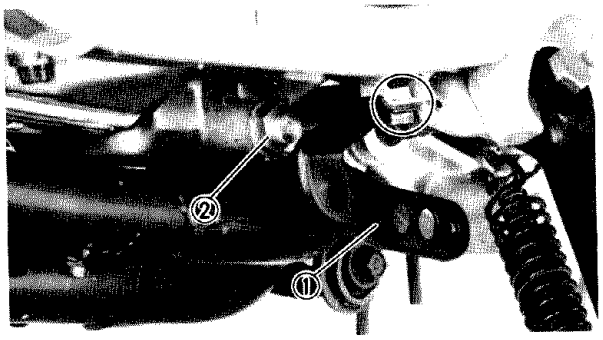
4. Remove:
   - Tail cover ①



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 cowling-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

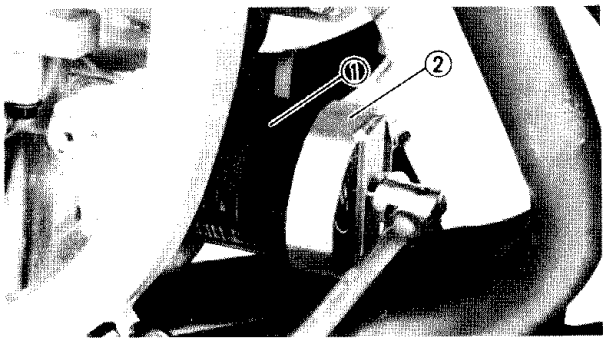
9. Install:
   - Oil filler cap
   - Stay (side cowling-left)
   - Side cowlings

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 .

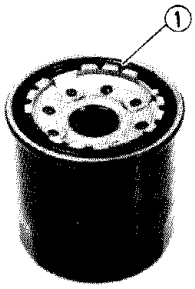
Oil filter wrench:
J-37140A
90890-04126

4. Inspect:
   - O-ring (oil filler cap)
   - Gasket (drain plug)

   Wear/Damage → Replace.
5. Install:
   - Drain plug

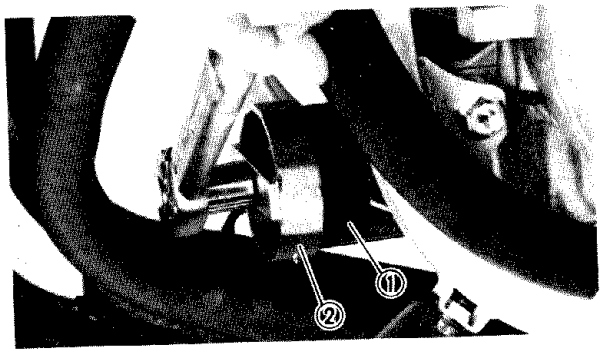
   (with gasket)

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



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.

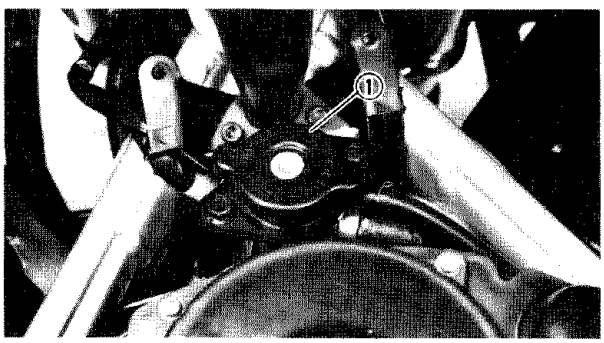
With oil filter replacement:
2.5 L (2.2 Imp qt, 2.64 US qt)

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

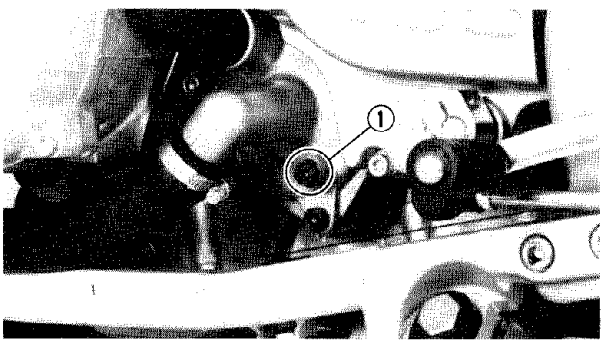
⚠ WARNING

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.

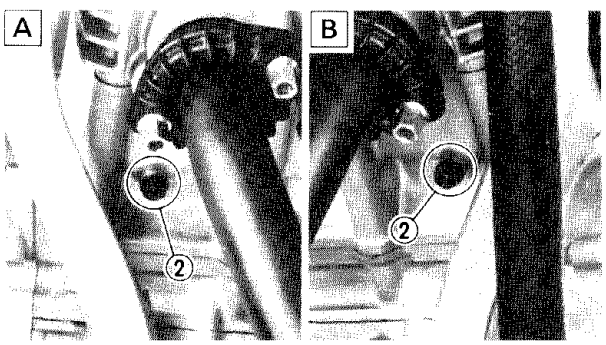


1. Remove:
   - Side cowlings (left and right)
   - Seats (passenger and rider)
   - Top cover

   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

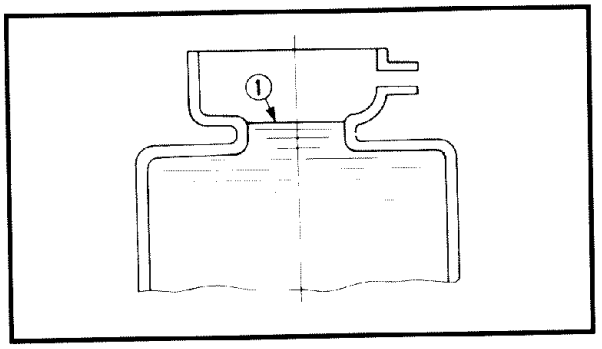
   Drain the coolant.

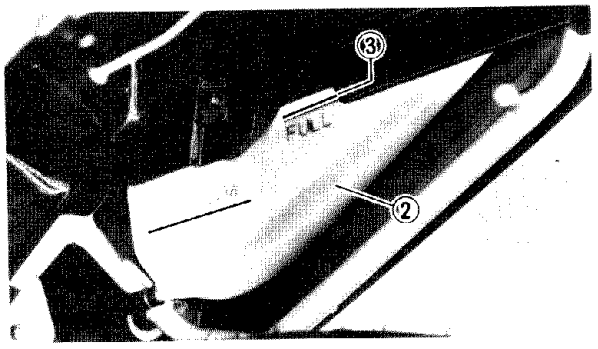
A Right
B Left

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.

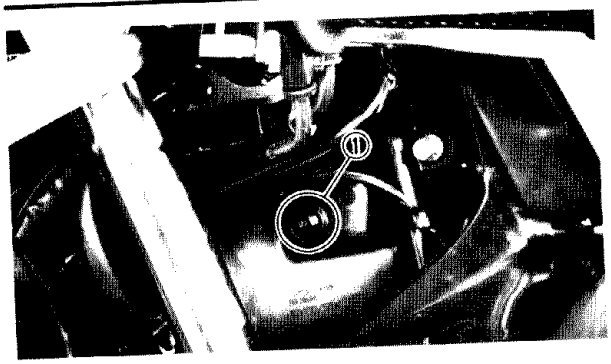
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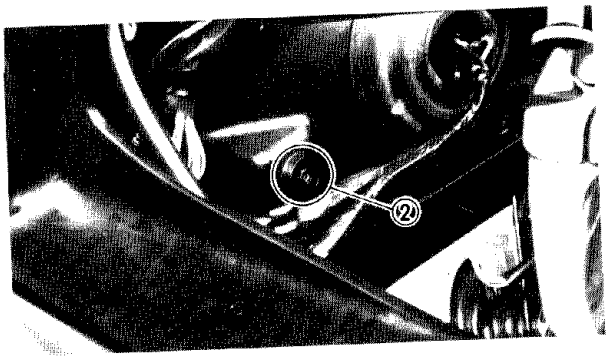
CAUTION:

- **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.





ELECTRICAL

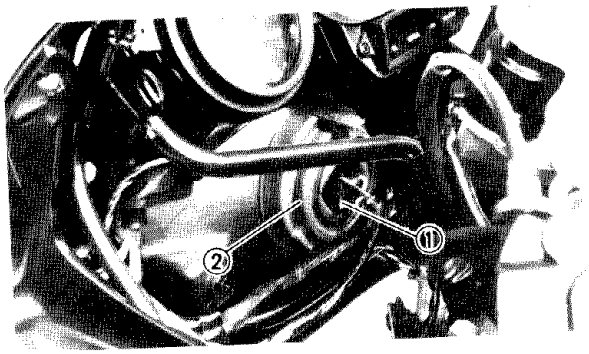
HEADLIGHT BEAM ADJUSTMENT

1. Adjust:
   - Headlight beam (horizontally)

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

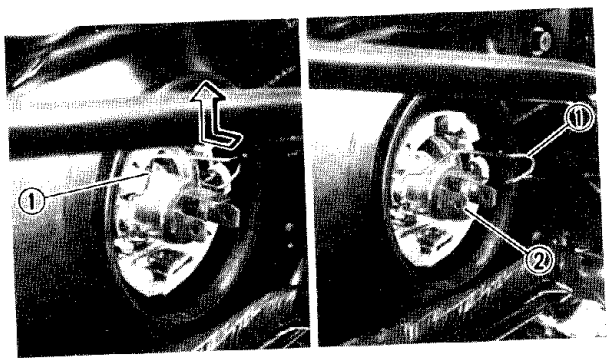
2. Adjust:
   - Headlight beam (vertically)

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



HEADLIGHT BULB REPLACEMENT

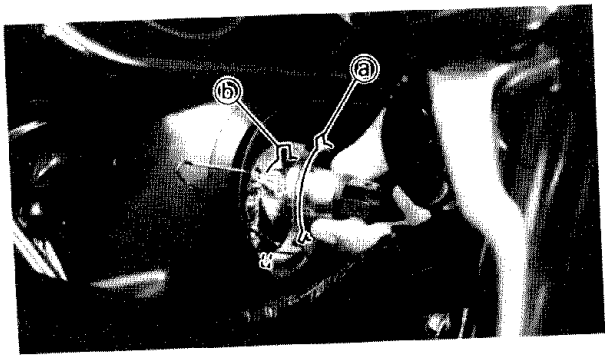
1. Disconnect:
   - Headlight coupler ①
2. Remove:
   - Headlight bulb cover ②



3. Unhook:
   - Bulb holding spring ①
4. Remove:
   - Bulb (defective) ②

⚠ WARNUNG

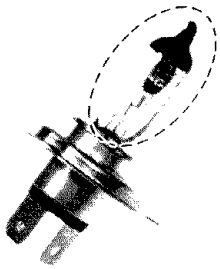
Keep flammable products or your hands away from the bulb while it is on, it will be hot. Do not touch the bulb until it cools down.



5. Install:
   - Bulb (new)

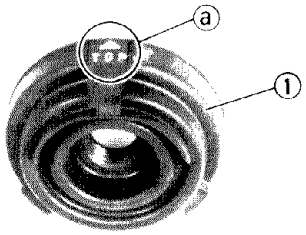
NOTE:

Make sure the projections ⓐ on the bulb are meshed with the slot ⓑ 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, throughly 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 a upward.

8. Connect:
   - Headlight coupler

ENGINE OVERHAUL

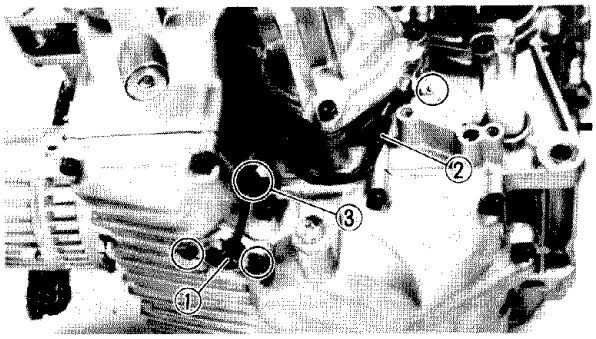
ENGINE DISASSEMBLY

OIL PAN AND OIL STRAINER

NOTE:

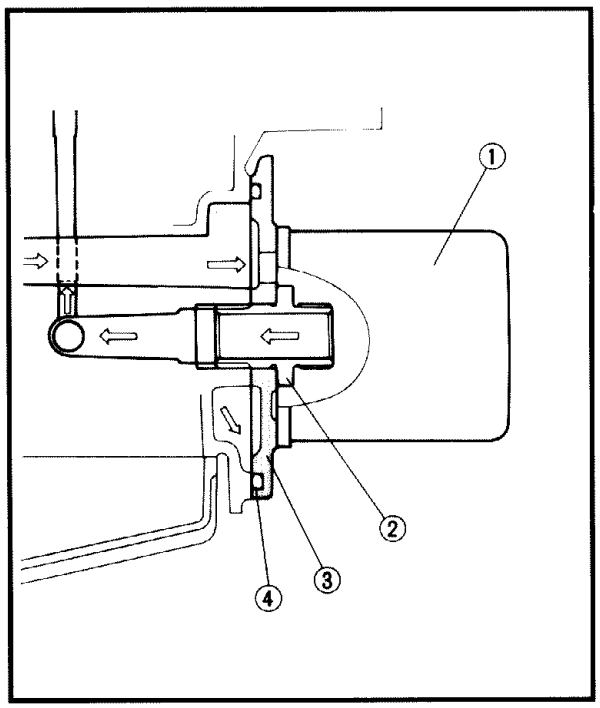
With the engine mounted, the oil pan and oil strainer can be maintained by removing the following parts.

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



1. Disconnect:
   - Oil level switch lead ①
   - Neutral switch lead ②

③ Clamp



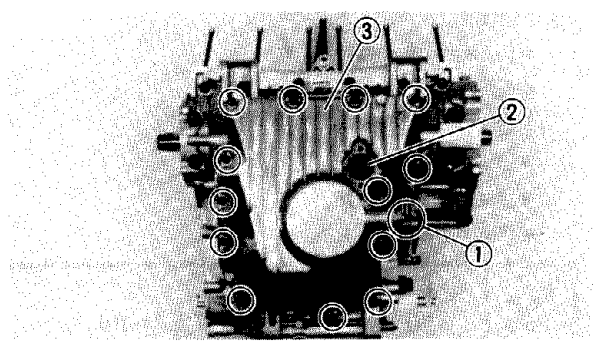
2. Remove:
   - Oil filter ①

   Use the oil filter wrench

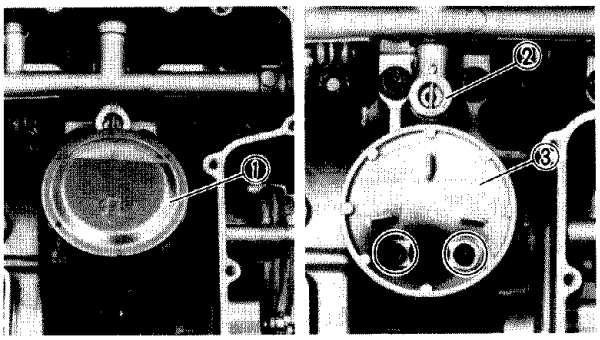


Oil filter wrench:
J-37140A
90890-04126

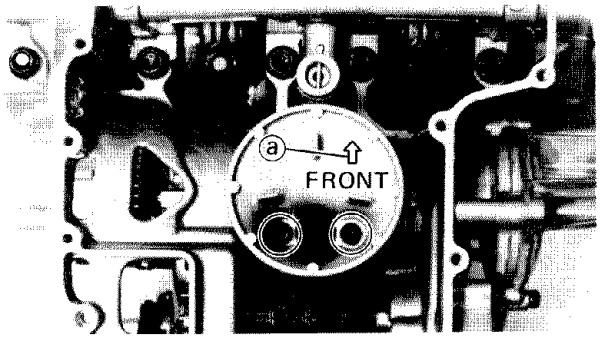
3. Remove:
   - Bolt ②
   - Adapter plate ③
   - O-ring ④



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



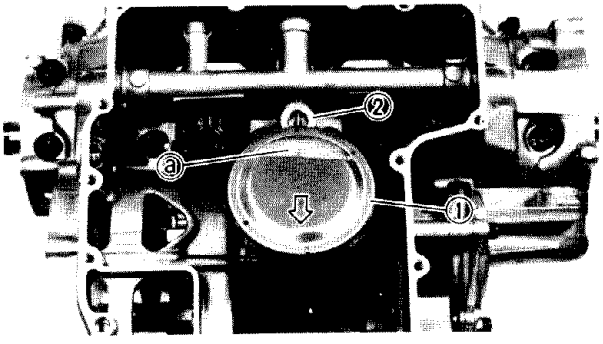
ENGINE ASSEMBLY AND ADJUSTMENT

OIL PAN AND OIL STRAINER

1. Install:
   - Oil strainer assembly

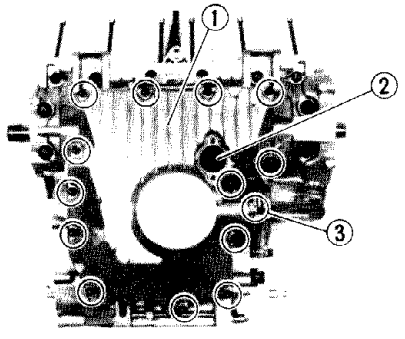
	Bolts (oil strainer assembly): 10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:
Install the oil strainer assembly so that the arrow mark ⓐ face forward.



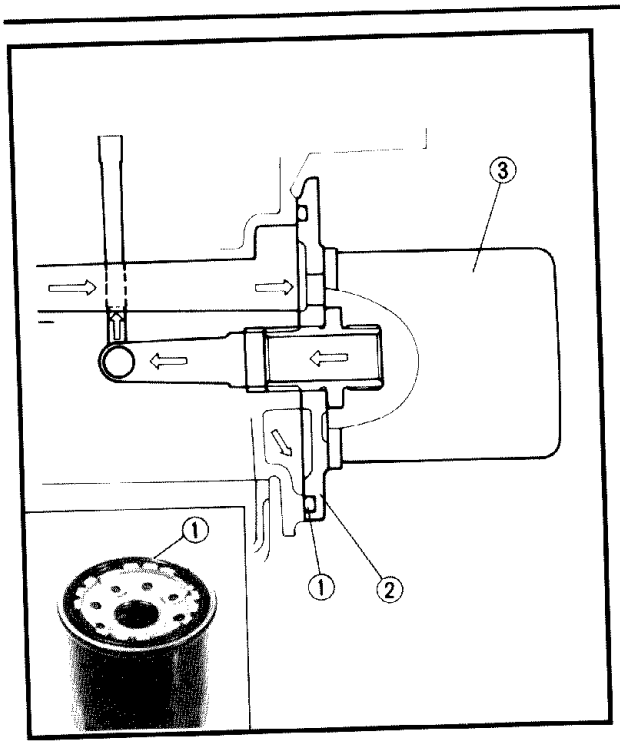
2. Install:
   - Oil strainer cover ①
   - Relief valve ②

NOTE:
The element (window) ⓐ 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.

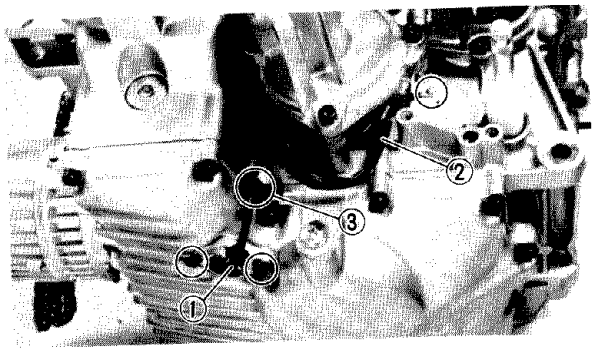
5. Install:
   - Adapter plate ②

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

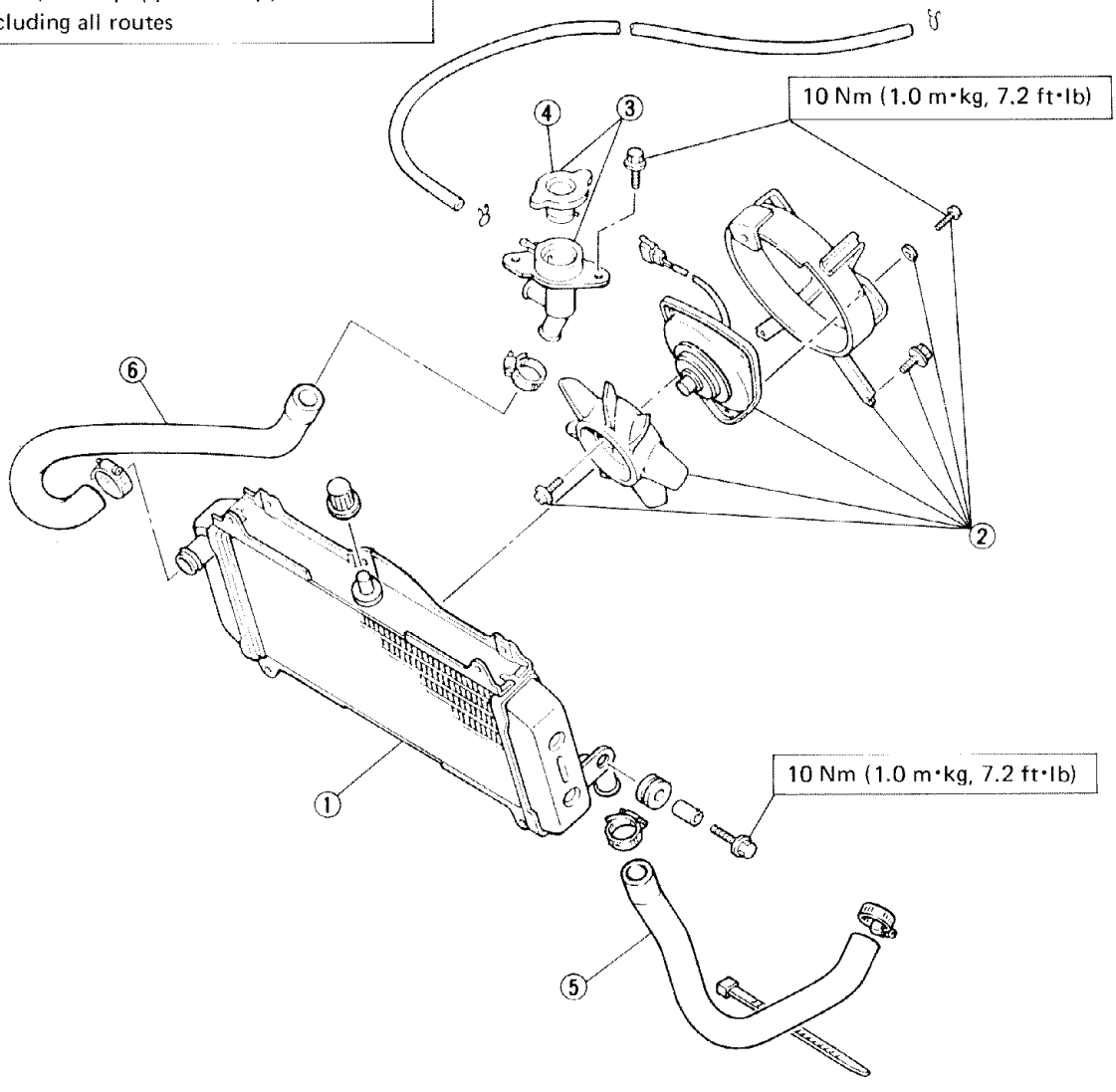
③ Clamp

COOLING SYSTEM

RADIATOR

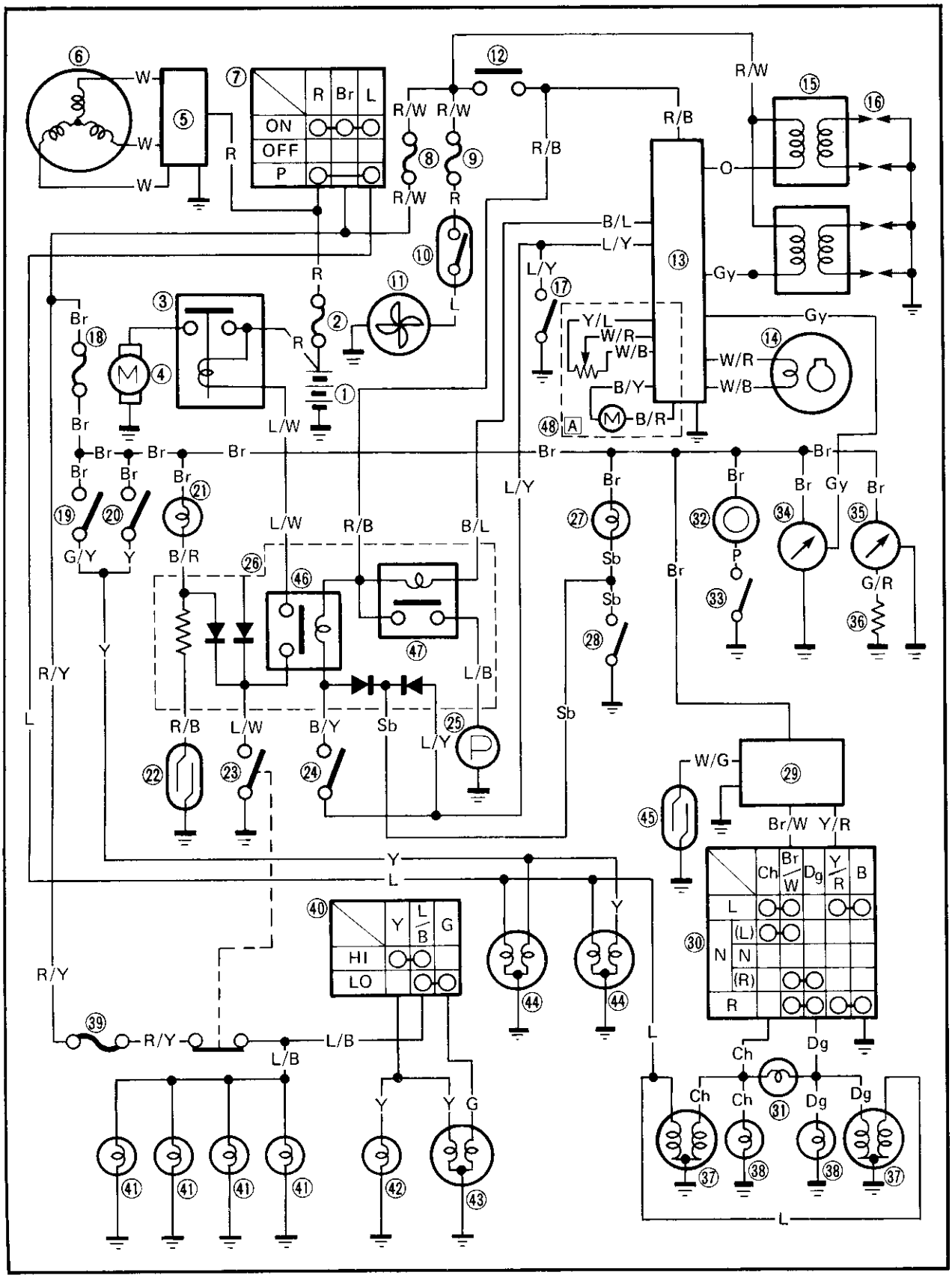
① Radiator assembly
② Fan motor assembly
③ Radiator cap assembly
④ Radiator cap
⑤ Outlet hose (radiator)
⑥ Inlet hose (radiator)

A	RADIATOR CAP OPENING PRESSURE: 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



① Battery
② Fuse (main)
③ Starter relay
④ Starter motor
⑤ Rectifier/Regulator
⑥ A.C. magneto generator
⑦ Main switch
⑧ Fuse (ignition)
⑨ Fuse (fan)
⑩ Thermo switch
⑪ Fan motor
⑫ "ENGINE STOP" switch
⑬ Ignitor unit
⑭ Pickup coil
⑮ Ignition coil
⑯ Spark plug
⑰ Side stand switch
⑱ Fuse (signal)
⑲ Front brake switch
⑳ Rear brake switch
㉑ "OIL LEVEL" indicator light
㉒ Oil level switch
㉓ "START" switch
㉔ Clutch switch
㉕ Fuel pump
㉖ Relay assembly
㉗ Neutral indicator light
㉘ Neutral switch
㉙ Flasher relay
㉚ "TURN" switch
㉛ "TURN" indicator light
㉜ Horn
㉝ "HORN" switch
㉞ Tachometer
㉟ Engine temperature gauge
㊱ Thermo unit
㊲ Front position light/Front flasher light
㊳ Rear flasher light
㊴ Fuse (head)
㊵ "LIGHTS" (dimmer) switch
㊶ Meter light
㊷ "HIGH BEAM" indicator light
㊸ Headlight
㊹ Tail/brake light
㊺ Reed switch
㊻ Starting circuit cut-off relay
㊼ Fuel pump relay
㊽ "EXUP" servo motor

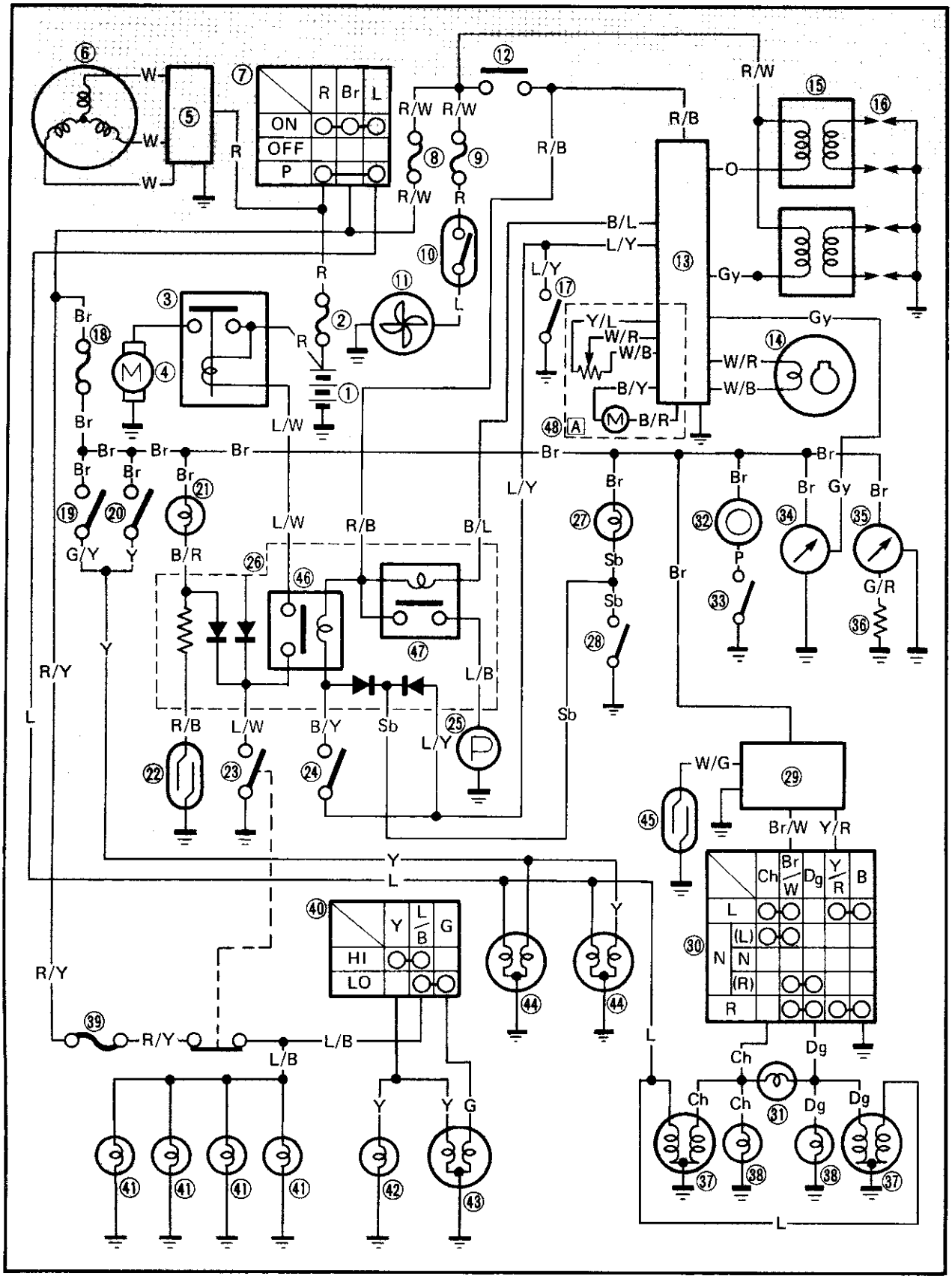
[A] For California only

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		

ELECTRICAL STARTING SYSTEM

CIRCUIT DIAGRAM

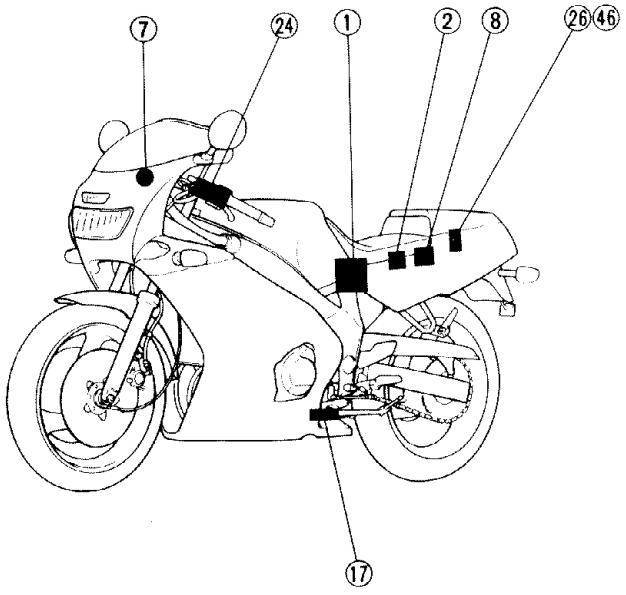


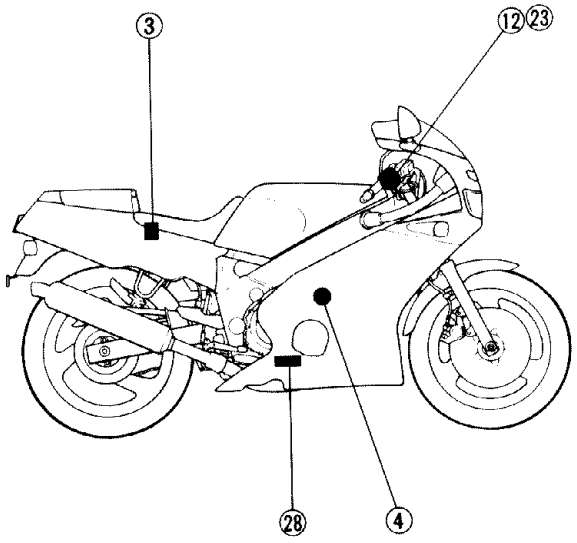
Aformentioned circuit diagram shows electrical starting circuit in circuit diagram.

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
㉓ "START" switch
㉔ Clutch switch
㉖ Relay assembly
㉘ Neutral switch
㊻ Ignition circuit cut-off relay





TROUBLESHOOTING

STARTER MOTOR DOES NOT OPERATE.

Procedure

Check;

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

NOTE:

Remove the following before troubleshooting.

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

- Use the following special tool in this troubleshooting.



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

1. Fuse (main)
- Remove the fuse (main).
- Connect the pocket tester (Ω x 1) to the fuse (main).
- Check the fuse (main) for continuity.

NO CONTINUITY → Replace fuse (main)

CONTINUITY ↓

2. Battery

Check the battery condition.
Refer to the "BATTERY INSPECTION" section in the CHAPTER 3.

Specific gravity:
1.280 at 20°C (68°F)

INCORRECT →
- Refill battery fluid.
- Clean battery terminals.
- Recharge or replace battery.

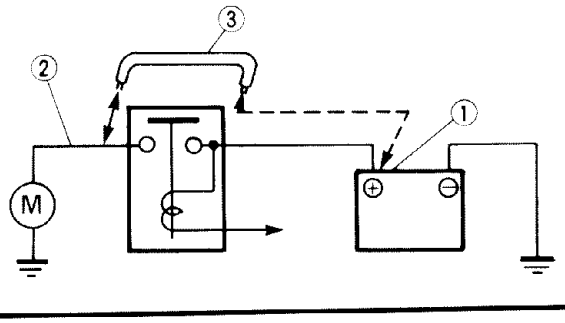
CORRECT ↓

*

*

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.

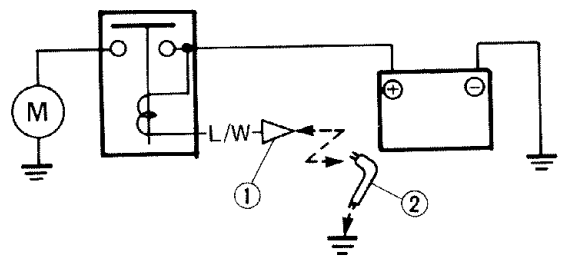
NO OPERATIVE

Repair or replace starter motor.

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.

NO OPERATIVE

Replace starter relay.

OPERATIVE

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

- Disconnect the relay assembly coupler from the wireharness.
- Connect the pocket tester (Ω x 1) and battery (12V) voltage to the relay assembly coupler terminals.

*

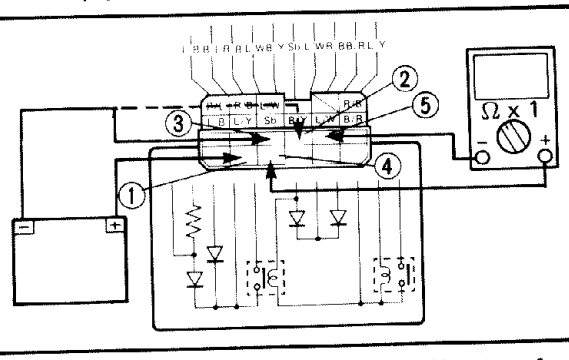
⚠ WARNING

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.

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



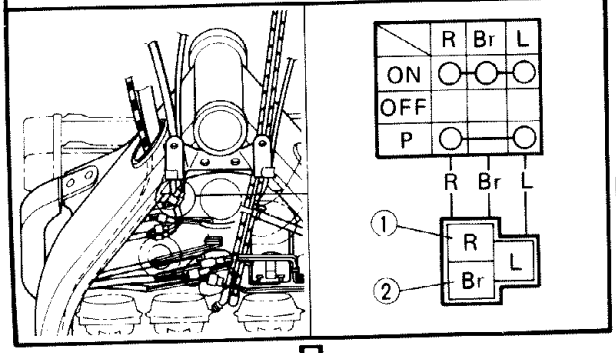
- Check the starting circuit cut-off relay for continuity.

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.

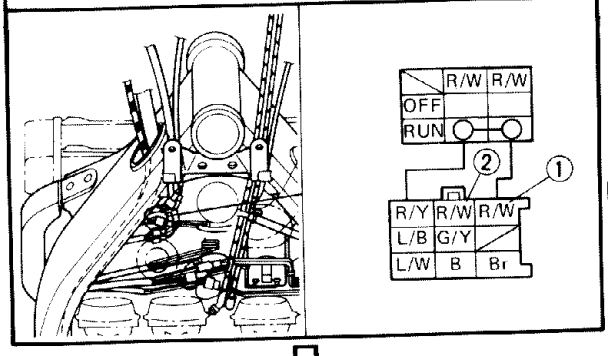
CORRECT ↓

*

*

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.

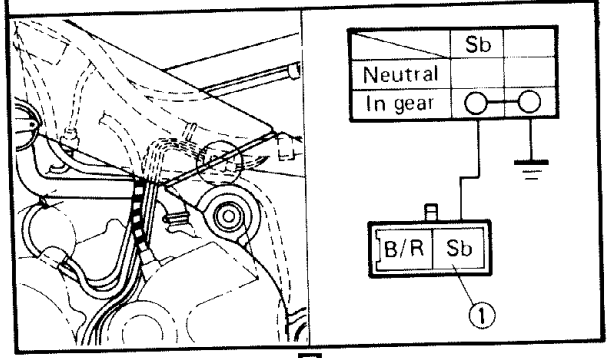


INCORRECT → Replace handlebar switch (right).

CORRECT

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.

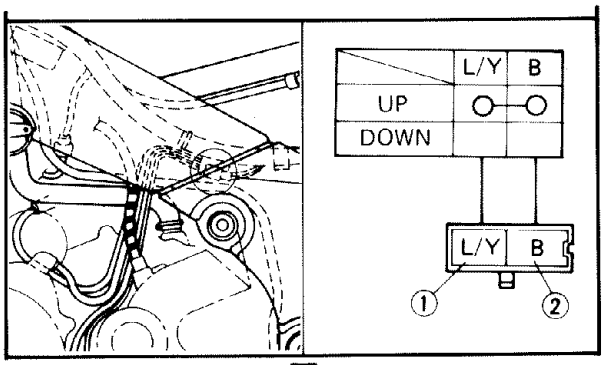


INCORRECT → Replace neutral switch.

CORRECT

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.



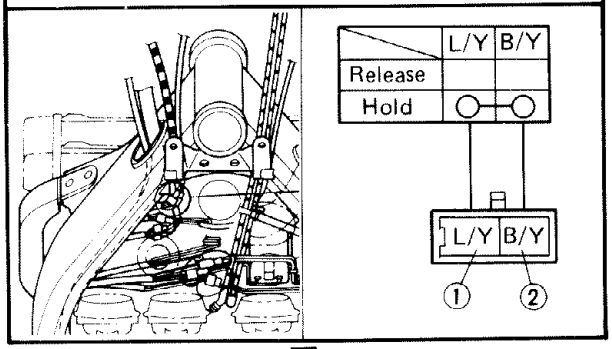
INCORRECT

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.



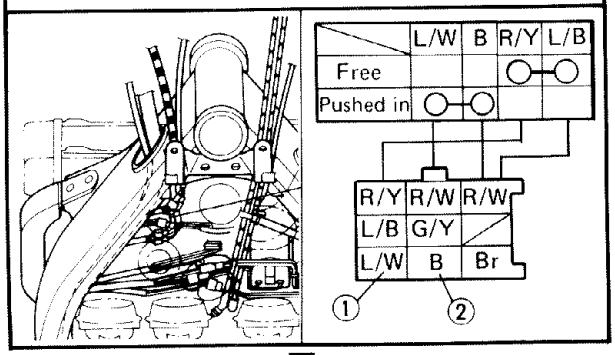
INCORRECT

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

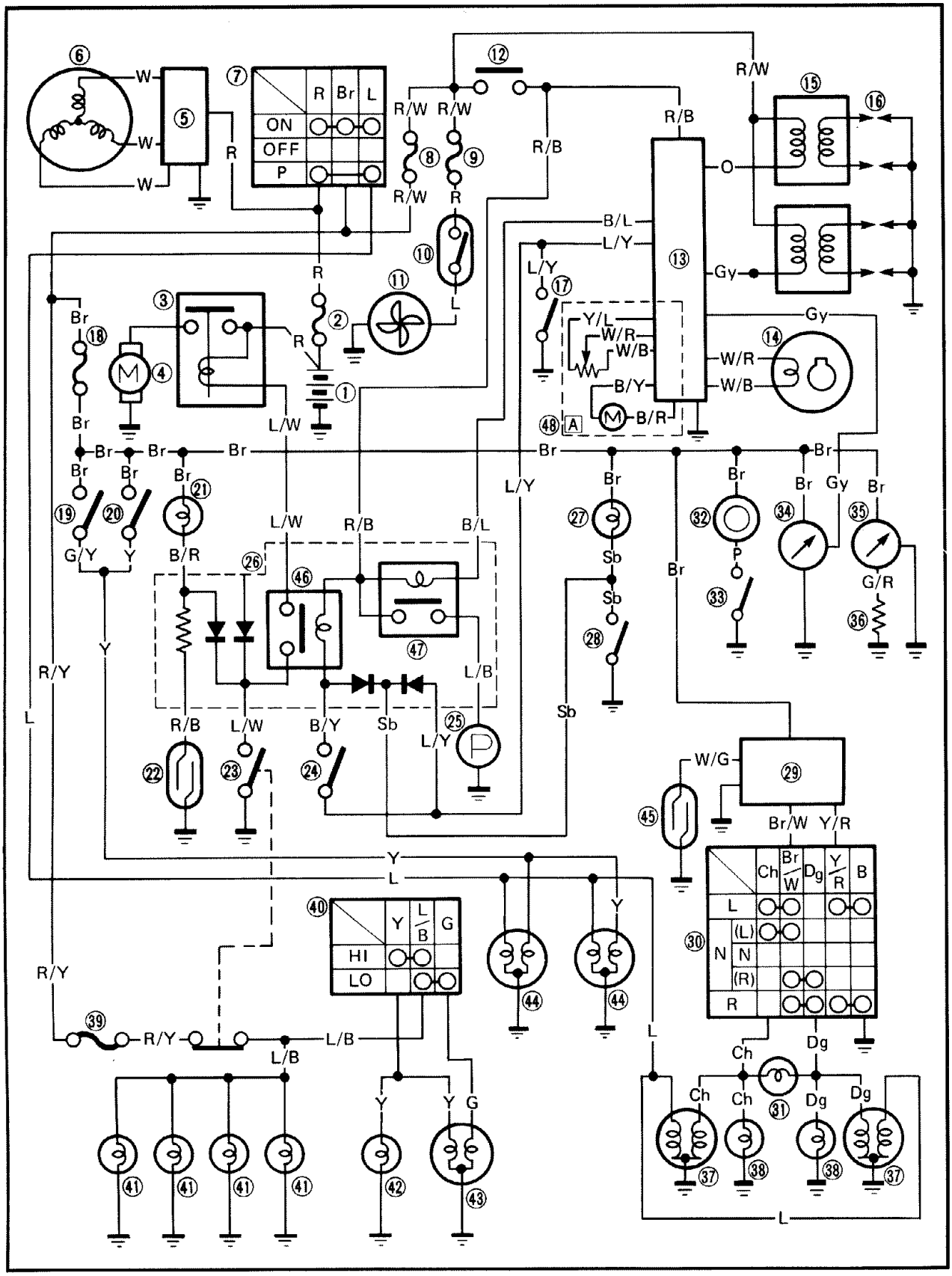
Check the entire ignition system for connections.
Refer to the "WIRING DIAGRAM" section.

POOR CONNECTION

Correct.

FUEL PUMP SYSTEM

CIRCUIT DIAGRAM

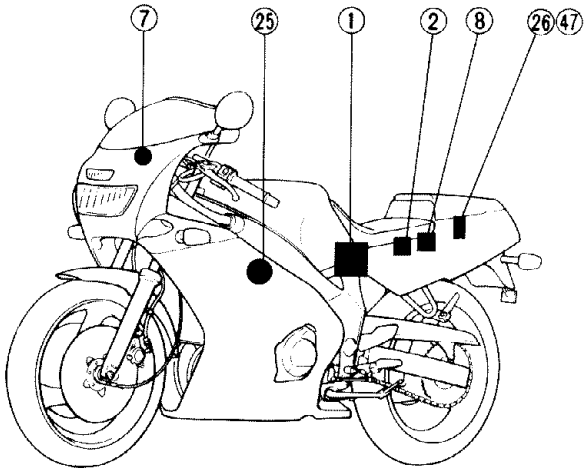


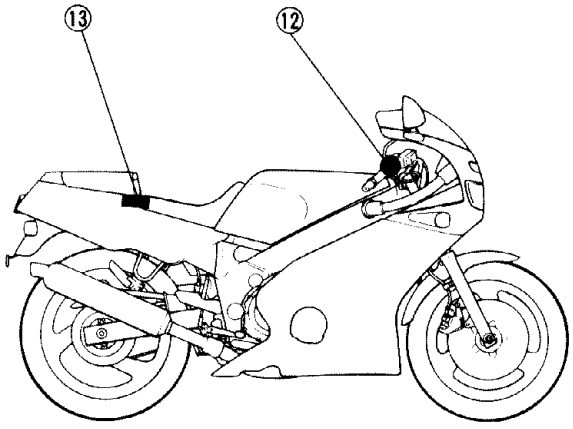
Aforementioned circuit shows fuel pump system circuit in circuit diagram.

NOTE:

For the color codes, see page 41.

① Battery
② Fuse (main)
⑦ Main switch
⑧ Fuse (ignition)
⑫ "ENGINE STOP" switch
⑬ Ignitor unit
㉕ Fuel pump
㉖ Relay assembly
㊼ Fuel pump relay

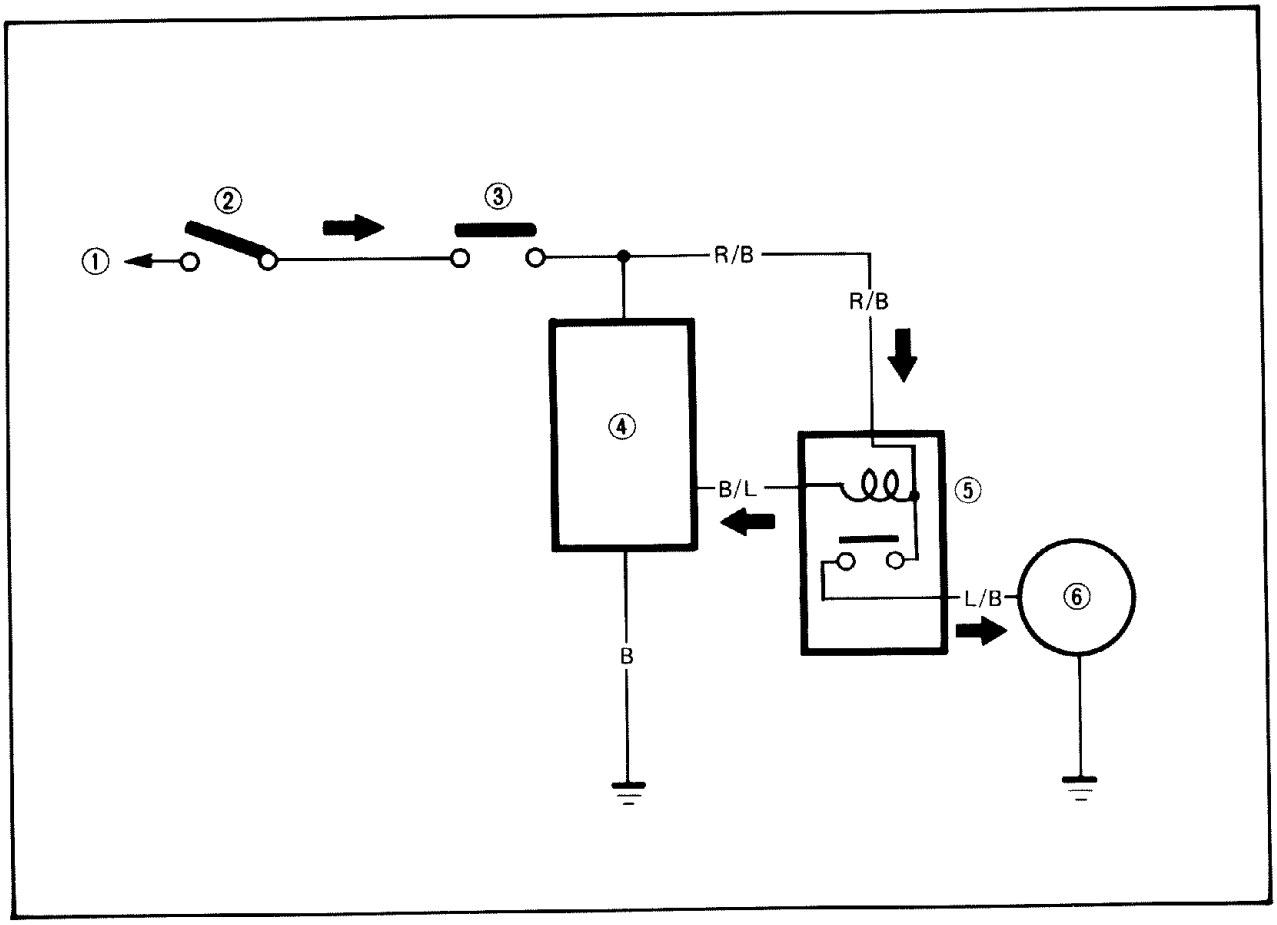




FUEL PUMP CIRCUIT OPERATION

The fuel pump circuit consists of the fuel pump relay, fuel pump, "ENGINE STOP" switch and digital ignition unit.
The digital ignition unit includes the control unit for the fuel pump.
The fuel pump starts and stops as indicated in the chart below.

① To main fuse and battery
② Main switch
③ "ENGINE STOP" switch
④ Digital ignitor unit
⑤ Fuel pump relay
⑥ Fuel pump



FUEL PUMP		
START		STOP
• Main/Engine stop switch turned to "ON"	• Engine turned on	• Engine turned off
For about 5 seconds when carburetor fuel level is low	After about 0.1 second	After about 5 seconds

TROUBLESHOOTING

FUEL PUMP FAILS TO OPERATE.

Procedure

1. Fuse (main)
2. Battery
3. Main switch
4. "ENGINE STOP" switch
5. Fuel pump relay (relay assembly)
6. Fuel pump
7. Wiring connection (Entire fuel system)

NOTE:

- Remove the following before troubleshooting.
  1) Seat (front and rear)
  2) Top cover
  3) Fuel tank
- Use the following special tool in this troubleshooting.



Pocket tester:
YU-03112
90890-03112

1. Fuse (main)

- Remove the fuse (main) and (ignition).
- Connect the pocket tester (Ω x 1) to the fuse (main).
- Check the fuse for continuity.

NO CONTINUITY → Fuse is faulty, replace it.

CONTINUITY ↓

2. Battery

- Check the battery condition. Refer to the "BATTERY INSPECTION" section in the CHAPTER 3.

Specific gravity:
1.280 at 20°C (68°F)

INCORRECT →
- Refill battery fluid.
- Clean battery terminals.
- Recharge or replace battery.

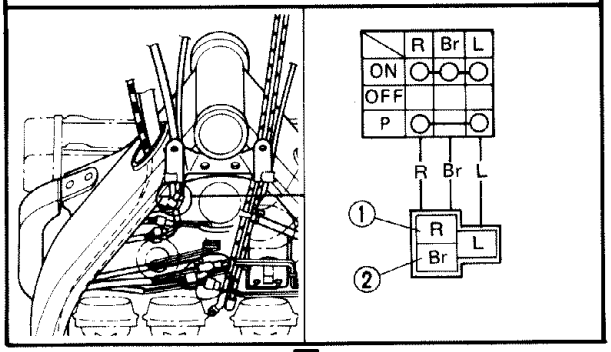
CORRECT ↓

*

*

3. 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.



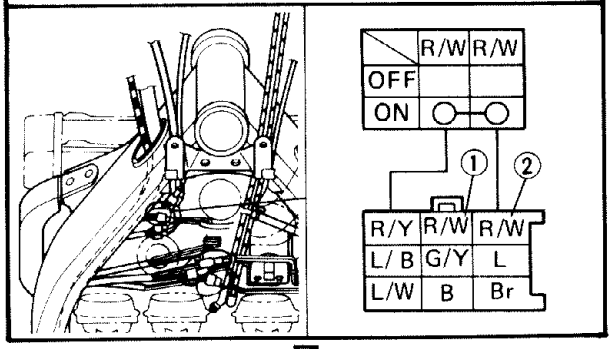
INCORRECT

Replace main switch.

CORRECT

4. "ENGINE STOP" switch

- Disconnect the "ENGINE STOP" switch 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).

CORRECT

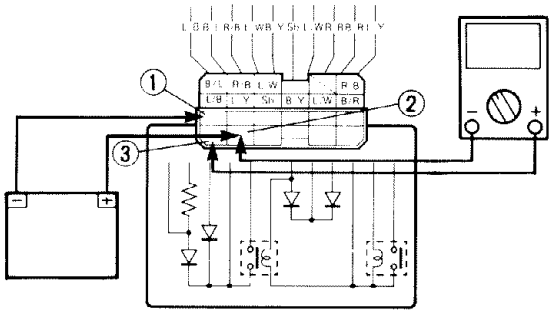
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5. Fuel pump relay (relay assembly)

- Disconnect the fuel pump relay coupler from the wire harness.
- Connect the pocket tester (Ω x 1) and battery (12V) voltage to the fuel pump relay coupler terminals.

Tester (+) lead → Blue/Black ① terminal
Tester (–) lead → Red/Black ② terminal
Battery (+) lead → Red/Black ② terminal
Battery (–) lead → Black/Blue ③ terminal



- Check the relay for continuity.

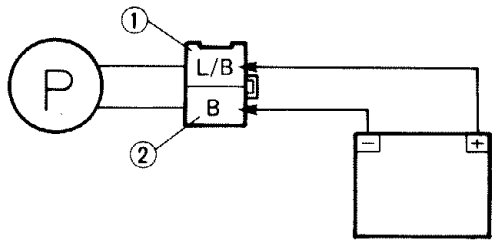
NO CONTINUITY → Replace relay assembly.

CONTINUITY ↓

6. Fuel pump

- Disconnect the fuel pump coupler from the wire harness.
- Connect the battery voltage as shown.

Battery (+) lead → Blue/Black ① terminal
Battery (-) lead → Black ② terminal

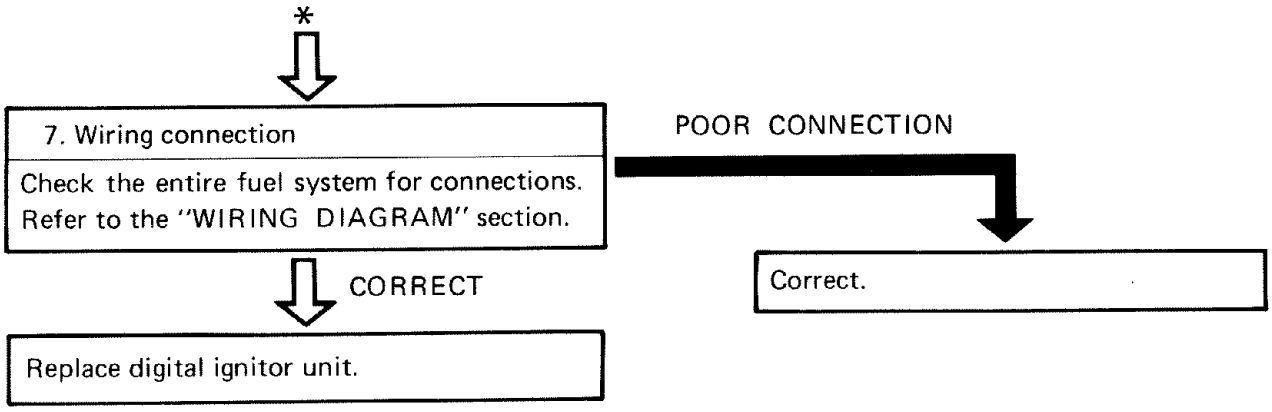


- Check the fuel pump operation.

NO OPERATIVE → Replace fuel pump.

OPERATIVE ↓

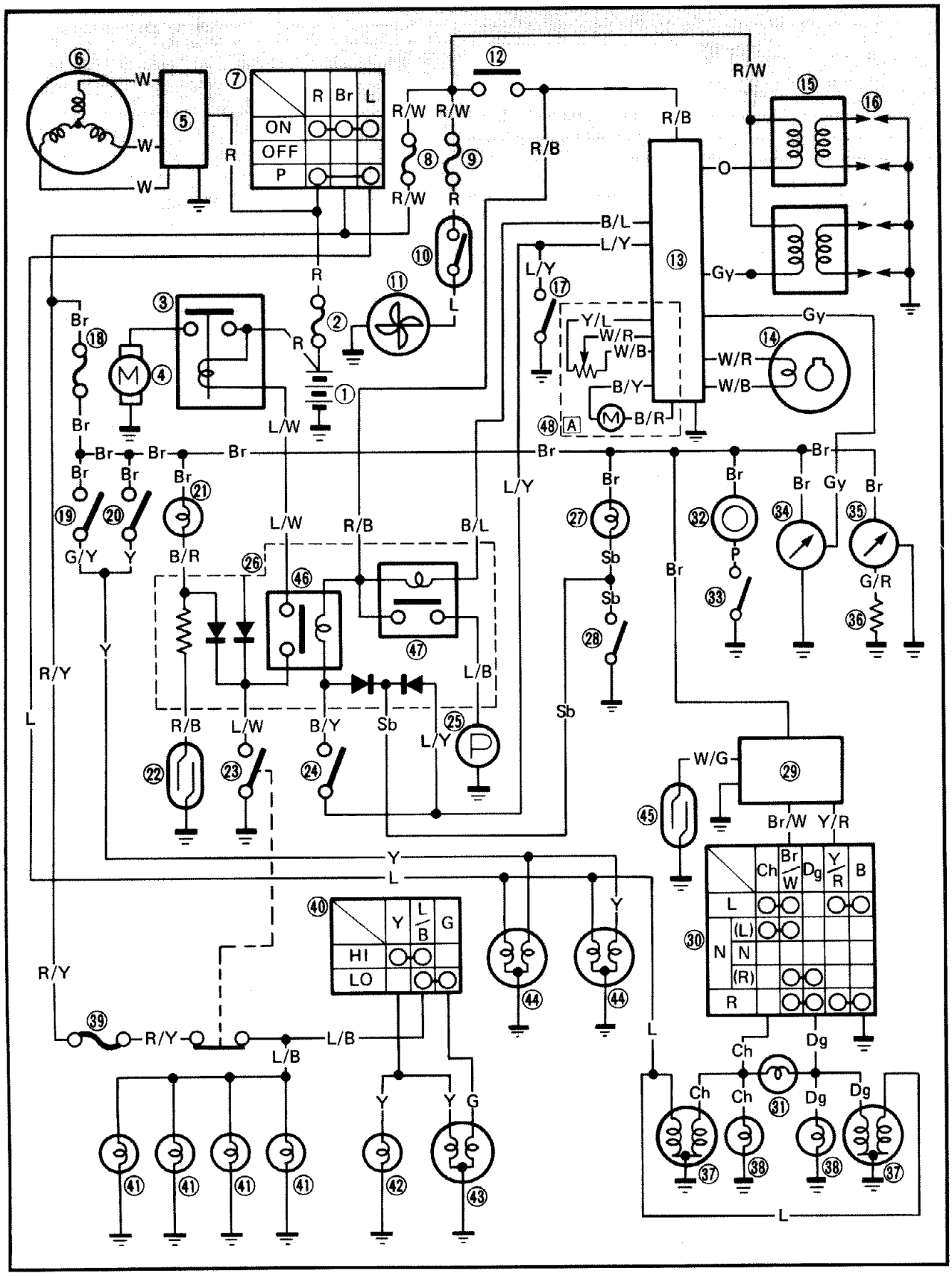
*


*
7. Wiring connection
Check the entire fuel system for connections.
Refer to the "WIRING DIAGRAM" section.
POOR CONNECTION
Correct.
CORRECT
Replace digital ignitor unit.

— MEMO —

EXUP SYSTEM (FOR CALIFORNIA ONLY)

CIRCUIT DIAGRAM



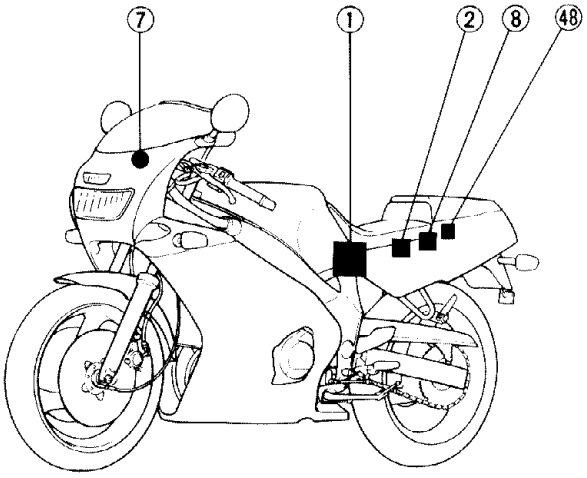
Aformentioned circuit diagram shows EXUP circuit in circuit diagram.

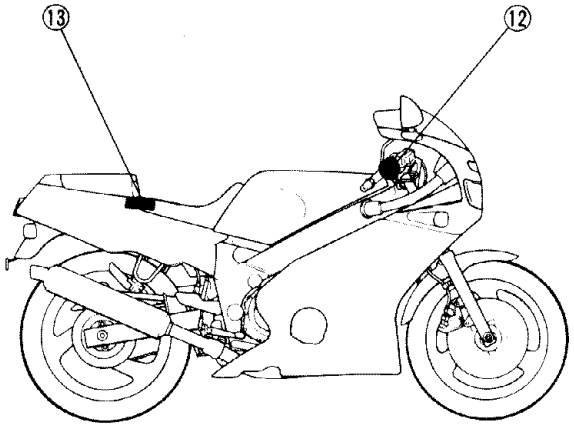
NOTE:

For the color codes, see page 41.

① Battery
② Fuse (main)
⑦ Main switch
⑧ Fuse (ignition)
⑫ "ENGINE STOP" switch
⑬ Ignitor unit
㊽ "EXUP" servo motor

[A] For California only





TROUBLESHOOTING

EXUP SERVOMOTOR DOES NOT OPERATE.

Procedure (1)
Check;
1. EXUP servo motor operation (with EXUP servo motor coupler connected)
2. Voltage
3. EXUP servo motor operation (with EXUP servo motor coupler disconnected)
4. EXUP servo motor resistance (potentiometent resistance)
5. Wiring connection (entire EXUP system)

Procedure (2)
Check;
1. Fuse "MAIN/IGNITION"
2. Battery
3. Main switch
4. "ENGINE STOP" switch
5. Wiring connection (entire EXUP system)

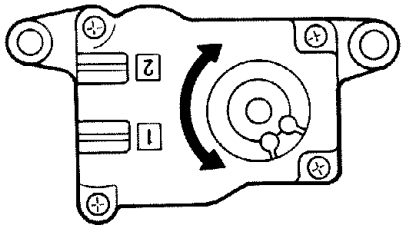
NOTE:
- Remove the following parts before troubleshooting.
  1) Seat (front and rear)
  2) Side cover (left)
  3) Side cowling (left)
- Use the following special tool in this troubleshooting.



Pocket tester:
YU-03112
90890-03112

Procedure (1)

1. EXUP servo motor operation (with EXUP servo motor coupler connected)
- Disconnect the EXUP cables at EXUP servo motor pully side.
- Start the engine and rev it up to 2,000 r/min.

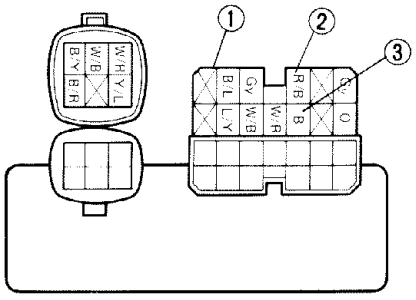


PULLY TURNS → Check the EXUP cables connection. If connection is correct. Inspect the EXUP valve and cables. Refer to "ENGINE OVERHAUL" section in the CHAPTER 4.

PULLY DOES NOT TURN

2. Voltage
- Connect the pocket tester (DC20V) to the ignitor unit ① connector.

Tester (+) lead → Red/Black ② terminal
Tester (–) lead → Black ③ terminal



- Turn the main switch to "ON" and check for the voltage between "Red/Black and Black".

Voltage (Red/Black – Black):
10 ~ 14V

OUT OF SPECIFICATION

Go to the "Procedure (2)".

MEETS SPECIFICATION

3. EXUP servo motor operation (with EXUP servo motor coupler disconnected)

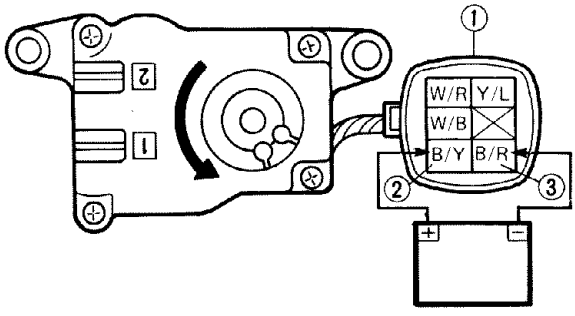
- Disconnect the EXUP cables at EXUP servo motor pulley side.
- Disconnect the EXUP servo motor coupler ① from the wireharness.
- Connect the battery leads to the EXUP servo motor coupler.

Battery positive lead → Black/Yellow ② lead
Battery negative lead → Black/Red ③ lead

- Check for pully operation by allowing it to rotate serveral times.

CAUTION:

This test should be performed within a few seconds to prevent further damage.



PULLY DOES NOT TURN

Replace EXUP servo motor.

PULLY TURNS

*

*

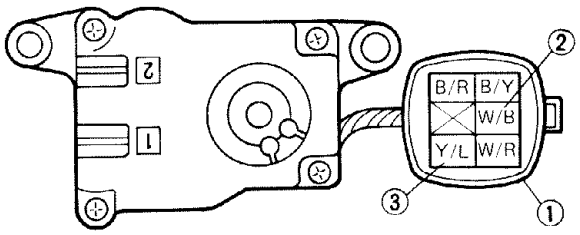
4. EXUP servo motor resistance (potentiometer resistance)

- Disconnect the EXUP servo motor coupler ① from the wireharness.

Steps 1:

- Connect the pocket tester (Ω x 1K) to the EXUP servo motor couplers.

Tester (+) lead → White/Black ② lead
Tester (—) lead → Yellow/Blue ③ lead



- Measure the EXUP servo motor resistance.

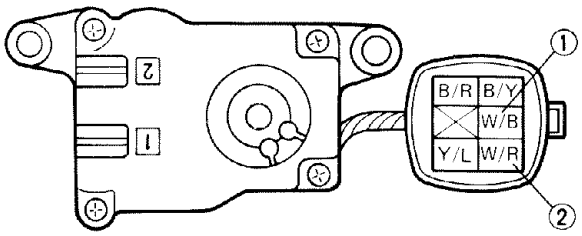
EXUP servo motor resistance:
6.7 ~ 10 kΩ
(White/Black — Yellow/Blue)

OUT OF SPECIFICATION

Steps 2:

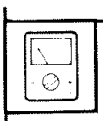
- Connect the pocket tester (Ω x 1K) to the EXUP servo motor coupler.

Tester (+) lead → White/Black ① lead
Tester (—) lead → White/Red ② lead



- Measure the EXUP servo motor resistance while turning the pully slowly.

EXUP servo motor is faulty, replace it.



EXUP servo motor resistance:
0 ~ about 10 kΩ
(White/Black – White/Red)
When pully is turned one turn.

BOTH MEET SPECIFICATIONS

5. Wiring connection

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

POOR CONNECTION

Correct.

CORRECT

Ignitor unit is faulty, replace it.

Procedure (2)

1. Fuse "MAIN/IGNITION"
- Remove the fuse "MAIN" and "IGNITION".
- Connect the pocket tester (Ω x 1) to the fuse "MAIN" and "IGNITION".
- Check the fuse for continuity.

NO CONTINUITY → Replace fuse "MAIN" and/or "IGNITION".

CONTINUITY ↓

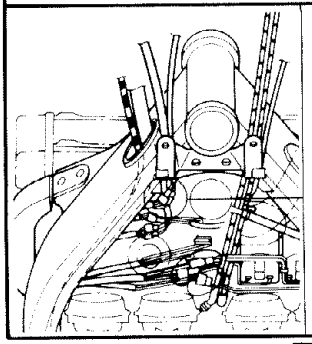
2. Battery
- Check the battery condition.
- Refer to the "BATTERY INSPECTION" section in the CHAPTER 3.

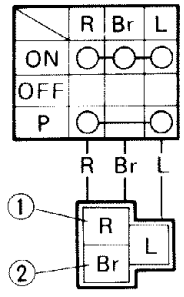
Specific gravity:
1.280 at 20° C (68° F)

INCORRECT →
- Refill battery fluid.
- Clean battery terminals.
- Recharge or replace battery.

CORRECT ↓

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

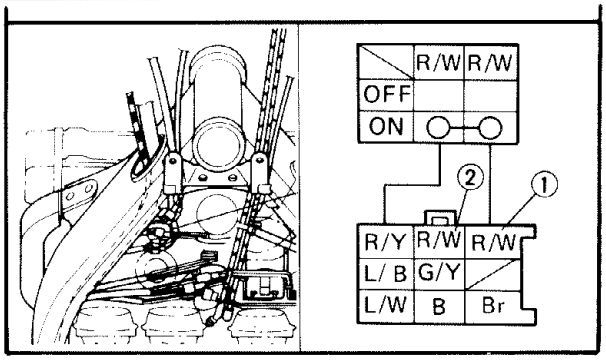




INCORRECT → Replace main switch.

CORRECT ↓

4. "ENGINE STOP" switch
- Disconnect the "ENGINE STOP" switch coupler from the wireharness.
- 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).

CORRECT

5. Wiring connection

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

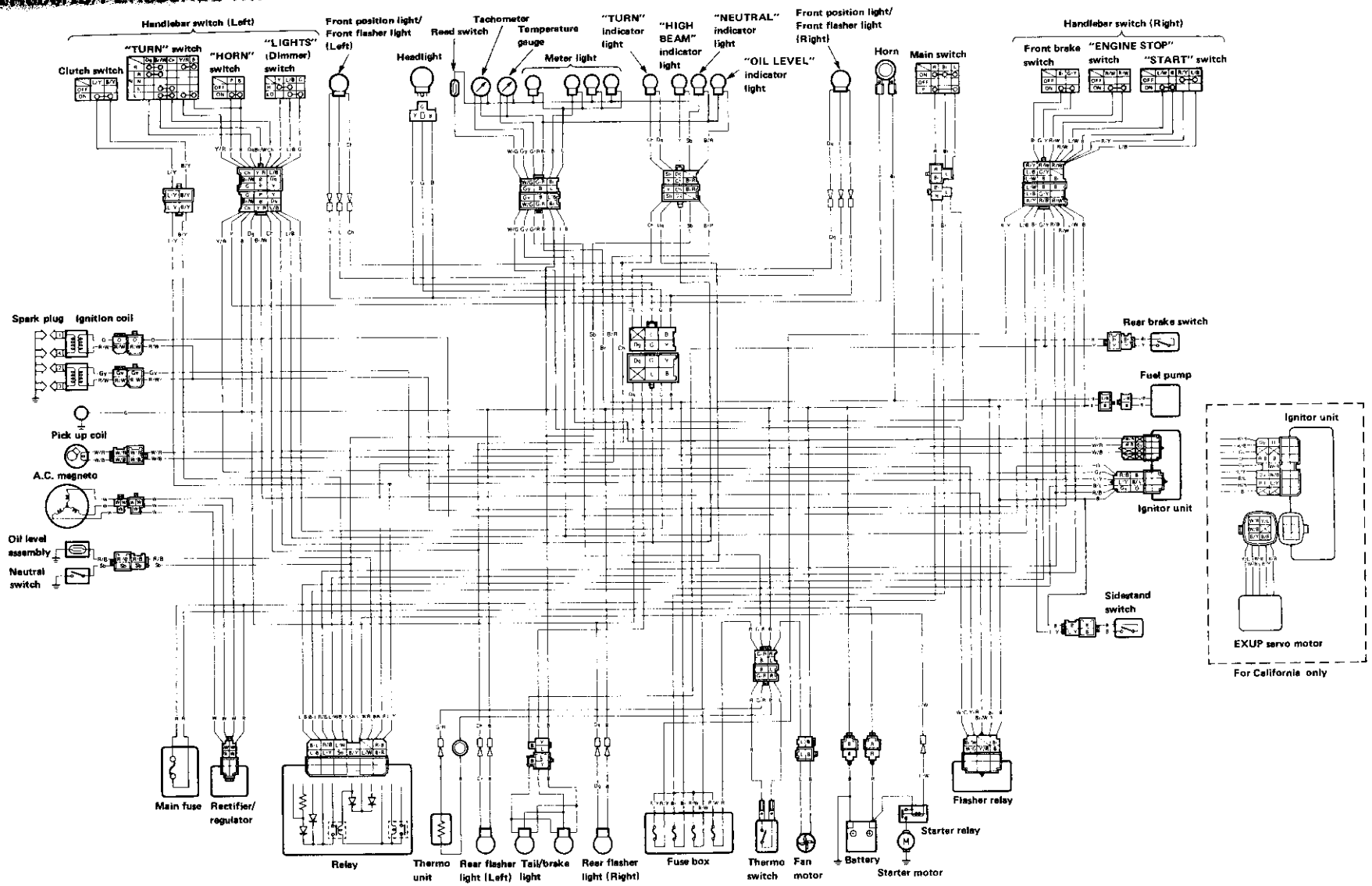
POOR CONNECTION

Correct.

CORRECT

Go to "Procedure (1)".

FZR600R/FZR600RSC WIRING DIAGRAM



COLOR CODE

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