YAMAHA

FJ1200W
FJ1200WC

Supplementary
Service Manual

LIT-11616-06-94

3SK-28197-10

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the FJ1200W/WC. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

FJ1100L/LC Service Manual: LIT-11616-04-08
FJ1200S/SC Supplementary Service Manual: LIT-11616-05-00

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

FJ1200W/WC
SUPPLEMENTARY
SERVICE MANUAL
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LIT-11616-06-94

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 FJ1200W/WC. Please read this material carefully.

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

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

⚠CAUTION: A CAUTION indicates special procedures that must be followed to avoid damage to the motorcycle.

⚠WARNING: A WARNING indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

MANUAL FORMAT

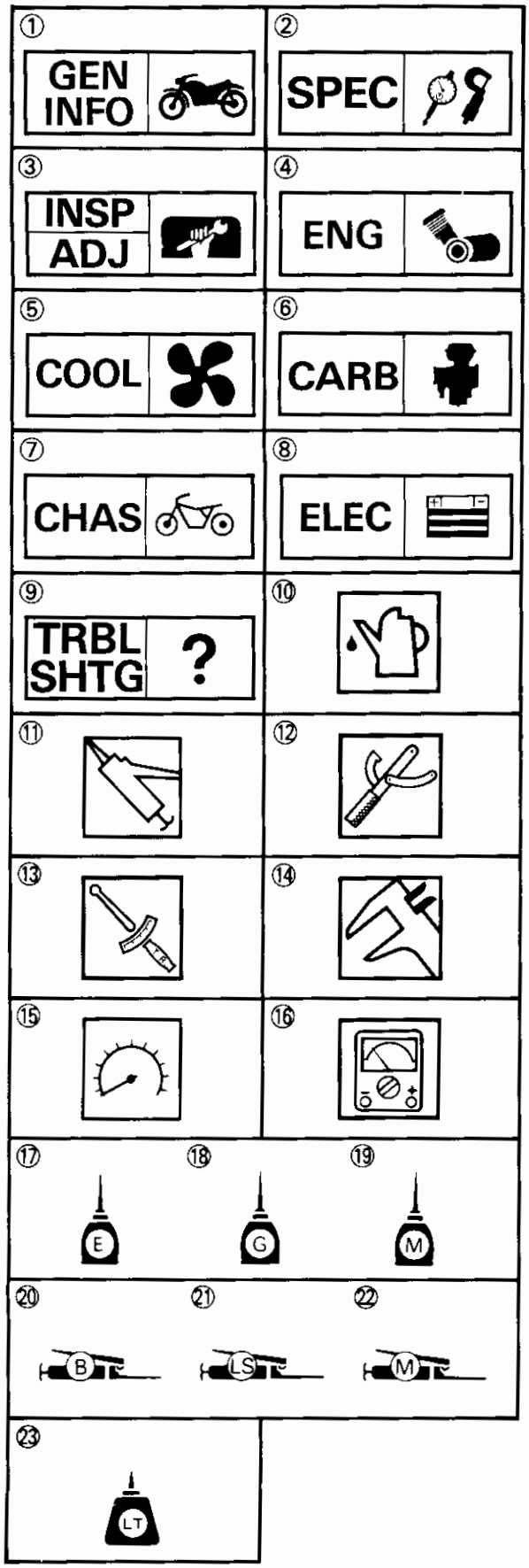
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/Damage→Replace.

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 in the text.

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®)

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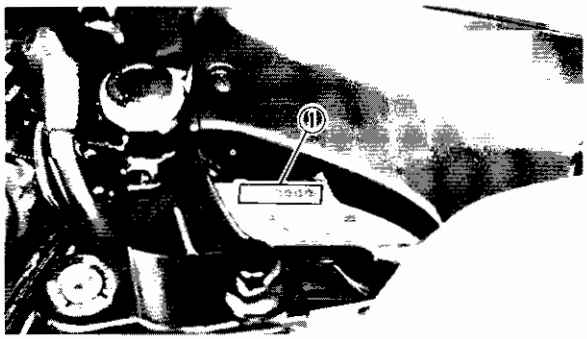
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FJ1200W/WC WIRING DIAGRAM



GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION

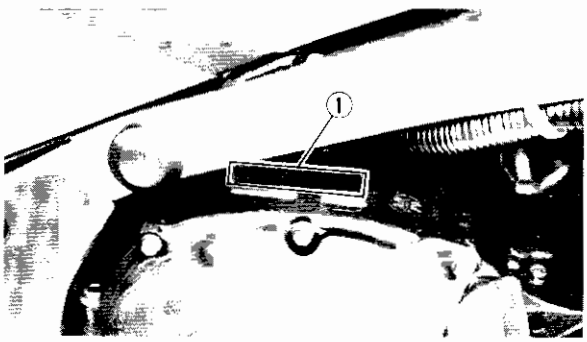
VEHICLE IDENTIFICATION NUMBER

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

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.

Starting serial number:
FJ1200W:
JYA3SKE0*KA000101
FJ1200WC (For California):
JYA3SKC0*KA008101



ENGINE SERIAL NUMBER

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

NOTE:

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

Starting serial number:
FJ1200W:
3SK-000101
FJ1200WC (For California):
3SK-008101

NOTE:

Designs and specifications are subject to change without notice.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Except for California: FJ1200W
For California: FJ1200WC

Model	FJ1200W/WC
Model Code Number:	FJ1200W: 3SK1 FJ1200WC: 3SK2
Engine Starting Number:	FJ1200W: 3SK-000101 FJ1200WC: 3SK-008101
Vehicle Identification Number:	FJ1200W: JYA3SKE0*KA000101 FJ1200WC: JYA3SKC0*KA008101
Dimensions:	
Overall Length	2,205 mm (86.8 in)
Overall Width	775 mm (30.5 in)
Overall Height	1,245 mm (49.0 in)
Seat Height	780 mm (30.7 in)
Wheelbase	1,490 mm (58.7 in)
Minimum Ground Clearance	140 mm (5.5 in)
Basic Weight:	
Weight Oil and Full Fuel Tank	FJ1200W: 261 kg (575 lb) FJ1200WC: 262 kg (577 lb)
Oil Type or Grade:	
Engine Oil	Yamalube 4 (20W40) or SAE 20W40 type SE motor oil (If temperature does not go below 5°C (40°F)) Yamalube 4 (10W30) or SAE 10W30 type SE motor oil (If temperature does not go above 15°C (60°F))
Transmission:	
Primary Reduction System	Spur gear
Primary Reduction Ratio	98/56 (1.750)
Secondary Reduction System	Chain Drive
Secondary Reduction Ratio	40/17 (2.353)
Transmission Type	Constant mesh, 5-speed
Operation	Left foot operation
Gear Ratio: 1st	40/14 (2.857)
2nd	36/18 (2.000)
3rd	33/21 (1.571)
4th	31/24 (1.291)
5th	29/26 (1.115)
Tire:	
Type	Tubeless
Manufacturer/Size/Type:	
Front:	DUNLOP/ 120/70 V17-V250/K330A
Rear:	DUNLOP/ 150/80 V16-V250/K330
Minimum Tire Tread Depth	1.0 mm (0.04 in)

Model	FJ1200W/WC	
Tire Pressure (Cold tire):		
Basic Weight:		
With Oil and Full Fuel Tank	FJ1200W: 261 kg (576 lb) FJ1200WC: 262 kg (578 lb)	
Maximum Load*	FJ1200W: 187 kg (412 lb) FJ1200WC: 186 kg (410 lb)	
Cold Tire Pressure:	Front	Rear
Up to 90 kg (198 lb) Load*	230 kPa (2.3 kg/cm^2, 32 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 the total weight of cargo, rider, passenger and accessories.		
Electrical:		
Ignition System	TCI (Digital ignition)	
Generator System	AC generator	
Battery Type or Model	YB14L	
Battery Capacity	12V 14AH	

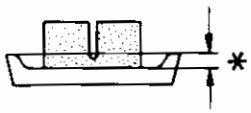
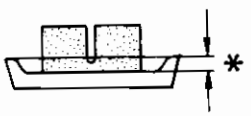
MAINTENANCE SPECIFICATIONS

Engine

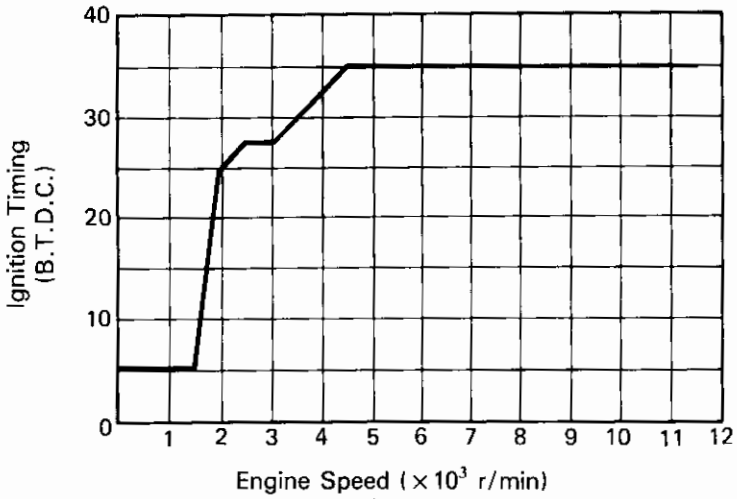
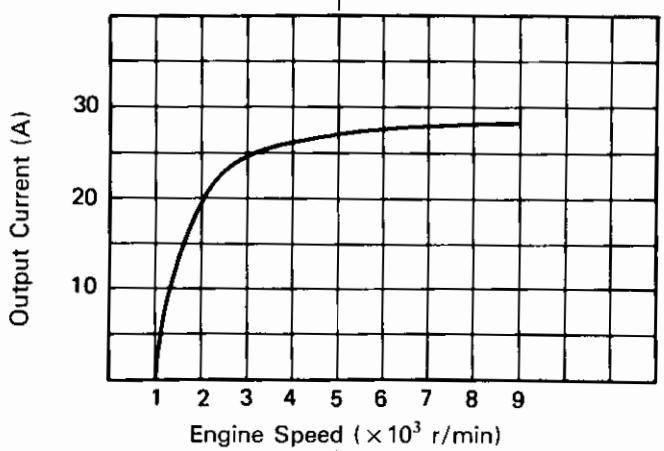
Model		FJ1200W/WC
Carburetor:		
ID Mark		3SK00 FJ1200WC: 3SK10
Main Jet	(M.J.)	#110
Main Air Jet	(M.A.J.)	#45
Jet Needle	(J.N.)	5FZ72
Needle Jet	(N.J.)	Y-2
Pilot Air Jet	(P.A.J.)	#155
Pilot Jet	(P.J.)	#37.5
Pilot Screw	(P.S.)	Preset
Valve Seat Size	(V.S.)	1.5
Starter Jet	(G.S.)	#30
Fuel Level	(F.L.)	2.5 ~ 3.5 mm (0.10 ~ 0.14 in)
Float Height	(F.H.)	21.3 ~ 23.3 mm (0.84 ~ 0.92 in)
Engine Idling Speed		1,050 ~ 1,150 r/min
Vacuum Pressure at Idling Speed		Above 29.3 kPa (220 mmHg, 8.7 inHg)
Vacuum Synchronous Difference		Below 1.33 kPa (10 mmHg, 0.394 inHg)

Chassis

Model	FJ1200W/WC
Front Suspension:	
Front Fork Travel	150 mm (5.91 in)
Fork Spring Free Length	485 (19.1 in)
<Limit>	480 mm (18.9 in)
Spring Rate: K1	4.71 N/mm (0.48 kg/mm, 26.9 lb/in)
K2	6.86 N/mm (0.70 kg/mm, 39.2 lb/in)
Stroke: K1	0 ~ 100 mm (0 ~ 3.74 in)
K2	100 ~ 150 mm (3.74 ~ 5.91 in)
Optional Spring	No
Oil Capacity/Oil Level	395 cm^3 (13.9 Imp oz, 13.4 US oz)/ 169 mm (6.65 in)
Oil Grade	Yamaha fork oil 10wt equivalent
Rear Suspension:	
Shock Absorber Travel	40 mm (1.57 in)
Spring Free Length	163.5 mm (6.44 in)
<Limit>	159 mm (6.26 in)
Fitting Length	151.5 mm (5.96 in)
Spring Rate	196 N/mm (20 kg/mm, 1,120 lb/in)
Stroke	0 ~ 40 mm (0 ~ 1.57 in)
Optional Spring	No.

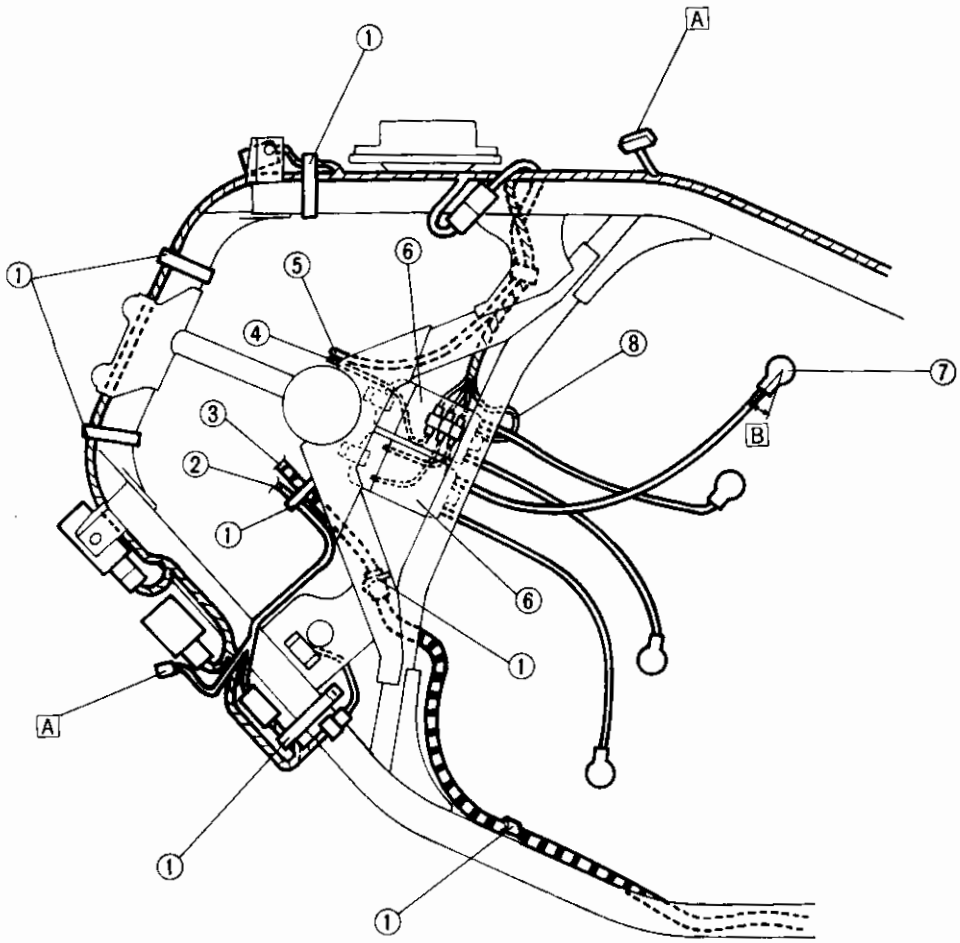
Model		FJ1200W/WC
Front Wheel:		
Type		Cast wheel
Rim Size		MT3.00×17
Rim *Material*		Aluminum
Rim Runout Limit:	Radial	2 mm (0.08 in)
	Lateral	2 mm (0.08 in)
Front Disc Brake:		
Type		Dual
Disc Outside Dia.×Thickness		298×4 mm (11.7×0.2 in)
Pad Thickness	Inner	5.5 mm (0.22 in)
<Limit>*		0.5 mm (0.02 in)
Pad Thickness	Outer	5.5 mm (0.22 in)
<Limit>*		0.5 mm (0.02 in)
		
Master Cylinder Inside Dia.		15.87 mm (0.63 in)
Caliper Cylinder Inside Dia.		32.1 mm (1.26 in)
Brake Fluid Type		DOT#4 If DOT#4 is not available, #3 can be used.
Rear Disc Brake:		
Type		Single
Disc Outside Dia.×Thickness		282×7.5 mm (11.1×0.3 in)
Pad Thickness	Inner	5.5 mm (0.22 in)
<Limit>*		0.5 mm (0.02 in)
Pad Thickness	Outer	5.5 mm (0.22 in)
<Limit>*		0.5 mm (0.02 in)
		
Master Cylinder Inside Dia.		14.0 mm (0.55 in)
Caliper Cylinder Inside Dia.		42.8 mm (1.69 in)
Brake Fluid Type		DOT #4 If DOT #4 is not available, #3 can be used.

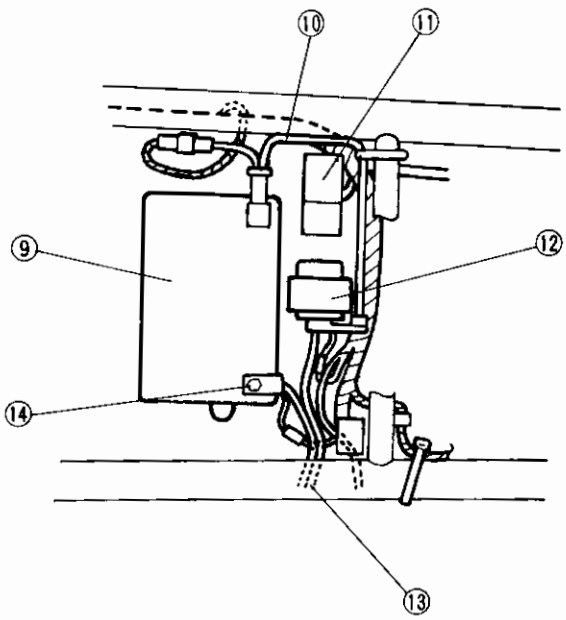
Electrical

Model	FJ1200W/WC
Ignition System:	
Ignition Timing (B.T.D.C.)	5° at 1,000 r/min
Advancer Type	Electrical/Vacuum
	
TCI:	
Pickup Coil Resistance (Color)	149 ~ 182Ω at 20°C (68°F) (Orange – Black), (Gray – Black)
TCI Unit-Model/Manufacturer	TID14-90/HITACHI
AC Generator:	
Model/Manufacturer	B3G/NIPPONDENSO
Nominal Output	12V, 28A at 5,000 r/min
	
Flasher Relay:	
Type	Semi-transistor type
Model/Manufacturer	FB257H/NIPPONDENSO
Self Cancelling Device	Yes.
Flasher Frequency	75 ~ 95 cycle/min
Wattage	27W × 4 + 3.4W

Model	FJ1200W/WC
Self Cancelling Unit: Model/Manufacturer	FB257H/NIPPONDENSO
Fuel Gauge: Model/Manufacturer Sender Unit Resistance (Color): Full Empty	36Y-03/NIPPONSEIKI (Green—Black) 4~10Ω at 20°C (68°F) 90~100Ω at 20°C (68°F)

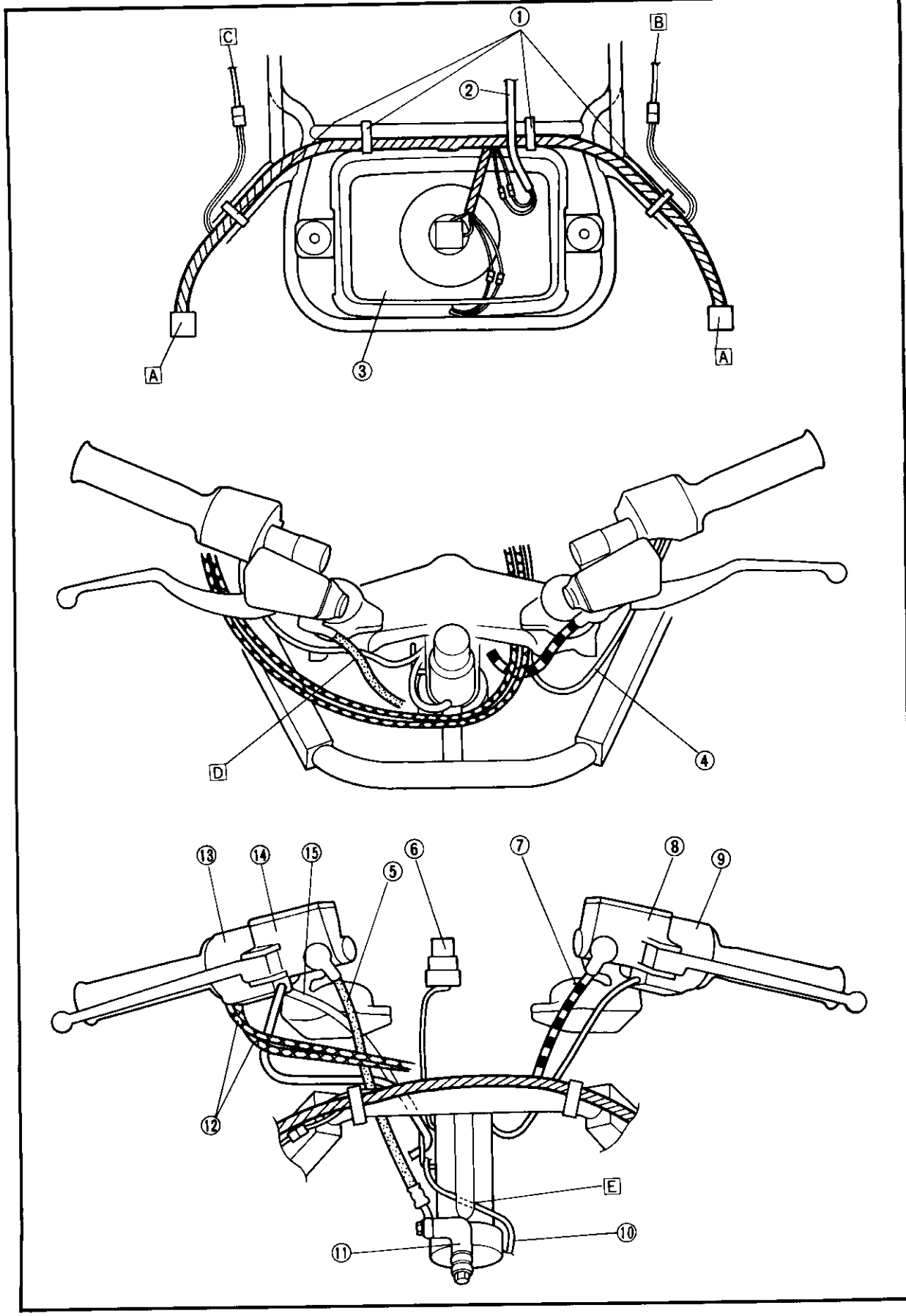
CABLE ROUTING





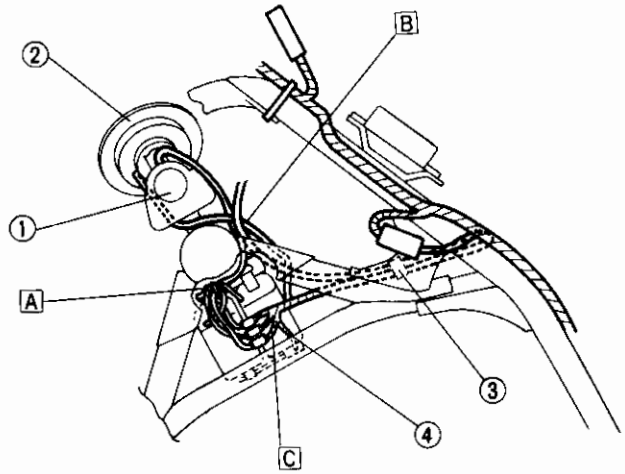
① Clamp
② Handlebar switch (left) lead
③ Clutch hose
④ Main switch lead
⑤ Handlebar switch (right) lead
⑥ Ignition coil
⑦ Spark plug cap
⑧ Ground
⑨ Battery
⑩ Battery positive lead
⑪ Fuse holder
⑫ Starter relay
⑬ Starter motor lead
⑭ Battery negative lead

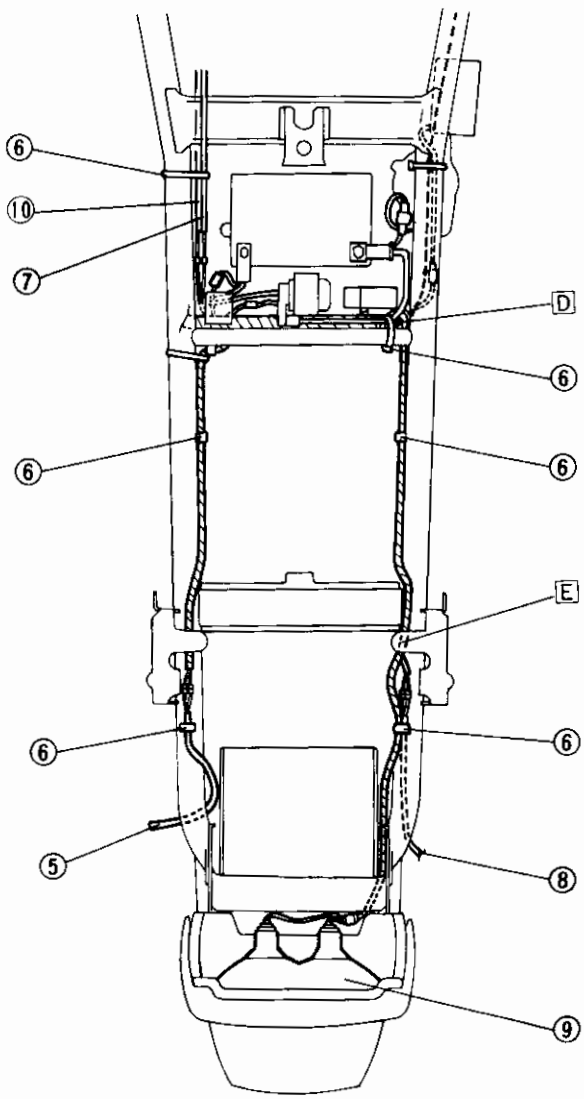
Ⓐ Connect the wire harness of the cowling.
Ⓑ Install the spark plug cap at approx. 15°.


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① Clamp
② Meter light lead
③ Headlight
④ Handlebar switch (left) lead
⑤ Brake hose
⑥ Main switch
⑦ Clutch hose
⑧ Master cylinder (clutch)
⑨ Handlebar switch (left)
⑩ Horn lead
⑪ Joint
⑫ Throttle cable
⑬ Handlebar switch (right)
⑭ Master cylinder (brake)
⑮ Handlebar switch (right) lead

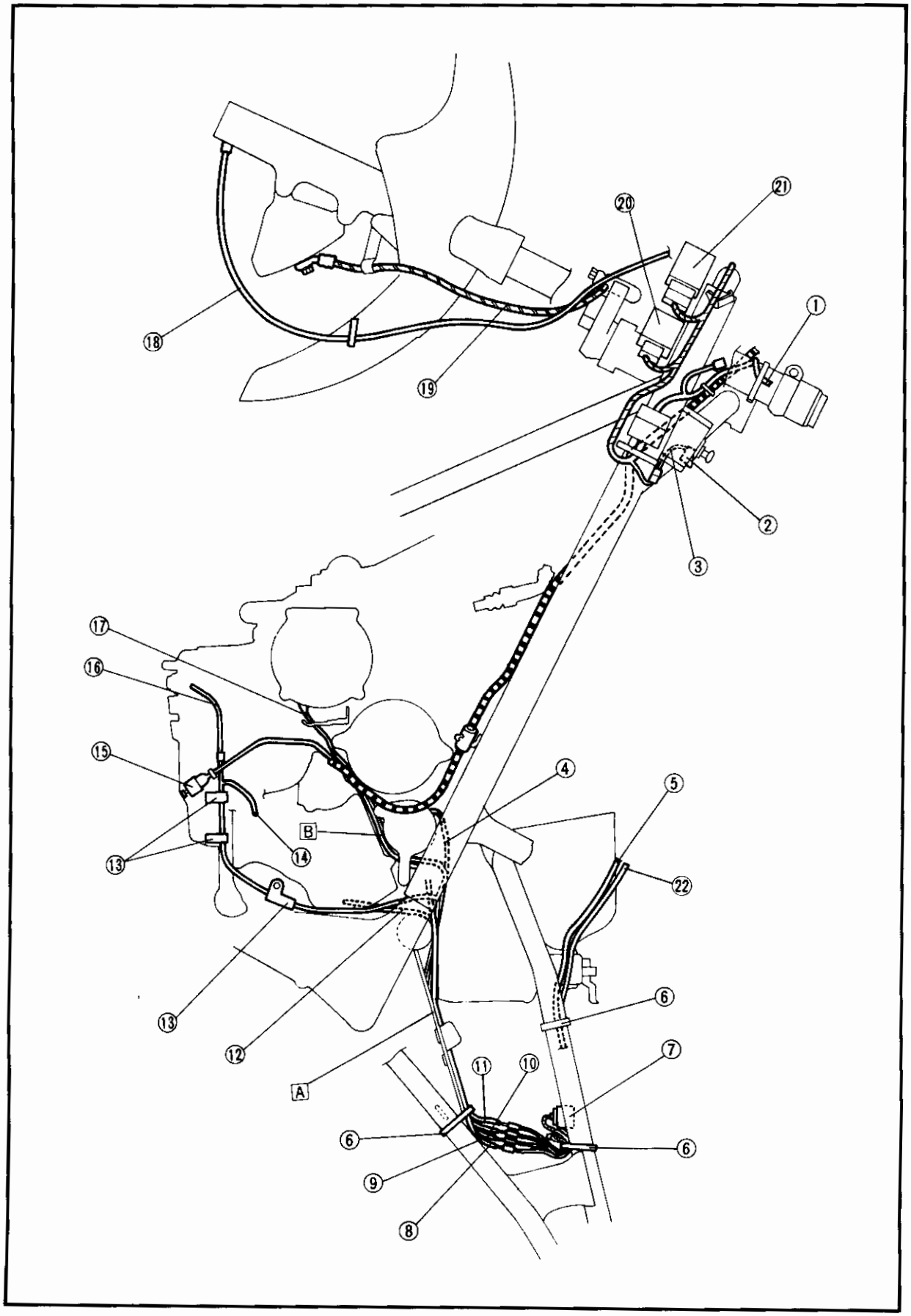
[A] Connect the wire harness of the frame.
[B] To front flasher light (right).
[C] To front flasher light (left).
[D] Pass the brake hose in front of the handlebar switch (right) lead.
[E] Pass the horn lead upper side of the pipe.


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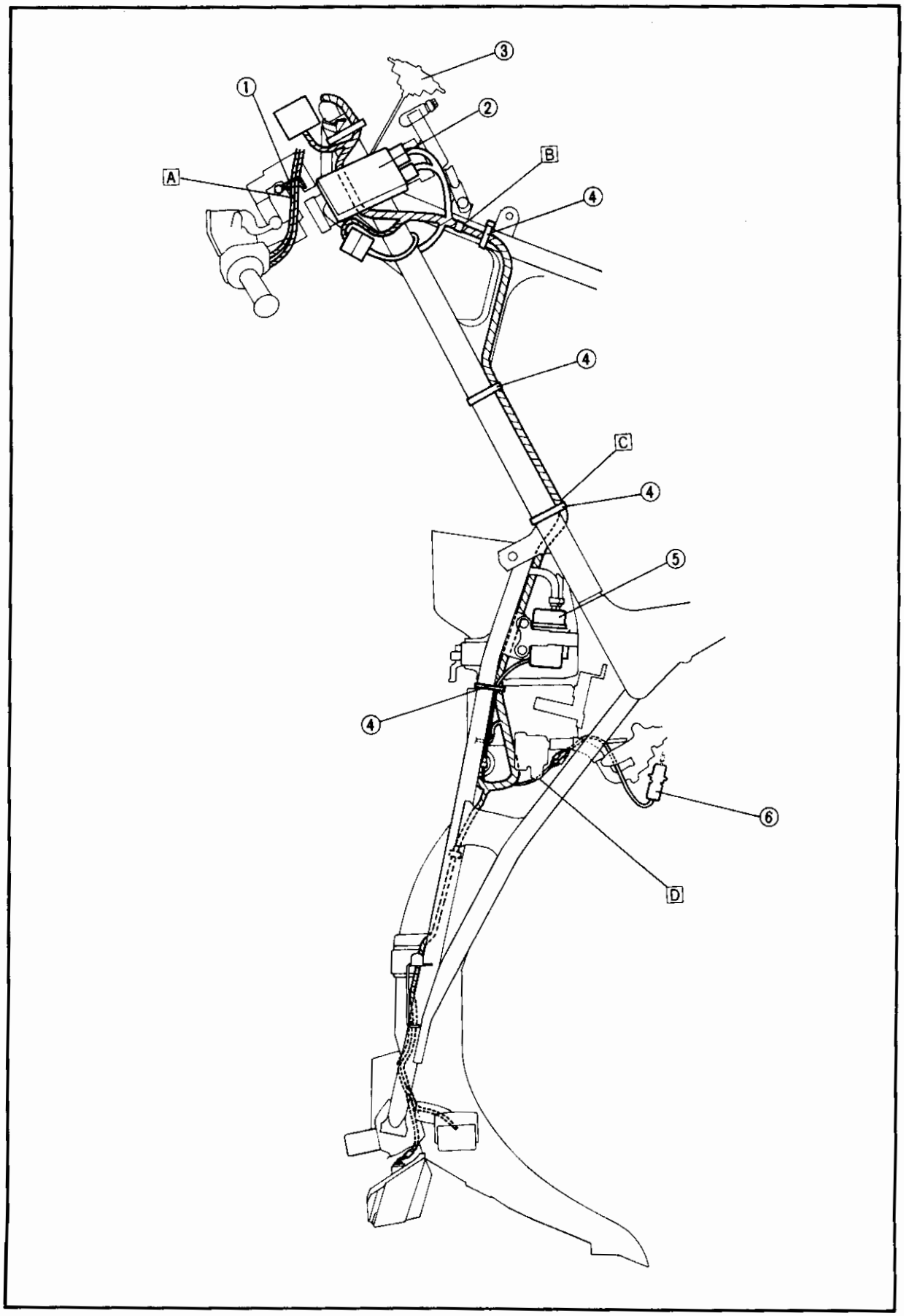
① Main switch
② Horn
③ Clamp
④ Ground
⑤ Rear flasher light (left) lead
⑥ Clamp
⑦ Fuel level sender unit lead
⑧ Rear flasher light (right) lead
⑨ Taillight
⑩ Control valve lead (for FJ1200WC)

[A] Pass the ignition coil and main switch lead into the guide.
[B] Pass the main switch, handlebar switch (right) and horn leads into the cable guide of the headpipe.
[C] Do not pinch all leads.
[D] Clamp the battery positive lead and wire harness.
[E] Pass the rear flasher light (right) lead under the bracket.


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① Handlebar switch lead
② "RESERVE" switch
③ Reserve switch lead
④ Starter motor lead
⑤ Fuel *sender* unit lead
⑥ Band
⑦ Fuel pump relay
⑧ Sidestand switch lead
⑨ Engine sub lead
⑩ A.C. generator lead
⑪ Pickup coil lead
⑫ Earth
⑬ Clamp
⑭ Neutral switch lead
⑮ Sidestand switch
⑯ Oil level switch lead
⑰ Pickup coil lead
⑱ Speedometer cable
⑲ Brake hose
⑳ Relay assembly
㉑ Flasher relay
㉒ Control valve lead (for FJ1200WC)

[A] Pass the six leads upper side of the panel.
[B] Pass the pickup coil lead and sidestand switch lead under the starter motor.


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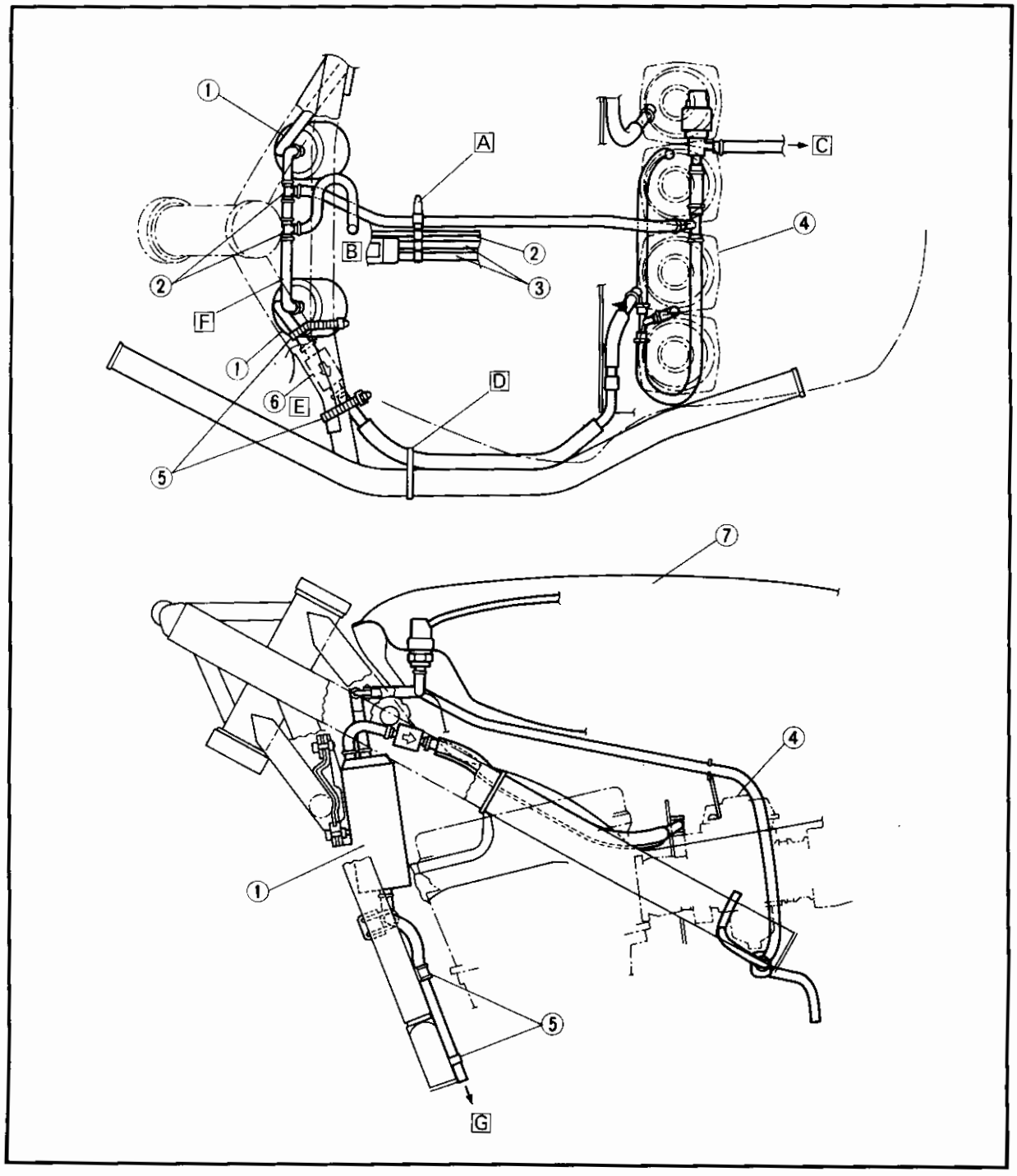
① Cable holder
② Digital ignitor unit
③ Horn
④ Band
⑤ Fuel pump
⑥ Rear brake switch

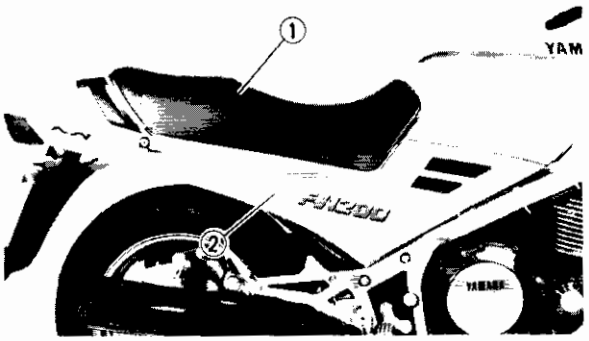
[A] Pass the cable into the cable holder.
[B] Locate the wire harness with its white tape portion at the bracket.
[C] Clamp the wire harness at 20 mm (0.8 in) from the bracket.
[D] Route the rear brake switch lead between the bracket and rear fender.

CANISTER HOSE ROUTING (FOR FJ1200WC)

① Canister
② Choke cable
③ Throttle cable
④ Carburetor
⑤ Clamp
⑥ Pressure control valve
⑦ Fuel tank

[A] Clamp the hose, throttle cables and choke cable.
[B] From fuel tank.
[C] To air.
[D] Pass the hose into the guide.
[E] Arrow mark on the pressure control valve should face toward the carburetor side.
[F] Pass the hose upper side of the ignition coil.
[G] To atmosphere.



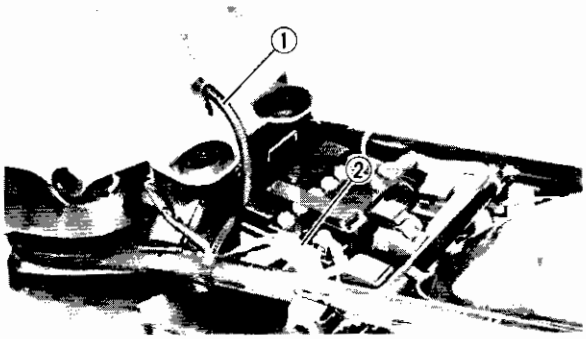


PERIODIC INSPECTION AND ADJUSTMENT

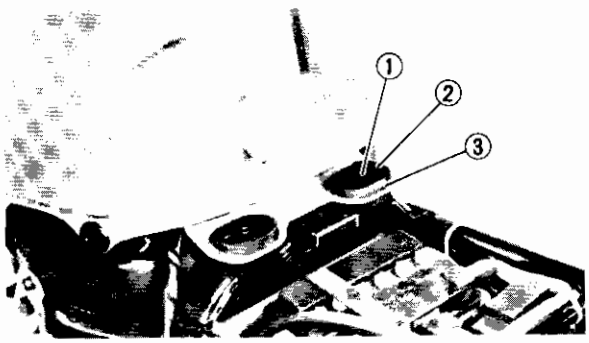
FUEL TANK

Removal

1. Place the motorcycle on a level place.
2. Remove:
   - Seat ①
   - Side covers (left and right) ②

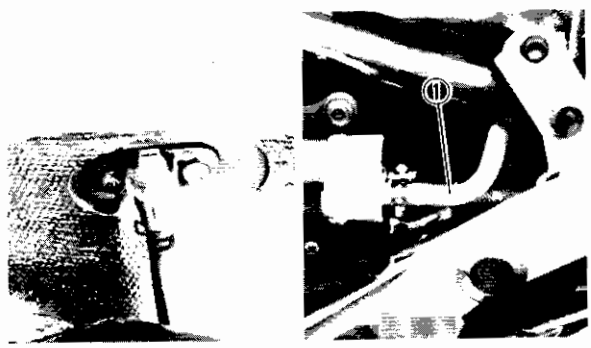


3. Disconnect:
   - Breather hose (fuel tank) ①
   - Coupler (fuel level sender unit) ②
   - Solenoid valve (fuel cock) leads



4. Remove:
   - Bolts (fuel tank) ①
   - Plates ②
   - Rubber washer ③

   Slowly lift up the fuel tank.



5. Turn the fuel cock to "OFF" position.
   Use a 8 mm open end wrench.
6. Disconnect:
   - Vacuum hose
   - Fuel hose ①
   - Breather hose (fuel tank-front) (for FJ1200WC)
7. Remove:
   - Fuel tank

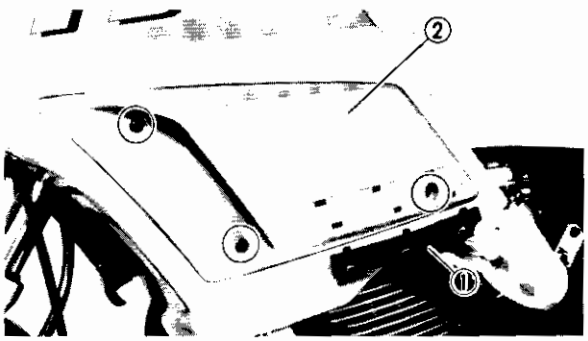
⚠WARNING:

Gasoline is highly flammable.
Avoid spilling fuel on the hot engine.

Installation

1. Install:
   - Fuel tank
   - Side covers
   - Seat

   Reverse removal procedure.
2. Turn the fuel cock to "ON" position.

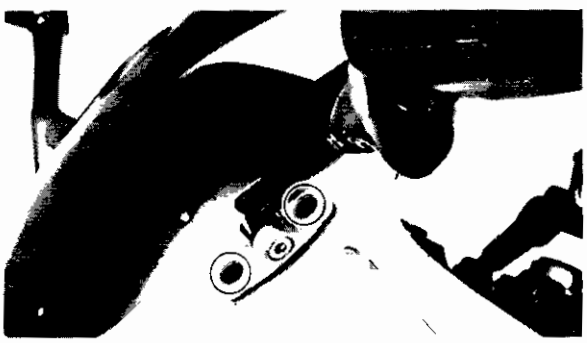


COWLING

Removal

1. Remove:
   - Fuel tank

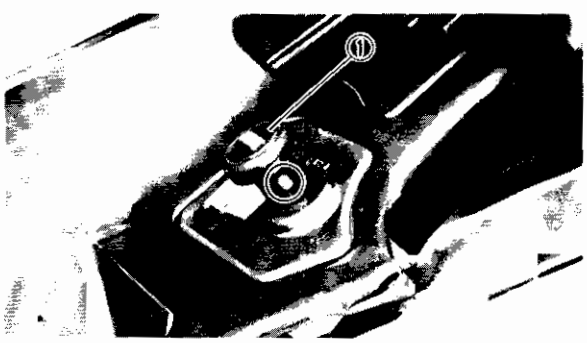
   Refer to "FUEL TANK" section.
2. Remove:
   - Molds (left and right) ①
   - Bolts (air duct)
   - Air ducts ②



3. Remove:
   - Rear view mirrors



4. Disconnect:
   - Speedometer cable ①

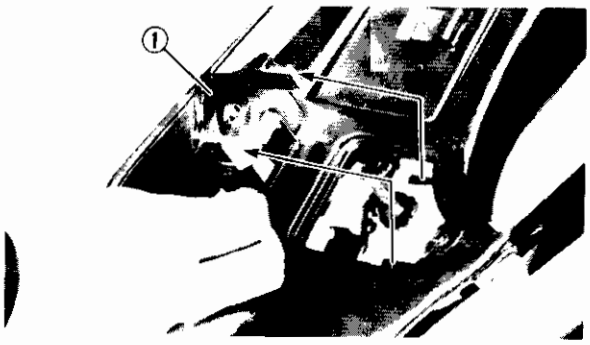


5. Remove:
   - Choke knob ①

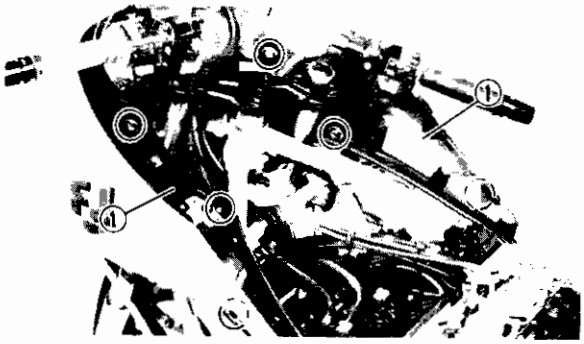
   Use a small screwdriver.

NOTE:

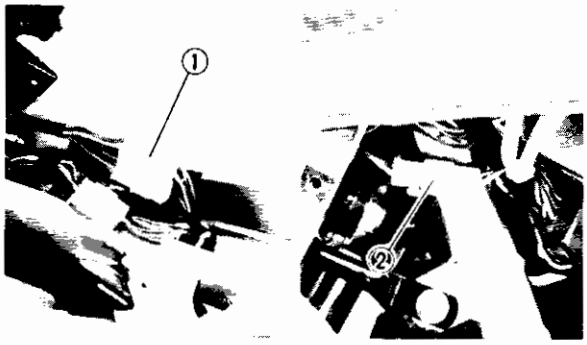
- Before pulling the knob, remove the knob holding screw.
- Do not lose the holding screw.



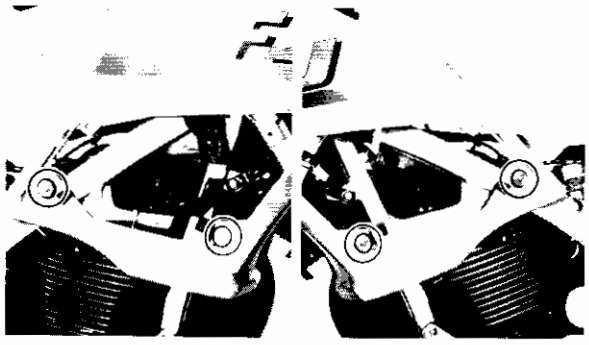
6. Remove:
   • Panel ①



7. Remove:
   • Inner panels ①



8. Disconnect:
   • Coupler (meter assembly) ①
   • Coupler ("LIGHTS" switch) ②



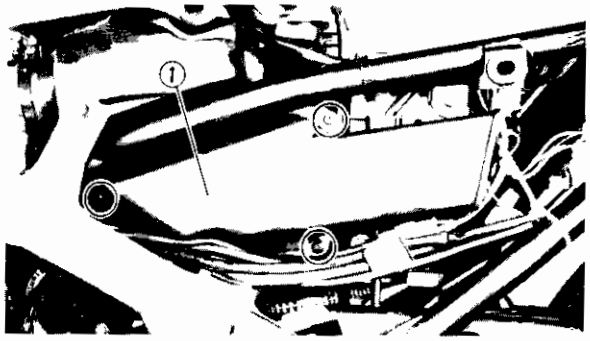
9. Remove:
   • Bolts
   • Cowling



Installation

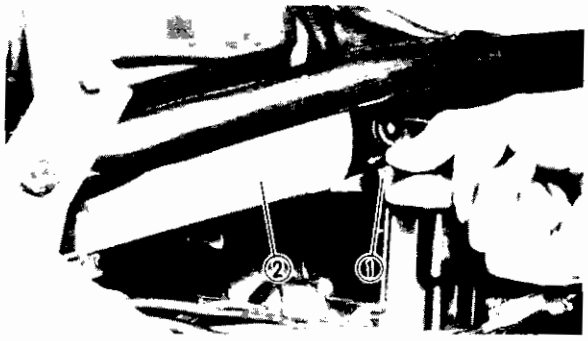
Reverse removal procedure.

1. Install:
   - Cowling
2. Connect:
   - Breather hose (fuel tank – rear)
   - Breather hose (fuel tank – front) (for FJ1200WC)
3. Install:
   - Fuel tank



AIR FILTER CLEANING

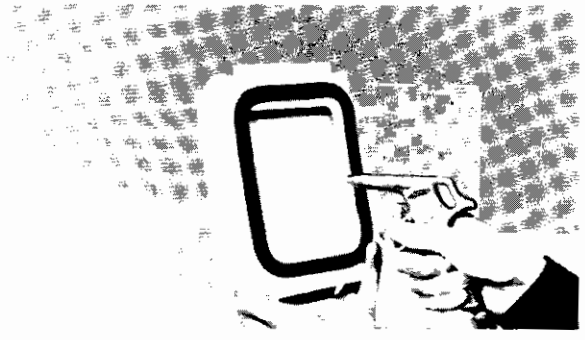
1. Remove:
   - Seat
   - Side cover (left)
2. Remove:
   - Cover (air filter) ①



3. Remove:
   - Retainers ①
   - Element ②
4. Eliminate:
   - Dust

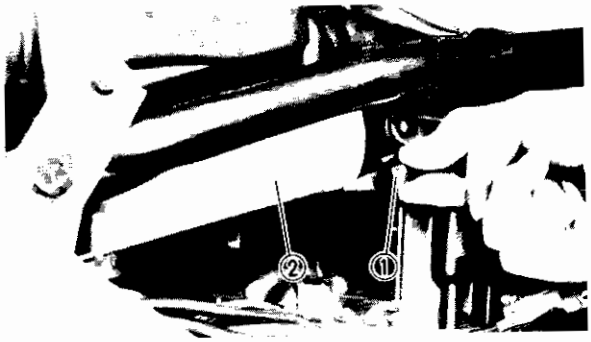
   Use compressed air
5. Inspect:
   - Element:

   Damage→Replace.



⚠CAUTION:

The engine should never be run without the air filter element installed; excessive piston and/or cylinder wear may result.



6. Install:
   - Element ②

⚠CAUTION:

Make sure the element edge fits into the corresponding filter case groove.

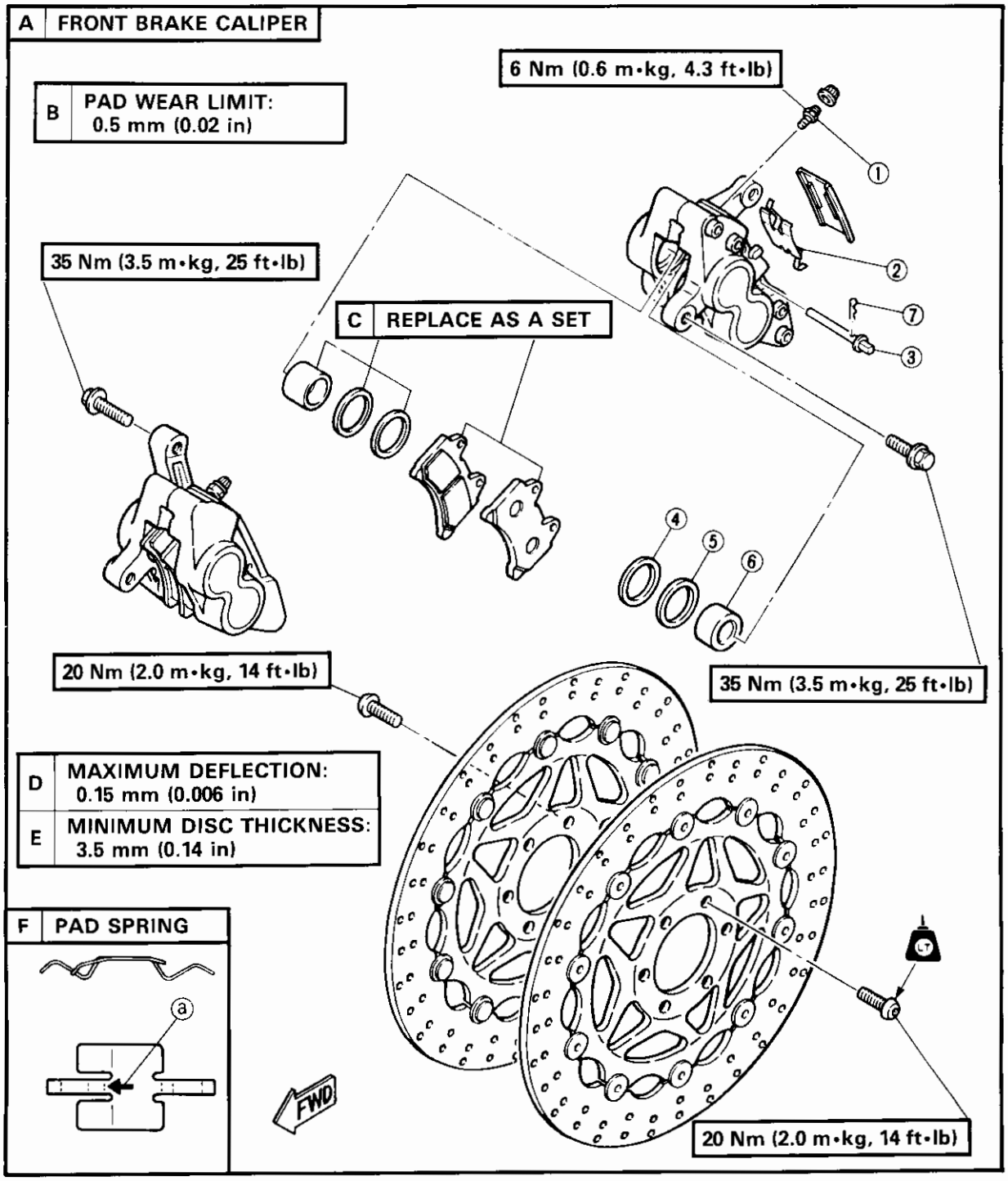
   - Retainers ①
   - Cover

CHASSIS

FRONT BRAKE

① Air bleed screw
② Pad spring
③ Retaining pin
④ Dust seal
⑤ Piston seal
⑥ Piston
⑦ Circlip

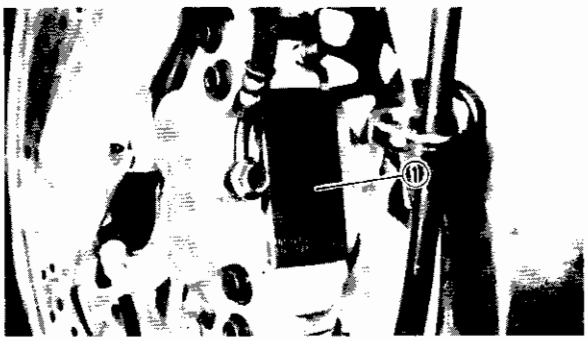
F The arrow mark ⓐ on the pad spring must pointing the disc rotating direction.



⚠CAUTION:

Disc brake components rarely require disassembly. DO NOT:

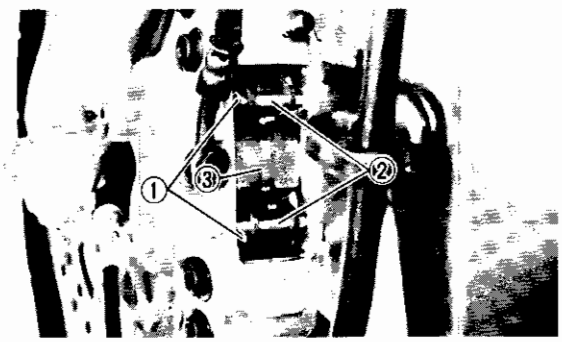
- **Disassembly components unless absolutely necessary.**
- **Use solvents on internal brake component.**
- **Use contaminated brake fluid for cleaning.**
- **Use only clean brake fluid.**
- **Allow brake fluid to come in contact with the eyes otherwise eye injury may occur.**
- **Allow brake fluid to contact painted surfaces or plastic parts otherwise damage may occur.**
- **Disconnect any hydraulic connection otherwise the entire system must be disassembled, drained, cleaned, and then properly filled and bled after reassembly.**



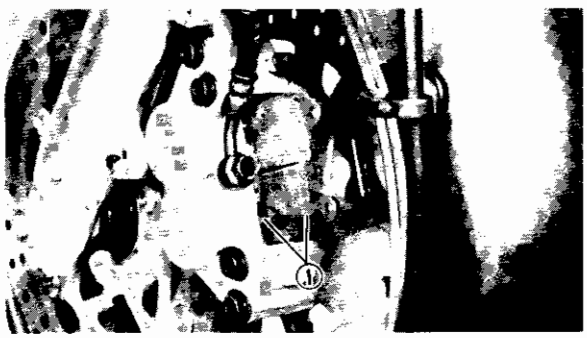
BRAKE PAD REPLACEMENT

It is not necessary to disassemble the brake caliper and brake hose to replace the brake pads.

1. Remove:
   - Cover ①



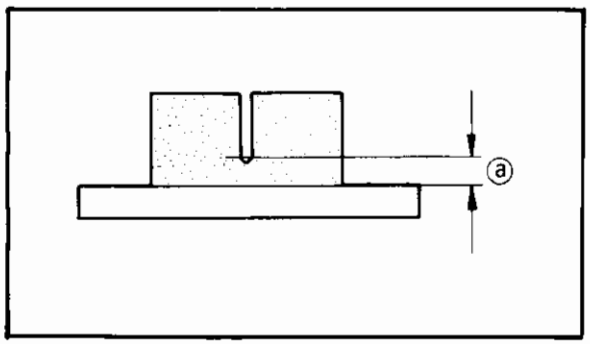
2. Remove:
   - Retaining clips ①
   - Retaining pins ②
   - Pad spring ③



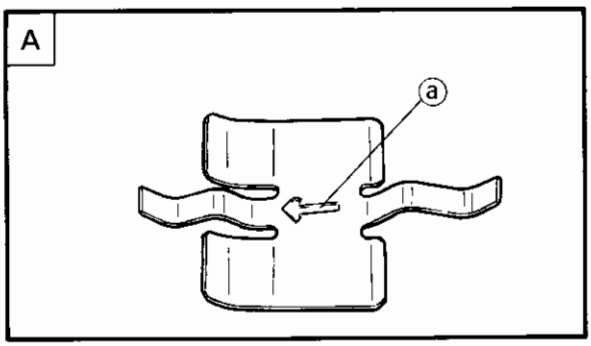
3. Remove:
   - Brake pads ①

NOTE:

- **Replace the pad spring if the pad replacement is required.**
- **Replace the pads as a set if either is found to be worn to the wear limit.**
- **Replace the pad shim if the pad replacement is required for the rear brake.**



Wear limit ⓐ:
0.5 mm (0.02 in)

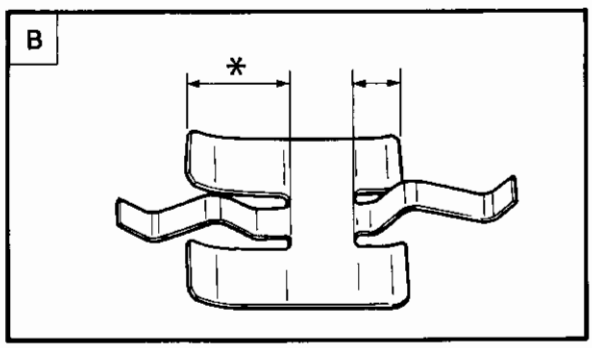


4. Install:
   Reverse removal procedure.

A Pad spring (Front)

NOTE:

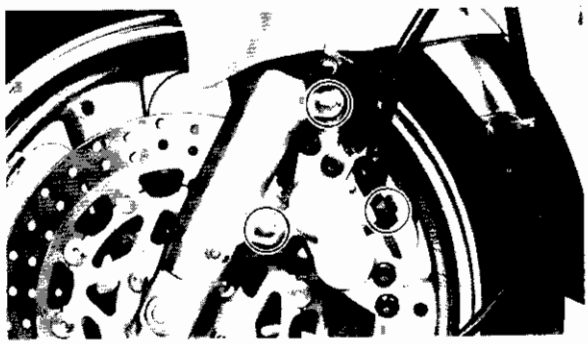
The arrow mark ⓐ on the pad spring must point in the disc rotating direction.



B Pad spring (rear)

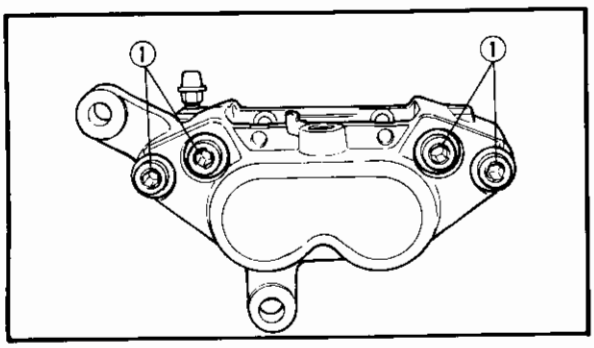
NOTE:

The longer tangs (*) of the pad spring must point in the disc rotating direction.



CALIPER DISASSEMBLY

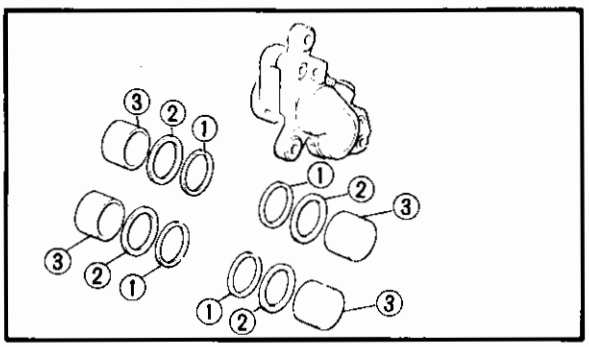
1. Remove:
   • Pads
   Refer to "BRAKE PAD REPLACEMENT".
2. Remove:
   • Brake hose
   Place the open hose end into a container and pump the old fluid out carefully.

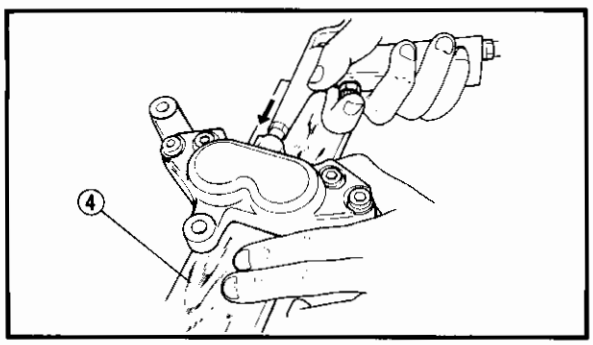


3. Remove:
   • Caliper

⚠CAUTION:

Never loosen the bridge bolts ① on either side of the caliper.



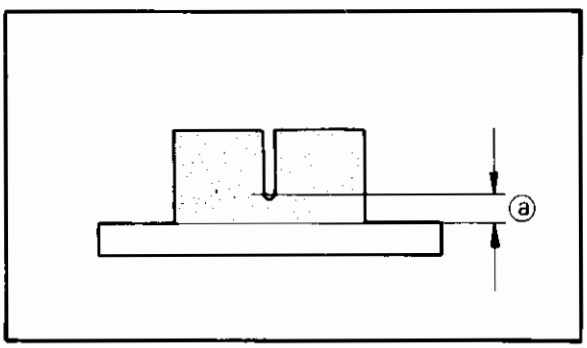


4. Remove:
   - Dust seals ①
   - Piston seals ②
   - Pistons ③

Caliper piston removal steps:
- Insert a place of wooden board ④ into the caliper to lock the right side piston.
- Blow compressed air into the tube joint opening to force out the left side pistons from the caliper body.
- Repeat previous step to force out the right side pistons from the caliper body.

INSPECTION AND REPAIR

Recommended brake component replacement schedule:	
Brake pads	As required
Piston seal, dust seal	Every two years
Brake hoses	Every four years
Brake fluid	Replace only when brakes are disassembled

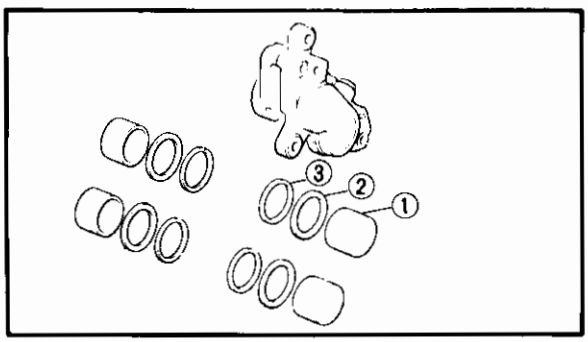


⚠WARNING:

All internal parts should be cleaned in new brake fluid only. Do not use solvents will cause seals to swell and distort.

1. Inspect:
   - Brake pads
     Over specified limit→Replace as a set.

Wear limit ⓐ:
0.5 mm (0.02 in)



2. Inspect:
   - Caliper piston ①
     Rust/Wear/Damage→Replace.
   - Piston seals ②
     Damage→Replace.
   - Dust seals ③
     Damage→Replace.

⚠WARNING:

Replace the piston and dust seals whenever a caliper is disassembled.

- Master cylinder kit
- Master cylinder body
  Scratches/Wear→Replace.

NOTE:

Clean all passages with new brake fluid.

- Brake hose
  Cracks/Wear/Damage→Replace.
- Brake disc
  Wear/Over specified limit→Replace.

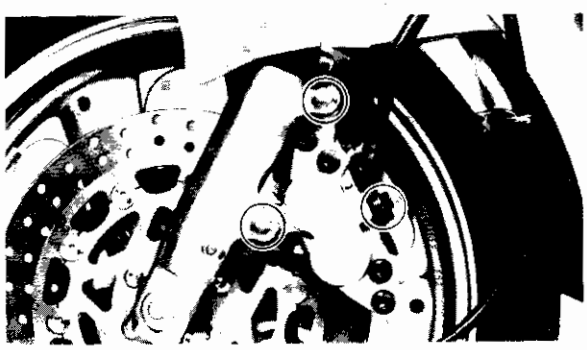
Maximum deflection (front/rear):
0.15 mm (0.006 in)
Minimum disc thickness:
3.5 mm (0.14 in)

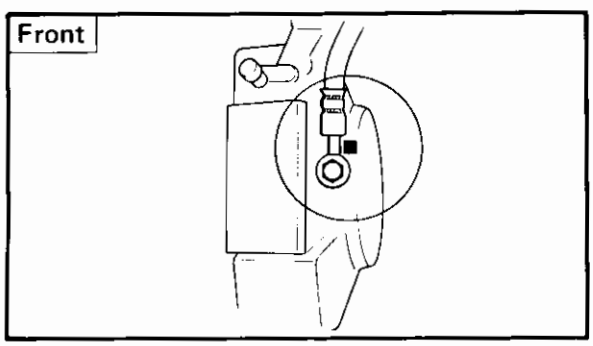
ASSEMBLY

⚠WARNING:

- **All internal parts should be cleaned in new brake fluid only.**
- **Internal parts should be lubricated with brake fluid when installed.**

Brake fluid:
DOT #4
If DOT #4 is not available, DOT #3 can be used.





Brake Caliper

When assembling the caliper, reverse the disassembly procedure. Note the following points.

1. Install:
   - Brake calipers
   - Brake hoses
   - Copper washers (new)

⚠CAUTION:

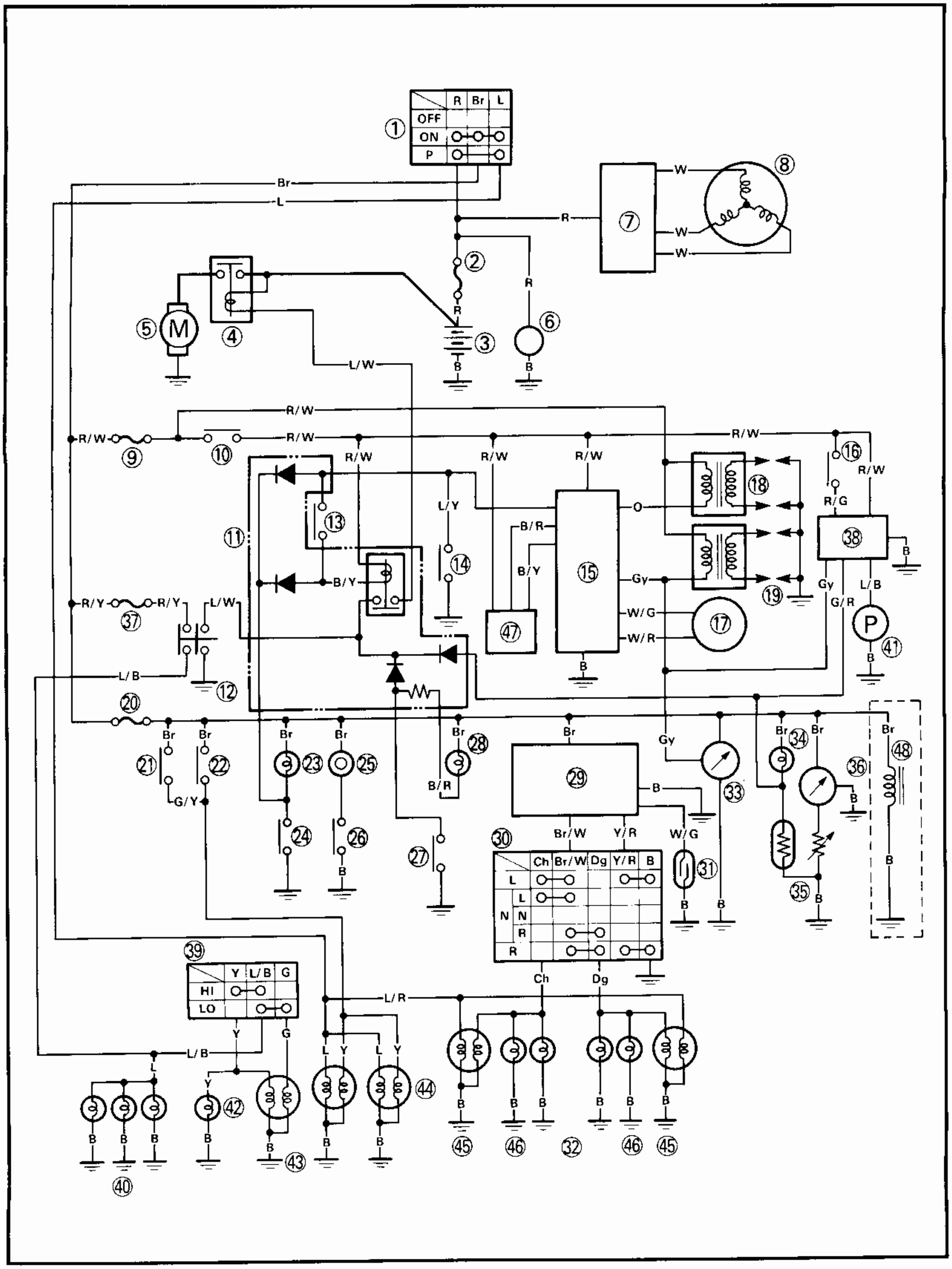
Install the brake hoses lightly touch with the projection on the brake calipers.

Bolts (brake caliper):
35 Nm (3.5 m•kg, 25 ft•lb)
Bolts (brake hose):
26 Nm (2.6 m•kg, 19 ft•lb)

2. Bleed the air completely from the brake system.

ELECTRICAL

FJ1200W/WC CIRCUIT DIAGRAM



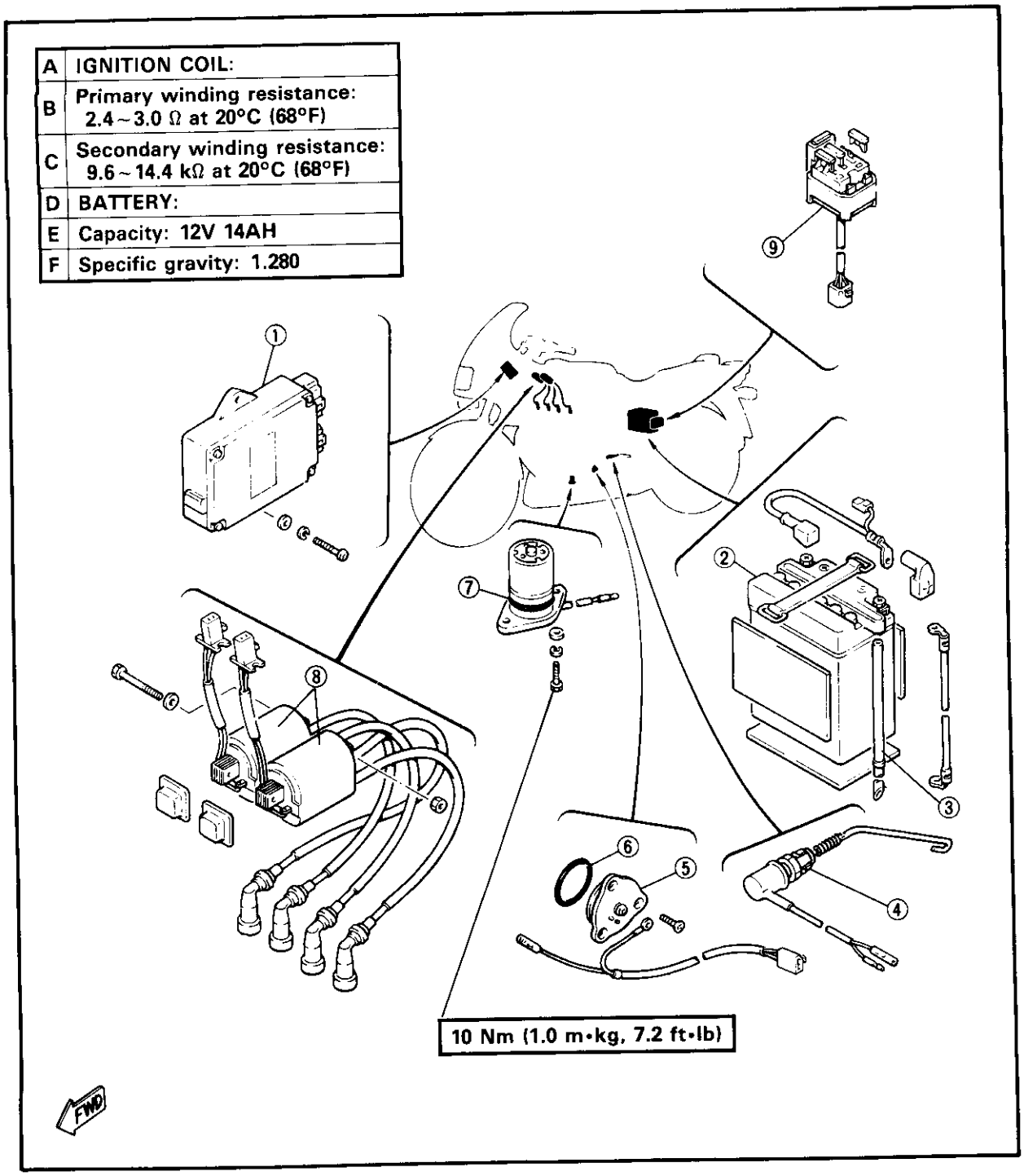
① Main switch
② Fuse "MAIN"
③ Battery
④ Starter relay
⑤ Starter motor
⑥ Clock
⑦ Rectifier/Regulator
⑧ A.C. Generator
⑨ Fuse "IGNITION"
⑩ "ENGINE STOP" switch
⑪ Relay assembly
⑫ "START" switch
⑬ Clutch switch
⑭ Sidestand switch
⑮ Digital ignitor unit
⑯ "RESERVE" switch
⑰ Pickup coil
⑱ Ignition coil
⑲ Spark plug
⑳ Fuse "SIGNAL"
㉑ Front brake switch
㉒ Rear brake switch
㉓ "NEUTRAL" indicator light
㉔ Neutral switch
㉕ Horn
㉖ "HORN" switch
㉗ Oil level switch
㉘ "OIL" indicator
㉙ Flasher relay
㉚ "TURN" switch
㉛ Reed switch
㉜ "TURN" indicator light
㉝ Tachometer
㉞ "FUEL" indicator light
㉟ Fuel sender unit
㊱ Fuel meter
㊲ Fuse "HEAD"
㊳ Fuel pump relay
㊴ "LIGHTS" (dimmer) switch
㊵ Meter light
㊶ Fuel pump
㊷ "HIGH BEAM" indicator light
㊸ Headlight
㊹ Tail/brake switch
㊺ Front position light/Front flasher light
㊻ Rear flasher light
㊼ Pressuer sensor
㊽ Control valve (for FJ1200WC)

COLOR CODE

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

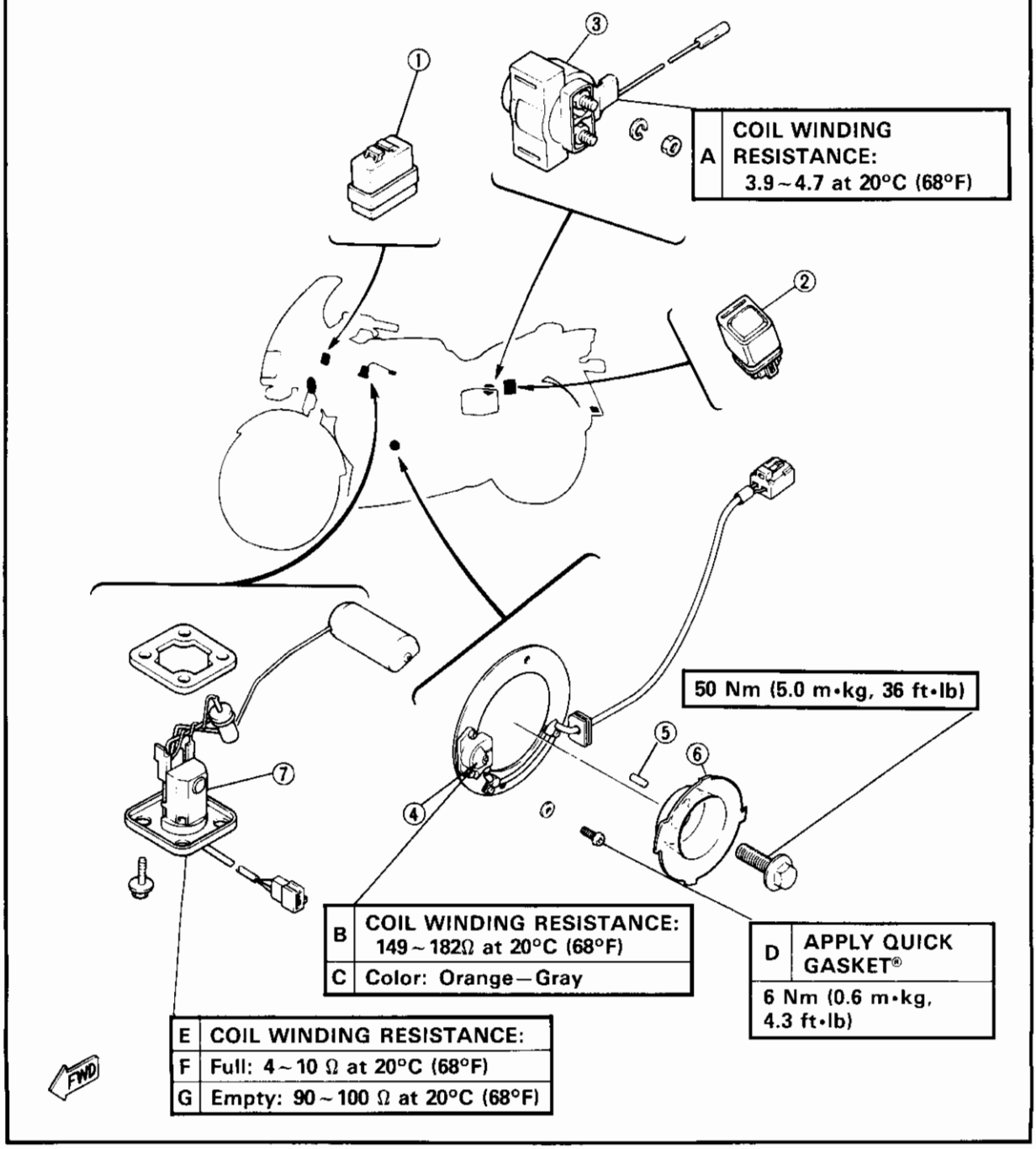
ELECTRICAL COMPONENTS

① TCI unit
② Battery
③ Breather hose
④ Rear brake switch
⑤ Neutral switch
⑥ O-ring
⑦ Oil level switch
⑧ Ignition coil
⑨ Fuse box



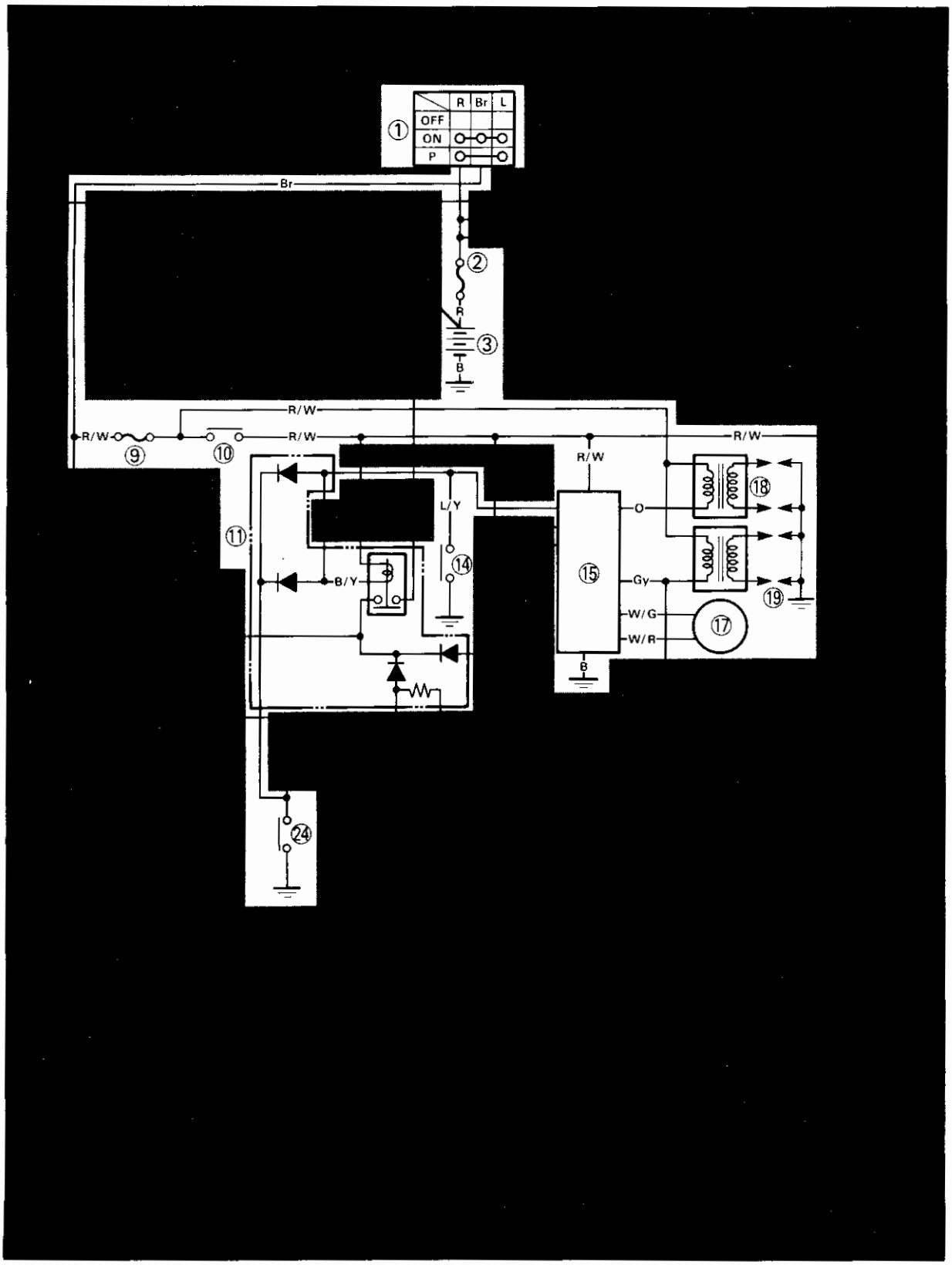
① Relay assembly
② Fuel pump relay
③ Starter relay
④ Pickup coil
⑤ Dowel pin
⑥ Timing plate
⑦ Fuel sender unit

GENERATOR:	STARTER MOTOR:
STARTOR COIL RESISTANCE: 0.15 ~ 0.18 Ω at 20°C (68°F) (White — White)	BRUSH LENGTH LIMIT: 5.5 mm (0.22 in)
FIELD COIL RESISTANCE: 4 Ω at 20°C (68°F)	COMMUTATOR DIA. LIMIT 27 mm (1.06 in)
BRUSH LENGTH LIMIT: 4.7 mm (0.19 in)	



IGNITION SYSTEM

CIRCUIT DIAGRAM

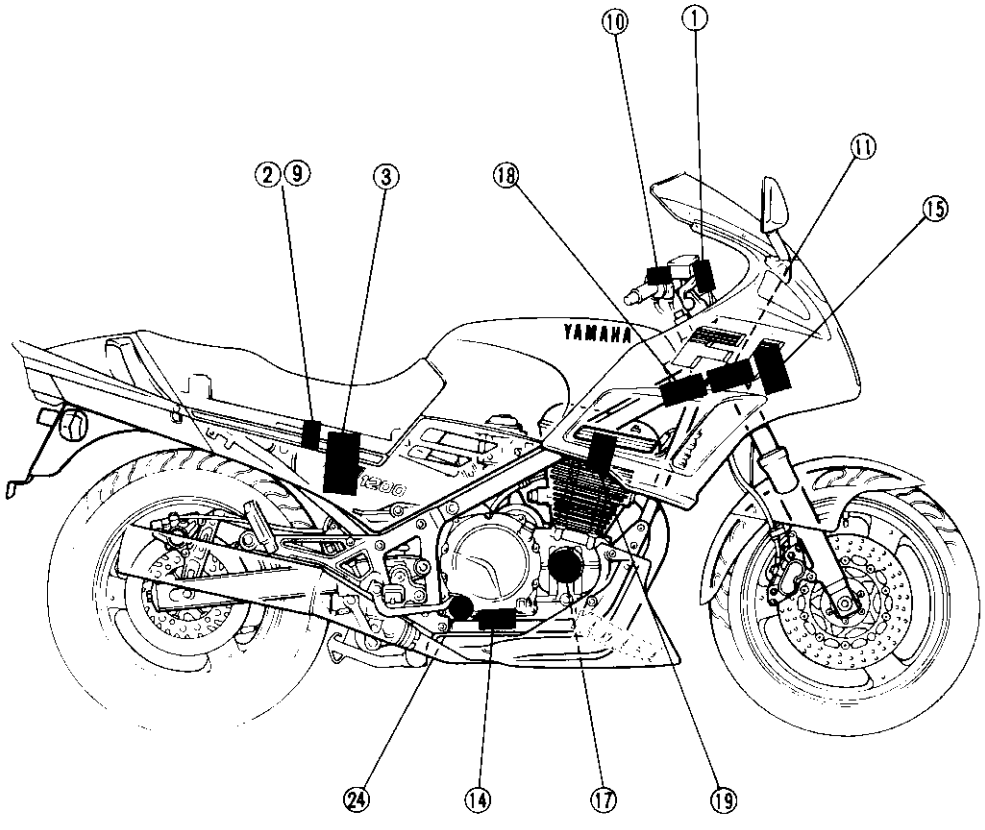


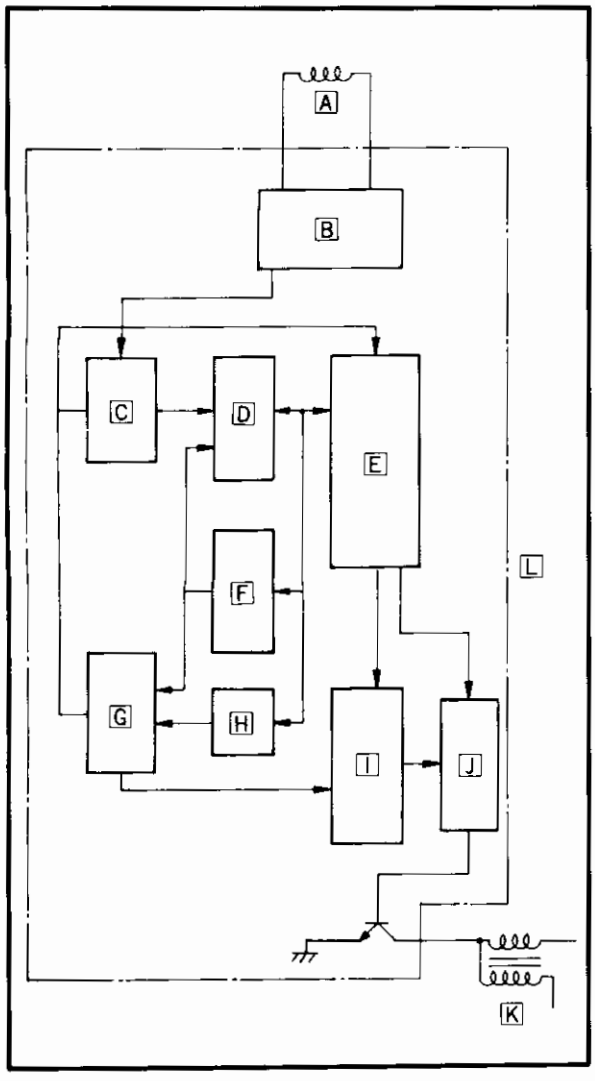
Aforementioned circuit diagram shows the ignition circuit in the wiring diagram.

NOTE:

For the color codes, see page 31.

① Main switch
② Fuse "MAIN"
③ Battery
⑨ Fuse "IGNITION"
⑩ "ENGINE STOP" switch
⑪ Relay assembly
⑭ Sidestand switch
⑮ Digital ignitor unit
⑰ Pickup coil
⑱ Ignition coil
⑲ Spark plug
㉔ Neutral switch





DIGITAL IGNITION CONTROL SYSTEM DESCRIPTION

The electronic ignition that sparks the engine is computer controlled and operated by the digital microprocessor. It has a pre-programed ignition advance curve.

This programed advance curve closely matches the spark timing to the engine's ignition requirements. Only one pickup coil is needed to meet the requirements of the digital ignitor unit.

The digital ignitor also includes the control unit for the electric fuel pump.

A Pickup coil
B Wave-shape shaping circuit
C Edge detection circuit
D Latch circuit
E Microprocessor
F Free-running counter
G Comparison circuit
H Register
I Flip-flop circuit
J Driving circuit
K Ignition coil
L Digital ignitor unit

OPERATION

The following operations are digitally-performed by signal from the pickup coil signal:

1. Determing proper ignition timing.
2. Sensing the engine revolution speed.
3. Determing timing for switching on ignition coil (duty control).
4. Increasing ignition coil primary current for starting the engine.
5. Sensing engine stall.
6. Preventing over-revolution of the engine.

TROUBLESHOOTING

IF IGNITION SYSTEM SHOULD BECOME INOPERATIVE (NO SPARK OR INTERMITTENT SPARK)

Procedure

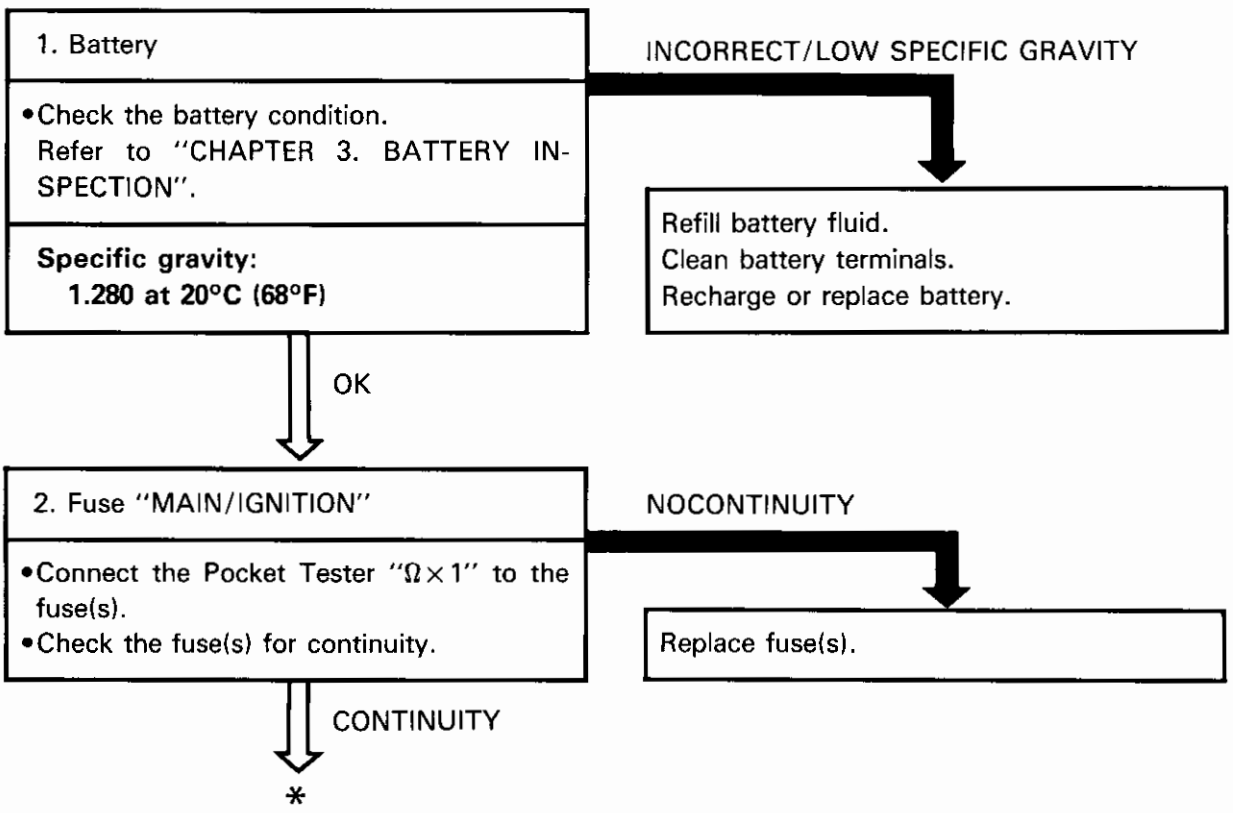
Check;

1. Battery
2. Fuse "MAIN/IGNITION"
3. Spark plug
4. Ignition spark gap
5. Spark plug cap resistance
6. Ignition coil resistance
7. Main switch
8. "ENGINE STOP" switch
9. Neutral switch
10. Sidestand switch
11. Pickup coil resistance
12. Wiring connection (Ignition system)

NOTE:

- Remove the following before troubleshooting.
  1) Air ducts
  2) Seat
  3) Side covers
  4) Inner panel (right)
  5) Spark plugs
  6) Fuel tank
- Use the following special tools in this troubleshooting.

Dynamic spark tester: **YM-34487**	**Pocket tester:** **YU-03112**



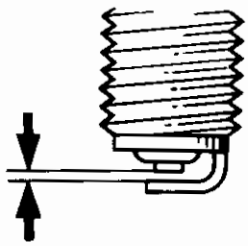
*

3. Spark plug gap

- Check the spark plug type.
- Check the spark plug gap.
  Refer to "APPENDICES – SPECIFICATIONS".

Standard spark plug:
DP8EA-9 (NGK), X24EP-U9 (N.D.)

Spark plug gap:
0.8 ~ 0.9 mm (0.031 ~ 0.035 in)

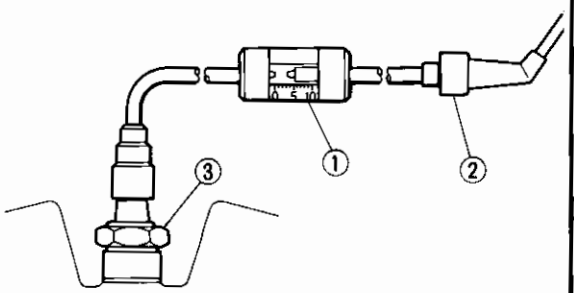


OUT OF SPECIFICATION → Regap or replace spark plugs.

4. Ignition spark gap

- Connect the Dynamic Spark Tester ① as shown.

② Spark plug cap
③ Spark plug



MEETS SPECIFICATION → Ignition system is good.

- Start the engine, and increase the spark gap until misfire occurs.

Minimum spark gap:
6 mm (0.24 in)

OUT OF SPECIFICATION OR NO SPARK

*

*

5. Spark plug cap resistance

- Disconnect the spark plug caps.
- Connect the Pocket Tester "Ω×1".

Spark plug cap resistance:
7.5~12.5 kΩ at 20°C (68°F)

OUT OF SPECIFICATION → Replace spark plug caps.

OK

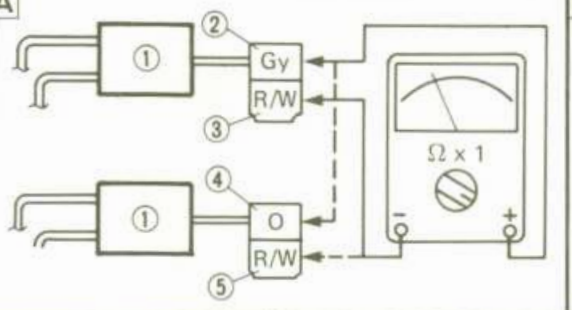
6. Ignition coil resistance

- Disconnect the ignition coil coupler and spark plug leads.
- Connect the Pocket Tester to the ignition coils ① (Gray ②, Red/White ③, Orange ④, Red/White ⑤ and Spark plug leads ⑥).
- Measure the primary coil and secondary coil resistances.

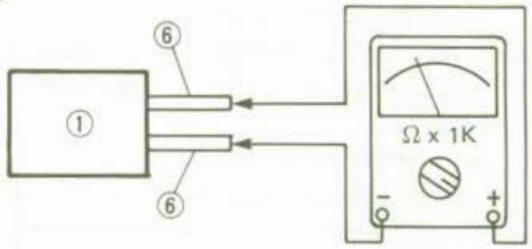
Primary coil resistance A:
2.4~3.0 Ω at 20°C (68°F)
Secondary coil resistance B:
9.6~14.4 kΩ at 20°C (68°F)

OUT OF SPECIFICATION → Replace ignition coil(s).

A



B



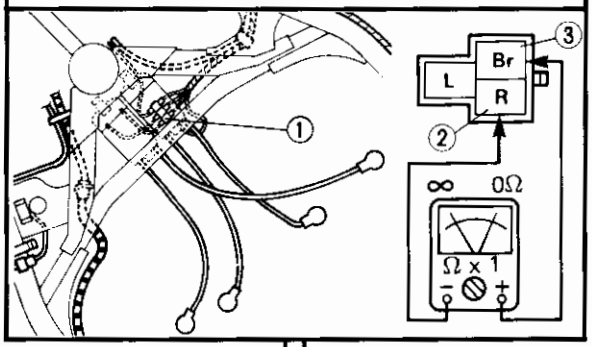
BOTH RESISTANCES MEET SPECIFICATIONS

*

*

7. Main switch

- Disconnect the main switch coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the main switch coupler terminals — Main switch side (Red ② and Brown ③).
- Turn the main switch to "ON".
- Check the switch for continuity.

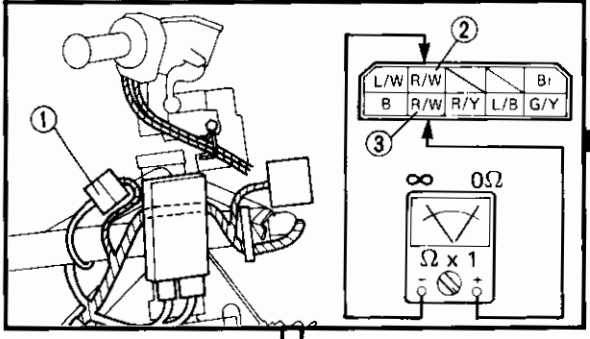


NOCONTINUITY → Replace main switch.

CONTINUITY

8. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the handlebar switch (right) coupler terminals — Handlebar switch side (Red/White ② and Red/White ③).
- Turn the "ENGINE STOP" switch to "RUN".
- Check the switch for continuity.



NOCONTINUITY → "ENGINE STOP" switch is faulty. Replace handlebar switch (right).

CONTINUITY

*

*

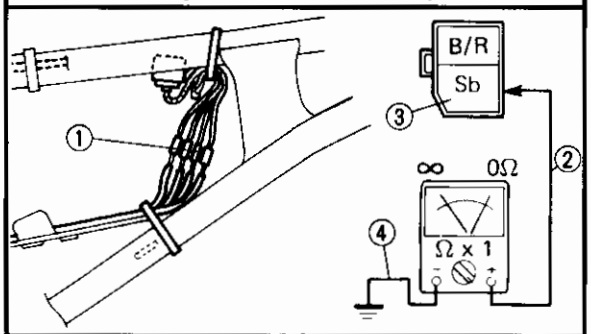
9. Neutral switch

- Disconnect the neutral/oil level switch coupler ① from the wire harness.
- Connect the positive lead ② of the Pocket Tester "Ω×1" to the coupler terminal — Neutral switch side (Sky blue ③).
- Ground the negative lead ④ of the Pocket Tester to the engine.
- Shift the gear, and check the switch for continuity.

BAD CONDITION

Transmission position	Good condition	Bad condition		
In neutral	○	○	×	×
In gear	×	○	×	○

○: Continuity ×: Nocontinuity



Replace neutral switch.

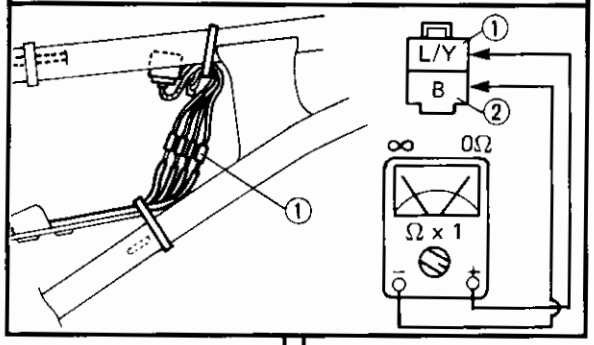
GOOD CONDITION

10. Sidestand switch

- Disconnect the sidestand switch leads from the wire harness.
- Connect the Pocket Tester "Ω×1" to the sidestand switch leads — Sidestand switch side (Blue/Yellow ① and Black ②).
- Move the sidestand upon down.
- Check the sidestand switch for continuity.

Sidestand position	Good condition	Bad condition		
Up	○	○	×	×
Down	×	○	×	○

○: Continuity ×: Nocontinuity



BAD CONDITION → Replace sidestand switch.

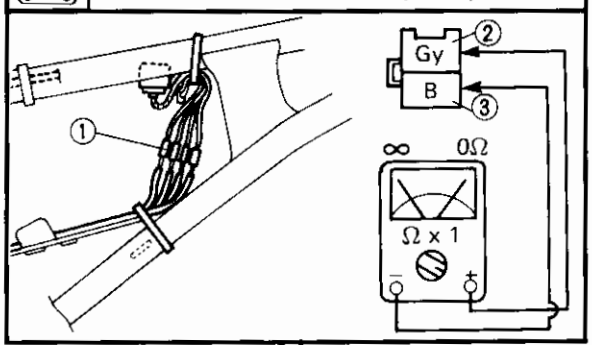
GOOD CONDITION

11. Pickup coil resistance

- Disconnect the pickup coil coupler ① (Gray, Black) from the wire harness.
- Connect the Pocket Tester "Ω×10" to the pickup coil coupler terminals — Pickup coil side (Gray ② and Black ③).

Pickup coil resistance:
149~182 Ω at 20°C (68°F)

OUT OF SPECIFICATION → Replace pickup coil.



RESISTANCE MEET SPECIFICATION

12. Wiring connection

- Entire ignition system
  Refer to "WIRING DIAGRAM".

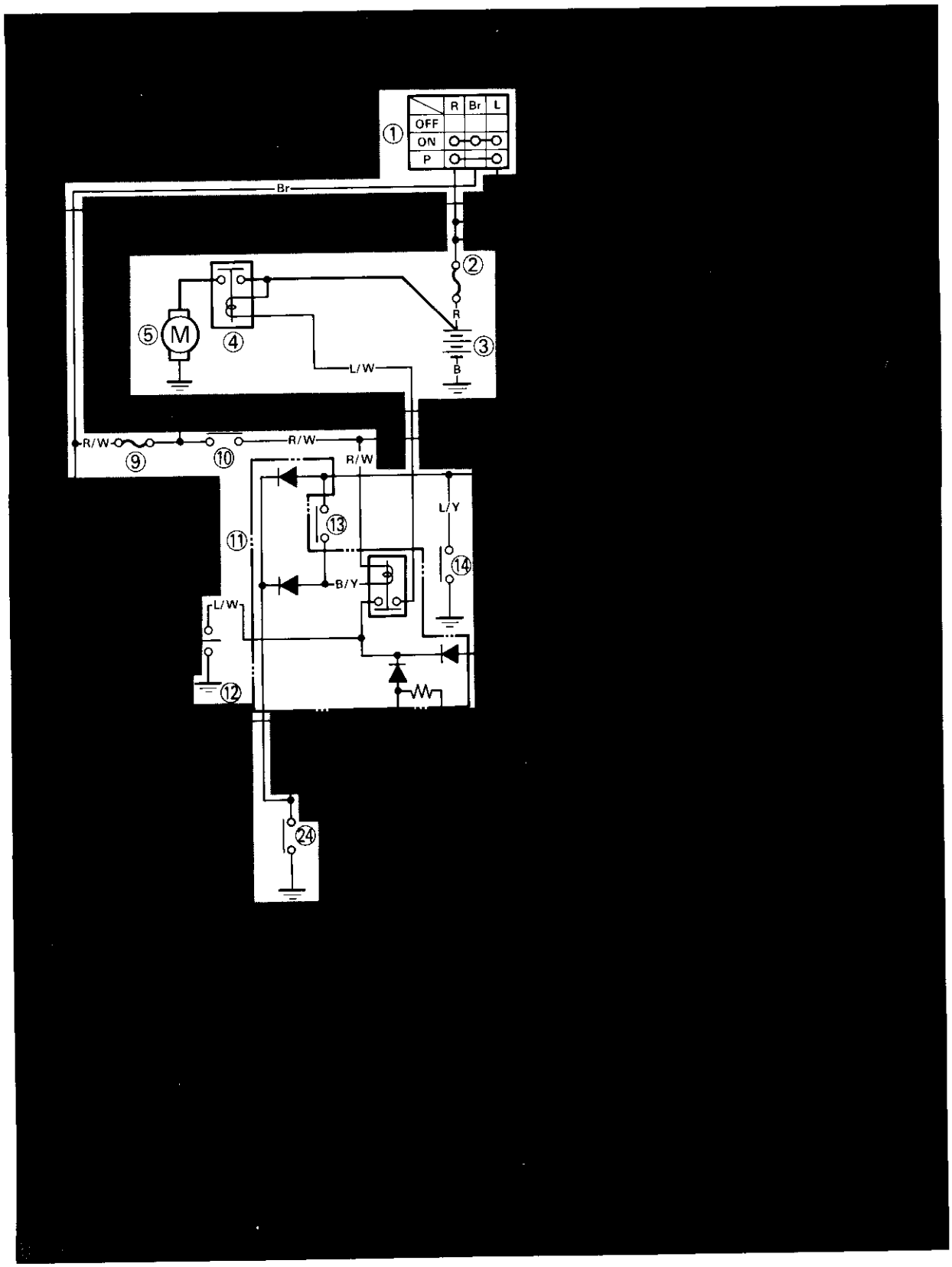
POOR CONNECTION → Correct connection(s).

OK

Digital ignitor unit is faulty.
Replace the digital ignitor unit.

ELECTRIC STARTING SYSTEM

CIRCUIT DIAGRAM

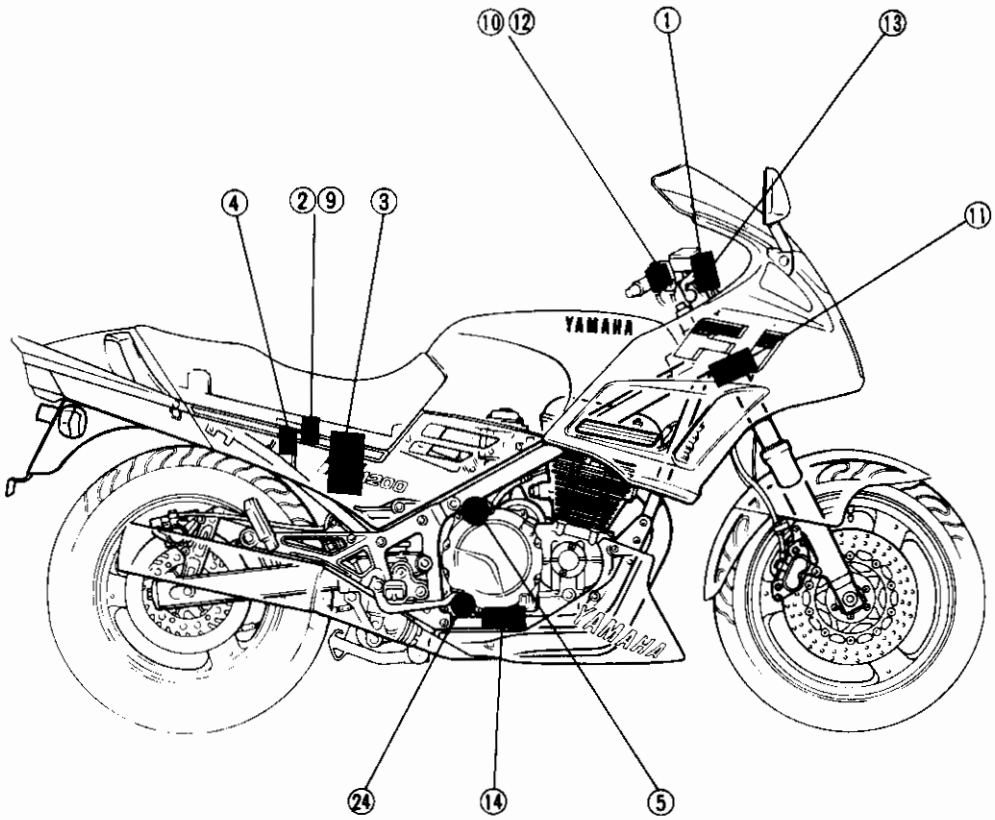


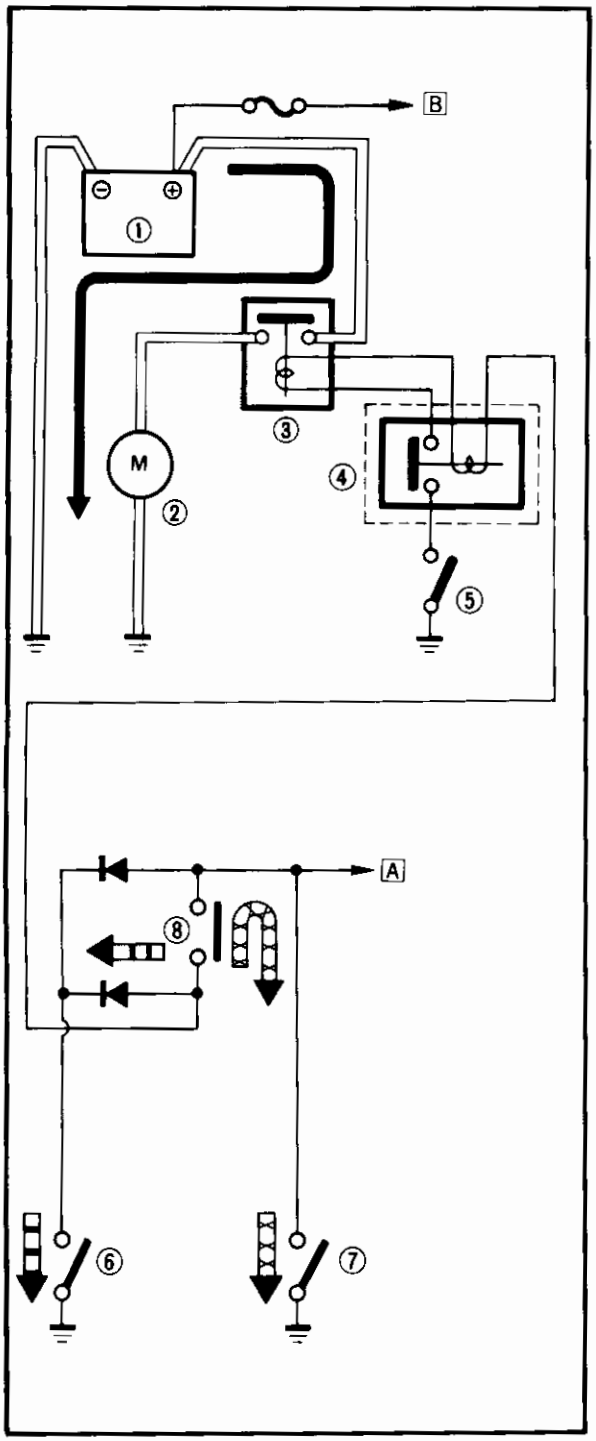
Aforementioned circuit diagram shows the electric starting circuit in the circuit diagram.

NOTE:

For the color codes, see page 31.

① Main switch
② Fuse "MAIN"
③ Battery
④ Starter relay
⑤ Starter motor
⑨ Fuse "IGNITION"
⑩ "ENGINE STOP" switch
⑪ Relay assembly
⑫ "START" switch
⑬ Clutch switch
⑭ Sidestand switch
㉔ Neutral switch





STARTING CIRCUIT OPERATION

The starting circuit on this model consist of the starter motor, starter relay, and the relay assembly (starting circuit cut-off relay). If the engine stop switch and the main switch are both closed, the starter motor can operate only if:

The transmission is in neutral (the neutral switch is closed).

or if

The clutch lever is pulled to the handlebar (the clutch switch is closed) and the sidestand is up (the sidestand switch is closed.)

The starting circuit cut-off relay prevents the starter from operating when neither of these conditions has been met. In this instance, the starting circuit cut-off relay is open so current cannot reach the starter motor.

When one of both of the above conditions have been met, however, the starting circuit cut-off relay is closed, and the engine can be started by pressing the starter switch.

◀□□□ WHEN THE TRANSMISSION IS IN NEUTRAL
◀□×□ WHEN THE SIDESTAND IS UP AND THE CLUTCH LEVER IS PULLED IN

① Battery
② Starter motor
③ Starter relay
④ Starting circuit cut-off relay
⑤ Engine stop switch
⑥ Neutral switch
⑦ Sidestand switch
⑧ Clutch switch

[A] To sidestand relay
[B] To main switch

TROUBLESHOOTING

STARTER MOTOR DOES NOT OPERATE.

Procedure

Check;

1. Battery
2. Fuse "MAIN/IGNITION"
3. Starter motor
4. Starting circuit cut-off relay (Relay assembly)
5. Main switch
6. "ENGINE STOP" switch
7. Neutral switch
8. Sidestand switch
9. Clutch switch
10. Wiring connection (Electric starting system)

NOTE:

- Remove the following before troubleshooting.
  1) Seat
  2) Side covers
  3) Fuel tank
  4) Air duct (left)
  5) Inner panel (right)
- Use the following special tool in this troubleshooting.



Pocket tester:
YU-03112

1. Battery

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

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

INCORRECT/LOW SPECIFIC GRAVITY

Refill battery fluid.
Clean battery terminals.
Recharge or replace battery.

OK

2. Fuse "MAIN/IGNITION"

- Connect the Pocket Tester "Ω×1" to the fuse(s).
- Check the fuse(s) for continuity.

NOCONTINUITY

Replace fuse(s).

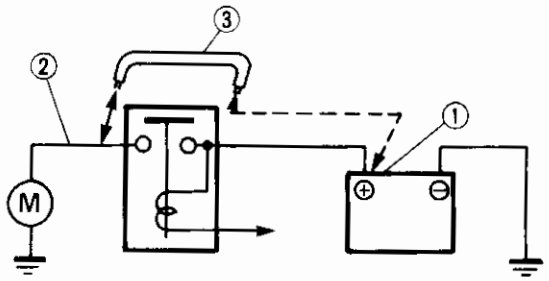
CONTINUITY

*

*

3. Starter motor

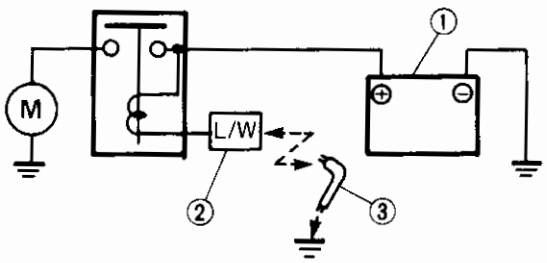
- Connect the battery positive terminal ① and starter motor cable ② using the jumper lead ③*.
- Check the starter motor operation.



- If the starter motor is operated, go to the next steps. If not, repair and/or replace the starter motor.
- Disconnect the starter relay lead (Blue/White).
- Ground the starter relay coupler (Blue/White) ② to the frame using the jumper lead ③.
- Check the starter motor operation.

FAULTY

Repair or replace starter motor.



OK

*

*

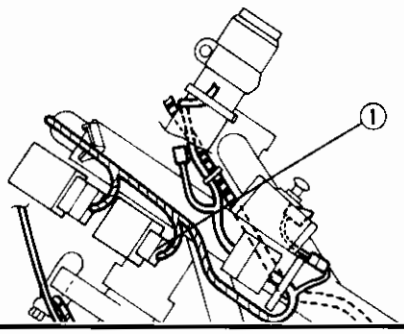
⚠WARNING:

- **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.**

*

4. Relay assembly (starting circuit cut-off relay)

- Disconnect the relay assembly coupler ① from the wire harness.



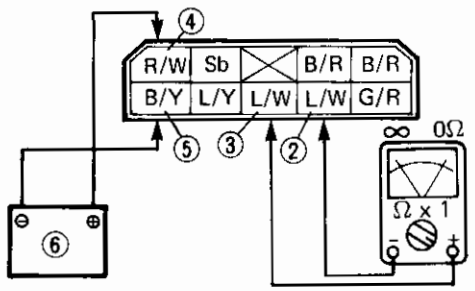
- Connect the Pocket Tester and battery (12V) ⑥ to the relay coupler terminals — Relay assembly side (Blue/White ②, Blue/White ③, Red/White ④ and Blue/Yellow ⑤).
- Check the relay for continuity.

FAULTY

Replace relay assembly.

	Good condition	Bad condition		
Battery connected	○	○	×	×
Battery disconnected	×	○	×	○

○: Continuity ×: Nocontinuity



OK

*

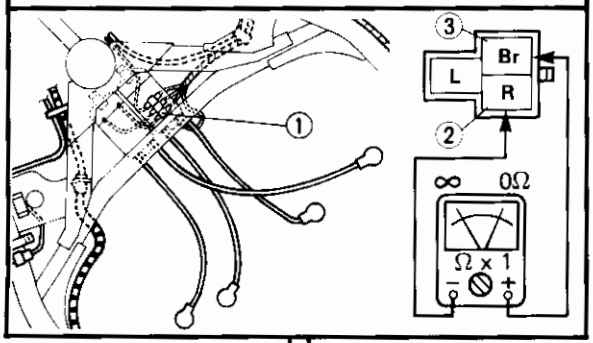
*

5. Main switch

- Disconnect the main switch coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the main switch leads — Main switch side (Red ② and Brown ③).
- Turn the main switch to "ON" position.
- Check the switch for continuity.

NOCONTINUITY

Replace main switch.



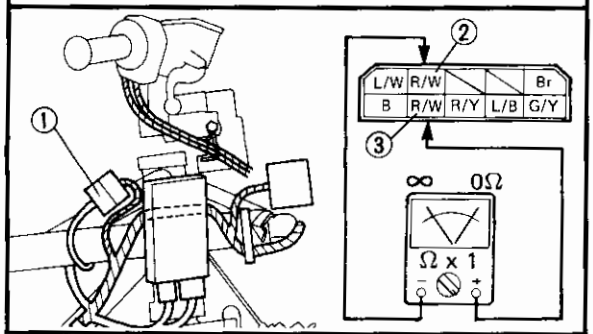
CONTINUITY

6. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the handlebar switch leads — Handlebar switch side (Red/White ② Red/White ③).
- Turn the "ENGINE STOP" switch to "RUN" position.
- Check the switch for continuity.

NOCONTINUITY

Replace handlebar switch (right).



CONTINUITY

*

*

7. Neutral switch

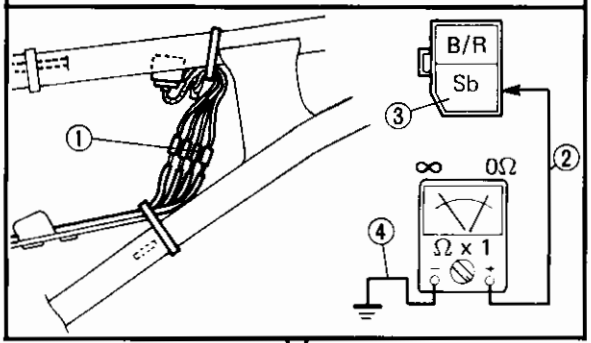
- Disconnect the neutral/oil level switch coupler ① from the wire harness.
- Connect the positive lead ② of the Pocket Tester to the neutral switch coupler terminal — Neutral switch side (Sky blue ③).
- Ground the negative lead ④ of the Pocket Tester to the engine.
- Shift the gear, and check the switch for continuity.

BAD CONDITION

Replace neutral switch.

Transmission position	Good condition	Bad condition		
In neutral	○	○	×	×
In gear	×	○	×	○

○: Continuity ×: Nocontinuity



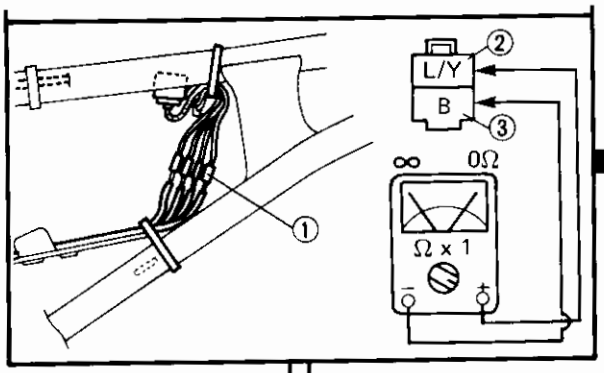
GOOD CONDITION

8. Sidestand switch

- Disconnect the sidestand switch leads ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the sidestand switch leads — Sidestand switch side (Blue/Yellow ② and Blue ③).
- Move the sidestand up or down.
- Check the sidestand switch for continuity.

Sidestand position	Good condition	Bad condition		
Up	○	○	×	×
Down	×	○	×	○

○: Continuity ×: Nocontinuity



BAD CONDITION

Replace sidestand switch.

GOOD CONDITION

9. Clutch switch

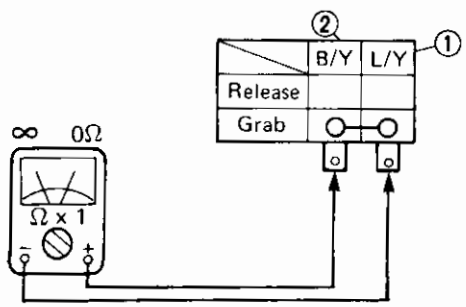
- Disconnect the clutch switch leads from the wire harness.
- Connect the Pocket Tester "Ω×1" to the clutch switch terminals (Blue/Yellow ① and Black/Yellow ②).
- Grab or release the clutch lever.
- Check the clutch switch for continuity.

Clutch lever position	Good condition	Bad condition		
Grab	○	○	×	×
Release	×	○	×	○

○: Continuity ×: Nocontinuity

BAD CONDITION

Replace clutch switch.



GOOD CONDITION

10. Wiring connection

- Entire electric starting system
  Refer to "WIRING DIAGRAM".

POOR CONNECTION

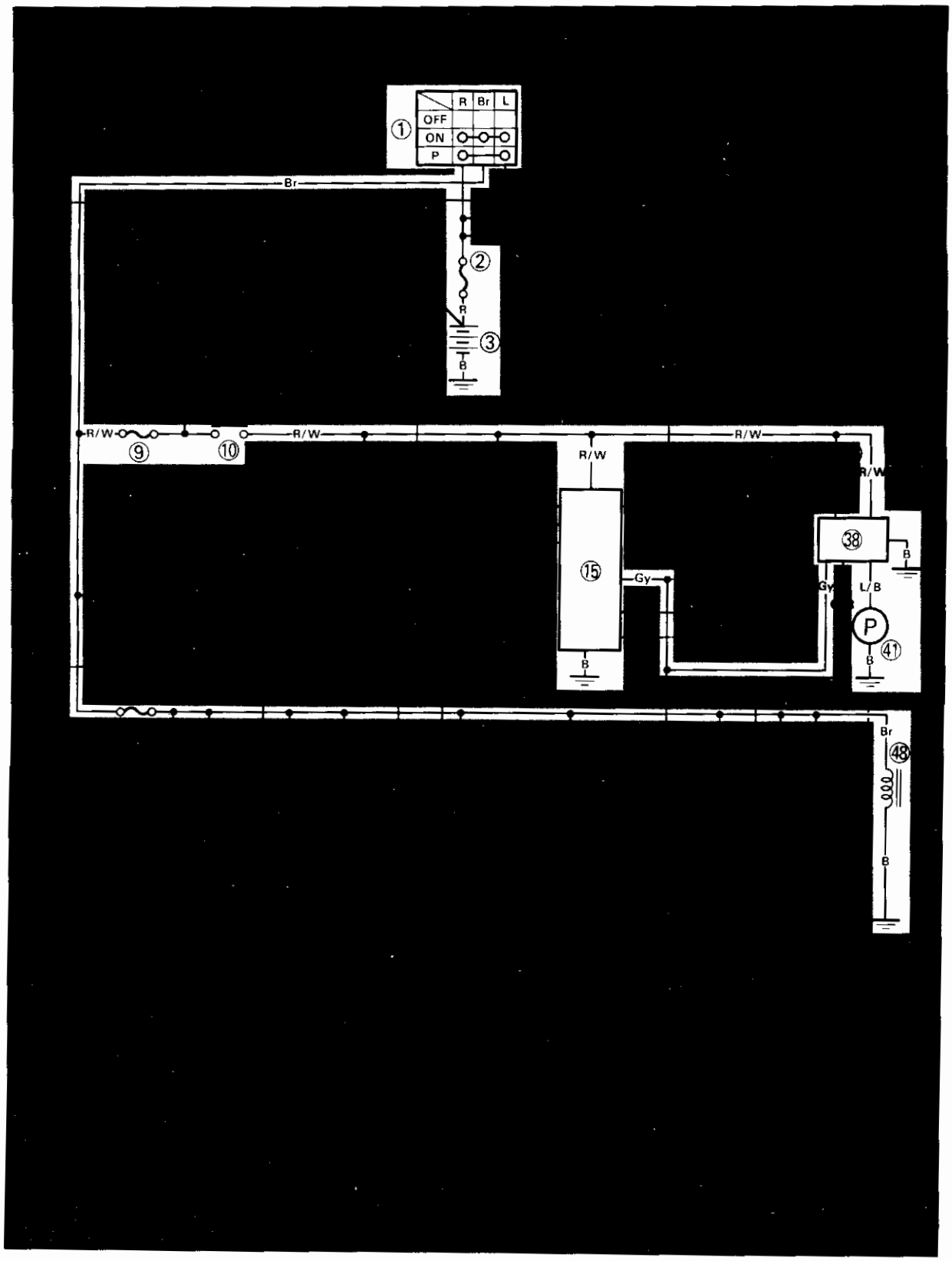
Correct connection(s).

OK

Diode is faulty.
Replace the relay assembly.

FUEL SYSTEM

CIRCUIT DIAGRAM

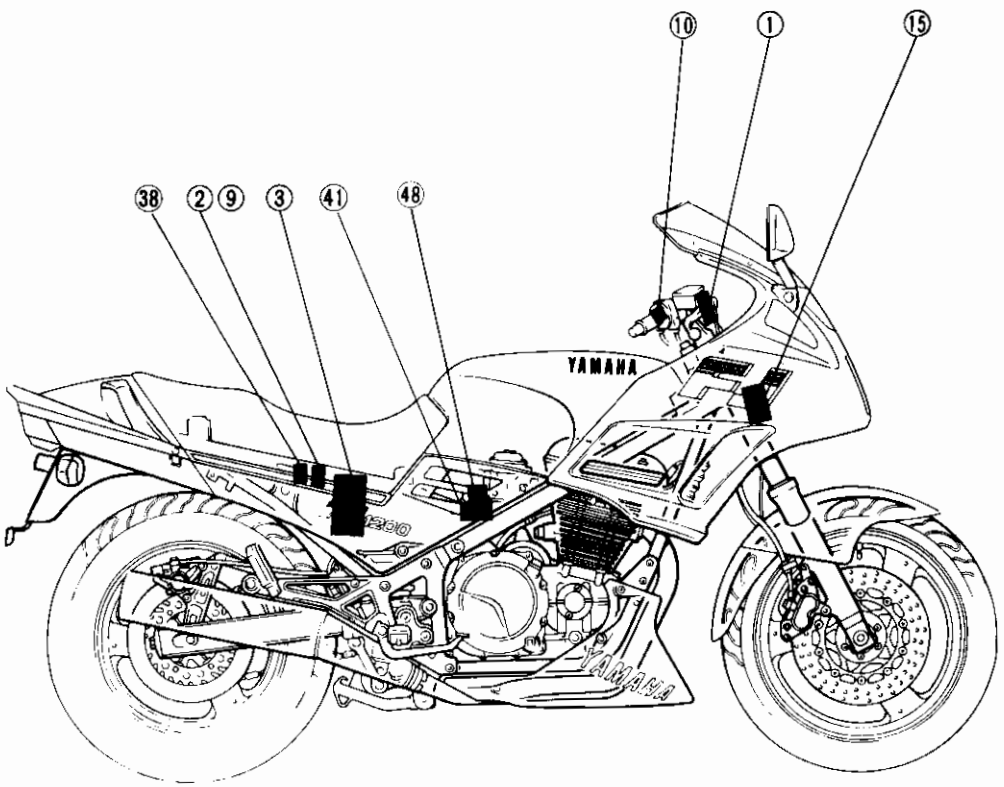


Aforementioned circuit diagram shows the fuel circuit in the circuit diagram.

NOTE:

For the color codes, see page 31.

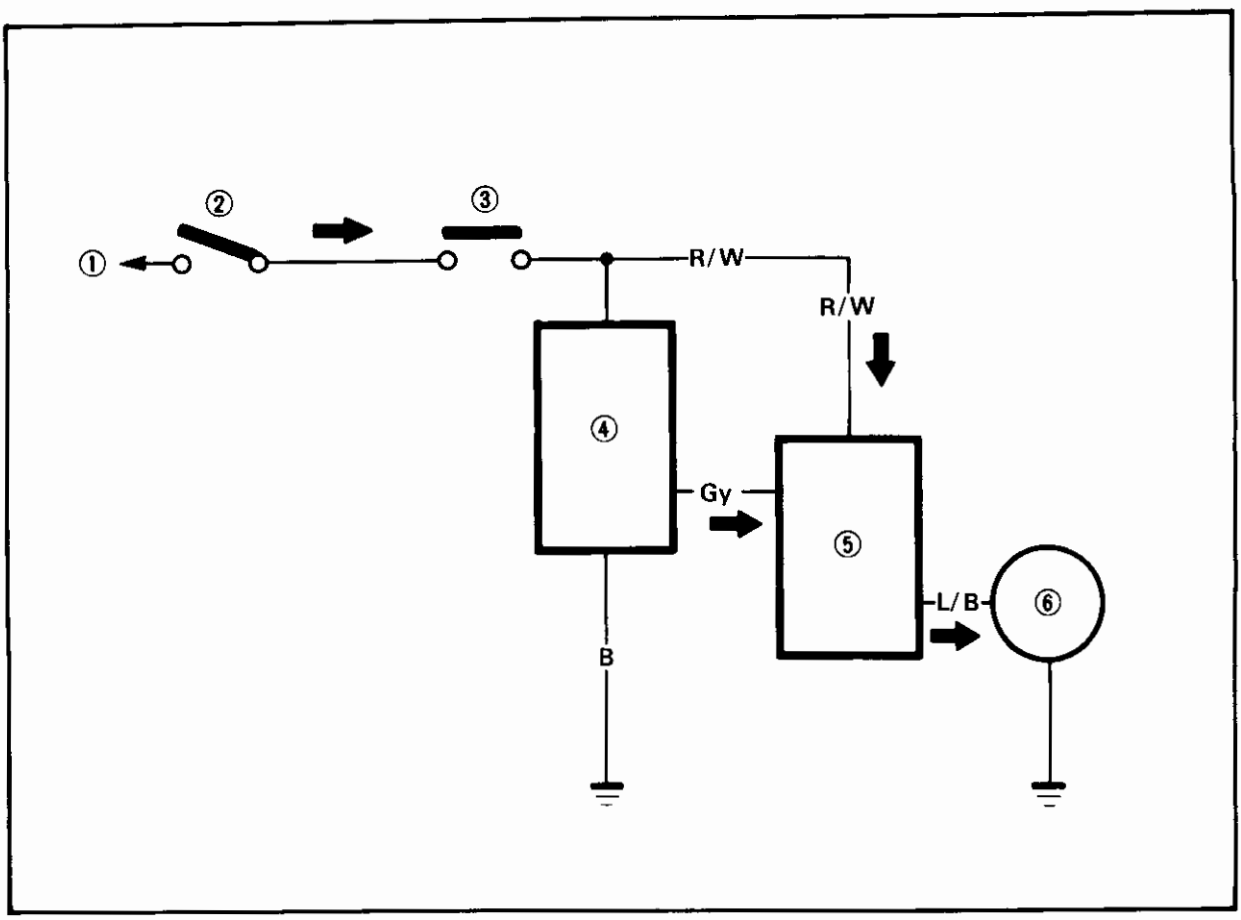
① Main switch
② Fuse "MAIN"
③ Battery
⑨ Fuse "IGNITION"
⑩ "ENGINE STOP" switch
⑮ Digital ignitor unit
⑳ Fuse "SIGNAL"
㊳ Fuel pump relay
㊶ Fuel pump
㊽ Control valve (for FJ1200WC)



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 AFTER ENGINE IS STARTED.

Procedure

Check;

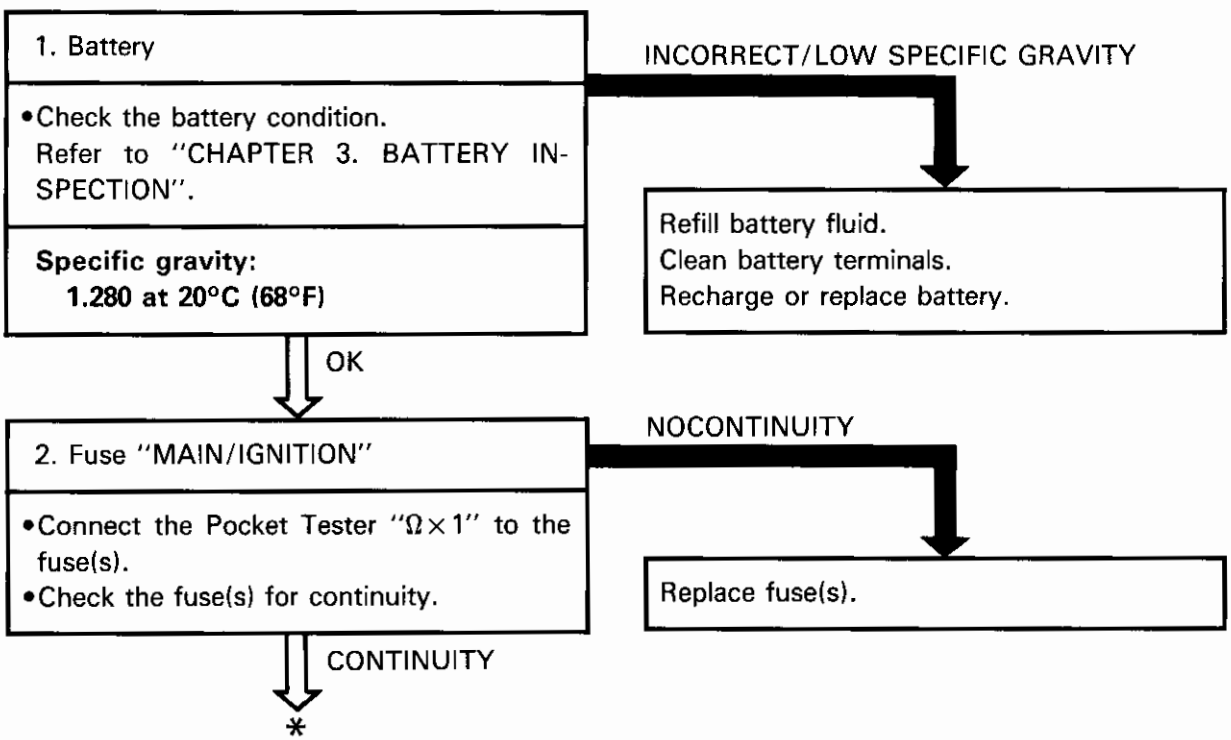
1. Battery
2. Fuse "MAIN/IGNITION"
3. Main switch
4. "ENGINE STOP" switch
5. Battery voltage
6. Fuel pump relay
7. Wiring connection (Fuel system)

NOTE:

- Remove the following before troubleshooting.
  1) Seat
  2) Side covers
  3) Fuel tank
  4) Air ducts
  5) Inner panel (right)
  6) Use the fuel subtank when the fuel tank is removed.
     Refor to "CHAPTER 2. CARBURETOR SYNCHRONIZATION".
- Use the following special tool in this troubleshooting.



Pocket tester:
YU-03112



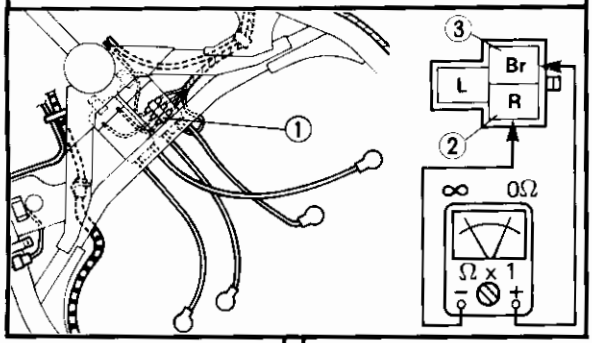
*

3. Main switch

- Disconnect the main switch coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the main switch coupler terminals — Main switch side (Red ② and Brown ③).
- Turn the main switch to "ON" position.
- Check the switch for continuity.

NOCONTINUITY

Replace main switch.



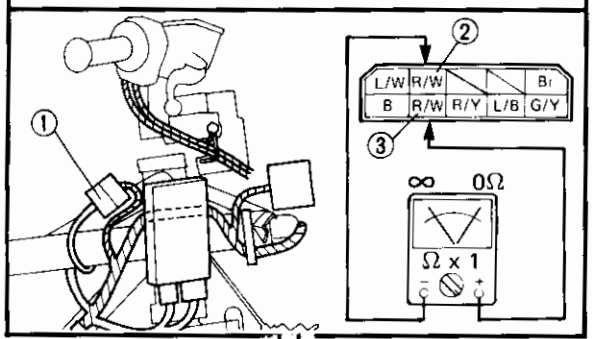
CONTINUITY

4. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to terminal — Handlebar switch side (Red/White ② and Red/White ③).
- Turn the "ENGINE STOP" switch to "RUN" position.
- Check the switch for continuity.

NOCONTINUITY

"ENGINE STOP" switch is faulty.
Replace handlebar switch (right).



CONTINUITY

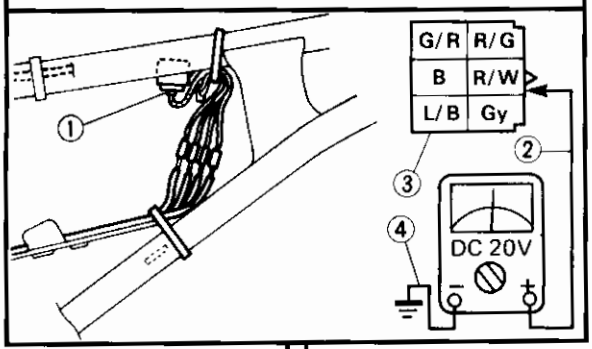
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5. Battery voltage

- Disconnect the fuel pump relay coupler ① from the wire harness.
- Connect the positive lead ② of the Pocket Tester "DC20V" to the relay coupler terminal (Red/White ③ — wire harness side).
- Ground the negative lead ④ of the Pocket Tester to the frame.
- Turn the main switch to "ON".
- Turn the "ENGINE STOP" switch to "RUN".
- Measure the battery voltage.

Tester (+) lead→Red/White
Tester (−) lead→Ground



LESS THAN 12V

Check wiring connection(s).

MORE THAN 12V

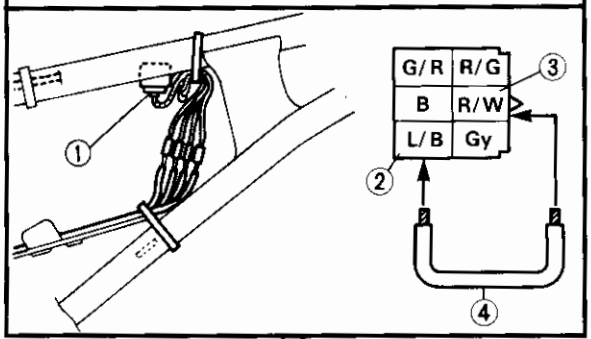
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6. Fuel pump relay

- Disconnect the fuel pump relay coupler ①.
- Connect the relay coupler terminals (Blue/Black ② and Red/White ③ – Wire harness side) with the jamper lead ④.
- Turn the main switch to "ON".
- Turn the "ENGINE STOP" switch to "RUN".
- Check the fuel pump for operation.

NO OPERATIVE → Replace fuel pump.



OPERATIVE

7. Wiring connection

- Entire fuel pump system
  Refer to "WIRING DIAGRAM".

POOR CONNECTION → Correct connection(s).

OK

Fuel pump relay is faulty.
Replace the fuel pump relay.

FUEL PUMP FAILS TO OPERATE FOR A 5 SECOND INTERVAL

Procedure

Check;

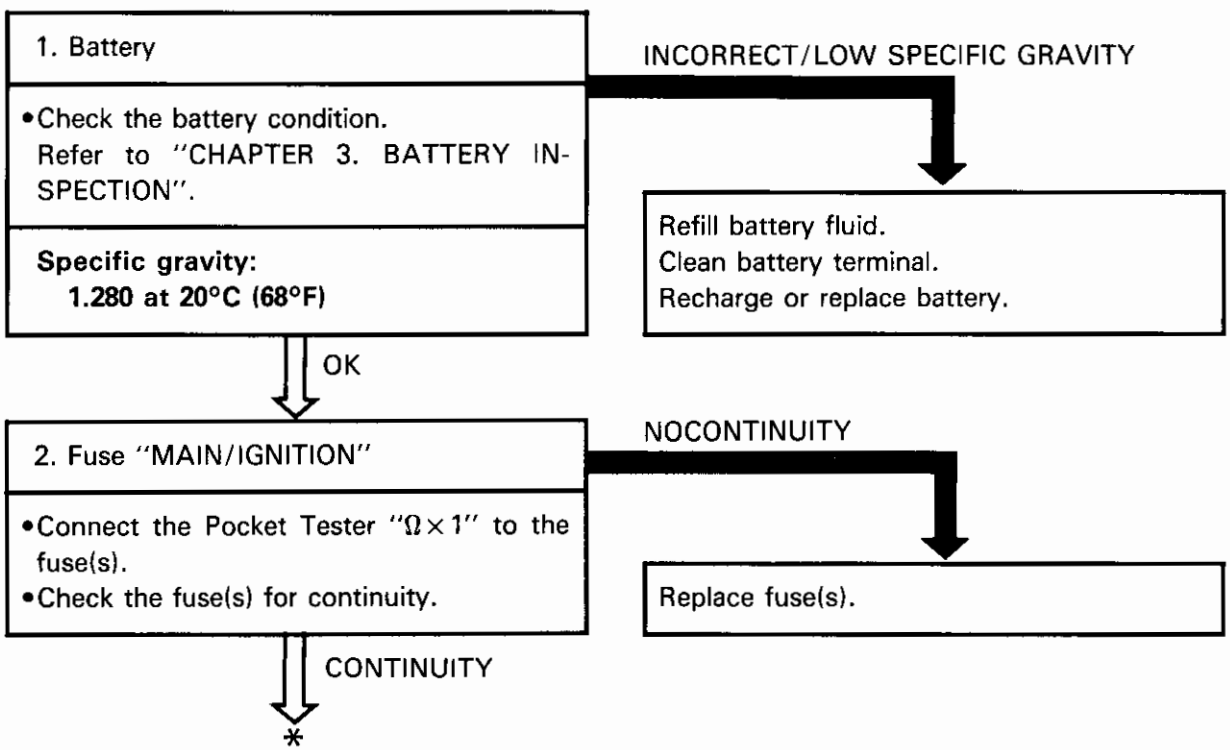
1. Battery
2. Fuse "MAIN/IGNITION"
3. Main switch
4. "ENGINE STOP" switch
5. Battery voltage
6. Fuel pump input voltage
7. Wiring connection (Fuel system)

NOTE:

- Remove the following before troubleshooting.
  1) Seat
  2) Side covers
  3) Fuel tank
  4) Air ducts
  5) Inner panel (right)
  6) Use the fuel sub tank when the fuel tank is removed. Refer to "CHAPTER 2. CARBURETOR SYNCHRONIZATION".
- Use the following special tool in this troubleshooting.



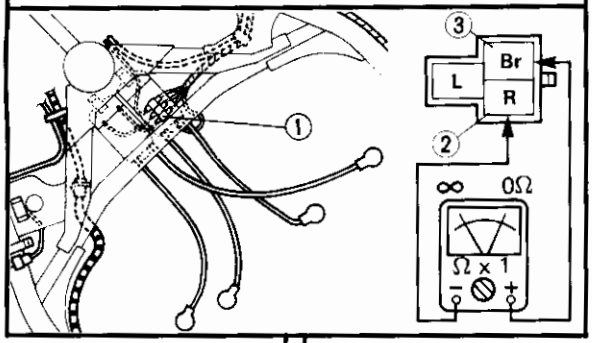
Pocket tester:
YU-03112



*

3. Main switch

- Disconnect the main switch coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the main switch coupler terminals — Main switch side (Red ② and Brown ③).
- Turn the main switch to "ON" position.
- Check the switch for continuity.

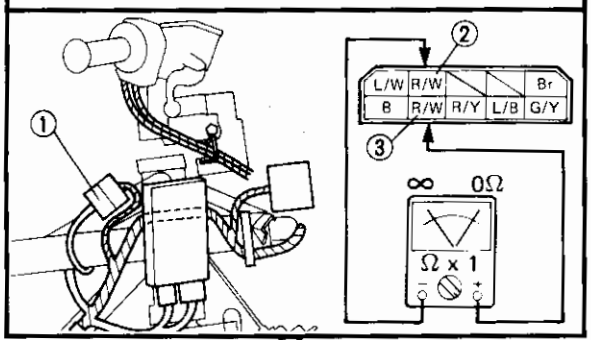


NOCONTINUITY → Replace main switch.

CONTINUITY

4. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the handlebar switch (right) coupler terminal — Handlebar switch side (Red/White ② and Red/White ③).
- Turn the "ENGINE STOP" switch to "RUN" position.
- Check the switch for continuity.



NOCONTINUITY → "ENGINE STOP" switch is faulty. Replace handlebar switch (right).

CONTINUITY

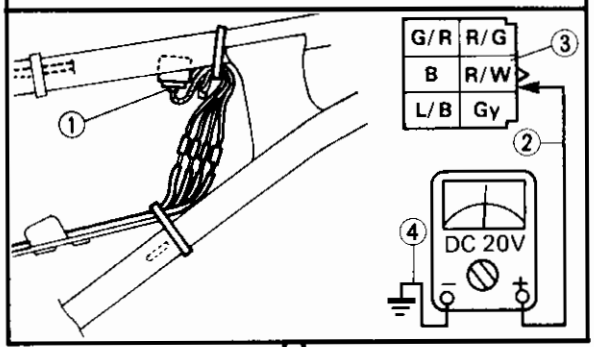
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5. Battery voltage

- Disconnect the fuel pump relay coupler ① from the wire harness.
- Connect the positive lead ② of the Pocket Tester "DC20V" to the relay coupler terminal (Red/White ③ — wire harness side).
- Ground the negative lead ④ of the Pocket Tester to the frame.
- Turn the main switch to "ON".
- Turn the "ENGINE STOP" switch to "RUN".
- Measure the battery voltage.

Tester (+) lead→Red/White
Tester (−) lead→Ground



LESS THAN 12V

Check wiring connection(s).

MORE THAN 12V

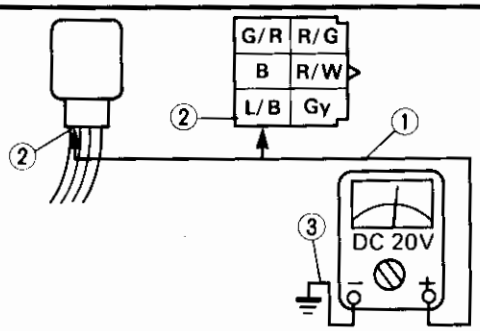
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6. Fuel pump input voltage

- Connect the positive lead ① of the Pocket Tester "DC20V" to the relay coupler terminal (Blue/Black ②).
- Ground the negative lead ③ of the pocket Tester to the frame.
- Turn the main switch to "ON".
- Turn the "ENGINE STOP" switch to "RUN".
- Push the "START" switch.
- Measure the fuel pump input voltage.

Tester (+) lead→Blue/Black
Tester (−) lead→Ground



LESS THAN 11V → Replace fuel pump relay.

MORE THAN 11V

7. Wiring connection

- Entire fuel system
  Refer to "WIRING DIAGRAM".

POOR CONNECTION → Correct connection(s).

OK → Fuel pump is faulty.
Replace the fuel pump.

FUEL PUMP DOES NOT STOP AFTER 30 SECONDS.

Procedure

Check;

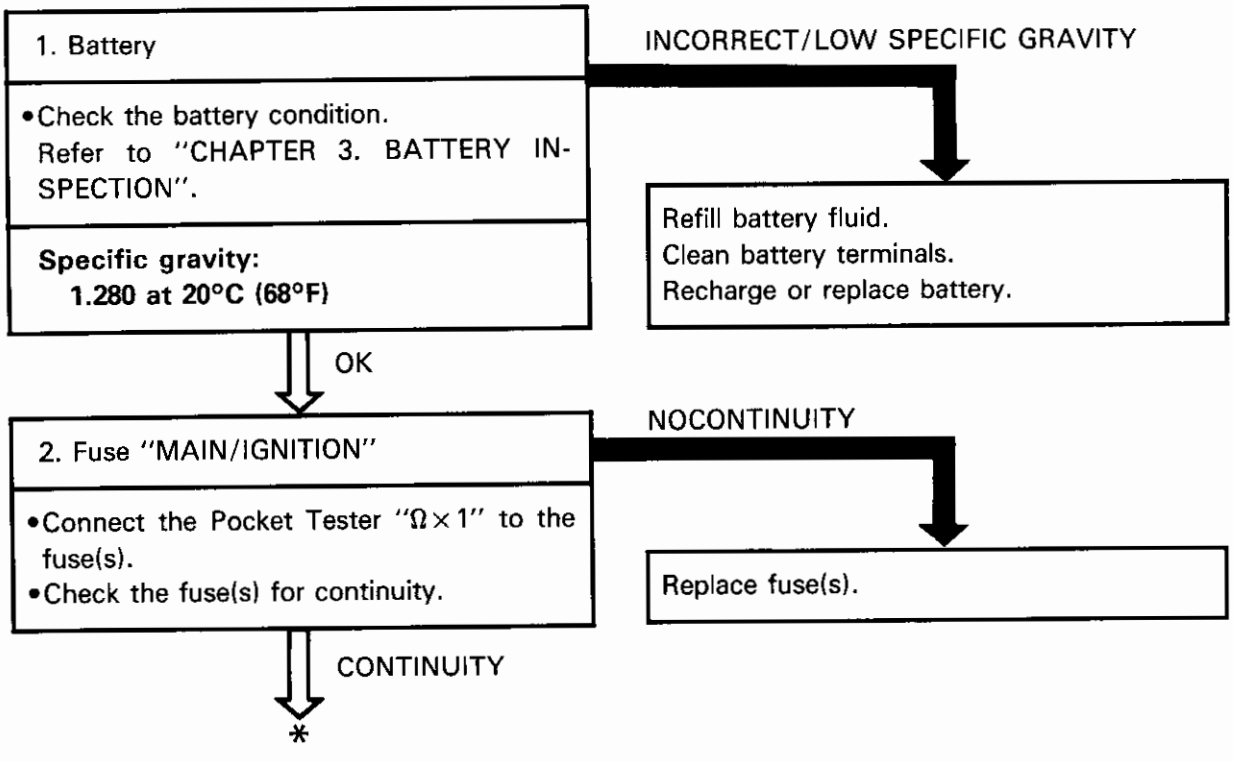
1. Battery
2. Fuse "MAIN/IGNITION"
3. Main switch
4. "ENGINE STOP" switch
5. Fuel pump input voltage
6. Wiring connection (Entire fuel system)

NOTE:

- Remove the following before troubleshooting.
  1) Seat
  2) Side covers
  3) Fuel tank
  4) Air ducts
  5) Inner panel (right)
  6) Use the fuel sub tank when the fuel tank is removed. Refer to "CHAPTER 2. CARBURETOR SYNCHRONIZATION".
- Use the following special tool in this troubleshooting.



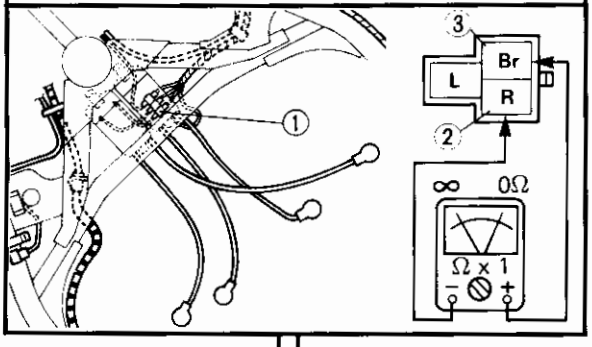
Pocket tester:
YU-03112



*

3. Main switch

- Disconnect the main switch coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the main switch coupler terminals — Main switch side (Red ② and Brown ③).
- Turn the main switch to "ON" position.
- Check the switch for continuity.

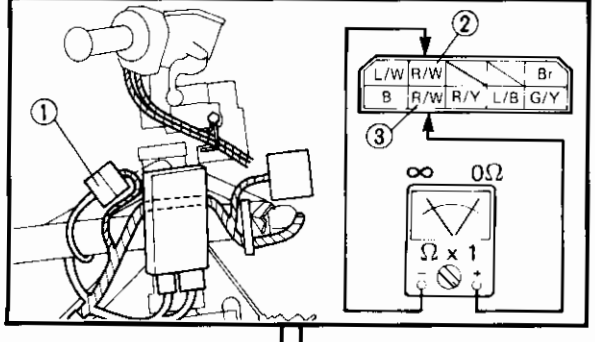


NOCONTINUITY → Replace main switch.

CONTINUITY

4. "ENGINE STOP" switch

- Disconnect the handlebar switch (right) coupler ① from the wire harness.
- Connect the Pocket Tester "Ω×1" to the handlebar switch (right) coupler terminals — Handlebar switch side (Red/White ② and Red/White ③).
- Turn the "ENGINE STOP" switch to "RUN" position.
- Check the switch for continuity.



NOCONTINUITY → "ENGINE STOP" switch is faulty. Replace handlebar switch (right).

CONTINUITY

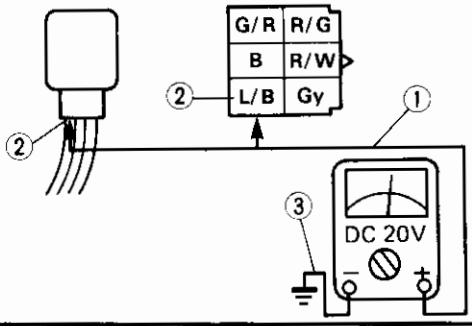
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5. Fuel pump input voltage

- Connect the positive lead ① of the Pocket Tester "DC20V" to the relay coupler terminal (Blue/Black ②).
- Ground the negative lead ③ of the Pocket Tester to the frame.
- Turn the main switch to "ON".
- Turn the "ENGINE STOP" switch to "RUN".
- Push the "START" switch.
- Measure the fuel pump input voltage.

Tester (+) lead→Blue/Black
Tester (−) lead→Ground



LESS THAN 11V → Replace digital ignitor unit.

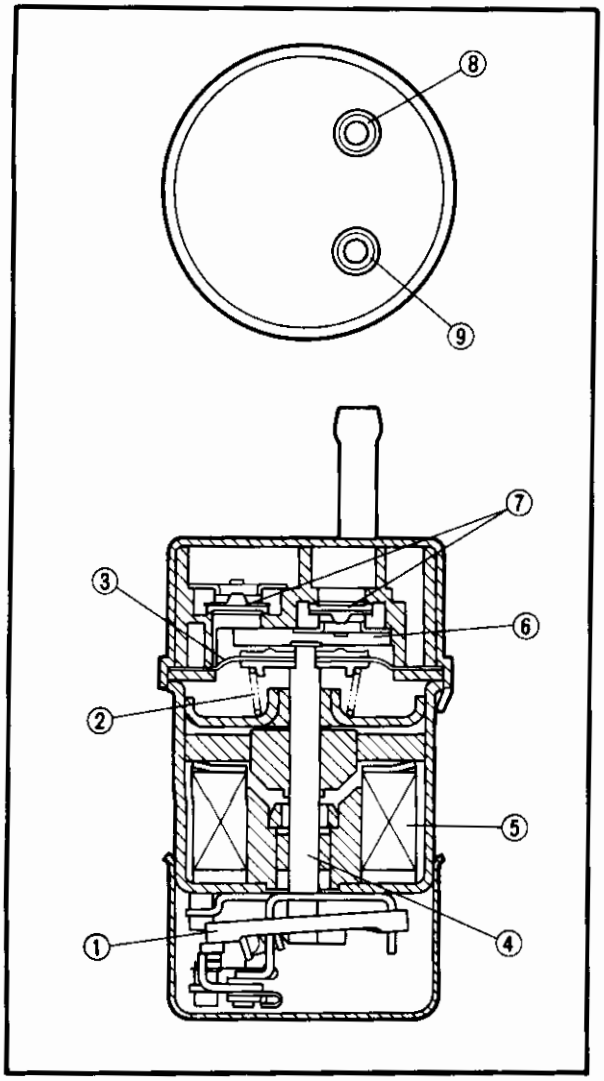
MORE THAN 11V

6. Wiring connection

- Entire fuel system
  Refer to "WIRING DIAGRAM".

POOR CONNECTION → Correct connection(s).

OK → Fuel pump relay is faulty.
Replace the fuel pump relay.



FUEL PUMP TEST

Operation

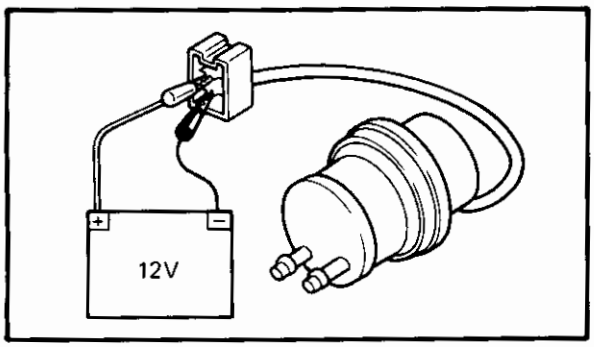
The diaphragm is pulled in by the plunger allowing fuel to be sucked into the fuel chamber. Fuel is pushed out from the pump until carb float chamber is filled with fuel, and then the cut-off switch cuts off the circuit.

When the spring pushes the diaphragm further to the end, the cut-off switch turns on and the solenoid coil pulls the plunger with the diaphragm forcing fuel into the fuel chamber.

NOTE:

When the main and "ENGINE STOP" switches are ON, the fuel pump relay is activated for five (5) seconds at which time the fuel pump operates.

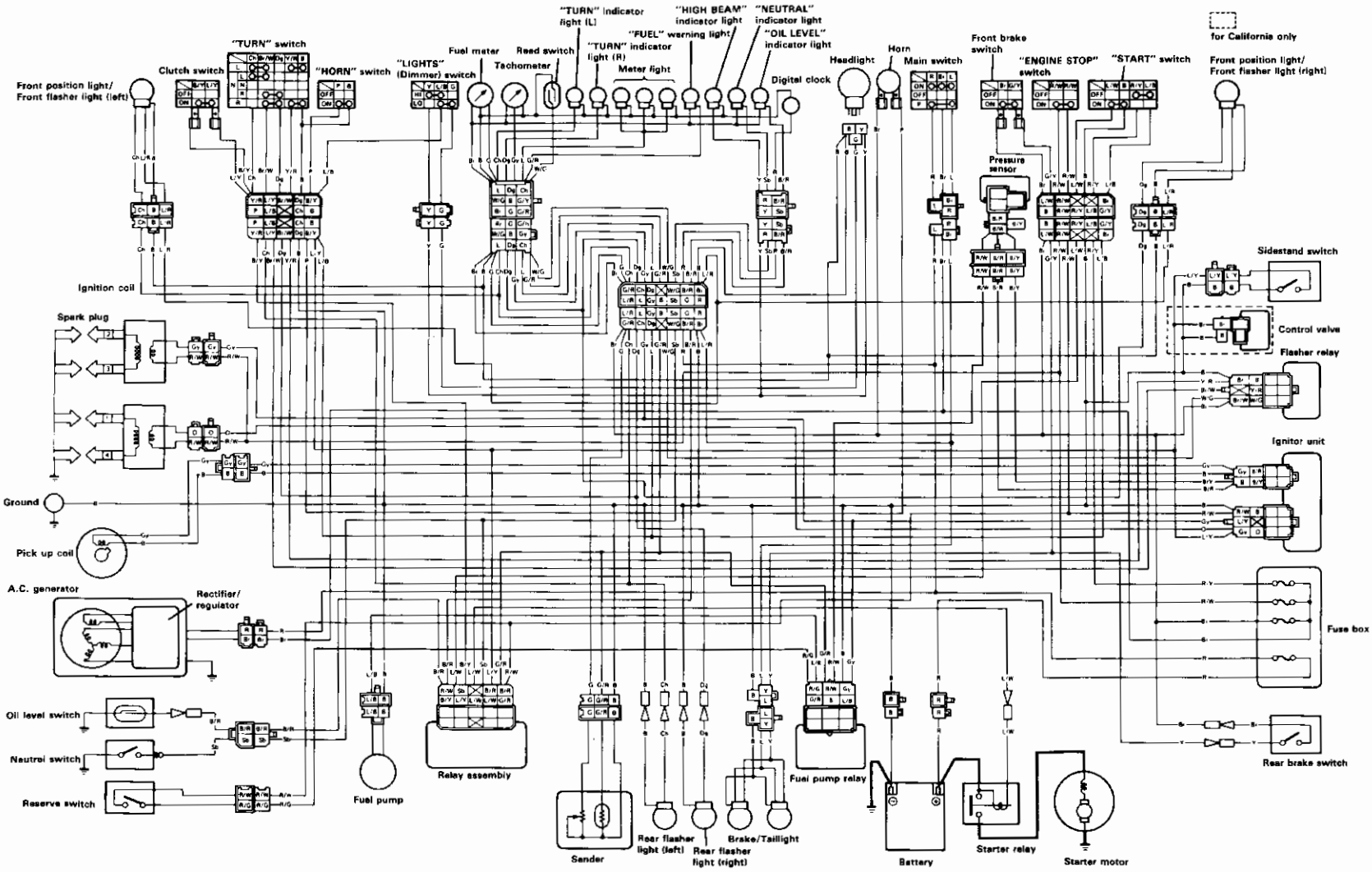
① Cut-off switch
② Spring
③ Diaphragm
④ Plunger
⑤ Solenoid coil
⑥ Fuel chamber
⑦ Valve
⑧ Outlet
⑨ Inlet



Inspection

1. Connect:
   - Battery (12V)
2. Inspect:
   - Fuel pump
     Cracks/Damage→Replace.
3. Check:
   - Fuel pump operation
     Faulty operation→Replace.

FJ1200W/FJ1200WC WIRING DIAGRAM



COLOR CODE

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