YAMAHA

FJ1200B
FJ1200BC

SUPPLEMENTARY SERVICE MANUAL

LIT-11616-07-80

3SK-28197-11

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the FJ1200B/BC. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manuals:

FJ1100L/LC Service Manual: LIT-11616-04-08
FJ1200S/SC Supplementary Service Manual: LIT-11616-05-00
FJ1200W/WC Supplentary Service Manual: LIT-11616-06-94

FJ1200B/BC
SUPPLEMENTARY
SERVICE MANUAL
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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 provicde 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 FJ1200B/BC. 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

CONSTRACTION 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

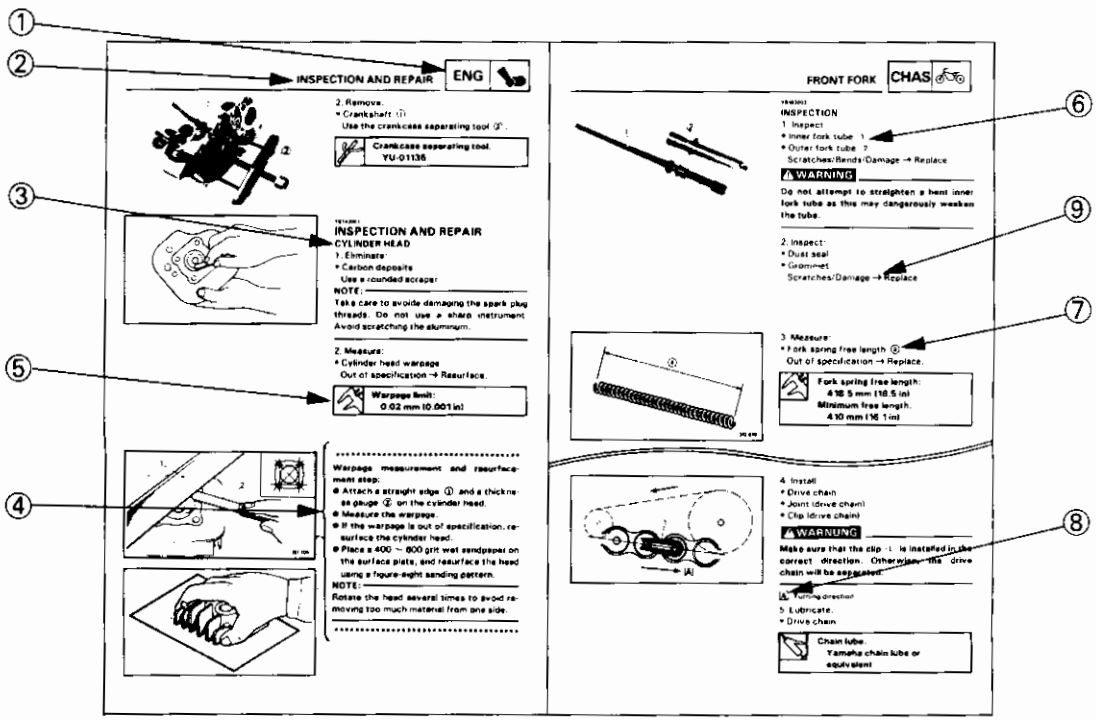
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspections.
A set of particularly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

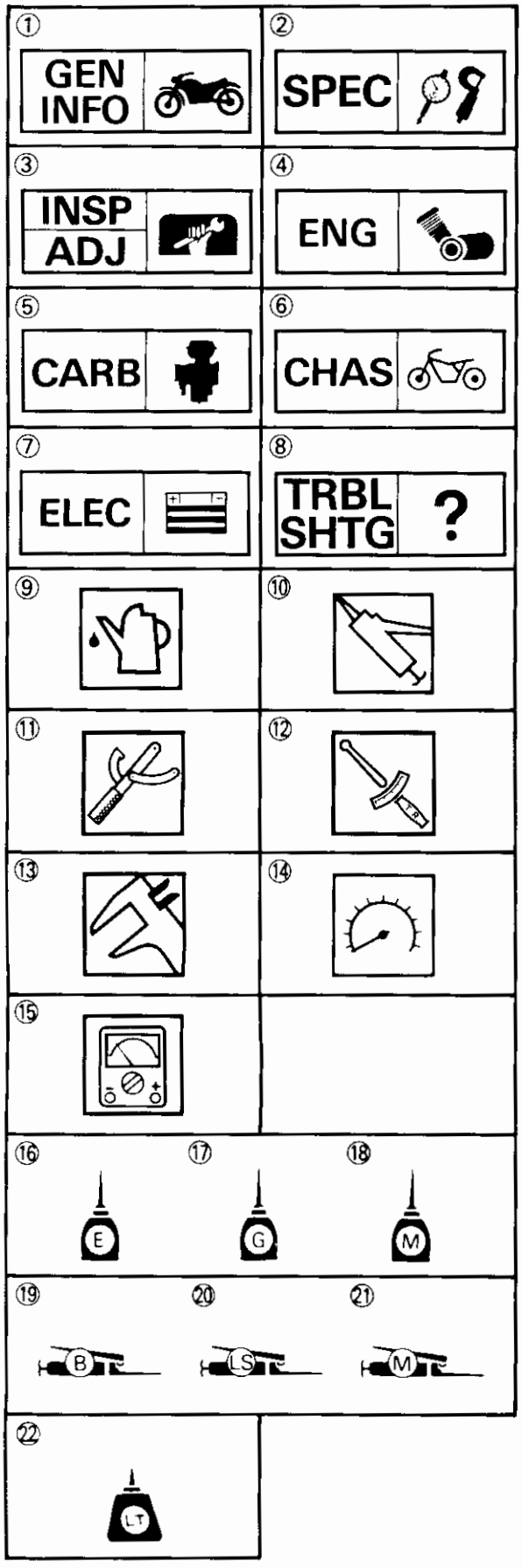
IMPORTANT FEATURES

- 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 ⑧ 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 Carburetion
⑥ Chassis
⑦ Electrical
⑧ Troubleshooting

Illustrated symbols ⑨ to ⑮ are used to identify the specifications appearing in the text.

⑨ Filling fluid
⑩ Lubricant
⑪ Special tool
⑫ Tightening
⑬ Wear limit, clearance
⑭ Engine speed
⑮ Ω, V, A

Illustrated symbols ⑯ to ㉒ in the exploded diagram indicate grade of lubricant and location of lubrication point.

⑯ Apply engine oil
⑰ Apply gear oil
⑱ Apply molybdenum disulfide oil
⑲ Apply wheel bearing grease
⑳ Apply lightweight lithium-soap base grease
㉑ Apply molybdenum disulfide grease
㉒ Apply locking agent (LOCTITE®)

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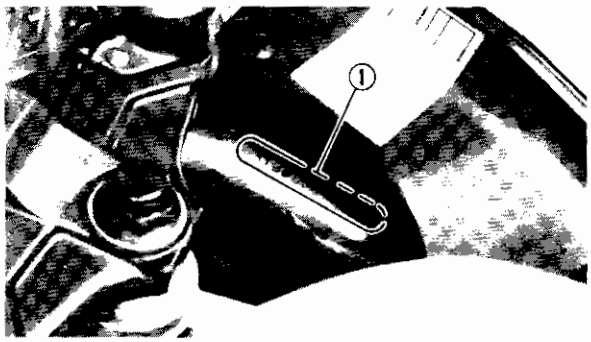
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GENERAL INFORMATION



MOTORCYCLE IDENTIFICATION

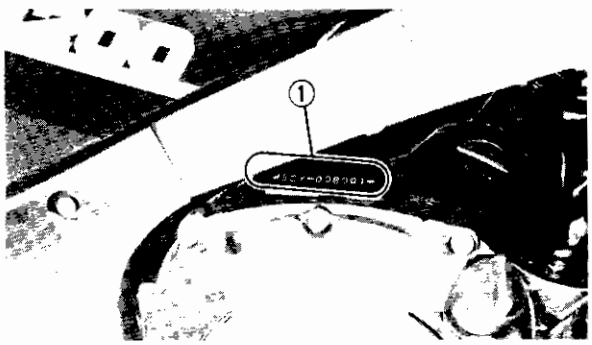
VEHICLE IDENTIFICATION NUMBER

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

Starting serial number:
FJ1200B:
JYA4AHE0*MA000101
FJ1200BC (For California):
JYA4AHC0*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.



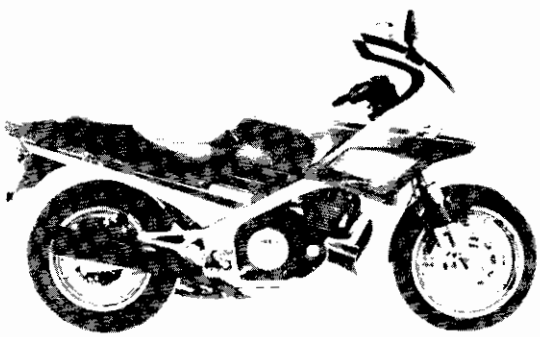
ENGINE SERIAL NUMBER

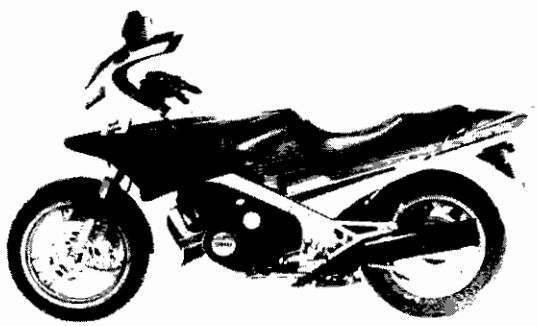
The engine serial number ① is stamped into the right side of the engine.

Starting serial number:
FJ1200B:
4AH-000101
FJ1200BC (For California):
4AH-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.

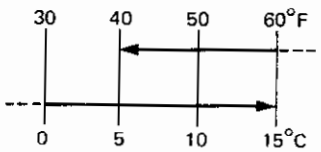




SPECIFICATIONS

GENERAL SPECIFICATIONS

FJ1200B: Except for California
FJ1200BC: For California

Model	FJ1200B/BC	
Model Code Number:	4AH1: FJ1200B 4AH2: FJ1200BC	
Vehicle identification number:	JYA4AHE0✻MA000101: FJ1200B JYA4AHC0✻MA003101: FJ1200BC	
Engine Starting Number:	4AH-000101: FJ1200B 4AH-003101: FJ1200BC	
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	 2,210 mm (87.0 in) 775 mm (30.5 in) 1,245 mm (49.0 in) 790 mm (31.1 in) 1,495 mm (58.9 in) 140 mm (5.5 in)	
Basic Weight: With Oil and Full Fuel Tank	 266 kg (586 lb): FJ1200B 267 kg (589 lb): FJ1200BC	
Minimum Turning Radius:	3,100 mm (122 in)	
Oil Type or Grade: Engine Oil 	 Yamalube 4 (20W40) or SAE 20W40 type SE/SF motor oil (If temperature does not go below 5°C (40°F)) Yamalube 4 (10W30) or SAE 10W30 type SE/SF motor oil (If temperature does not go above 15°C (60°F))	
Fuel: Type Tank Capacity: Total Reserve	 Unleaded fuel recomended 22 L (4.8 Imp gal, 5.8 US gal) 5 L (1.1 Imp gal, 1.3 US gal)	
Tire:	Front	Rear
Type	Tubeless	Tubeless
Size/Manufacturer (Type)	120/70 V17-V250 DUNLOP (K275F)	150/80 V16-V250 DUNLOP (K275)
<Wear Limit>	<0.8 mm (0.03 in)>	<0.8 mm (0.03 in)>

Model	FJ1200B/BC	
Tire Pressure (Cold Tire):		
Basic Weight:		
With Oil and Full Fuel Tank	266 kg (586 lb): FJ1200B 267 kg (589 lb): FJ1200BC	
Maximum Load *	182 kg (401 lb): FJ1200B 181 kg (399 lb): FJ1200BC	
Cold Tire Pressure:	Front	Rear
Up to 90 kg (198lb) Load*	225 kpa (2.25 kg/cm², 32 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 the total weight of cargo, rider, passenger, and accessories.		
Wheel Travel:		
Front Wheel Travel	150 mm (5.9 in)	
Rear Wheel Travel	119 mm (4.7 in)	
Electrical:		
Ignition System	TCI (Digital Ignition)	
Generator System	AC generator	
Battery Type or Model	YTX14-BS	
Battery Capacity	12V 12AH	

MAINTENANCE SPECIFICATIONS

ENGINE

Model		FJ1200B/BC
Carburetor:		
I.D. Mark		4AH-00, 4AH-10: FJ1200BC
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.)	2.0 ~ 4.0 mm (0.079 ~ 0.157 in)
Float Height	(F.H.)	21.3 ~ 23.3 mm (0.839 ~ 0.917 in)
Engine Idling Speed		1,050 ~ 1,150 r/min
Vacuum Pressure at Idling Speed		Above 29.3 kpa (220 mm Hg, 8.7 in Hg)
Vacuum Synchronous Difference		Below 1.33 kpa (10 mm Hg, 0.394 in Hg)
Lubrication System:		
Oil Filter Type:		Paper type
Oil Pump Type:		Trochoid type
Tip clearance		0.12 mm (0.0047 in)
<Limit>		<0.17 mm (0.0067 in)>
Side Clearance		0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in)
<Limit>		<0.10 mm (0.0039 in)>
Bypass Valve Setting Pressure		180 ~ 220 kPa (1.8 ~ 2.2 kg/cm^2, 26 ~ 31 psi)
Relief Valve Operating Pressure (Main gallery)		480 ~ 580 kPa (4.8 ~ 5.8 kg/cm^2, 68 ~ 82 psi)

CHASSIS

Model	FJ1200B/BC
Front Suspension:	
Front Fork Travel	150 mm (5.91 in)
Fork Spring Free Length	529.5 mm (20.8 in)
<Limit>	<524 mm (20.6 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	Zero ~ 100 mm (Zero ~ 3.74 in)
K2	100 ~ 150 mm (3.74 ~ 5.91 in)
Optional Spring	No
Oil Caspacity/Oil Level	446 cm^3 (15.70 Imp oz, 15.08 US oz)/ 142 mm (5.59 in)
Oil Grade	Fork oil 10W or equivalent
Rear Suspension:	
Shock Absorber Travel	48 mm (1.89 in)
Spring Free Length	181 mm (7.13 in)
<Limit>	<174 mm (6.85 in)>
Fitting Length	164 mm (6.46 in)
Spring Rate K1	132 N/mm (13.5 kg/mm, 756 lb/in)
Stroke	Zero ~ 48 mm (Zero ~ 1.89 in)
Optional Spring	No
Enclosed Gas Pressure	1,200 kPa (12 kg/cm^2, 171 psi)
Drive Chain:	
Type/Manufacturer	50 ZL • 5/DID
No. of Links	110 Links
Chain Slack	15 ~ 20 mm (0.6 ~ 0.8 in)

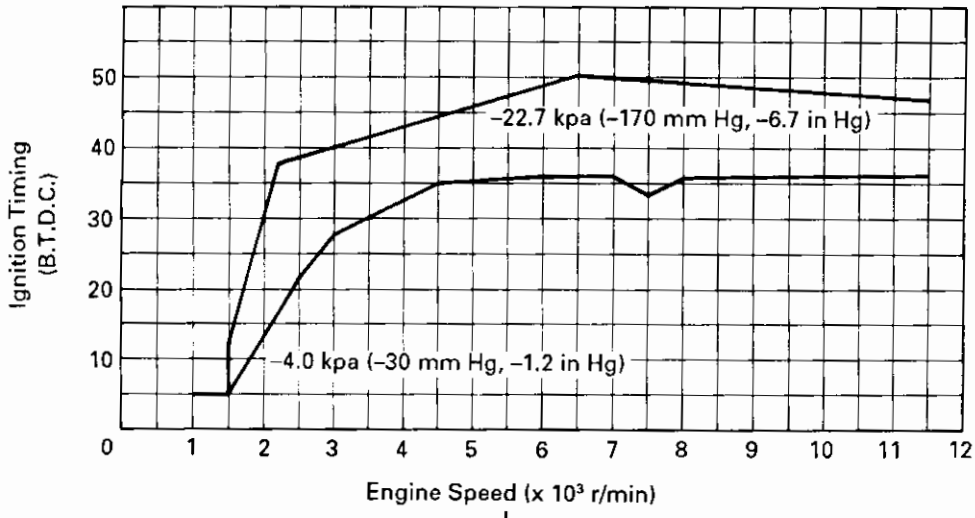
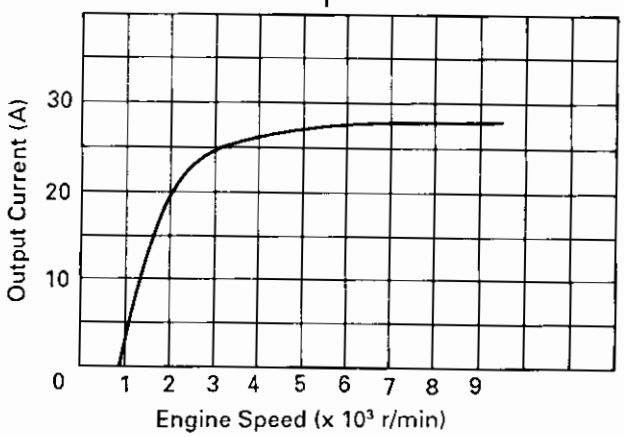
Model	FJ1200B/BC				
Tightening torque:					
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m·kg	ft·lb	
Front fork Handlebar:					
Handle crown and inner tube	M8 × 1.25	23	2.3	17	
Handle crown and steering shaft	M14 × 1.25	110	11.0	80	
Lower bracket and inner tube	M8 × 1.25	23	2.3	17	
Handlebar and inner tube	M8 × 1.25	23	2.3	17	
Handlebar and handle crown	M6 × 1.0	9	0.9	6.5	
Steering shaft and ring nut	M25 × 1.0	3	0.3	2.2	Refer to "NOTE"
Master cylinder cap (front brake)	M4 × 0.7	2	0.2	1.4	
Master cylinder and handle	M6 × 1.0	9	0.9	6.5	
Joint (brake hose) and lower bracket	M6 × 1.0	9	0.9	6.5	
Meter and Meter cable	M12 × 1.0	3	0.3	2.2	
Front fender and front fork	M6 × 1.0	9	0.9	6.5	
Clutch hose and clutch pipe	M10 × 1.0	20	2.0	14	
Engine mount:					
Engine bracket (front) and frame	M12 × 1.25	90	9.0	65	
Engine bracket (front) and engine	M12 × 1.25	90	9.0	65	
Engine bracket (rear upper) and frame	M12 × 1.25	90	9.0	65	
Engine bracket (rear upper) and engine	M10 × 1.25	64	6.4	46	
Down tube (front) and frame	M10 × 1.25	48	4.8	35	
Down tube (rear) and frame	M10 × 1.25	30	3.0	22	
Rear frame and frame	M10 × 1.25	48	4.8	35	
Rear shock absorber/Swingarm:					
Pivot shaft and nut	M14 × 1.5	90	9.0	65	
Swingarm and arm 1	M12 × 1.25	65	6.5	47	
Arm 1 and relay arm	M12 × 1.25	65	6.5	47	
Realy arm and frame	M12 × 1.25	65	6.5	47	
Rear shock abosrber and frame	M10 × 1.25	40	4.0	29	
Rear shock absorber and relay arm	M12 × 1.25	65	6.5	47	
Compression bar	M8 × 1.25	30	3.0	22	
Chain puller	M8 × 1.25	23	2.3	17	
Front wheel/Rear wheel:					
Front wheel axle and front fork	M14 × 1.5	59	5.9	43	
Rear wheel axle and nut	M18 × 1.5	155	15.5	112	
Front axle holder	M8 × 1.25	20	2.0	14	
Brake caliper (front) and front fork	M10 × 1.25	35	3.5	25	
Brake caliper (rear) and bracket	M10 × 1.25	35	3.5	25	
Union bolt (brake)	M8 × 1.25	30	3.0	22	
Brake caliper and bleed screw	M8 × 1.25	6	0.6	4.3	
Brake disk and front wheel	M8 × 1.25	20	2.0	14	①
Brake disk and rear wheel	M8 × 1.25	20	2.0	14	①
Speedometer gear unit and meter cable	M12 × 1.0	3	0.3	2.2	

Model	FJ1200B/BC				
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m·kg	ft·lb	
Footrest/Pedal/Stand:					
Shift pedal shaft bolt and frame	M8 × 1.25	30	3.0	22	
Footrest bracket and frame	M8 × 1.25	30	3.0	22	
Footrest (for rider) and frame	M8 × 1.25	30	3.0	22	
Footrest (for passenger) and footrest bracket	M10 × 1.25	23	2.3	17	
Master cylinder (rear brake) and bracket 3	M8 × 1.25	23	2.3	17	
Reservoir tank (rear brake) and frame	M6 × 1.0	4	0.4	2.9	
Brake pedal and brake shaft	M6 × 1.0	8	0.8	5.8	
Muffler and frame	M10 × 1.25	30	3.0	22	
Tank/Seat/Cover/Fender:					
Fuel tank and fuel cock	M6 × 1.0	7	0.7	5.1	
Fuel sender unit and fuel tank	M5 × 0.8	4	0.4	2.9	
Rear stay and rear frame	M8 × 1.25	23	2.3	17	

NOTE:

1. First, tighten the ring nut approximately 52 Nm (5.2 m • kg, 38 ft • lb) by using the torque wrench. Turn the handlebars to the left and right making sure there is no binding and then fully loosen the ring nut.
2. Retighten the ring nut to specification.

ELECTRICAL

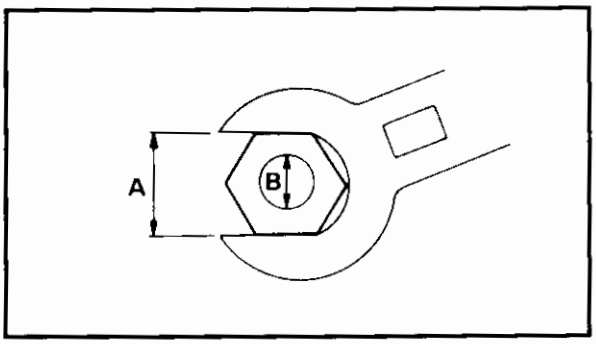
Model	FJ1200B/BC
Voltage:	12V
Ignition System: Ignition Timing (B.T.D.C.) Advancer Type	 5° at 1,000 r/min Electrical/Vacuum
	
TCI: Pickup Coil Resistance (Color) TCI Unit-Model/Manufacturer	 149 ~ 182 Ω at 20°C (68°F) (Gray – Black) TID14-90A/HITACHI
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	 CM12-35/HITACHI 6 mm (0.24 in) 1.8 ~ 2.2Ω at 20°C (68°F) 9.6 ~ 14.4kΩ at 20°C (68°F)
Charging System/Type:	A.C. generator
A.C. Generator: Model/Manufacturer Nominal Output	 B3G/NIPPONDENSO 14V, 28A at 5,000 r/min
	

Model	FJ1200B/BC
Generator Assembly:	
Stator Coil Resistance (color)	0.19 ~ 0.20 Ωat 20°C (68°F) (White – White)
Field (Rotor) Coil Resistance	3.8 ~ 4.2Ω at 20°C (68°F)
Brush Overall Length	10.5 mm (0.41 in)
<Limit>	<4.5 mm (0.18 in)>
Spring Pressure	230 ~ 330 g (8.12 ~ 11.65 oz)
Battery:	
Capacity	12V, 12AH
Specific Gravity	1.320
Electrical Starter System:	
Type	Constant mesh type
Starter Motor:	
Model/Manufacturer	SM-13/MITSUBA
Output	0.65 kW
Brush:	
Overall Length	12.5 mm (0.49 in)
<Limit>	<5.0 mm (0.20 in)>
Spring Pressure	570 ~ 920 g (20.12 ~ 32.48 oz)
Commutator:	
Diameter	28 mm (1.1 in)
<Wear Limit>	<27 mm (1.06 in)>
Mica Undercut	0.5 mm (0.02 in)
Flasher Relay:	
Type	Semi-transister type
Model/Manufacturer	3YA/OMRON
Self Cancelling Device	No
Flasher Frequency	75 ~ 95 cycle/min
Wattage	27W x 2 + 3.4W
Relay Assembly (Starting Circuit Cut-off Relay):	
Model/Manufacturer	2UJ/OMRON
Coil Winding Resistance (Color)	203 ~ 248Ω at 20°C (68°F) (Red/Black – Black/Yellow)
Circuit Breaker:	
Type	Fuse
Amperage for Individual Circuit x Quantity	
MAIN	30A x 1
HEAD	15A x 1
SIGNAL	10A x 1
IGNITION	10A x 1
RESERVE	30A x 1
	15A x 1
	10A x 1

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

A (Nut)	B (Bolt)	General torque specifications		
		Nm	m•kg	ft•lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94



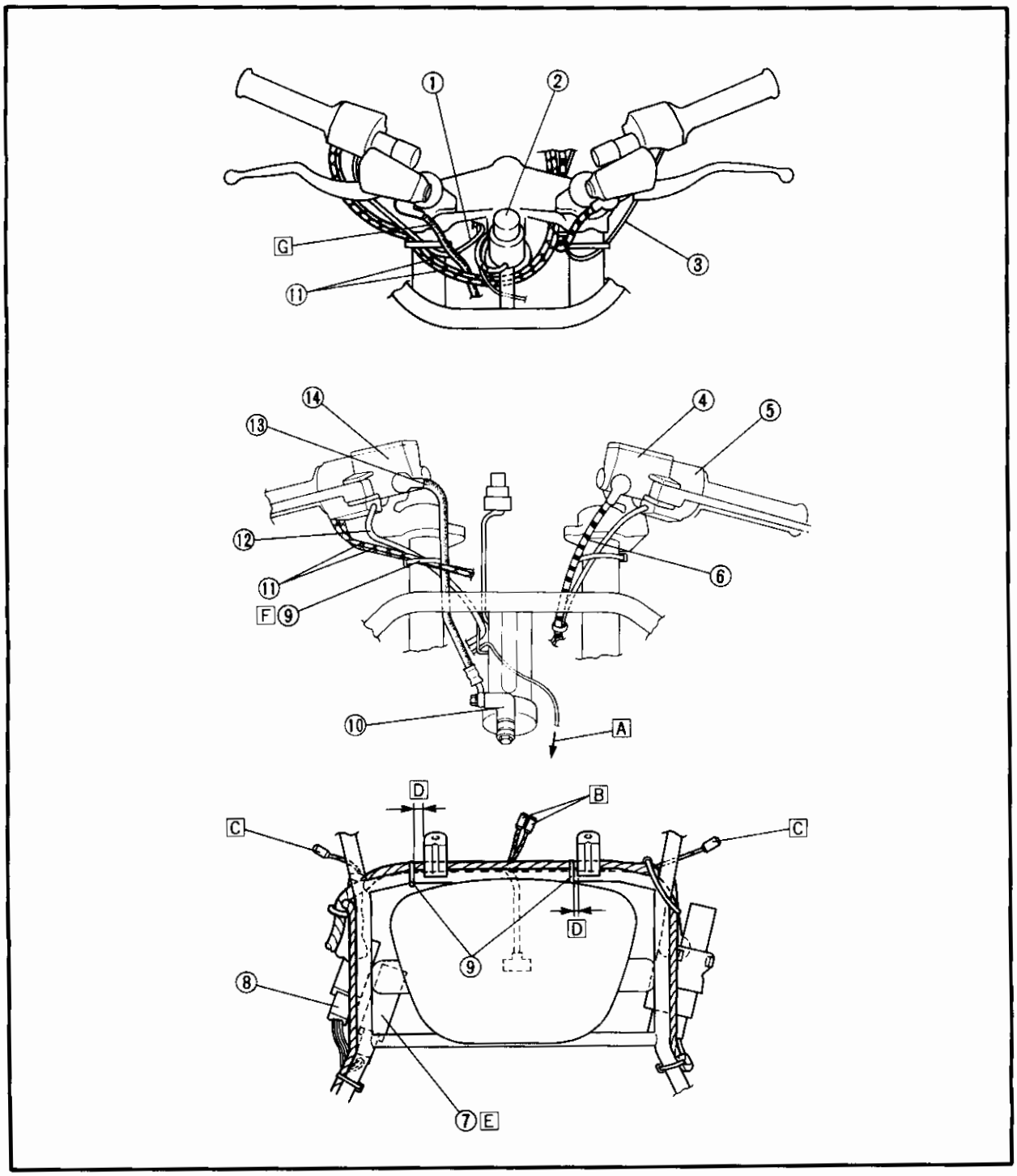
A: Distance across flats
B: Outside thred diameter

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm cm	millimeter centimeter	10^{-3} meter 10^{-2} meter	Length Length
kg	kilogram	10^{3} gram	Weight
N	Newton	1 kg × m/sec^2	Force
Nm m•kg	Newton meter Meter kilogram	N × m m × kg	Torque Torque
Pa N/mm	Pascal Newton per millimeter	N/m^2 N/mm	Pressure Spring rate
L cm^3	Liter Cubic centimeter	—	Volume or capacity
r/min	Revolution per minute	—	Engine speed

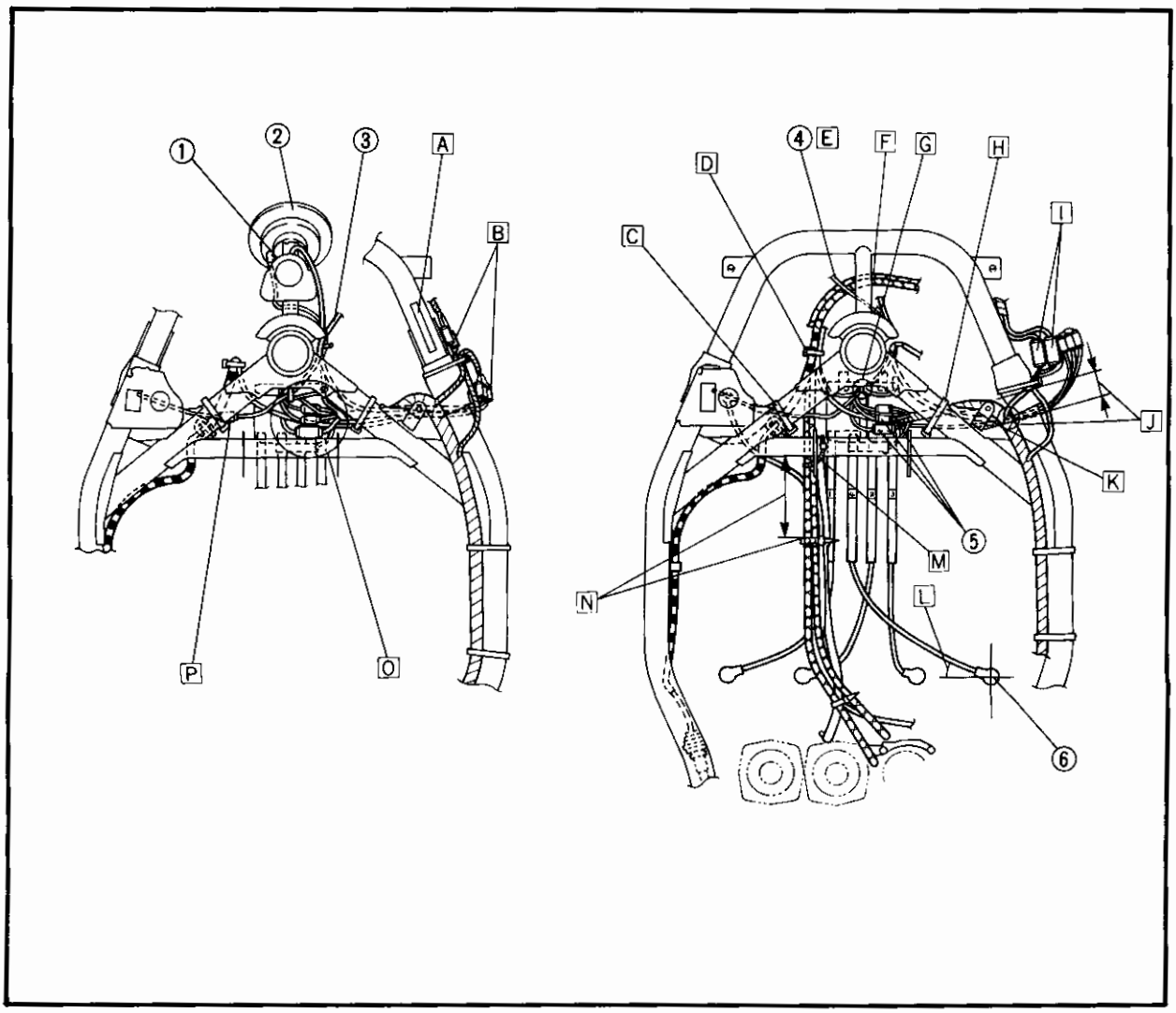
CABLE ROUTING

① Handle switch lead (right)
② Main switch
③ Handle switch lead (left)
④ Master cylinder (clutch)
⑤ Handle switch 4 (left)
⑥ Clutch hose
⑦ Flasher relay
⑧ Relay assembly
⑨ Band
⑩ Joint (brake hose)
⑪ Throttle cable
⑫ Handle switch lead (right)
⑬ Brake hose 1
⑭ Master cylinder (brake)
[A] To the horn
[B] Connect the meter coupler
[C] Connect the flasher light coupler
[D] Less than 10 mm (0.39 in)
[E] Fit the flasher relay on the inside.
[F] Cut the end of the band which clamps the 2 throttle cables and handle switch lead (right).
[G] The brake hose 1 should be routed in front of the handle switch lead (right) and behind the throttle cable.



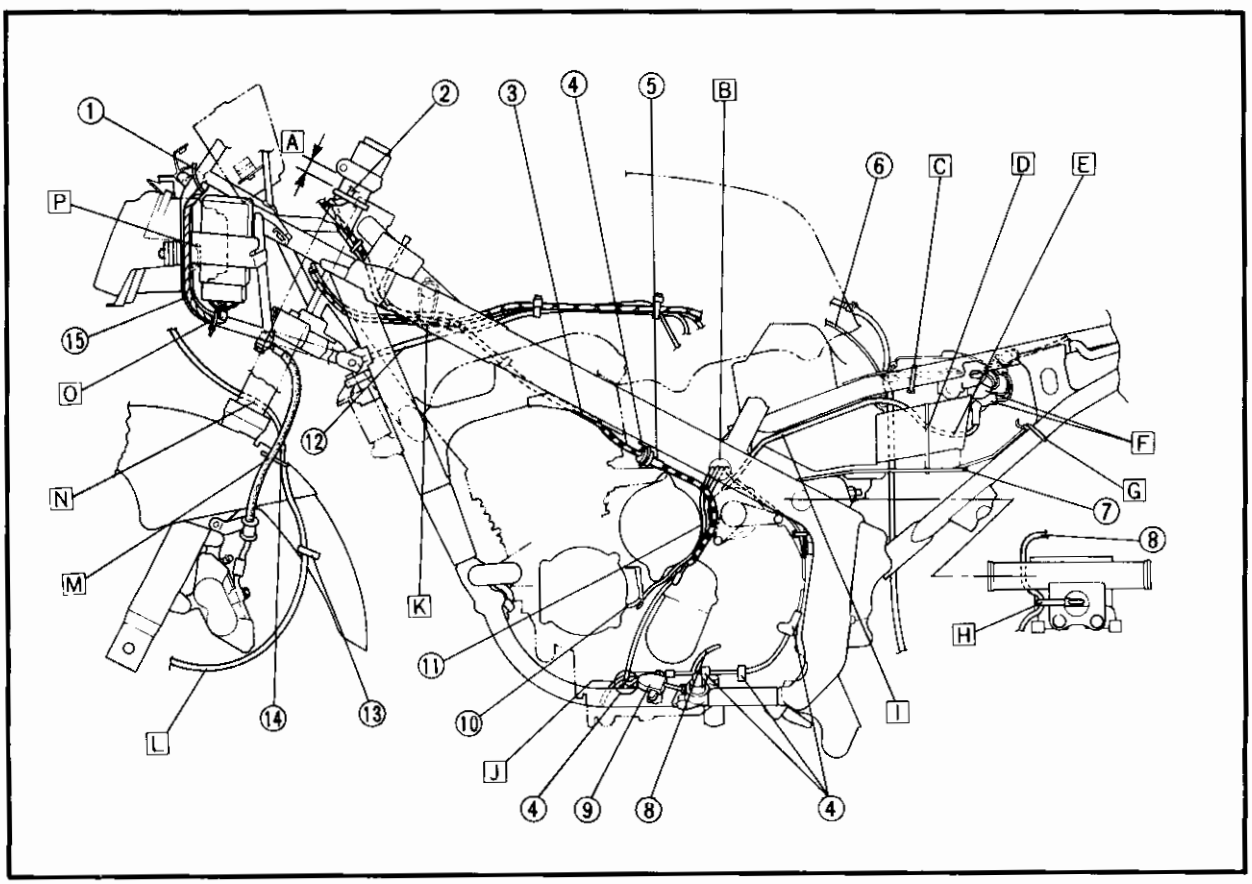
① Main switch
② Horn
③ Handle switch lead (right)
④ Horn lead
⑤ Ignition coil coupler (two pieces)/Handle switch coupler (right)
⑥ Plug cap

[A] Make sure the frame No. is not hidden by the harness.
[B] Coupler on the outside of the frame
[C] Secure the clutch hose and reserve switch lead, so that the front ends face towards the inside of the frame.
[D] Clamp the clutch hose and handle switch lead (left).
[E] Route the horn lead in front of the head pipe (throught the triangular space) and above the throttle cable.
[F] Route the throttle cable through the center of the head pipe (within the triangular shape).
[G] Route the ignition coil leads (2 nos.), handle switch lead (right) and reserve switch lead through the clamp of the frame unit.
[H] Secure the main harness and handle switch lead (right/ left) simultaneously, and make sure that the band front end is directed towards the inside of the frame.
[I] After connecting with the coupler of cowl stay, clamp it.
[J] To position the harness, align the harness branch point with the bracket end (Less than 10 mm (0.39 in)).
[K] Insert the harness beneath the bracket
[L] About 15 degrees (to prevent interference with duct)
[M] Clamp the two throttle cables to the cross-pipe (for California only).
[N] Secure the two throttle cables, the choke cable, and the pressure sensor hose (less than 60 mm (2.36 in)). (In California models, there are five items to be clamped at the same time, including the cannister hose.)
[O] At the time of installing the fuel tank, insert the lead and coupler within the frame so that they are not sandwiched.
[P] The coupler should be inserted beneath the frame.



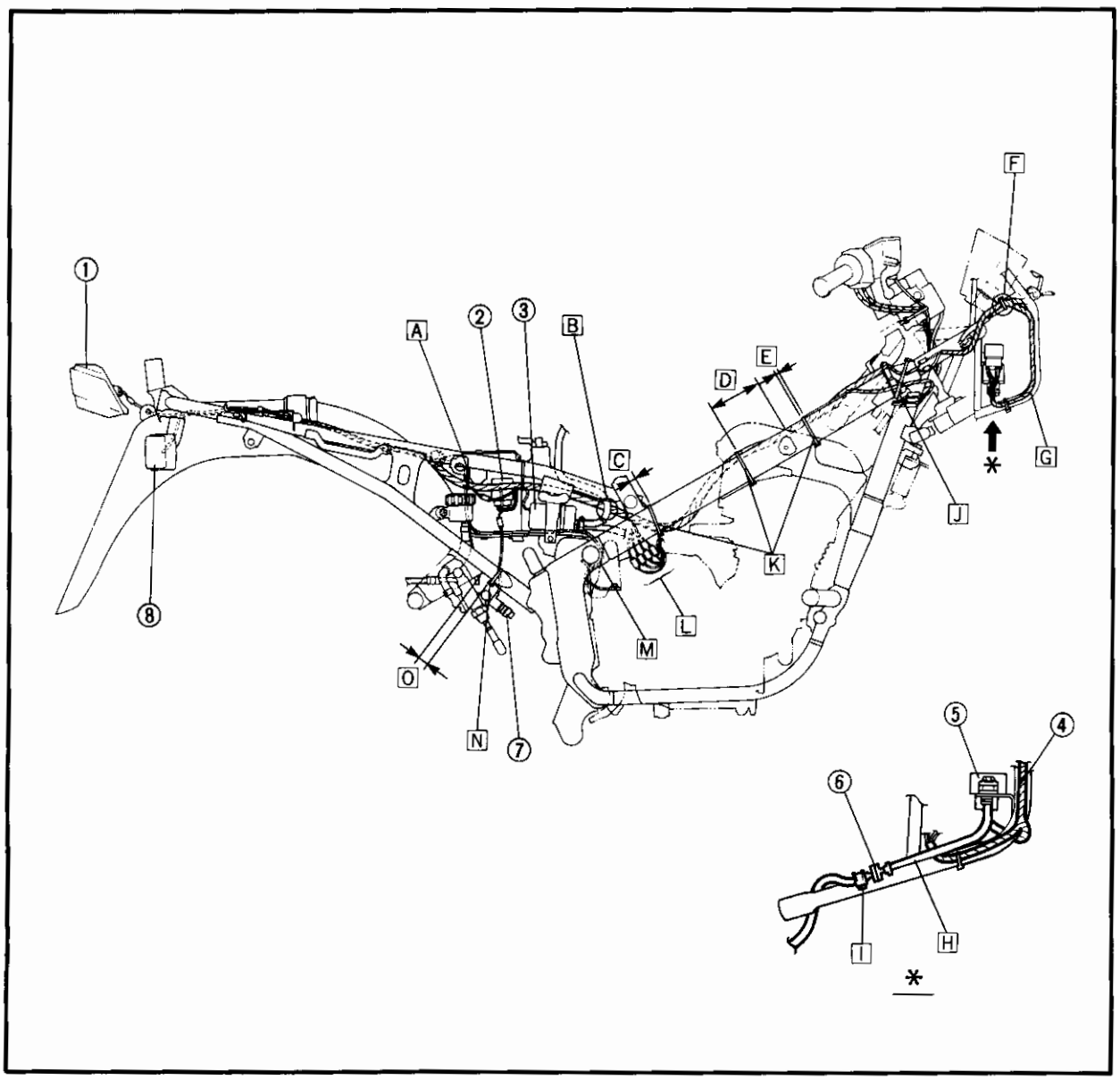
① Band
② Handle switch lead (left)
③ Clutch pipe
④ Clamp
⑤ Clutch hose 2
⑥ Fuel sender unit lead
⑦ Rubber seat
⑧ Neutral switch lead
⑨ Side stand switch
⑩ Pickup coil lead
⑪ A.C. generator lead
⑫ Pressure censor hose
⑬ Cable holder
⑭ Holder
⑮ Cross pipe

[A] Clamp at a position 20 mm (0.79 in) beneath the handle crown (Common for left and right sides)
[B] Route the neutral switch lead, side stand switch lead, pickup coil lead and A.C. generator lead between the insulating plate and carburetor to the right side of the vehicle body.
[C] Clamp in such a way that the wires do not get stuck in the damper at the seat bottom.
[D] Secure the starter motor lead, air cleaner duct and rubber seat. The band should be routed through the rubber seat hole, and the end should be inserted at the rear part of the frame.
[E] Insert the starter motor lead between the air cleaner duct and the battery box. Do not position it above the duct.
[F] The harness should be led out to the rear of the vehicle body. (Facing sideways)
[G] The clamp securing the rubber seat is to be fitted on the mudguard of the rear frame, routed from the top of the bracket and the end is to be inserted on the inside of the frame.
[H] The front end of the band should be inserted in the engine bracket.
[I] The starter motor lead should be routed above the air cleaner duct, and should not protrude outside the frame.
[J] The side stand switch lead should not sag. (To prevent contact with the joint silencer)
[K] Route the pressure sensor hose to the left of the high-tension cord 1 (for California, through the center between the canister and the high-tension cord 1), and over the cross-pipe. Pass it behind the oil cooler attachment pin and to the right side of the vehicle.
[L] The speedometer cable should be routed through holders at two locations.
[M] The brake hose should be routed on the outside.
[N] Should be routed through the inner side of the fork.
[O] Should be routed on the outside of the cowl stay and clamped.Whether the front end of the band is cut or not cut, it should be directed outside the cowl.
[P] The earth lead should be secured along with the ignitor. (The earth lead should be sandwiched between the ignitor and screw)



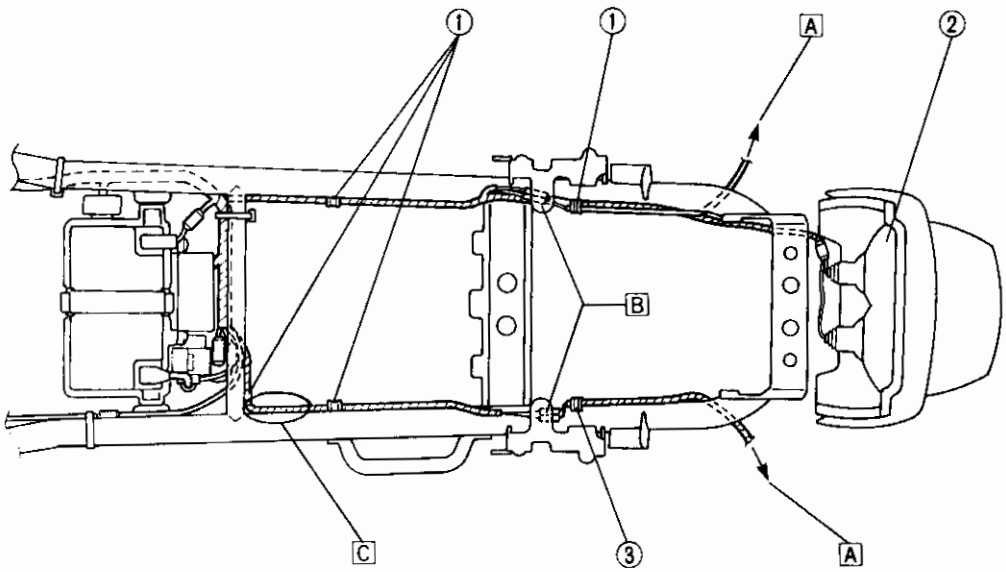
① Tail light unit
② Fuel pump relay
③ Fuel pump
④ Pressure sensor lead
⑤ Pressure sensor
⑥ Nozzle
⑦ Rear brake switch
⑧ Rear flasher light

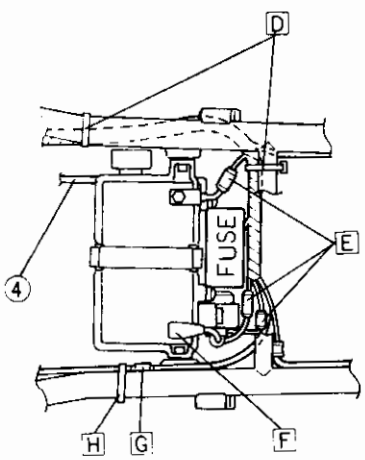
[A] Mount the damper on the bracket, and clamp the main harness, fuel pump lead and damper by means of the band.
[B] The fuel hose should be more on the outside than the main harness.
[C] Less than 20 mm (0.79 in)
[D] Less than 100 mm (3.94 in)
[E] Less than 15 mm (0.59 in)
[F] Align the harness branch with the bracket for fitting meter.
[G] The harness should be routed on the outside of the cowl stay and should not enter the inside part of the cowl stay.
[H] Route the band along the outside of the cowl stay and the harness. Do not clamp it together with the relay cord.
[I] Using the cowl stay clamp, secure it on top of the nozzle or the clamp.
[J] After connecting the band, the end should be directed towards the outside portion of the frame.
[K] After fitting the band, cut the end and position the end on the underside of the frame.
[L] After connecting the pickup coil lead, A.C. generator lead, neutral switch lead and side stand switch lead, these lead wires should be enclosed on the inside portion of the frame.
Make sure you do not damage the carburetor breather pipe during this operation.
[M] The negative lead should be routed in front of the engine suspension bracket, and above the rubber plate, to the battery. The securing on the crankcase side is by fastening the wire and the case by means of the securing bolt.
[N] Cut the band end part.
[O] Less than 70 mm (2.76 in)



① Clamp
② Tail light unit
③ Clamp
④ Battery negative lead

[A] To the flasher light
[B] Route beneath the bracket.
[C] The harness should not protrude above the seat rail.
[D] After securing the band, cut the front end. If it is not cut, the front end should be inserted beneath the frame.
[E] The negative lead, positive lead and starter relay coupler should not protrude above the frame.
[F] Install so that the positive lead comes out in the rear.
[G] The fuel center lead coupler should be inserted on the inside part of the seat rail and should not protrude above the frame.

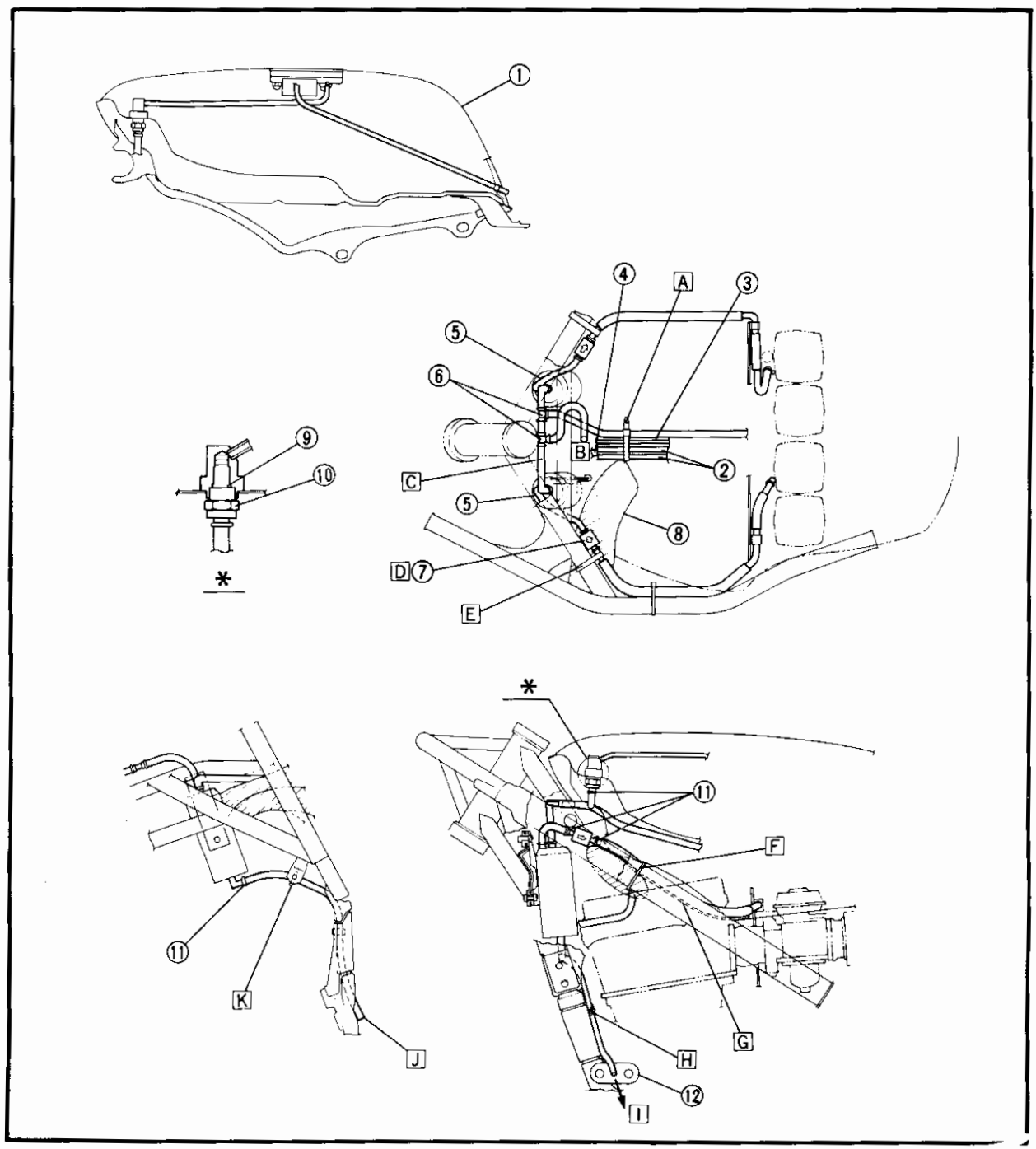




CANISTER HOSE ROUTING (FOR FJ1200BC)

① Fuel tank
② Throttle cable
③ Choke cable
④ Pressure sensor hose
⑤ Canister
⑥ Joint pipe
⑦ Pressure control valve
⑧ Air duct
⑨ O-ring
⑩ Roll over valve
⑪ Clip
⑫ Engine suspension bracket

[A] Clamp the canister hose, throttle cable, choke cable and pressure sensor hose with the band.
[B] From fuel tank
[C] Pass the hose over the ignition coil.
[D] The arrow mark on the pressure control valve should face the carburetor side.
[E] Make sure the hose is not collapsed at any point.
[F] Cut the end of the band.
[G] Pass the hose inside the tank rail.
[H] Secure it with the clamp of the down tube.
[I] To outside
[J] Route the hose between the under cowling and the engine suspension bracket.
[K] Pass the hose through the holder of the oil cooler bracket.



PERIODIC INSPECTION AND ADJUSTMENT

INTRODUCTION

This chapter includes all information necessary to perform recommended inspections and adjustments. These preventive maintenance procedures, if followed, will ensure more reliable vehicle operation and a longer service life. The need for costly overhaul work will be greatly reduced. This information applies to vehicles already in service as well as new vehicles that are being prepared for sale. All service technicians should be familiar with this entire chapter.

PERIODIC MAINTENANCE EMISSION CONTOROL SYSTEM

No.	Item	Remarks	Initial	Odometer readings				
			1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	**3 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
1*	Valve clearance	Check and adjust valve clearance when engine is cold.					○	
2	Spark plugs	Check condition. Adjust gap and clean. Replace at 13,000 km (or 13 months) and thereafter every 12,000 km (or 12 months).		○	Replace	○	Replace	○
3*	Crankcase ventilation system	Check ventilation hose for cracks or damage. Replace if necessary.		○	○	○	○	○
4*	Fuel line	Check fuel hose and vacuum pipe for cracks or damage. Replace if necessary.		○	○	○	○	○
5*	Exhaust system	Check for leakage. Retighten if necessary. Replace gasket (s) if necessary.		○	○	○	○	○
6*	Carburetor Synchronization	Adjust synchronization of carburetors.	○	○	○	○	○	○
7*	Idle speed	Check and adjust engine idle speed. Adjust cable free play.		○	○	○	○	○

*: It is recommended that these items be serviced by a Yamaha dealer or other qualified mechanic.

NOTE:

For farther odometer reading, repeat the above maintenance at the period established; **1: Every 6,000 km (3,800 mi), **2: Every 12,000 km (7600 mi), **3: Every 24,000 km (15,200 mi) intervals.

GENERAL MAINTENANCE/LUBRICATION

No.	Item	Remarks	Type	Initial	Odometer readings				
				1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	**3 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
1	Engine oil	Warm-up engine before draining.	*1) Yamalube 4 (20W40) or SAE 20W40 type "SE" motore oil *2) Yamalube 4 (10W30) or SAE 10W30 type "SE" motor oil	○	○	○	○	○	○
2	Oil filter	Replace	–	○		○		○	
3*	Air filter	Clean with compressed air. Replace if necessary.	–		○	○	○	○	○
4*	Brake system	Adjust free play. Replace pads if necessary.	–	○	○	○	○	○	○
5	Drive chain	Check chain condition. Adjust and lubricate chain thoroughly.	SAE30W-50 motor oil	Every 500 km (300 mi)					
6*	Control and meter cable	Apply chain lube thoroughtly.	Yamaha chain and cable lube or SAE 10W30 motor oil.	○	○	○	○	○	○
7	Rear arm pivot shaft and suspension link pivots.	Apply grease lightly.	Lithium soap base grease.					○	
8	Brake/ Clutch lever pivot shaft	Aplly chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil.		○	○	○	○	○
9	Brake pedal and shift pedal shaft	Lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil.		○	○	○	○	○
10*	Center/Side stand pivots	Check operation and lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil.		○	○	○	○	○
11*	Front fork oil	Check operation and leakage.	–		○	○	○	○	○
12*	Steering bearings	Check bearings assembly for looseness. Moderately repack every 24,000 km (15,200 mi)	Medium weight wheel bearing grease.		○	○	○	Repack	○

No.	Item	Remarks	Type	Initial	Odometer readings				
				1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	**3 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
13*	Wheel bearings	Check bearings for smooth rotation.	–		O	O	O	O	O
14*	A.C. Generator	Replace generator brushes every 100,000 km (62,000 mi)	–						
15*	Sidestand switch	Check and clean or replace if necessary.	–	O	O	O	O	O	O

*1) If ambient temperature dose not go below 5°C.
*2) If ambient temperature dose not go above 15°C.
* It is recommended that these items be service by a Yamaha dealer or other qualified mechanic.

NOTE:

For farther odometer reading, repeat the above maintenance at the period established; **1: Every 6,000 km (3,800 mi), **2: Every 12,000 km (7600 mi), **3: Every 24,000 km (15,200 mi) intervals.

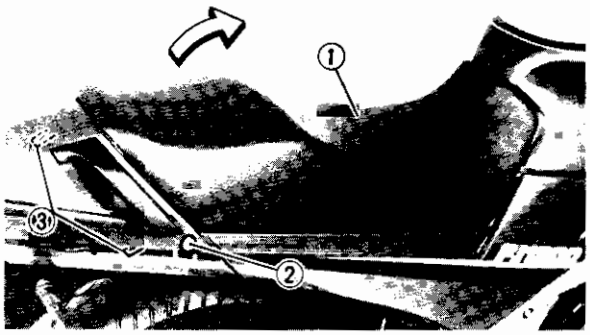
SEAT, SIDE COVERS AND FUEL TANK

REMOVAL

⚠ WARNING

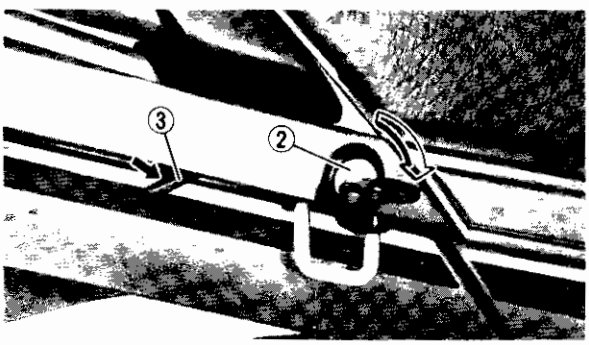
Securely support the motorcyle so there is no danger of it falling over.

1. Place the motorcycle on a level place and the motorcycle on its centerstand.
2. Remove:
   - Seat ①

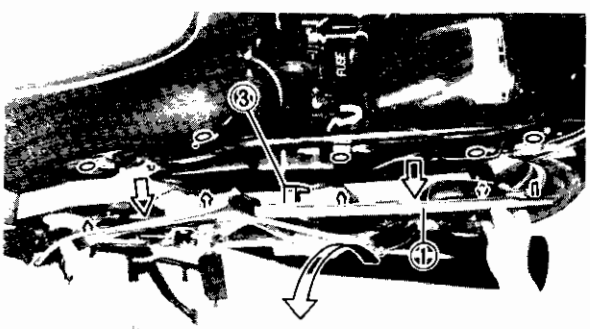


NOTE :

Rotate the seat lock key ② in the clockwise direction, release the seat lock, press the lever ③ on both sides to the front, and lift up the seat holding it at the rear to remove it.

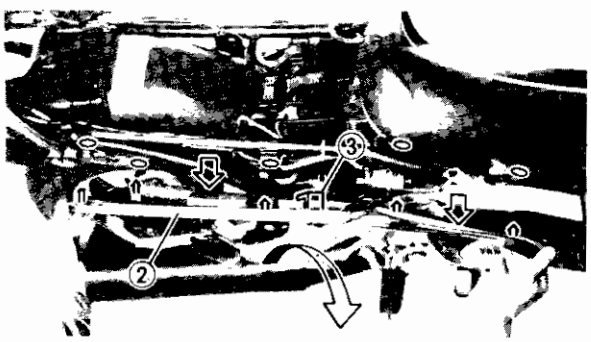


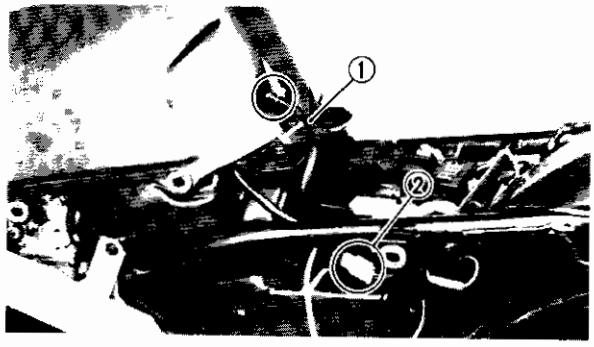
3. Remove:
   - Side cover (left) ①
   - Side cover (right) ②



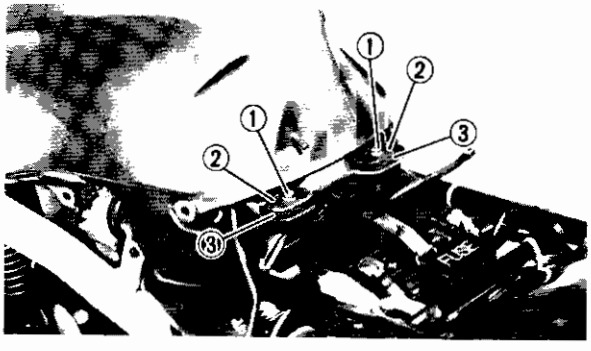
NOTE :

Remove the seat frame knobs at three locations. Remove the fuel tank knobs at two locations, lift up the L type hook ③ on the lower part of the side cover and remove the side cover.

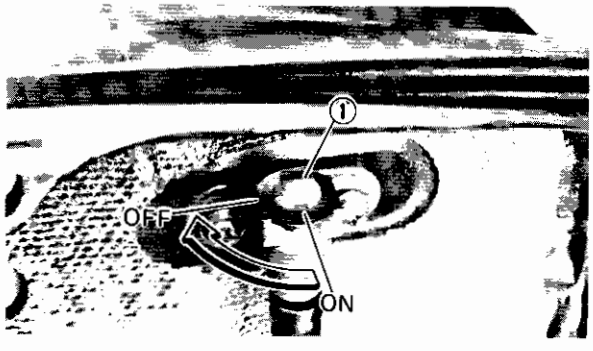




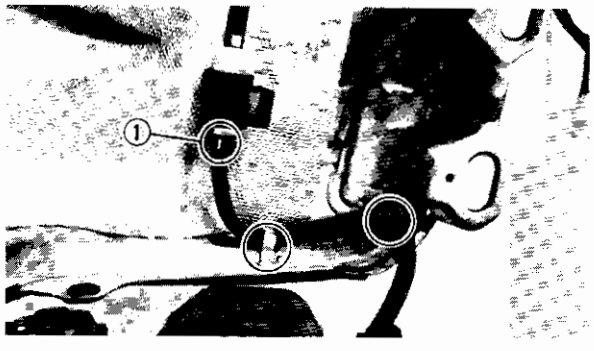
4. Disconnect
   - Breather hose ① (fuel tank)
   - Coupler ② (fuel level sender unit)



5. Remove:
   - Fuel tank securing bolts ①
   - Plates ②
   - Rubber washer ③



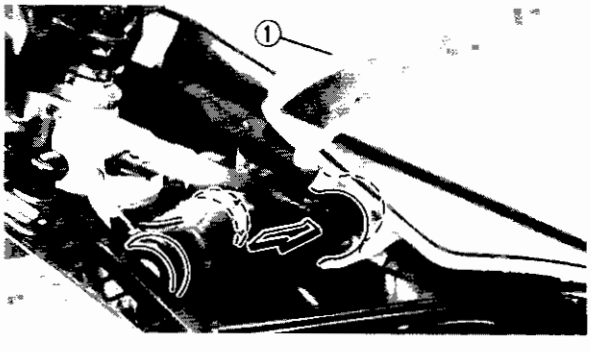
6. Turn the fuel cock ① to "OFF" position.
   Use a 8 mm (0.31 in) open end wrench.



7. Disconnect:
   - Fuel hose ①
   - Breather hose (fuel tank-front) (for FJ1200BC)

⚠ WARNING

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



8. Remove:
   - Fuel tank ①

INSTALLATION

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

   Reverse removal procedure.

NOTE:

Turn the fuel cock to "ON" position.

UPPER COWLING

CAUTION:

- **Avoid impact or damage in the removal and installation of the cowling.**
- **Avoid using any alkaline or strong acid cleaner, gasoline, brake fluid, or any other solvent.**

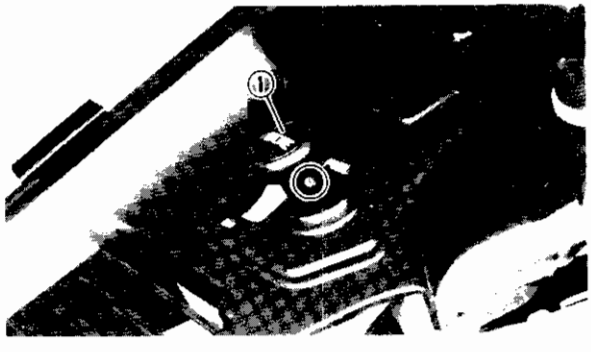
⚠ WARNING

- **Do not use a haircracked windscreen because it blurs visuality.**
- **Do not put a thing between the cowling and frame because it adversely affects steering.**

REMOVAL

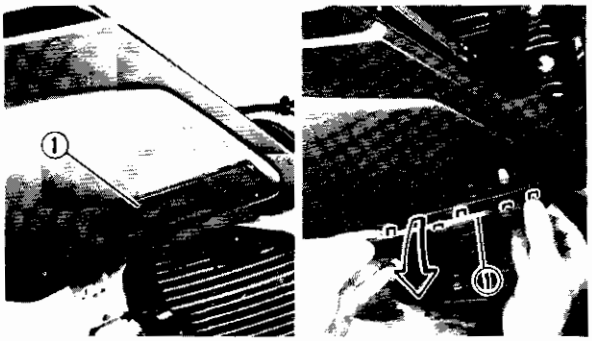
1. Remove:
   - Seat
   - Side covers
   - Fuel tank

   Refer to the "SEAT, SIDE COVERS AND FUEL TANK" section.
2. Remove:
   - Choke knob ①

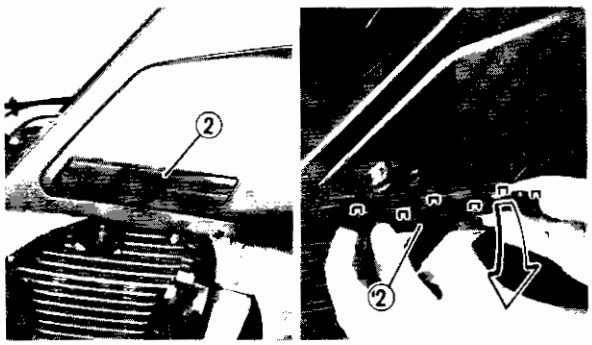


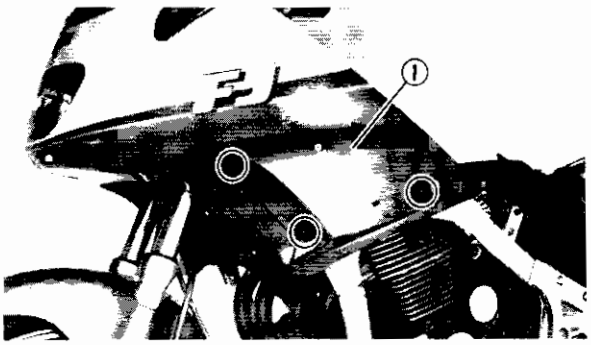
3. Remove:
   - Panel ①





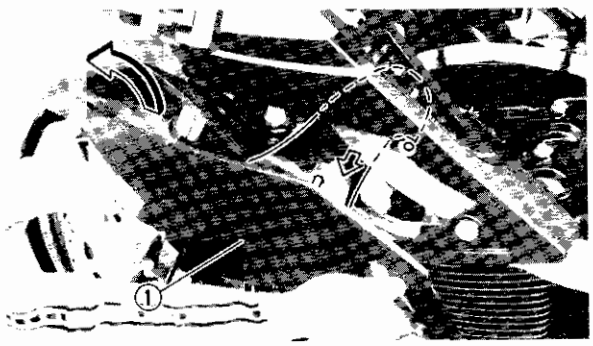
4. Remove:
- Mold (left) ①
- Mold (right) ②

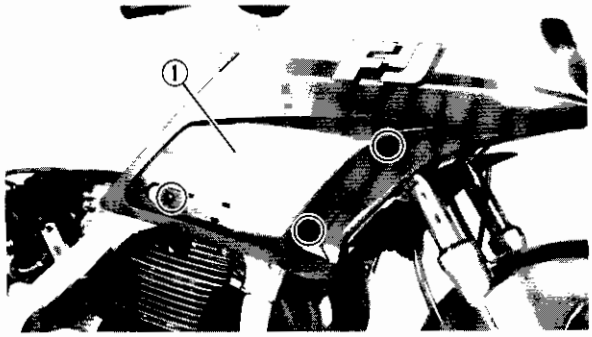




5. Remove:
- Air duct (left) ①

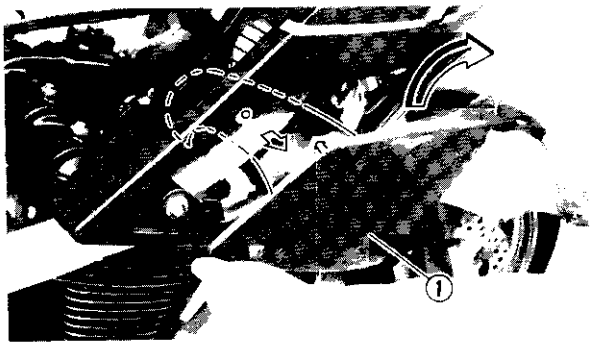
NOTE:
Remove the bolt, then remove the knob at one location, while taking adequate care in not pulling out the plug cord above the cylinder head. Rotate in the counter clockwise direction and remove the air duct.

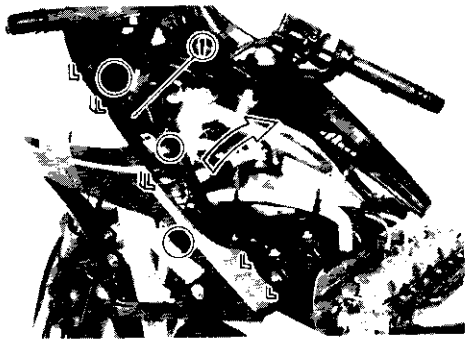




6. Remove:
- Air duct (right) ①

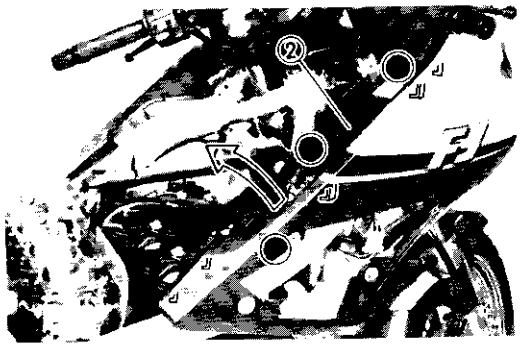
NOTE:
Remove the bolt, then remove the knob at one location, while taking adequate care in not pulling out the plug cord above the cylinder head. Rotate in the clockwise direction and remove the air duct.

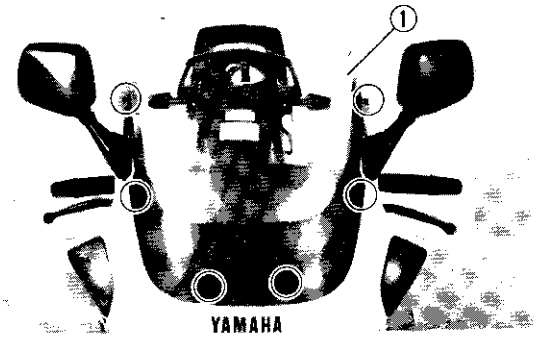




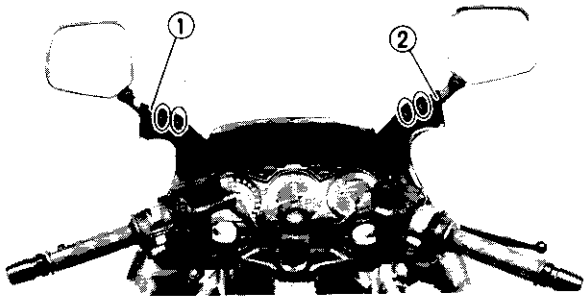
7. Remove:
   - Inner panel 1 (left) ①
   - Inner panel 2 (right) ②

NOTE:
While removing the inner panel, be careful of the L type hooks.

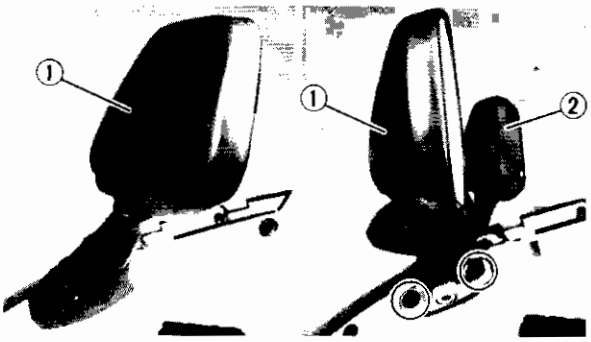




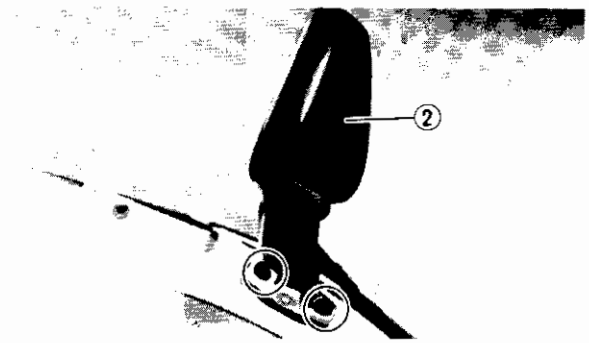
8. Remove:
   - Windscreen ①

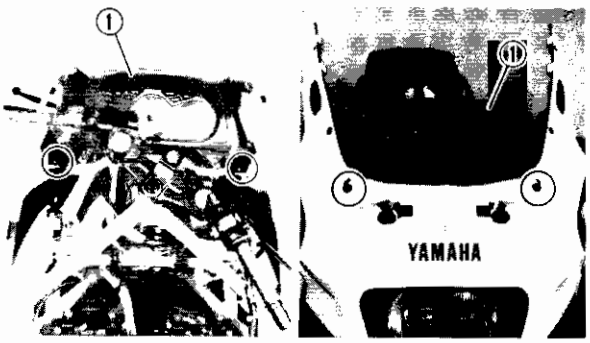


9. Remove:
   - Inner panel 3 (left) ①
   - Inner panel 4 (right) ②



10. Remove:
    - Rear view mirror (left) ①
    - Rear view mirror (right) ②

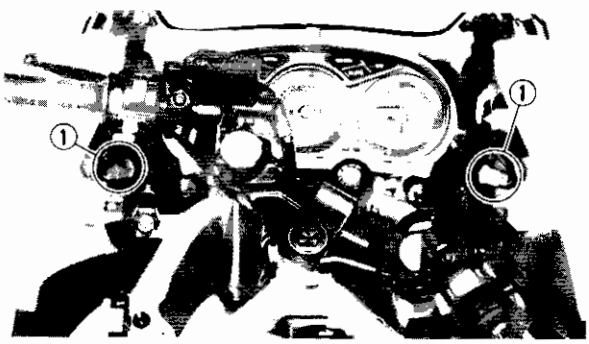




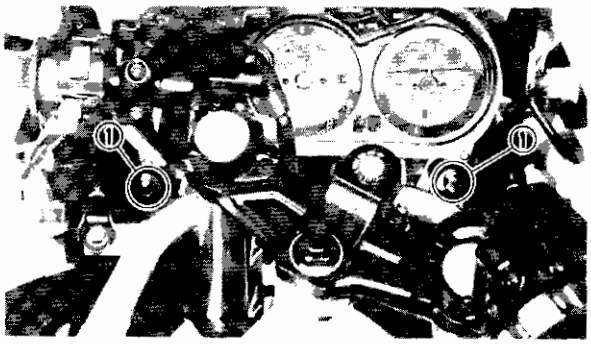
11. Remove:
    - Meter cover ①

NOTE:
For removing the meter cover, hold it so as to lift it up and remove it.

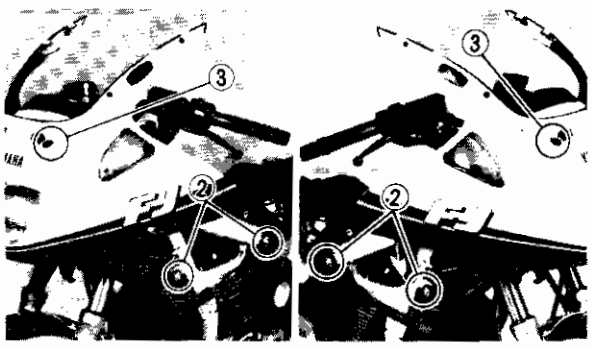




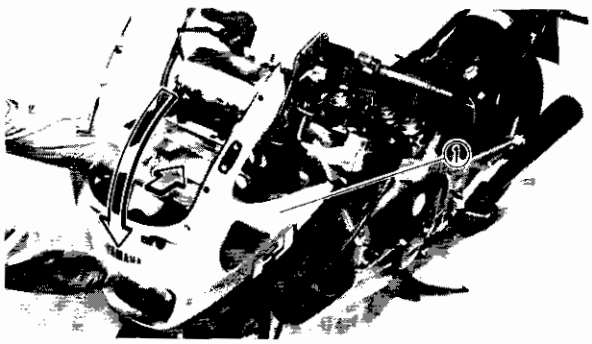
12. Disconnect:
    - Couplers (front flasher light) ①



13. Remove:
    - Bolts (upper cowling and head light) ①



14. Remove:
    - Bolts (upper cowling) ②
    - Bolts (upper cowling) ③



15. Remove:
    - Upper cowling ①

CAUTION:

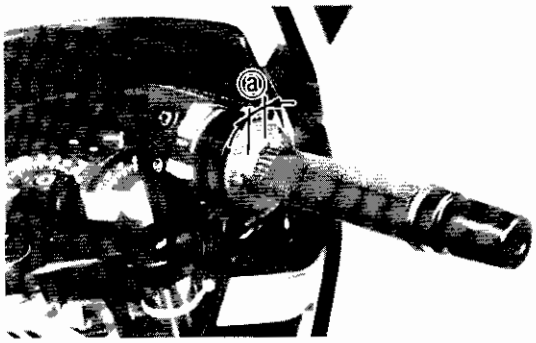
At the time of removing the upper cowling, the headlight will also come out. Take care you do not drop the headlight, hold it firmly and remove the upper cowling.



INSTALLATION

1. Install:
    - Upper cowling
    - Meter cover
    - Rear view mirror
    - Inner panel
    - Wind screen
    - Air duct
    - Choke knob

    Reverse removal procedure.



ENGINE

THROTTLE CABLE FREE PLAY ADJUSTMENT

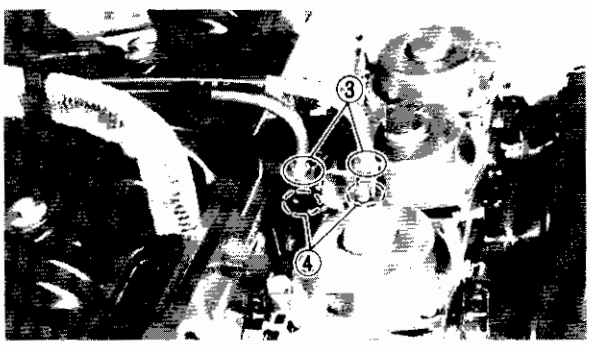
NOTE:

Before adjusting the throttle cable free play, the engine idle speed should be adjusted.

1. Check:
   - Throttle cable free play ⓐ
     Out of specification → Adjust.

Throttle cable free play ⓐ : 3 ~ 7 mm (0.12 ~ 0.28 in)





2. Adjust:
   - Throttle cable free play

****

Adjustment steps:

First step:

- Remove the seat, side covers and the fuel tank.
- Make sure that the adjuster ① and locknut ② located below the choke knob are fully tightened.
- Loosen the locknut ③ on the carburetor side.
- Turn the adjuster nut ④ in or out until the correct free play is obtained.

Turning in	Free play is increased.
Turning out	Free play is decreased.

- Tighten the locknut ③.

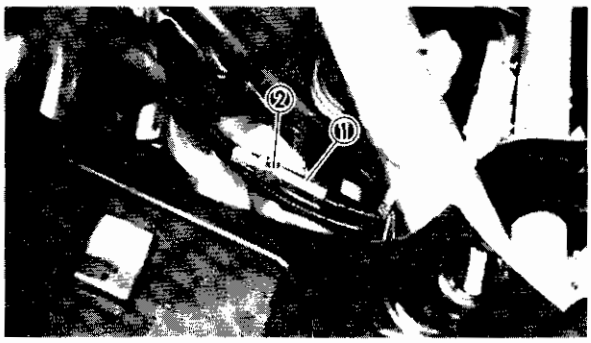
NOTE:

If the free play is incorrect, adjust the throttle cable free play with the adjuster (below the choke knob).

Second step:

- Loosen the locknut ②.
- Turn the adjuster ① in or out until the correct free play is obtained.

Turning in	Free play is increased.
Turning out	Free play is decreased.



● Tighten the locknut ②.

⚠ WARNING

After adjusting the free play, turn the handlebar to right and left, and make sure that the engine idling does not run faster.

● Install the fuel tank, side covers and the seat.

****

CHASSIS

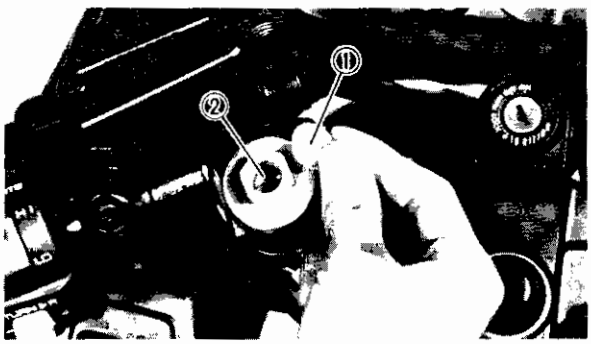
FRONT FORK ADJUSTMENT

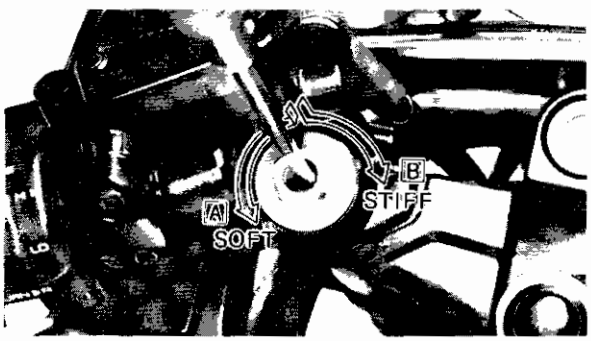
The front fork of this model features a spring preload adjuster. Normal adjustment can be made by turning this spring preload adjuster.

1. Adjust:
   - Spring preload

⚠ WARNING

Always adjust each fork preload to the same setting. Uneven adjustment can cause poor handling and loss of stability.



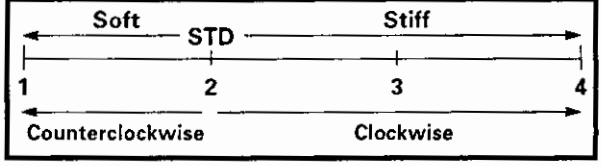


****

Spring preload adjustment steps:

- Remove the fork caps ①.
- Place a screwdriver into the slot of the spring preload adjuster ②, and turn it while pushing downward until it stops.
- Adjust the spring preload. Turning the adjuster clockwise Stiffest the spring and turning counterclockwise softens the spring preload.

A	**Softest Position: "1"**
	Standard Position: "2"
B	**Stiffest Position: "4"**



CAUTION:

Turn the spring preload adjuster from 1 to 4 or 4 to 1 in progressive steps. Never turn the adjuster directly from 1 to 4 or 4 to 1.

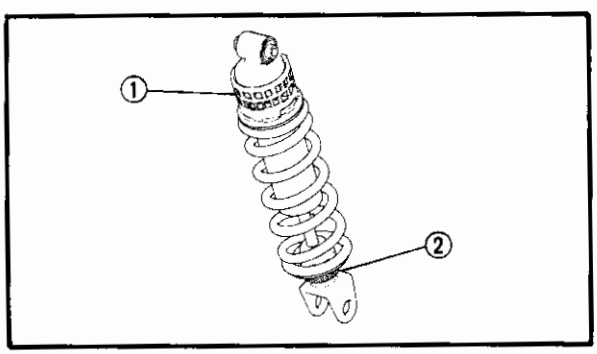
****

REAR SHOCK ABSORBER ADJUSTMENT

⚠WARNING

This shock absorber contains highly pressurized nitrogen gas.
Read and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

1. **Do not tamper with or attempt to open the cylinder assembly.**
2. **Do not subject shock absorber to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.**
3. **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.**

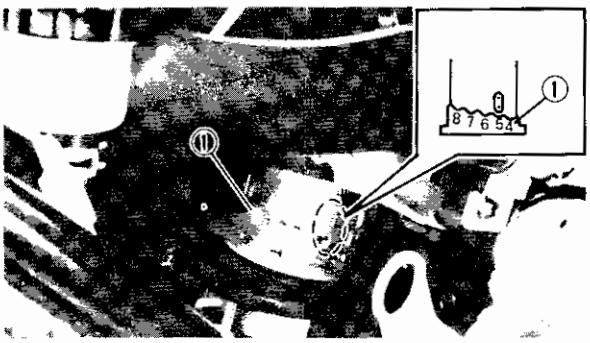


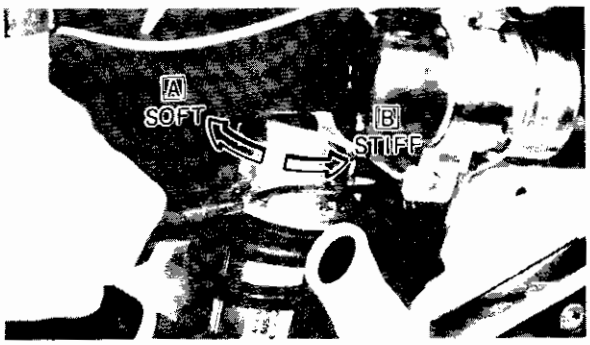
1. Adjust:
   - Spring preload ①
   - Damping ②

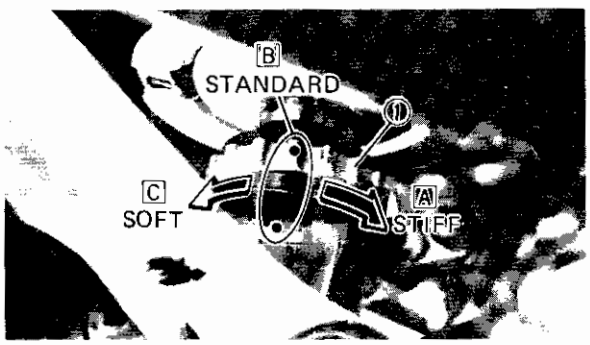
The rear shock absorber of this model features a spring preload adjuster which is a combined spring preload and damping adjuster. Normal adjustment can be made by turning this spring preload adjuster, whereas damping adjustment only can be made by the damping adjuster.

CAUTION:

Turn spring preload adjuster from 1 to 9, or 9 to 1 in progressive steps. Never try to turn adjuster directly from 1 to 9, or 9 to 1. Turn damping adjuster from 3 to 12, or 12 to 3 in progressive steps. Never attempt to turn the adjuster beyond fully turned-in or fully turnd-out position.







****

Adjustment steps:

Spring preload adjustment:

- Remove the seat and side covers.
- To decrease the preload, turn the spring adjuster ① clockwise.
  To increase the preload, turn the spring adjuster ① counterclockwise.

A	**Softest position: "1"**
	Standard position: "5"
B	**Stiffest position: "9"**

NOTE:

When adjusting use the special wrench. Included in the tool case.

- Install the side covers and seat.

Damping adjustment:

- To increase the damping force, turn the adjuster ① clockwise.
  To decrease the damping force, turn the adjuster counterclockwise.

A Maximum	3 clicks out from fully turned-in position
B Standard	7 clicks out (from match mark)
C Minimum	12 clicks out

****

Recommended combinations of the front fork and the rear shock absorber settings:

Use this table as a guide for specific riding and motorcycle load conditions.

Front fork	Rear shock absorber		Loading condition			
Spring preload adjuster	Spring preload adjuster	Damping adjuster	Solo rider	With passenger	With accessories equipment	With accessories equipment and passenger
1, 2	1 ~ 4	12 ~ 7	○			
2, 3	5 ~ 8	7 ~ 3		○		
2, 3	5 ~ 8	7 ~ 3			○	
3, 4	6 ~ 9	5 ~ 3				○



ELECTRICAL

BATTERY INSPECTION

NOTE:

Since the MF battery is of a sealed-type construction, it is impossible to measure the specific gravity of the electrolyte in order to check the state of charge in the battery. Therefore, to check the state of charge in the battery, voltage must be measured at the battery terminals.

CAUTION:

CHARGING METHOD

- This battery is sealed type. Never remove sealing caps even when charging. With the sealing cap removed, this balancing will not be maintained, and battery performance will lower gradually.
- Never add water. If distilled water is added, chemical reaction in the battery will not proceed in the normal way, thus making it impossible for the battery to operate regularly.
- The charging time, charging current and charging voltage for the MF battery is different than general type batteries.

  The MF battery should be charged as instructed in the "Charging method". Should the battery be overcharged, the electrolyte level will lower extremely. Therefore, use special care when charging the battery.
- Avoid using any electrolyte other than specified. The specific gravity of the MF battery electrolyte is 1.32 at 20°C (68°F). (The specific gravity of the general type battery electrolyte is 1.28.) If the electrolyte whose specific gravity is less than 1.32, the sulfuric acid will decrease and thus low battery performance will result. Should any electrolyte, whose specific gravity is 1.32 or more, be used, the battery plates will corrode and battery life will shorten.



⚠WARNING

Battery electrolyte is dangerous; it contains sulfuric acid and therefore is poisonous and highly caustic.

Always follow these preventive measures:

- **Avoid bodily contact with elecrolyte as it can cause severe burns or permanent eye injury.**
- **Wear protective eye gear when handling or working near batteries.**

Antidote (EXTERNAL):

- **SKIN-Flush with water.**
- **EYES-Flush with water for 15 minutes and get immediate medical attention.**

Antidote (INTERNAL):

- **Drink large quantities of water or milk follow with milk of magnesia, beaten egg, or vegetable oil. Get immediate medical attention.**

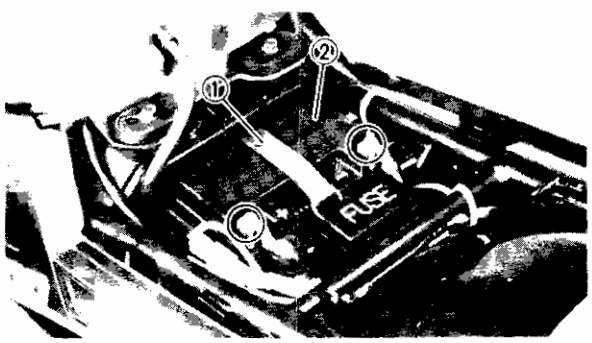
  Batteries also generate explosive hydrogen gas, therefore you should always follow these preventive measures:

- **Charge batteries in a well-ventilated area.**
- **keep batteries away from fire, sparks, or open flames (e.g., welding equipment, lighted cigarettes, etc.)**
- **DO NOT SMOKE When charging or handling batteries.**

KEEP BATTERIES AND ELECTROLYTE OUT OF REACH OF CHILDREN.

1. Remove:
   - Seat

   Refer to the "SEAT, SIDE COVERS AND FUEL TANK" section.

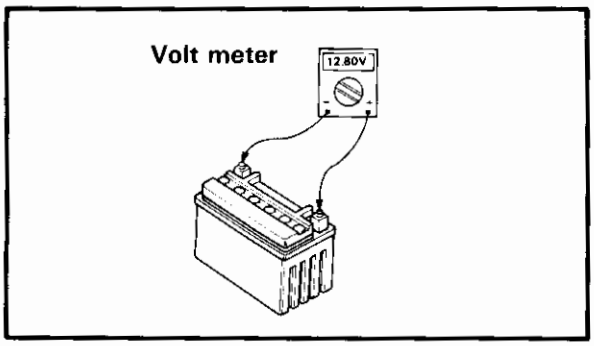


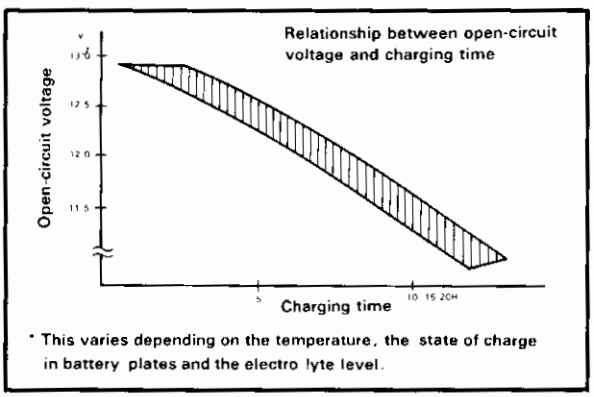
2. Disconnect:
   - Battery leads
   - Battery band ①

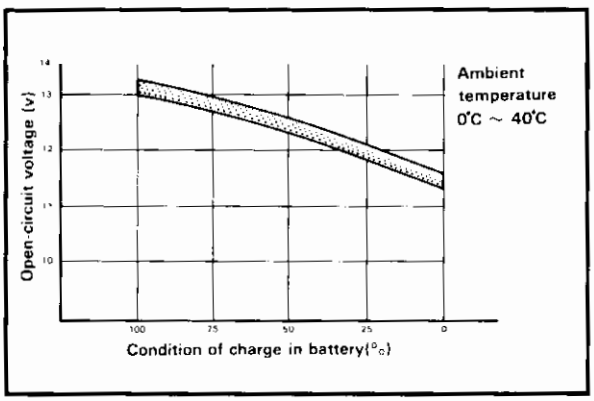
CAUTION:

Disconnect the negative lead first and then disconnect the positive lead.

3. Remove:
   - Battery ②







4. Check:
   - Battery condition

* *

Battery condition checking steps:

- Connect the pocket tester to the battery terminals.

Tester (+) lead → Battery (+) terminal.
Tester (−) lead → Battery (−) terminal.

NOTE:

The state of a discharged MF battery can be checked by measuring open circuit voltage (the voltage measured with the positive terminals being disconnected).

Open-circuit voltage	Charging time
12.8 v or higher	No charging is necessary.
12.7 v - 11.5 v	5 - 10 hours
Less than 11.5 v	15 - 20 hours

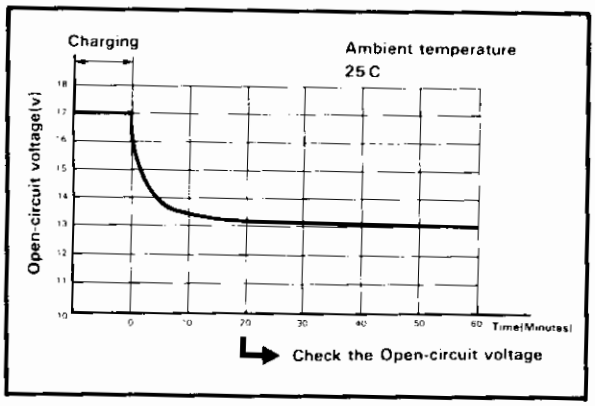
- Battery condition chart as shown.

* *

5. Charging method of MF battery

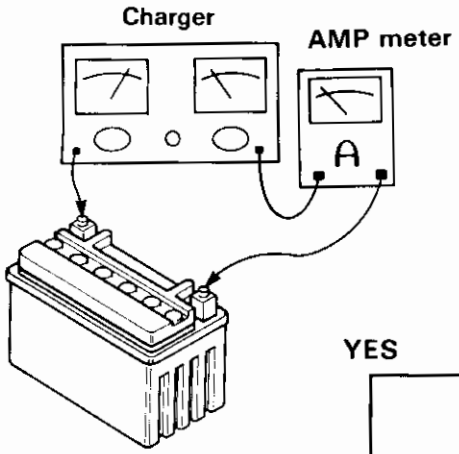
CAUTION:

- **If it is impossible to set the standard charging current, be careful not to overcharge.**
- **When charging the battery, be sure to remove it from the machine. (If charging has to be done with the battery mounted on the machine for some reason, be sure to disconnect the wire at the negative terminal.)**
- **Never remove the sealing plug from the MF battery.**



- Use special care so that charging clips are in a full contact with the terminal and that they are not shorted. (A corroded clip of the charger may cause the battery to generate heat at the contact area. A weak clip spring may cause sparks.)
- Before removing the clips from the battery terminals, be sure to turn off the power switch of the charger.
- Change in the open-circuit voltage of the MF battery after being charged is shown below. As shown in the figure, the open-circuit voltage is stabilized 30 minutes after charging has been completed.
  Therefore, to check the condition of the battery, measure the open-circuit voltage 30 minutes after charging has been completed.

Charging method using a variable-current (voltage) type charger



Measure the open-circuit voltage prior to charging.

NOTE:
Voltage should be measured 30 minutes after the machine is stopped.

Connect a charger and AMP meter to the battery and start charging.

NOTE:
Set the changing voltage at 16-17v. (If the setting is lower, charging will be insufficient. If too high, the battery will be over-charged.)

Make sure the current is higher than the standard charging current written on the battery.

YES

NO

Adjust the voltage so that current is at standard charging level.

By turning the charging voltage adjust dial, set the charging voltage at 20 - 25 v.

Monitor the amperage for 3-5 minutes to check if the standard charging current is reached.

1A or less

1A or more

If the current is more than 1 amp, adjust the voltage to 16 - 17 v and continue charging.

NO

Set the timer according to the charging time suitable for the open-circuit voltage.

After 5 minutes, adjust the voltage to 16 - 17 v, and continue charging.

If current does not exceed standard charging current after 5 minutes, replace the battery.

In case that charging requires more than 5 hours, it is advisable to check the charging current after a lapse of 5 hours. If there is any change in the amperage, readjust the voltage to obtain the standard charging current.

Measure the battery open-circuit voltage after having left the battery unused for more than 30 minutes.
12.8 v or more --- Charging is complete.
12.7 v or less --- Recharging is required.
Under 12.0 v --- Replace the battery.

Charging method using a constant-voltage type charger

Measure the open-circuit voltage prior to charging.

NOTE:
Voltage should be measured 30 minutes after the machine is stopped.

Connect a charger and AMP meter to the battery, and start charging.

Make sure the current is higher than the standard charging current written on the battery.

YES

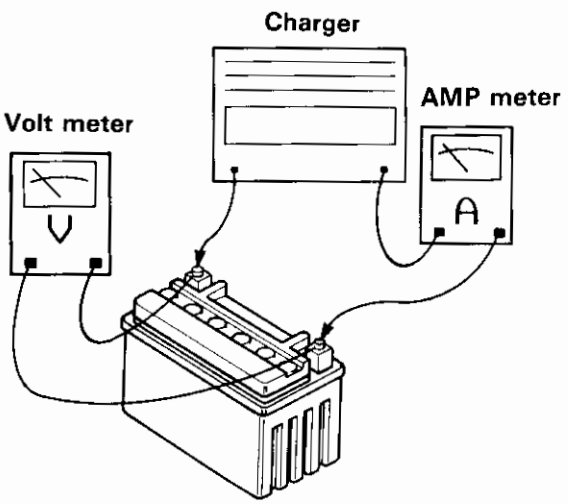
Charge the battery until the battery's charging voltage is 16 volts or more

NOTE:
Set the charging time at 20 hours (maximum).

Check the open-circuit voltage after having left the battery for 30 minutes after charging.
12.8 v or more---Charging is complete.
12.7 v or less---Recharging is necessary.
Under 12 v---Replace the battery.

NO

This type of battery charger cannot charge the MF battery. A variable voltage charger or a constant current charger is recommended.



Charging method using a constant current type charger (Exclusive for MF Battery)

Measure the open-circuit voltage prior to charging.

NOTE:
Voltage should be measured 30 minutes after the machine is stopped.

Connect a charger and AMP meter to the battery, and start charging.

After one hour of charging, make sure the rated charging current of the charger is flowing by checking AMP meter.

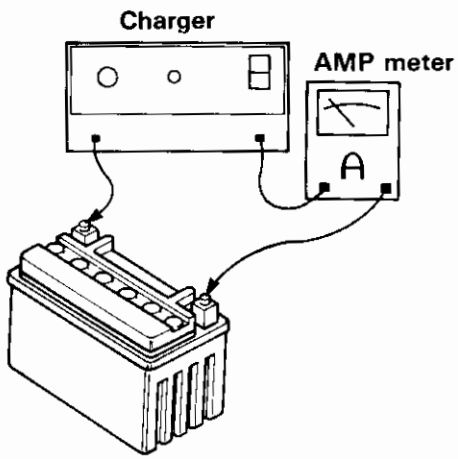
YES

Since the charging current is constant, the charging time varies depending on the battery capacity.
Set the charging time according to the instructions specified for the charger.

Measure the battery open-circuit voltage after having left the
battery unused for more than 30 minutes.
12.8 v or more---Charging is complete.
12.7 v or less---Recharging is required.
Under 12.0 v---Replace the battery.

NO

If rated current is not flowing, replace the battery.



ENGINE OVERHAUL

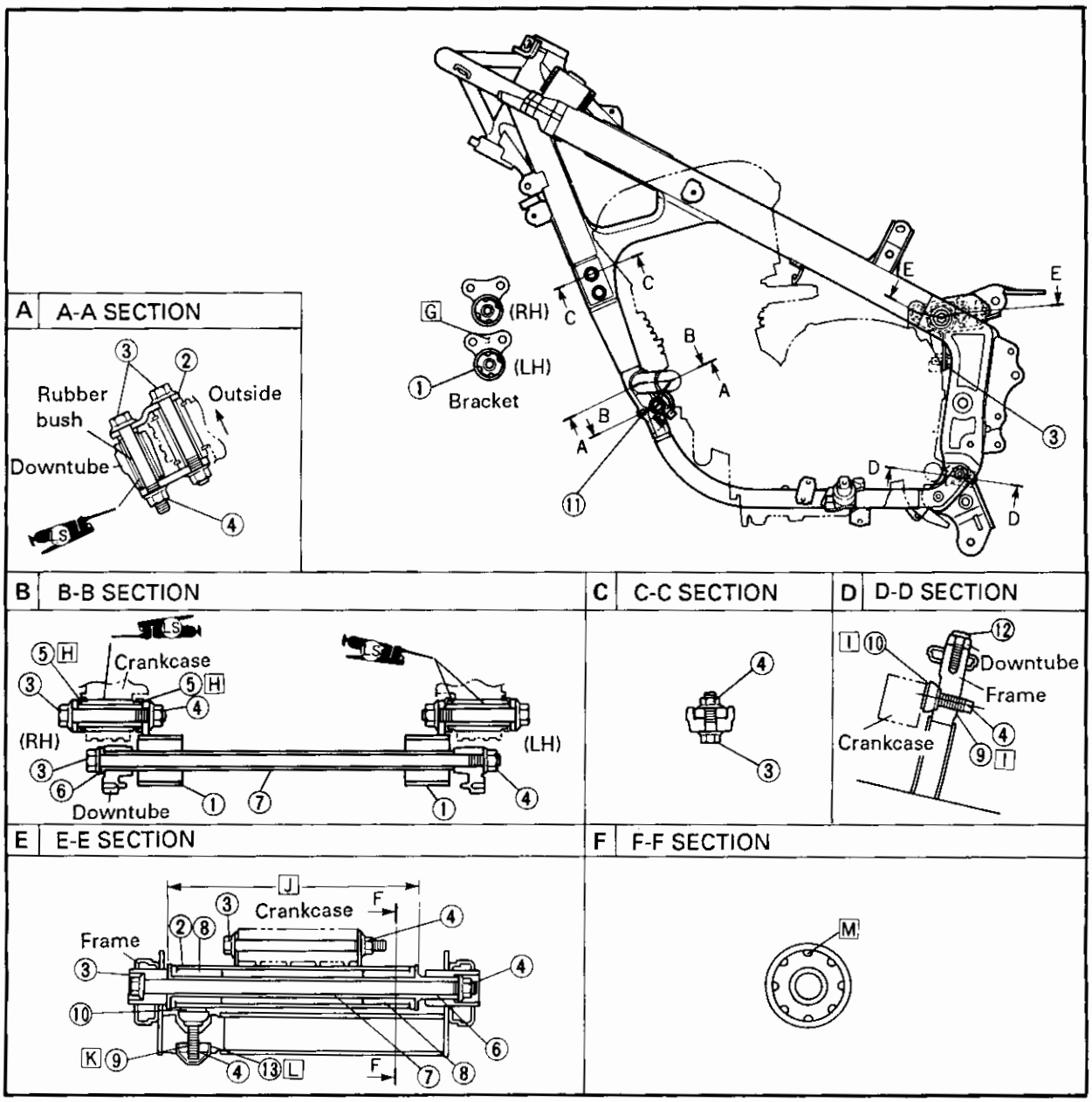
ENGINE ASSEMBLY AND ADJUSTMENT

REMOUNTING ENGINE

1. Refer to engine removal. Reverse those removal steps that apply.

① Engine bracket
② Engine stay
③ Flange bolt
④ Nut
⑤ Dust cover
⑥ Collar
⑦ Spacer
⑧ Damper
⑨ Adjusting bolt
⑩ Stopper damper
⑪ Hexagon socket head bolt
⑫ Screw
⑬ Tight plug

[G] The item on the reverse side, painted "L" in white, should be used on the left side.
[H] To prevent the lip from rotating in the opposite direction, rotate it by half a turn after fitting.
[I] Only the left side
[J] The dimension after assembly of damper and spacer in the engine stay is taken as 213 mm (8.39 in) as a yardstick.
[K] After mounting the engine, turn the adjusting bolt to push it on the stay bracket with the hand.
[L] Press fit till it reaches the base.
[M] Align the pipe joint part with the thickness contact part of damper.



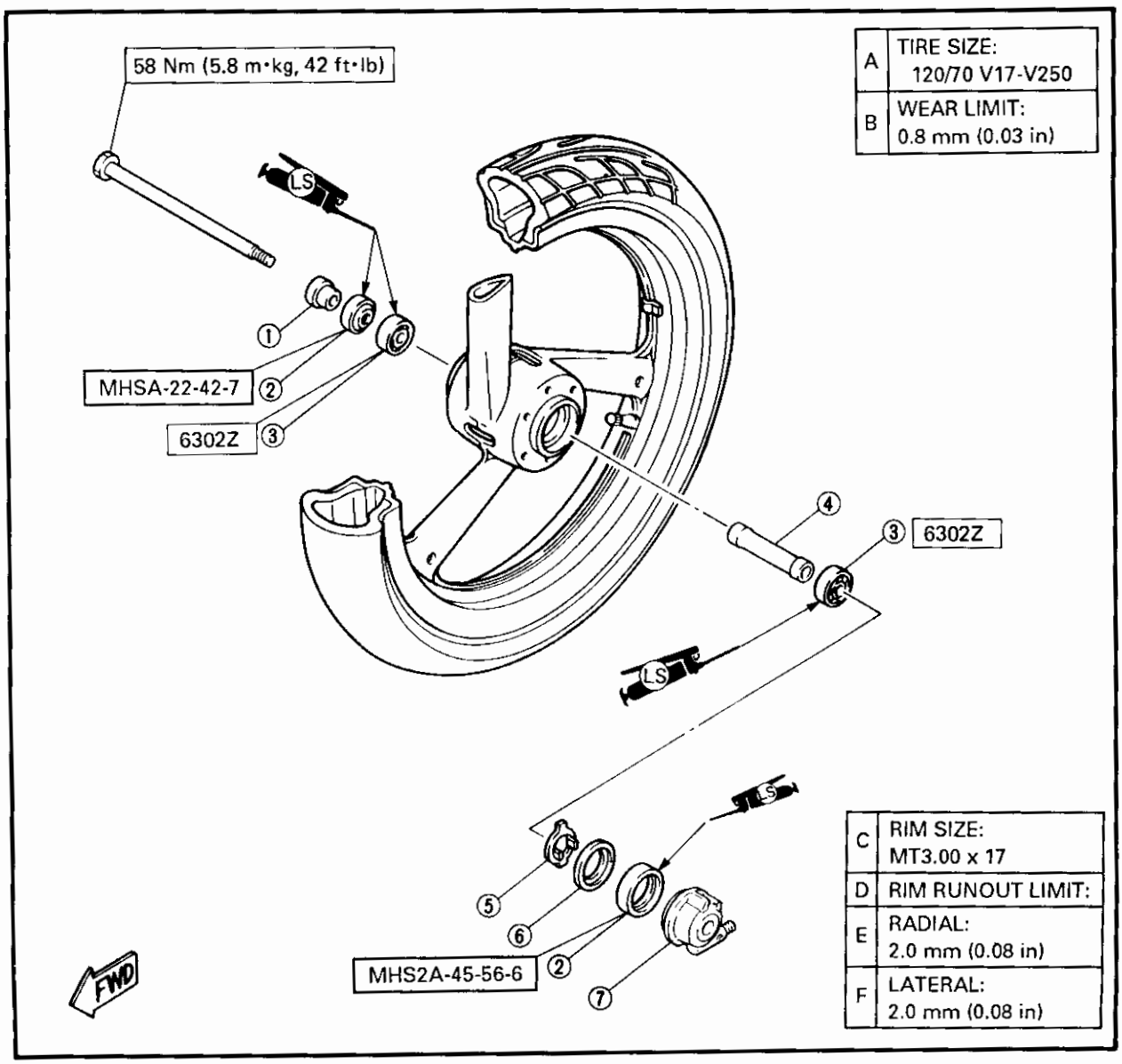
CHASSIS

FRONT WHEEL

① Collar
② Oil seal
③ Bearing
④ Spacer
⑤ Meter clutch
⑥ Clutch retainer
⑦ Speedometer gear unit

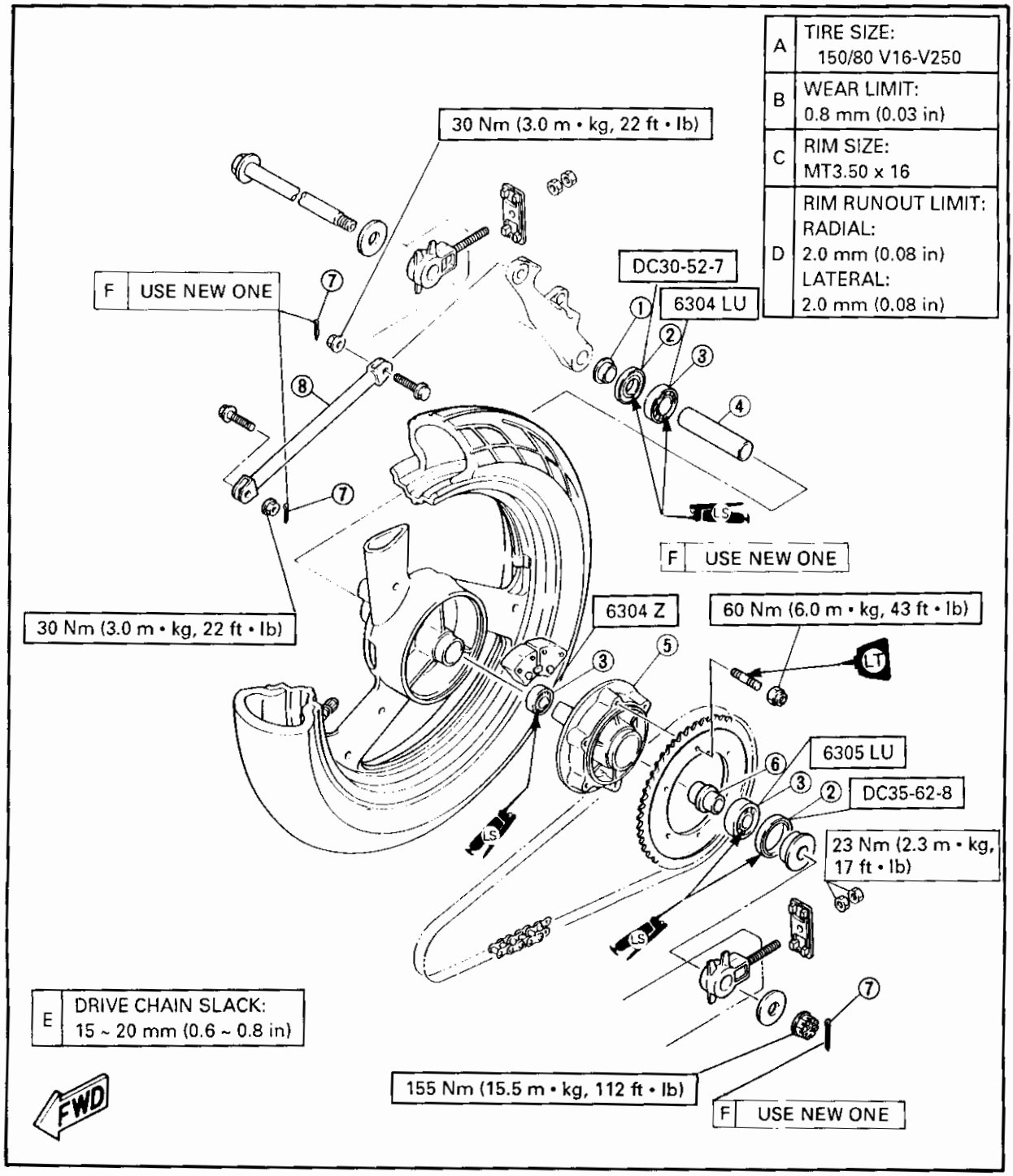
TIRE AIR PRESSURE (COLD):		
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	225 kPa (2.25 kg/cm², 32 psi)	250 kPa (2.5 kg/cm², 36 psi)
90 kg (198 lb) ~ Maximum load*	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
High speed riding	250 kPa (2.5 kg/cm², 36 psi)	290 kPa (2.9 kg/cm², 42 psi)
Maximum load*	182 kg (401 lb): FJ1200B 181 kg (399 lb): FJ1200BC	

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



REAR WHEEL

① Collar
② Oil seal
③ Bearing
④ Spacer
⑤ Clutch hub
⑥ Collar
⑦ Cotter pin
⑧ Compression bar

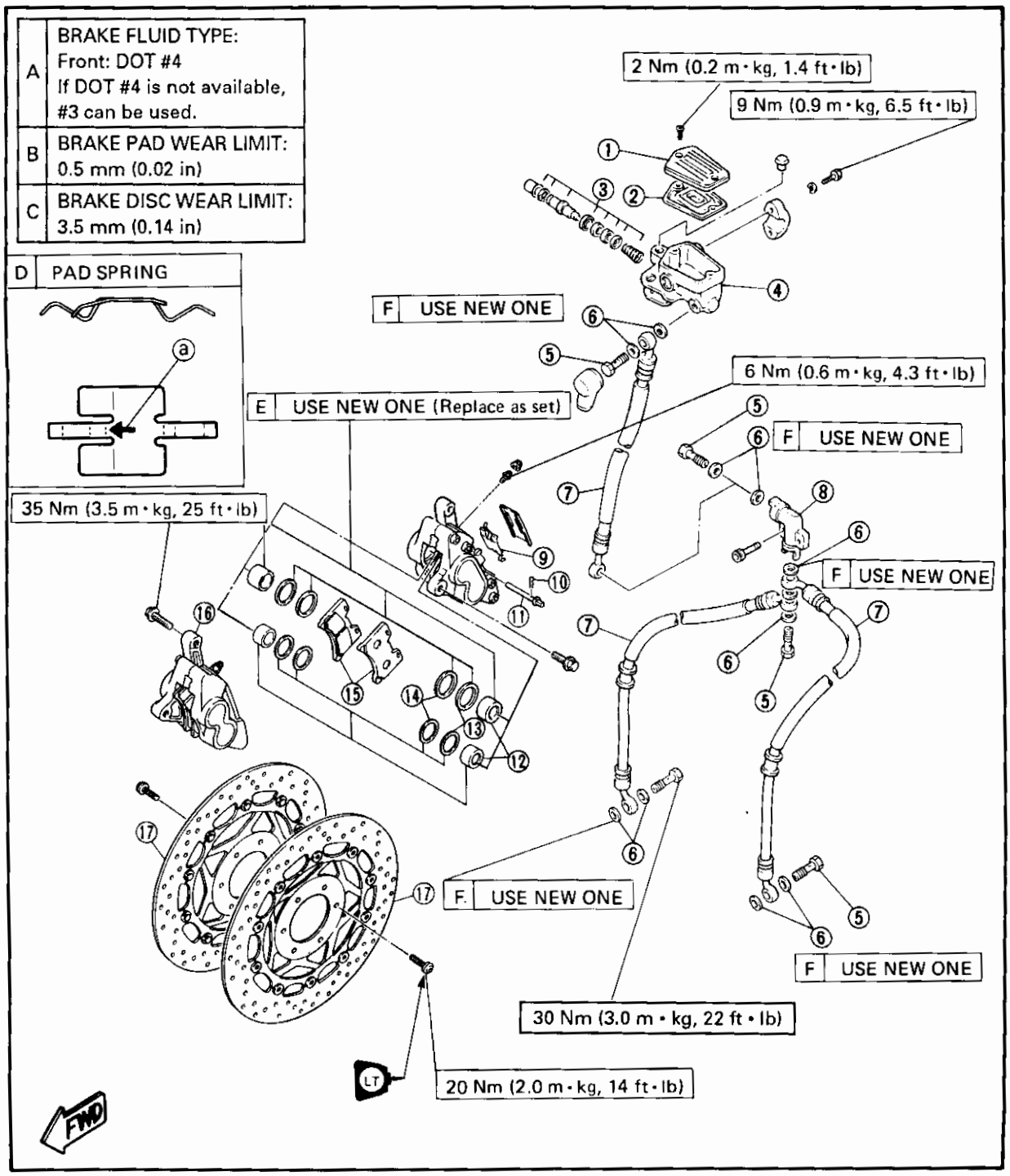


FRONT AND REAR BRAKE

FRONT BRAKE

① Master cylinder cap
② Diaphragm
③ Master cylinder kit
④ Master cylinder
⑤ Union bolt
⑥ Copper washer
⑦ Brake hose
⑧ Joint
⑨ Pad spring
⑩ Retaining clips
⑪ Retaining pins
⑫ Piston
⑬ Piston seal
⑭ Dust seal
⑮ Brake pad assembly
⑯ Brake caliper
⑰ Brake disc

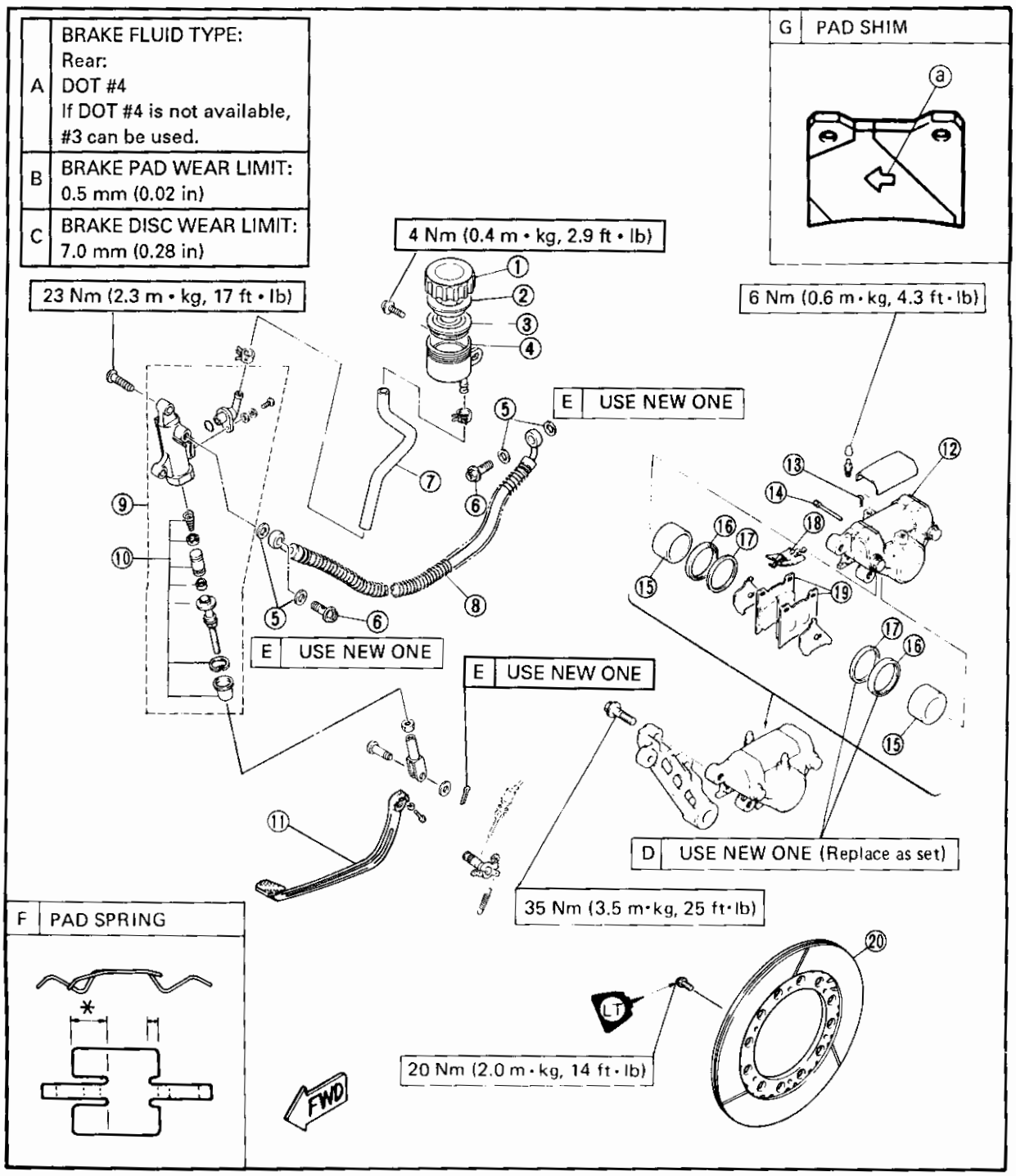
[D] The arrow mark ⓐ on the pad spring must pointing the disc rotating direction.



REAR BRAKE

① Reservoir tank cap
② Holder (diaphragm)
③ Diaphragm
④ Reservoir tank
⑤ Copper washer
⑥ Union bolt
⑦ Reservoir hose
⑧ Brake hose
⑨ Master cylinder
⑩ Master cylinder kit
⑪ Brake pedal
⑫ Brake caliper
⑬ Retaining clips
⑭ Retaining pins
⑮ Piston
⑯ Piston seal
⑰ Dust seal
⑱ Pad spring
⑲ Brake pad
⑳ Brake disc

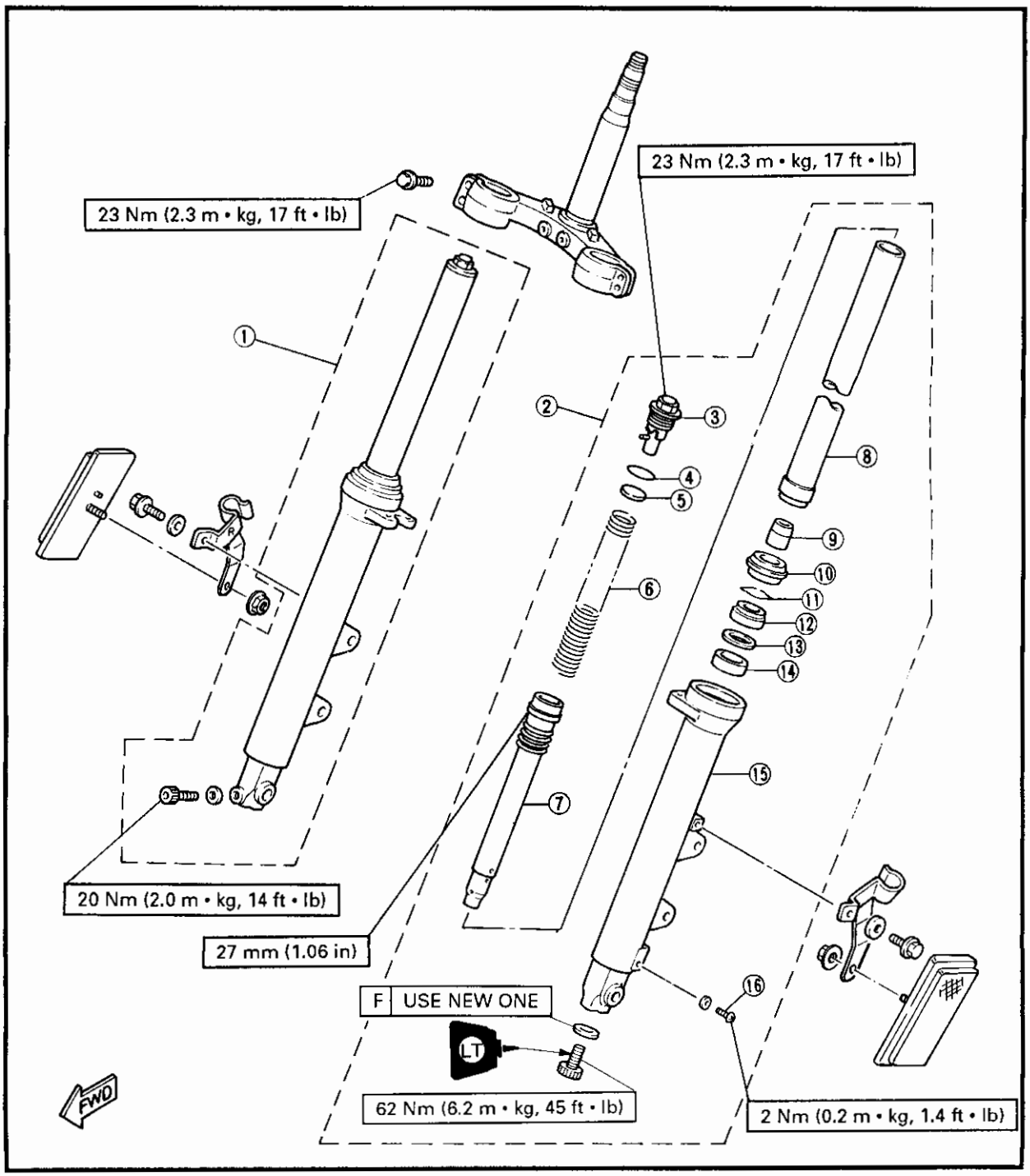
F The longer tangs (*) of the pad spring must point in the disc rotating direction.
G The arrow mark ⓐ on the pad shim must point in the disc rotating direction.



FRONT FORK

① Front fork (Right)
② Front fork (Left)
③ Cap bolt assembly
④ O-ring
⑤ Spring seat
⑥ Fork spring
⑦ Damper rod
⑧ Inner fork tube
⑨ Oil lock piece
⑩ Dust seal
⑪ Retaining clip
⑫ Oil seal
⑬ Plain washer
⑭ Guide bush
⑮ Outer fork tube
⑯ Drain screw

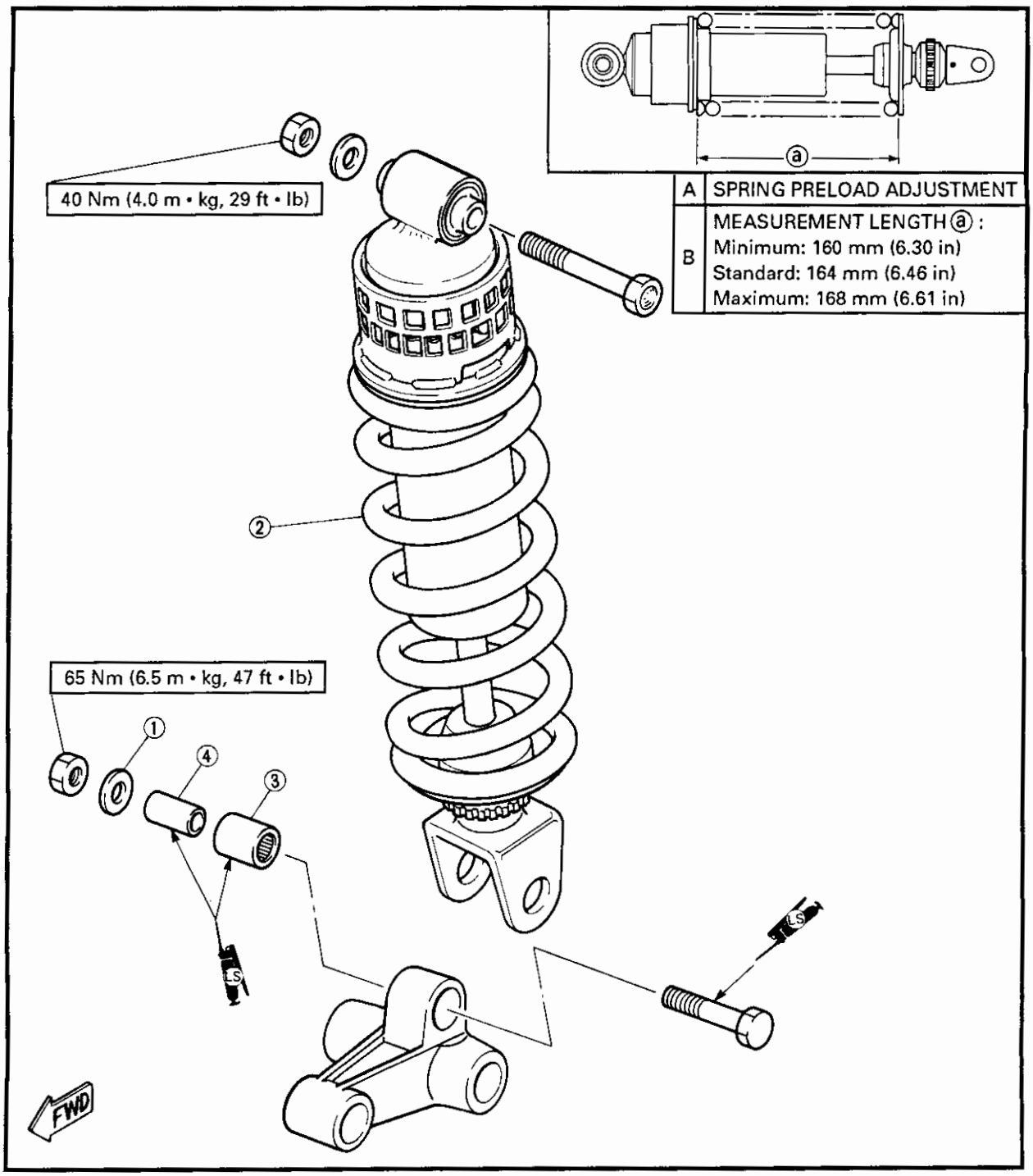
A	FORK OIL (EACH):
B	Capacity: 446 cm³ (15.70 Imp oz, 15.08 Us oz)
C	Grade: Fork oil 10W or equivalent
D	FORK SPRING:
E	Free length: 529.5 mm (20.8 in)



REAR SHOCK ABSORBER AND SWINGARM

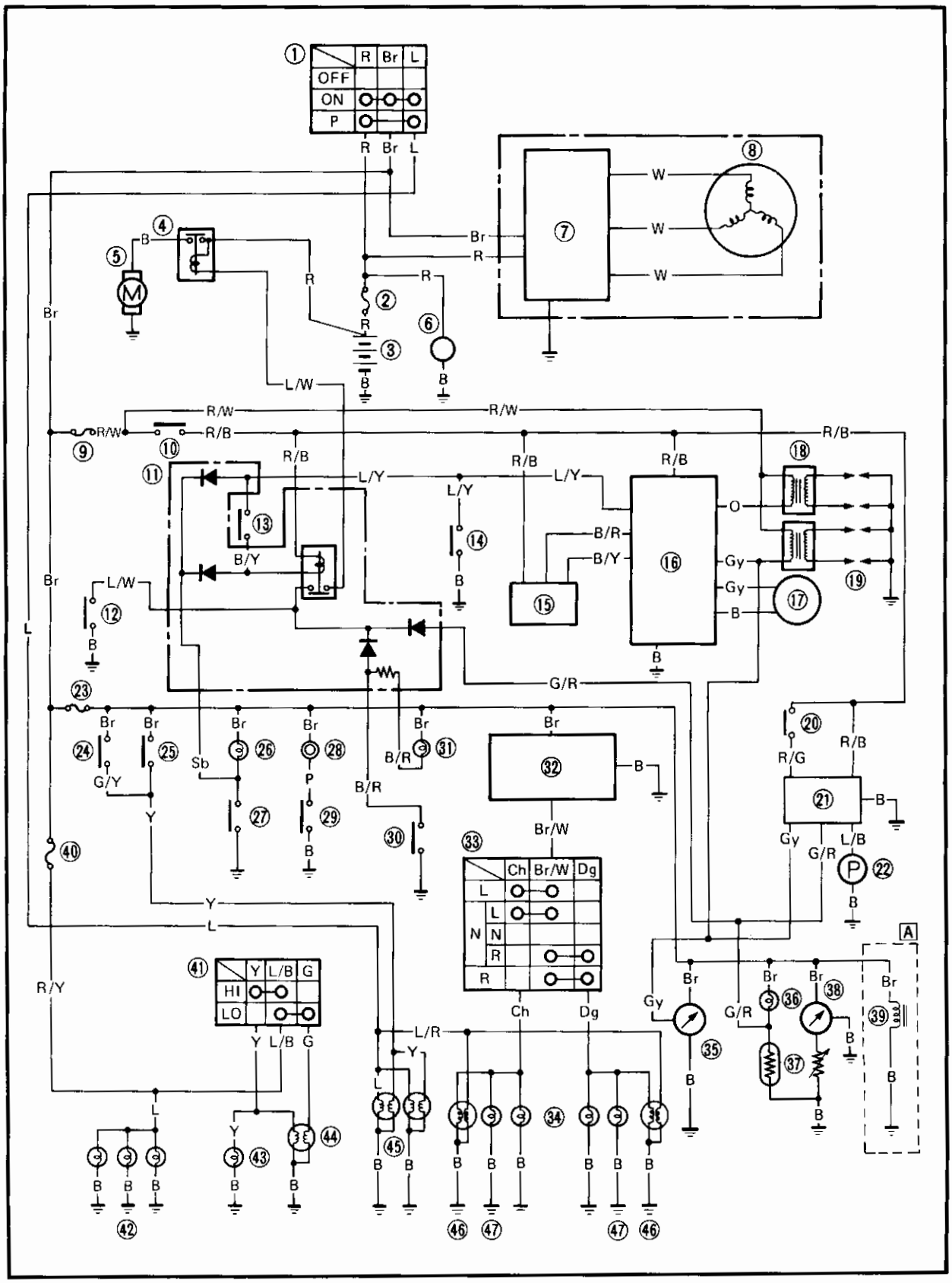
REAR SHOCK ABSORBER

① Washer
② Shock absorber
③ Bearing
④ Collar



ELECTRICAL

FJ1200B/BC 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 Pressuer sensor
⑯ Digital ignitor unit
⑰ Pickup coil
⑱ Ignition coil
⑲ Spark plug
⑳ "RESERVE" switch
㉑ Fuel pump relay
㉒ Fuel pump
㉓ Fuse "SIGNAL"
㉔ Front brake switch
㉕ Rear brake switch
㉖ "NEUTRAL" indicator light
㉗ Neutral switch
㉘ Horn
㉙ "HORN" switch
㉚ Oil level switch
㉛ "OIL" indicator light
㉜ Flasher relay
㉝ "TURN" switch
㉞ "TURN" indicator light
㉟ Tachometer
㊱ "FUEL" indicator light
㊲ Fuel sender unit
㊳ Fuel meter
㊴ Outer vent control valve (for FJ1200BC)
㊵ Fuse "HEAD"
㊶ "LIGHTS" (Dimmer) switch
㊷ Meter light
㊸ "HIGH BEAM" indicator light
㊹ Headlight
㊺ Tail/brake light
㊻ Front position light/Front flasher light
㊼ Rear flasher light
Ⓐ (For California)

COLOR CODE

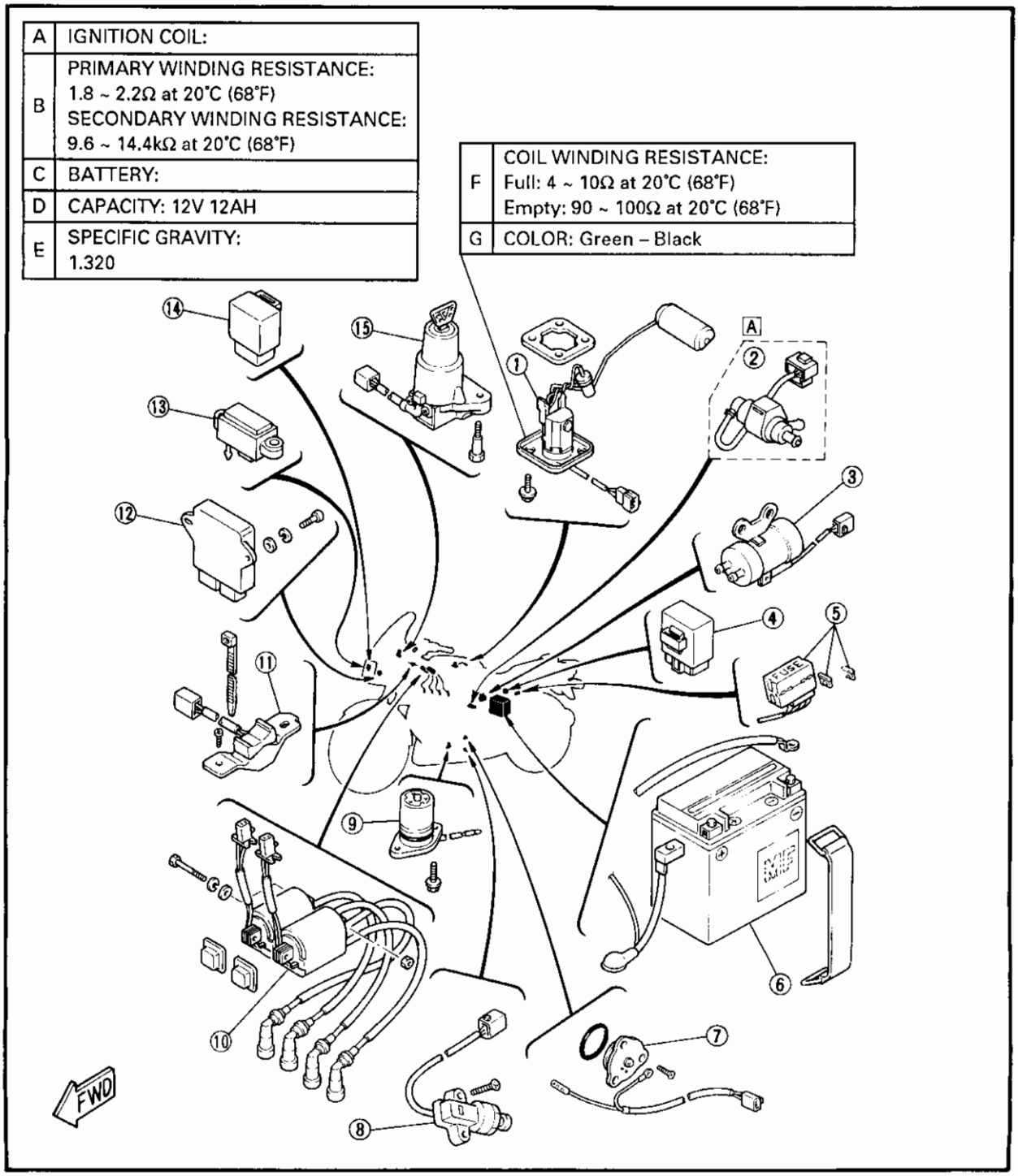
B	Black	B/Y	Black/Yellow
Br	Brown	Br/W	Brown/White
Ch	Chocolate	G/R	Green/Red
Dg	Dark green	G/Y	Green/Yellow
G	Green	L/B	Blue/Black
Gy	Gray	L/R	Blue/Red
L	Blue	L/W	Blue/White
O	Orange	L/Y	Blue/Yellow
P	Pink	R/B	Red/Black
R	Red	R/G	Red/Green
Sb	Sky blue	R/W	Red/White
W	White	R/Y	Red/Yellow
Y	Yellow	W/G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

ELECTRICAL COMPONENTS (1)

① Fuel sender unit
② Outer vent control valve (for FJ1200BC)
③ Fuel pump
④ Fuel pump relay
⑤ Fuse
⑥ Battery
⑦ Neutral switch
⑧ Sidestand switch
⑨ Oil level switch
⑩ Ignition coil
⑪ "FUEL" (Reserve) switch
⑫ Digital ignitor unit
⑬ Pressure sensor
⑭ Relay assembly
⑮ Main switch
[A] For California

A	IGNITION COIL:
B	PRIMARY WINDING RESISTANCE: 1.8 ~ 2.2Ω at 20°C (68°F) SECONDARY WINDING RESISTANCE: 9.6 ~ 14.4kΩ at 20°C (68°F)
C	BATTERY:
D	CAPACITY: 12V 12AH
E	SPECIFIC GRAVITY: 1.320

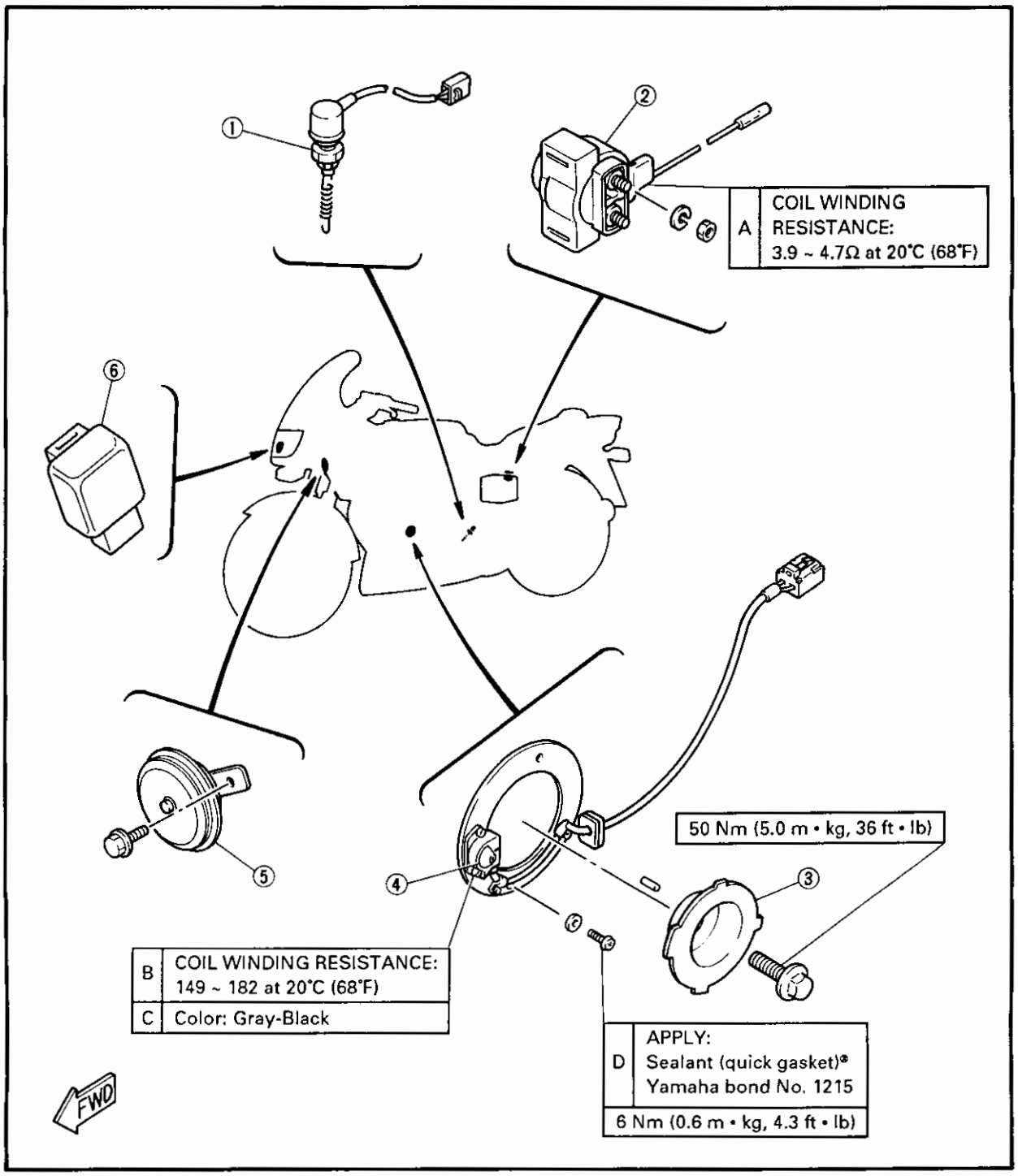
F	COIL WINDING RESISTANCE: Full: 4 ~ 10Ω at 20°C (68°F) Empty: 90 ~ 100Ω at 20°C (68°F)
G	COLOR: Green – Black

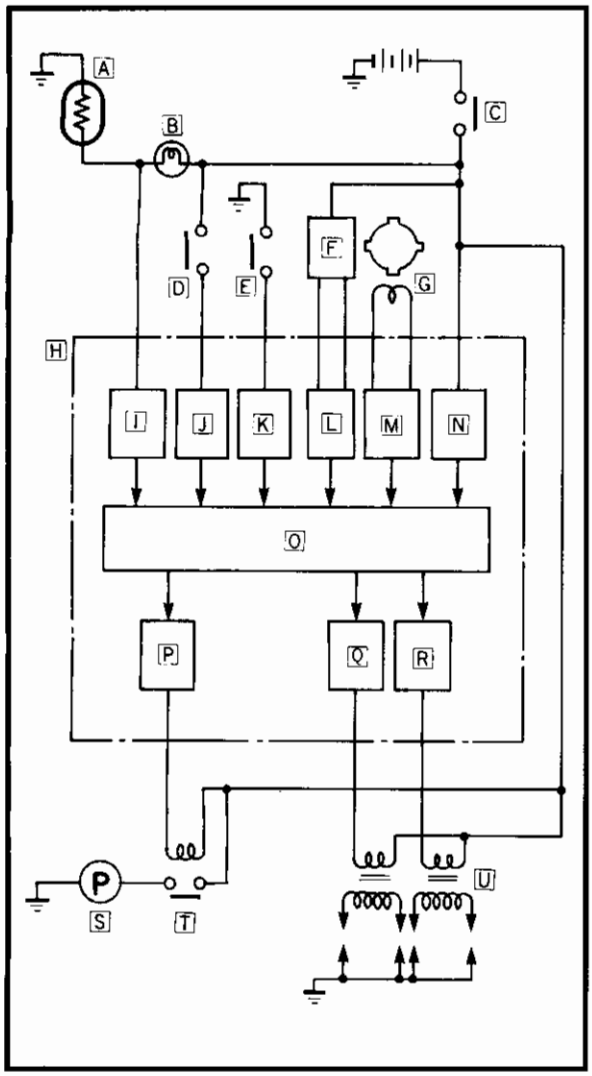


ELECTRICAL COMPONENTS (2)

① Rear brake switch
② Starter relay
③ Pickup rotor
④ Pick up coil
⑤ Horn
⑥ Flasher relay

GENERATOR:	STARTER MOTOR:
STATOR COIL RESISTANCE: 0.19 ~ 0.20Ω at 20°C (68°F) (White – White)	BRUSH LENGTH LIMIT: 5.0 mm (0.20 in)
FIELD COIL RESISTANCE: 3.8 ~ 4.2Ω at 20°C (68°F)	COMMUTATOR DIA. LIMIT 27 mm (1.06 in)
BRUSH LENGTH LIMIT: 4.5 mm (0.18 in)	





IGNITION SYSTEM

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.

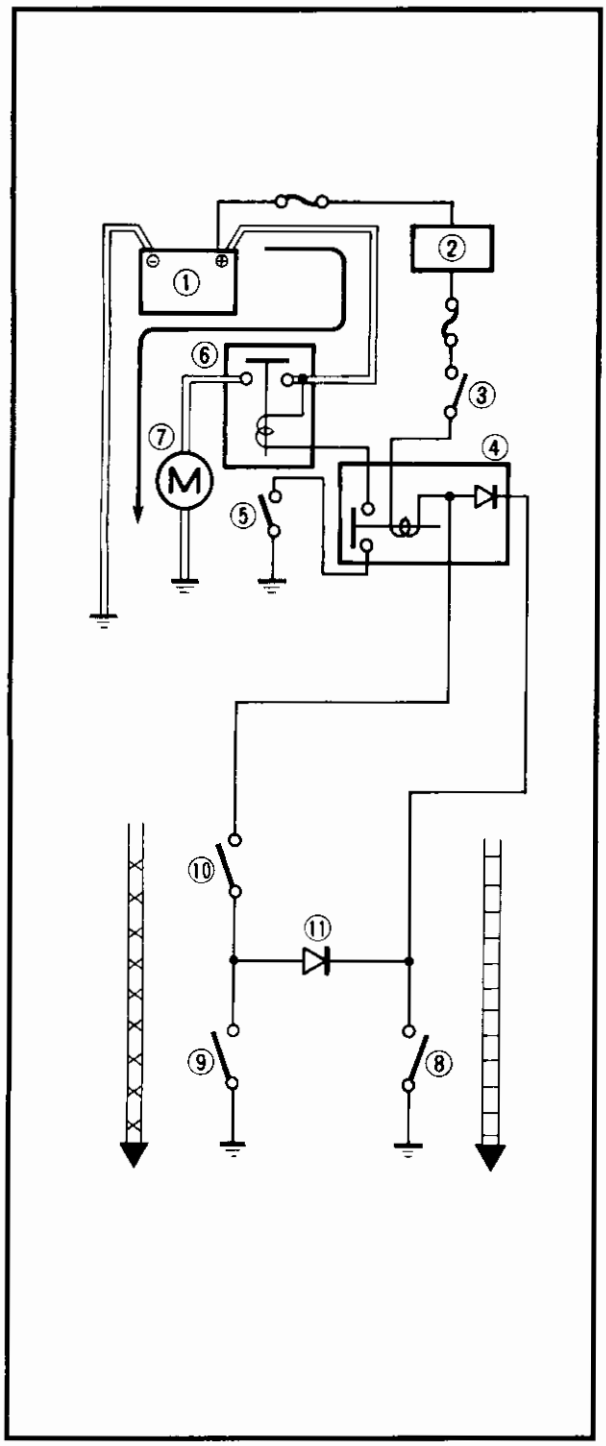
The digital ignitor also includes the control unit for the electric fuel pump.

[A] Fuel censor
[B] "Fuel" warning light
[C] Main switch
[D] Reserve switch
[E] Sidestand switch
[F] Pressure sensor
[G] Pickup coil
[H] Digital ignitor unit
[I] Fuel censor input circuit
[J] Reserve switch input circuit
[K] Stop switch input circuit
[L] Vacuum control circuit
[M] Wave-shape shaping circuit
[N] Rated voltage circuit
[O] CPU (Microprocessor)
[P] Fuel pump driving circuit
[Q] Ignition coil driving circuit
[R] Ignition coil dirivng circuit
[S] Fuel pump
[T] Fuel pump relay
[U] Igntion coil

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.



ELECTRICAL STARTING SYSTEM

STARTING CIRCUIT OPERATION

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

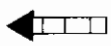
The transmission is in neutral (the neutral switch is closed).

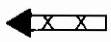
or if

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 or these conditions has been met. In this instance, the starting circuit cut-off relay is open so current cannot reach the starter motor.

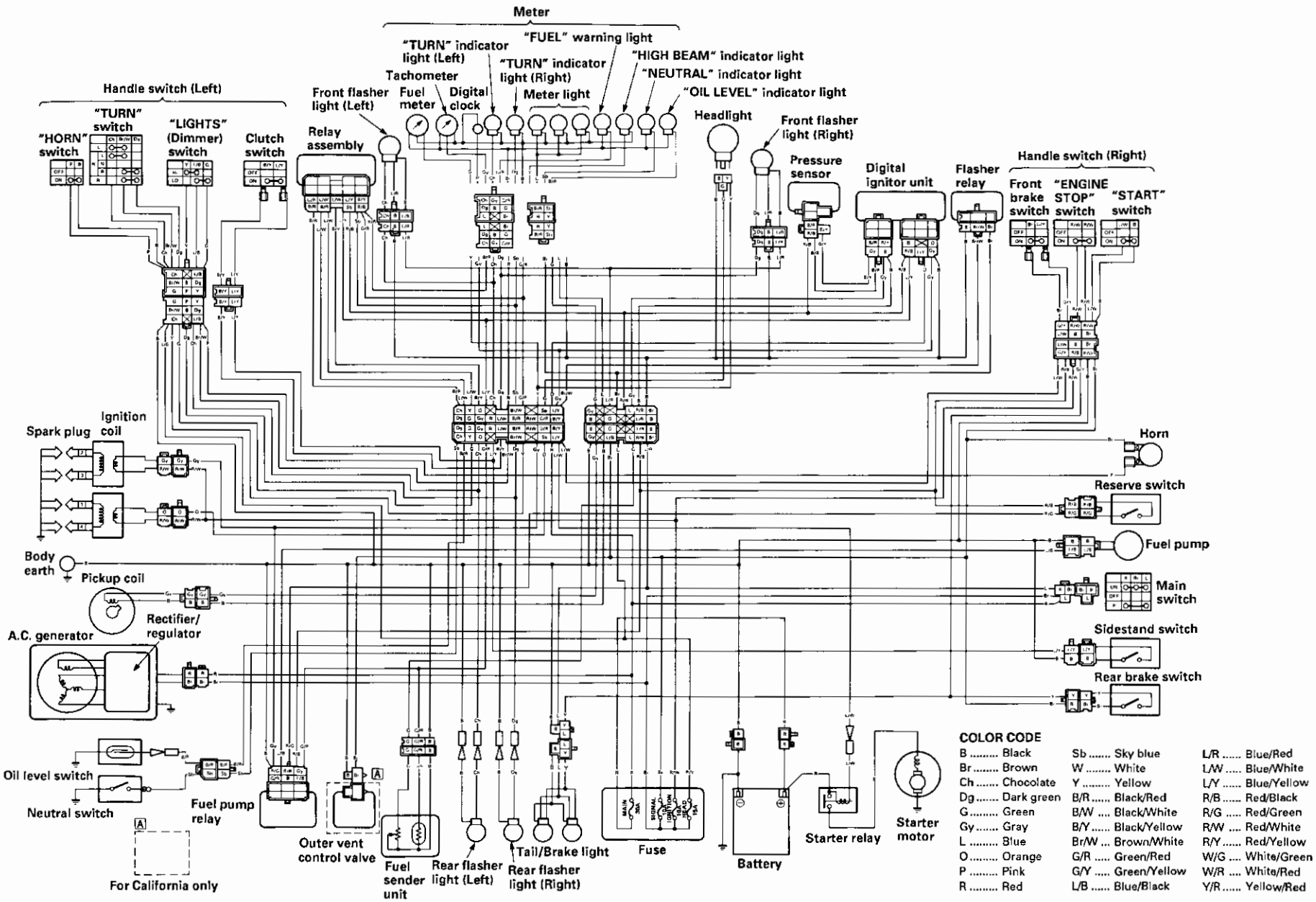
When one of both of the above conditions have been met, however, the starting circuit cut-off relay is closed, and the engine can be started by pressing the starter switch.


WHEN THE TRANSMISSION IN NEUTRAL


WHEN THE SIDESTAND IS UP AND THE CLUTCH LEVER IS PULLED IN

① Battery
② Main switch
③ "ENGINE STOP" switch
④ Relay assembly (Starting circuit cut-off relay)
⑤ "START" switch
⑥ Starter relay
⑦ Starter motor
⑧ Neutral switch
⑨ Side stand switch
⑩ Clutch switch
⑪ Diode

FJ1200B/BC WIRING DIAGRAM



COLOR CODE

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