



YAMAHA

DT200R(W) '89
2YY-AE1

**SUPPLEMENTARY
SERVICE MANUAL**

A-1

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and data for the DT200R(W) '89. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

DT125R Service Manual (3BN-ME1)

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

**DT200R(W)
SUPPLEMENTARY
SERVICE MANUAL
1988 by Yamaha Motor Co., Ltd.
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unauthorized use without the written
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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.

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.

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.

① GEN INFO 	② SPEC 	
③ INSP ADJ 	④ ENG 	
⑤ COOL 	⑥ CARB 	
⑦ CHAS 	⑧ ELEC 	
⑨ TRBL SHTG ? 	⑩ 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	⑲ 
⑳ 	㉑ 	㉒ 
㉓ 		

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.

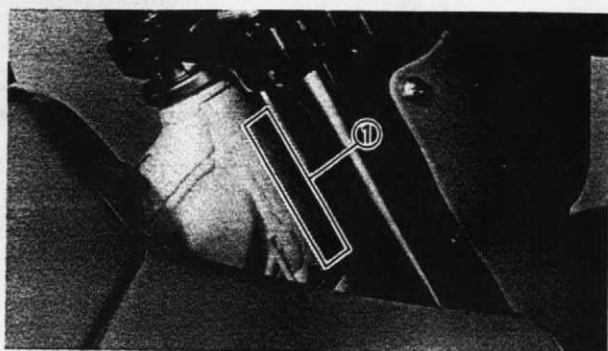
- ⑰ Apply engine oil
- ⑱ Apply gear oil
- ⑲ Apply molybdenum disulfide oil
- ⑳ Apply wheel bearing grease
- ㉑ Apply lightweight lithium-soap base grease
- ㉒ Apply molybdenum disulfide grease
- ㉓ Apply locking agent (LOCTITE®)

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GENERAL INFORMATION



**MOTORCYCLE IDENTIFICATION
VEHICLE IDENTIFICATION NUMBER
(FOR OCEANIA)**

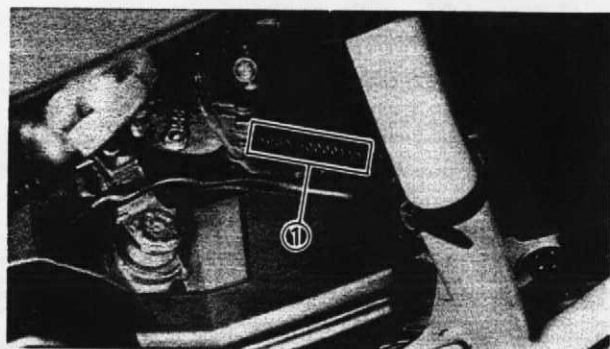
The vehicle identification number ① is stamped on the right of the steering head pipe.

Starting Serial Number:
JYA3CJT0*KA002101

**FRAME SERIAL NUMBER (EXCEPT FOR
OCEANIA)**

The frame serial number ① is stamped on the right of the steering head pipe.

Starting Serial Number:
2YY-020101



ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the elevated part of the left rear section 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:
FOR OCEANIA: 3CJ-002101
EXCEPT FOR OCEANIA: 3ET-020101

NOTE: _____

Designs and specifications are subject to change without notice.





SPECIFICATIONS

GENERAL SPECIFICATIONS

(Oc): For Oceania

Model	DT200R(W)
Model Code Number	2YY1, 3CJ1 (Oc)
Engine Starting Number	3ET-020101, 3CJ-002101 (Oc)
Frame Serial Number, Vehicle Identification Number (Oc)	2YY-000101, JYA3CJTO*KA002101 (Oc)
Dimensions:	
Overall Length	2,165 mm (85.2 in)
Overall Width	830 mm (32.7 in)
Overall Height	1,255 mm (49.4 in)
Seat Height	885 mm (34.8 in)
Wheel Base	1,415 mm (55.7 in)
Minimum Ground Clearance	315 mm (12.4 in)
Basic Weight:	
With Oil and Full Fuel Tank	122 kg (269 lb), 121 kg (267 lb) (Oc)
Minimum Turning Radius:	2,100 mm (82.7 in)
Engine:	
Engine Type	Liquid cooled 2-stroke, gasoline
Induction System	Reed valve
Cylinder Arrangement	Single cylinder, Forward inclined
Displacement	195 cm ³
Bore × Stroke	66 × 57 mm (2.598 × 2.244 in)
Compression Ratio	6.4 : 1
Starting System	Kick starter
Lubrication System	Separate lubrication (Yamaha Autolube)
Engine Oil:	
Type	Yamaha oil 2T or air-cooled 2-stroke engine oil
Capacity	1.2 L (1.1 Imp qt, 1.3 US qt)
Transmission Oil:	
Type	SAE 10W30 type SE motor oil
Capacity:	
Periodic Oil Change	0.75 L (0.66 Imp qt, 0.79 US qt)
Total Amount	0.80 L (0.70 Imp qt, 0.84 US qt)
Coolant Capacity:	
Including All Routes	1.20 L (1.06 Imp qt, 1.27 US qt)
Air Filter:	
Type	Wet element
Fuel:	
Type	Regular gasoline
Fuel Tank Capacity:	
Full Amount	10.0 L (2.2 Imp gal, 2.6 US gal)
Reserve Amount	1.8 L (0.40 Imp gal, 0.48 US gal)

GENERAL SPECIFICATIONS

SPEC



Model	DT200R(W)	
Carburetor: Type/Quantity Manufacturer	TM28/1 pc. MIKUNI	
Spark Plug: Type/Quantity Manufacturer Plug Gap	BR9ES/1 pc. NGK 0.7 ~ 0.8 mm (0.028 ~ 0.032 in)	
Clutch: Type	Wet, multiple disc	
Transmission: Type Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Operation Gear Ratio: 1st 2nd 3rd 4th 5th 6th	Constant mesh 6-speed Helical gear 52/17 (3.059) Chain drive 43/13 (3.308) Left foot operation 33/12 (2.750) 30/16 (1.875) 24/17 (1.412) 24/21 (1.143) 22/23 (0.957) 18/22 (0.818)	
Chassis: Frame Type Caster Angle Trail	Semi double cradle 27.5° 113 mm (4.45 in)	
Tire: Type Size: Front Rear	With tube 3.00-21 4PR 4.60-18 4PR	
Maximum Load* Front Rear	47 kg (104 lb) 134 kg (295 lb)	
Cold Tire Pressure: Up to 90 kg (198 lb) Load* 90 kg (198 lb) ~ Maximum Load* Off-road Riding	Front	Rear
	130 kPa (1.3 kg/cm ² , 18 psi)	150 kPa (1.5 kg/cm ² , 22 psi)
	150 kPa (1.5 kg/cm ² , 22 psi)	180 kPa (1.8 kg/cm ² , 26 psi)
	130 kPa (1.3 kg/cm ² , 18 psi)	150 kPa (1.5 kg/cm ² , 22 psi)

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

GENERAL SPECIFICATIONS

SPEC

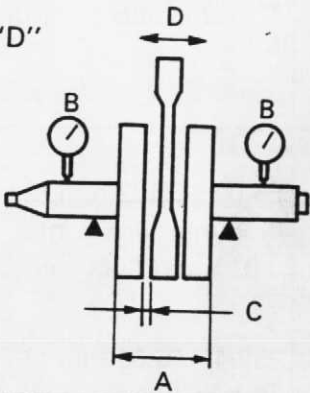


Model	DT200R(W)
Brake: Front Brake Type Front Brake Operation Rear Brake Type Rear Brake Operation	Single disc brake Right hand operation Single disc brake Right foot operation
Suspension: Front Suspension Type Rear Suspension Type	Telescopic fork Swingarm (Monocross suspension)
Shock Absorber: Front Shock Absorber Rear Shock Absorber	Coil and air spring/Oil damper Coil and gas spring/Oil damper
Wheel Travel: Front Wheel Travel Rear Wheel Travel	270 mm (10.6 in) 270 mm (10.6 in)
Electrical: Ignition System Generator System	CDI Flywheel magneto
Battery: Type Capacity	GM3-3B/FB3L-B 12V 3AH
Headlight: Type	Bulb type
Bulb Wattage (Quantity): Headlight Tail/Brake Light Flasher Light Auxiliary Light Meter Light "NEUTRAL" Indicator Light "HIGH BEAM" Indicator Light "OIL" Indicator Light "TURN" Indicator Light	12V 60W/55W, 12V 35W/36.5W (Oc) 12V 5W/21W 12V 21W (4 pcs.), 12V 10W (4 pcs.) (Oc) 12V 4W (1 pc.) Except for Oceania 12V 3.4W (2 pcs.) 12V 3.4W (1 pc.) 12V 3.4W (1 pc.) 12V 3.4W (1 pc.) 12V 3.4W (1 pc.)



MAINTENANCE SPECIFICATIONS
ENGINE

Model	DT200R(W)	
Cylinder Head: Warpage Limit		0.03 mm (0.0012 in) *Lines indicate straightedge measurement.
Cylinder: Bore Size Taper Limit Out of Round Limit	66.00 ~ 66.02 mm (2.598 ~ 2.599 in) 0.05 mm (0.002 in) 0.01 mm (0.0004 in)	
Piston: Piston Size "D" Measuring Point "a" Piston Off-Set Piston-to Cylinder Clearance < Limit > Over Size: 1st 2nd		65.94 ~ 66.00 mm (2.596 ~ 2.598 in) 10 mm (0.4 in) 0 mm (0 in) 0.055 ~ 0.060 mm (0.0022 ~ 0.0024 in) < 0.1 mm (0.004 in) > 66.25 mm (2.61 in) 66.50 mm (2.62 in)
Piston Ring: Sectional Sketch	<p>Top Ring</p> <p>2nd Ring</p>	Keystone type B = 1.2 mm (0.047 in) T = 2.8 mm (0.110 in) Plain type B = 1.2 mm (0.047 in) T = 2.4 mm (0.095 in) End Gap (Installed) Top Ring 0.30 ~ 0.45 mm (0.012 ~ 0.018 in) 2nd Ring 0.30 ~ 0.45 mm (0.012 ~ 0.018 in) Side Clearance Top Ring 0.020 ~ 0.060 mm (0.0008 ~ 0.0024 in) 2nd Ring 0.030 ~ 0.065 mm (0.0012 ~ 0.0026 in)

Model	DT200R(W)
<p>Crankshaft: Crank Width "A" Runout Limit "B" Big End Side Clearance "C" < Limit > Small End Free Play "D"</p> 	<p>57.90 ~ 57.95 mm (2.280 ~ 2.282 in) 0.02 mm (0.0008 in) 0.20 ~ 0.70 mm (0.008 ~ 0.028 in) < 1.0 mm (0.040 in) > 0.8 ~ 1.0 mm (0.031 ~ 0.040 in)</p>
<p>Clutch: Friction Plate: Thickness Quantity Wear Limit Clutch Plate: Thickness Quantity Warpage Limit Clutch Spring: Free Length Quantity Minimum Free Length Clutch Release Method Push Rod Bending Limit</p>	<p>2.9 ~ 3.1 mm (0.114 ~ 0.122 in) 7 pcs. 2.7 mm (0.106 in) 1.05 ~ 1.35 mm (0.041 ~ 0.053 in) 6 pcs. 0.05 mm (0.002 in) 34.5 mm (1.358 in) 5 pcs. 32.0 mm (1.260 in) Inner push, Cam push 0.15 mm (0.006 in)</p>
<p>Transmission: Main Axle Runout Limit Drive Axle Runout Limit</p>	<p>0.08 mm (0.003 in) 0.08 mm (0.003 in)</p>
<p>Shifter: Type Guide Bar Bending Limit</p>	<p>Cam drum and guide bar 0.03 mm (0.0012 in)</p>
<p>Kick Starter: Type</p>	<p>Kick and mesh type</p>
<p>Air Filter: Oil Grade</p>	<p>Foam-Air-Filter oil or SAE 10W30 SE</p>



MAINTENANCE SPECIFICATIONS

SPEC



Model	DT200R(W)
Carburetor: I.D. Mark Main Jet (M.J.) Air Jet (A.J.) Jet Needle-Position (J.N.) Needle Jet (N.J.) Cutaway (C.A.) Pilot Outlet (P.O.) Pilot Jet (P.J.) Bypass 1 (B.P. 1) Valve Seat Size (V.S.) Starter Jet (G.S.) Power Jet (PW.J.) Fuel Level (F.L.) Float Height (F.H.) Idling Speed	2YY00 # 150 φ0.5 5J10-4 P-2 2.5 φ0.6 #25 φ1.6 φ2.8 #25 #65 -2.5 ~ -4.5 mm (-0.10 ~ -0.18 in) 20 ~ 21 mm (0.79 ~ 0.83 in) 1,300 ~ 1,400 r/min
Reed Valve: Valve Thickness Valve Stopper Height Valve Bending Limit	0.4 mm (0.02 in) 6.8 mm (0.27 in) 0.5 mm (0.02 in)
Lubrication System: Autolube Pump: Color Code Minimum Stroke Maximum Stroke Minimum Output Maximum Output Pulley Adjusting Mark	White 0.20 ~ 0.25 mm (0.008 ~ 0.010 in) 1.85 ~ 2.05 mm (0.073 ~ 0.080 in) 0.50 ~ 0.63 cm ³ per 200 strokes 4.65 ~ 5.15 cm ³ per 200 strokes Auto adjuster
Cooling System: Radiator Core Width Radiator Core Height Radiator Core Thickness Radiator Cap Opening Pressure Reservoir Tank Capacity Water Pump Type	110 mm (4.3 in) 280 mm (11.0 in) 32.0 mm (1.26 in) 75 ~ 105 kPa (0.75 ~ 1.05 kg/cm ² , 10 ~ 14 psi) 0.3 L (0.32 Imp qt, 0.26 US qt) Single-suction centrifugal pump
Thermostatic Valve: Opening Temperature Full Open Temperature/Lift	63 ~ 67°C (146 ~ 153°F) 80°C (176°F)/7 mm (0.28 in) or more



Tightening Torque:						
Part to be tightened	Q'ty	Thread size	Tightening torque			Remarks
			Nm	m•kg	ft•lb	
Spark Plug	1	M14×1.25	20	2.0	14	
Cylinder Head						
Nut	5	M 8×1.25	22	2.2	16	
Cylinder						
Stud bolt	9	M 8×1.25	13	1.3	9.4	
Nut	4	M 8×1.25	28	2.8	20	
Power Valve Holder, Valve, Cover, Cap Seal						
Bolt	6	M 5×0.8	7	0.7	5.1	
Power Valve Pully						
Bolt	1	M 6×1.0	10	1.0	7.2	
Balancer Gear						
Nut	2	M12×1.0	55	5.5	40	
Thermostat Valve Cover						
Screw	3	M 6×1.0	8	0.8	5.8	
Housing Cover						
Screw	2	M 6×1.0	8	0.8	5.8	
Drain Bolt (Housing Cover)	1	M 6×1.0	10	1.0	7.2	
Radiator						
Bolt	2	M 6×1.0	8	0.8	5.8	
Warm Water Hose (Carburetor)						
Bolt	2	M 6×1.0	8	0.8	5.8	
Radiator Cap Stopper						
Screw	1	M 5×0.8	5	0.5	3.6	
Oil Pump						
Screw	2	M 5×0.8	5	0.5	3.6	
Carburetor Joint						
Bolt	4	M 6×1.0	8	0.8	5.8	
Air Filter						
Bolt	2	M 6×1.0	5	0.5	3.6	
Exhaust Pipe						
Nut	2	M 8×1.25	18	1.8	13	
Stud Bolt	2	M 8×1.25	10	1.0	7.2	
Bolt	3	M 6×1.0	8	0.8	5.8	
Transmission Oil Drain Bolt	1	M 8×1.25	15	1.5	11	
Crankcase Cover (Left)						
Screw	6	M 6×1.0	5	0.5	3.6	
Crankcase Cover (Right)						
Screw	6	M 6×1.0	8	0.8	5.8	
Oil Pump Cover						
Screw	3	M 6×1.0	5	0.5	3.6	
Crankcase						
Screw	12	M 6×1.0	8	0.8	5.6	
Oil Seal Holder						
Screw	1	M 8×1.25	16	1.6	11	

MAINTENANCE SPECIFICATIONS

SPEC



Tightening Torque:						
Part to be tightened	Q'ty	Thread size	Tightening torque			Remarks
			Nm	m•kg	ft•lb	
Cover						
Screw	2	M 6×1.0	8	0.8	5.6	
Kick Crank Boss						
Nut	1	M12×1.0	65	6.5	47	
Primary Drive Gear						
Nut	1	M12×1.0	80	8.0	58	
Clutch Boss						
Nut	1	M12×1.0	70	7.0	51	
Clutch Spring						
Bolt	5	M 5×0.8	6	0.6	4.3	
Plate Cover						
Screw	2	M 6×1.0	10	1.0	7.2	
Drive Sprocket						
Nut	1	M16×1.0	60	0.6	43	
Tachometer Housing						
Bolt	1	M 6×1.0	5	0.5	3.6	
Stopper Lever						
Bolt	1	M 6×1.0	14	1.4	10	
Change Pedal						
Bolt	1	M 6×1.0	15	1.5	11	
Thermo Unit	1	—	15	1.5	11	
Rotor						
Nut	1	M12×1.25	80	8.0	58	



CHASSIS

Model	DT200R(W)
Steering System: Bearing Type Upper Lower Bearing Size (Quantity): Upper	Ball bearing Taper roller bearing 3/16 in (22 pcs.)
Front Suspension: Front Fork Travel Fork Spring Free Length < Limit > Spring Rate (K ₁) Stroke (K ₁) Optional Spring Oil Capacity Oil Level Oil Grade	270 mm (10.6 in) 548 mm (21.6 in) < 543 mm (21.4 in) > 3.5 N/mm (0.35 kg/mm, 20 lb/in) 0~270 mm (0~10.6 in) No. 512 cm ³ (18.1 Imp oz, 17.3 US oz) 140 mm (5.51 in) From top of inner tube fully compressed without spring. Fork oil 10W or equivalent
Rear Suspension: Shock Absorber Travel Spring Free Length < Limit > Fitting Length Spring Rate (K ₁) Stroke (K ₁) Optional Spring Enclosed Gas Pressure	99 mm (3.90 in) 265 mm (10.40 in) < 263 mm (10.35 in) > 250 mm (9.84 in) 66.7 N/mm (6.8 kg/mm, 381 lb/in) 0~99 mm (0~3.90 in) No. 1471.0 kPa (15 kg/cm ² , 213 psi)
Swingarm: Free Play Limit (Swingarm End)	1.0 mm (0.04 in) Move swingarm end side to side
Front Wheel: Type Rim Size Rim Material Rim Runout Limit Vertical Lateral	Spoke wheel 1.60 × 21 Steel 2.0 mm (0.08 in) 2.0 mm (0.08 in)
Rear Wheel: Type Rim Size Rim Material Rim Runout Limit Vertical Lateral	Spoke wheel 2.15 × 18 Steel 2.0 mm (0.08 in) 2.0 mm (0.08 in)

MAINTENANCE SPECIFICATIONS

SPEC



Model	DT200R(W)
Drive Chain: Type/Manufacturer Number of Links Chain Free Play	528V6/DAIDO 105 Links + joint 25 ~ 40 mm (0.98 ~ 1.57 in)
Front Disc Brake: Type Disc Outside Diameter Disc Thickness Pad Thickness <Wear Limit> Master Cylinder Inside Diameter Caliper Cylinder Inside Diameter Brake Fluid Type	Single 230 mm (9.06 in) 3.5 mm (0.14 in) 6.0 mm (0.24 in) <0.8 mm (0.03 in)> 12.7 mm (0.5 in) 34.9 mm (1.38 in) DOT No. 4 If DOT No. 4 is not available, DOT No. 3 can be used.
Rear Disc Brake: Type Disc Outside Diameter Disc Thickness Pad Thickness <Limit> Master Cylinder Inside Diameter Caliper Cylinder Inside Diameter Brake Fluid Type	Single 220 mm (8.66 in) 4.5 mm (0.18 in) 6 mm (0.24 in) <0.8 mm (0.03 in)> 12.7 mm (0.5 in) 30.2 mm (1.19 in) DOT No. 4 If DOT No. 4 is not available, DOT No. 3 can be used.
Brake Lever and Brake Pedal: Brake Lever Free Play Brake Pedal Position Brake Pedal Free Play	2 ~ 5 mm (0.08 ~ 0.20 in) At end of brake lever 15 mm (0.59 in) Below top of footrest Adjustment free
Clutch Lever and Throttle Grip: Clutch Lever Free Play Throttle Cable Free Play	2 ~ 3 mm (0.08 ~ 0.12 in) At the lever pivot 2 ~ 5 mm (0.08 ~ 0.20 in) At grip flange



Tightening Torque:					
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Front Fork, Steering:					
Handle Crown and Inner Tube	M 8×1.25	23	2.3	17	Refer to "NOTE".
Handle Crown and Steering Shaft	M22×1.0	90	9.0	65	
Handlebar Holder	M 8×1.25	23	2.3	17	
Steering Shaft and Ring Nut	M25×1.0	6	0.6	4.3	
Brake Hose Holder	M 6×1.0	10	1.0	7.2	
Master Cylinder Cap	M 4×0.7	2	0.2	1.4	
Handle Crown Pinch Bolt	M 8×1.25	23	2.3	17	
Engine Mounting:					
Engine Stay (Front) and Frame	M10×1.25	63	6.3	45	
Engine Stay (Top) and Frame	M 8×1.25	33	3.3	24	
Engine and Frame	M 8×1.25	33	3.3	24	
Swingarm, Rear Shock Absorber:					
Pivot Shaft and Frame	M16×1.5	90	0.9	65	
Swingarm and Connecting Rod	M14×1.5	58	5.8	42	
Relay Arm and Connecting Rod	M14×1.5	58	5.8	42	
Relay Arm and Frame	M10×1.25	58	5.8	42	
Rear Shock Absorber and Frame	M10×1.25	33	3.3	24	
Rear Arm and Rear Shock Absorber	M10×1.25	33	3.3	24	
Chain Cover	M 6×1.0	4	0.4	2.9	
Swingarm End Bolt	M 6×1.0	3	0.3	2.2	
Fuel Tank, Seat, Rear Fender:					
License Bracket and Stay	M 6×1.0	5	0.5	3.6	
Wheels:					
Front Wheel Axle	M14×1.5	58	5.8	42	
Rear Wheel Axle and Nut	M18×1.5	90	9.0	65	
Front Wheel Axle Holder	M 6×1.0	10	1.0	7.2	
Front Brake Caliper	M10×1.25	35	3.5	25	
Union Bolt (Brake Hose)	M10×1.25	26	2.6	19	
Wheel Sprocket and Hub	M 8×1.25	35	3.5	25	
Footrest Brake Pedal:					
Sidestand	M10×1.25	40	4.0	29	
Sidestand Switch	M 5×0.8	4	0.4	29	
Footrest (Rear and Frame)	M 8×1.25	20	2.0	14	
Master Cylinder (Rear)	M 6×1.0	10	1.0	7.2	
Reservoir Tank	M 6×1.0	4	0.4	2.9	

NOTE:

1. First, tighten the ring nut approximately 38 Nm (3.8 m•kg, 27 ft•lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut to specification.



ELECTRICAL

Model	DT200R(W)												
Voltage:	12V												
Ignition System: Ignition Timing (B.T.D.C.) Advancer Type	15° at 1,350 r/min Electrical type												
<p>Ignition Timing (B.T.D.C.)</p> <p>Engine Speed (×1,000 r/min)</p> <table border="1"> <caption>Ignition Timing Data Points from Graph</caption> <thead> <tr> <th>Engine Speed (r/min)</th> <th>Ignition Timing (B.T.D.C.)</th> </tr> </thead> <tbody> <tr> <td>1,350</td> <td>15° ± 1.5°</td> </tr> <tr> <td>2,850</td> <td>15.5° ± 1.5°</td> </tr> <tr> <td>4,250</td> <td>16.3° ± 1.5°</td> </tr> <tr> <td>7,450</td> <td>16.5° ± 1.5°</td> </tr> <tr> <td>10,250</td> <td>7° ± 1.5°</td> </tr> </tbody> </table>		Engine Speed (r/min)	Ignition Timing (B.T.D.C.)	1,350	15° ± 1.5°	2,850	15.5° ± 1.5°	4,250	16.3° ± 1.5°	7,450	16.5° ± 1.5°	10,250	7° ± 1.5°
Engine Speed (r/min)	Ignition Timing (B.T.D.C.)												
1,350	15° ± 1.5°												
2,850	15.5° ± 1.5°												
4,250	16.3° ± 1.5°												
7,450	16.5° ± 1.5°												
10,250	7° ± 1.5°												
C.D.I.:													
Magneto Model/Manufacturer	F3ET/YAMAHA												
C.D.I. Unit Model/Manufacturer	3ET/YAMAHA												
Pickup Coil Resistance (Color)	280 ~ 420Ω at 20°C (68°F) (White/Red—White/Blue)												
Source Coil Resistance (Color)	192 ~ 288Ω at 20°C (68°F) (Black/Red—Green/White)												
Ignition Coil:													
Model/Manufacturer	2JN/YAMAHA												
Minimum Spark Gap	6 mm (0.24 in)												
Primary Coil Resistance	0.7 ~ 1.1Ω at 20°C (68°F)												
Secondary Coil Resistance	5.7 ~ 8.5kΩ at 20°C (68°F)												
Spark Plug Cap:													
Type	Rubber type												
Plug Cap Resistance	4 ~ 6kΩ at 20°C (68°F)												



MAINTENANCE SPECIFICATIONS

SPEC

Model	DT200R(W)																				
Charging System:	Flywheel magneto																				
Flywheel Magneto: Model/Manufacturer Charging Coil Resistance (Color) Standard Output	F3ET/YAMAHA 0.3~0.5Ω at 20°C (68°F) (White—Black) 12V 1.1A at 2,500 r/min When "LIGHT" switch is turned to "OFF".																				
<table border="1"><caption>Graph Data: Output Current vs Engine Speed</caption><thead><tr><th>Engine Speed (x 1,000 r/min)</th><th>Output Current (A)</th></tr></thead><tbody><tr><td>1</td><td>0.3</td></tr><tr><td>2</td><td>1.0</td></tr><tr><td>3</td><td>1.4</td></tr><tr><td>4</td><td>1.6</td></tr><tr><td>5</td><td>1.6</td></tr><tr><td>6</td><td>1.6</td></tr><tr><td>7</td><td>1.6</td></tr><tr><td>8</td><td>1.6</td></tr><tr><td>9</td><td>1.6</td></tr></tbody></table>		Engine Speed (x 1,000 r/min)	Output Current (A)	1	0.3	2	1.0	3	1.4	4	1.6	5	1.6	6	1.6	7	1.6	8	1.6	9	1.6
Engine Speed (x 1,000 r/min)	Output Current (A)																				
1	0.3																				
2	1.0																				
3	1.4																				
4	1.6																				
5	1.6																				
6	1.6																				
7	1.6																				
8	1.6																				
9	1.6																				
Voltage Regulator: Type	Semi conductor — Short circuit type																				
Rectifier: Model/Manufacturer Capacity	EHU01TR23/MATSUSHITA 12A																				
Battery: Specific Gravity	1.280																				
Horn: Type Quantity Model/Manufacturer Maximum Amperage	Plane type 1 pc. YF-12/NIKKO 2.5A																				

MAINTENANCE SPECIFICATIONS

SPEC



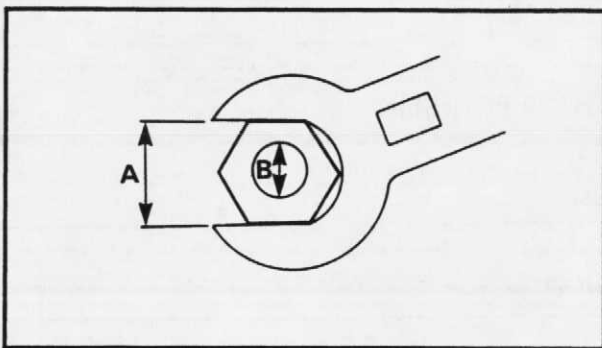
Model	DT200R(W)
Flasher Relay: Type Model/Manufacturer Self Cancelling Device Flasher Frequency Wattage	Condenser type FZ249SD/NIPPON DENSO No 60 ~ 120 cycle/min 21W × 2 + 3.4W
Ignition Control Unit: Model/Manufacturer	4Y3/YAMAHA
Oil Level Switch: Model/Manufacturer	4UI/STANLEY
Thermo Unit: Model/Manufacturer	11H/NIPPON SEIKI
Circuit Breaker: Type	Fuse
Circuit (Fuse): "MAIN"	10A (1 pc.)



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

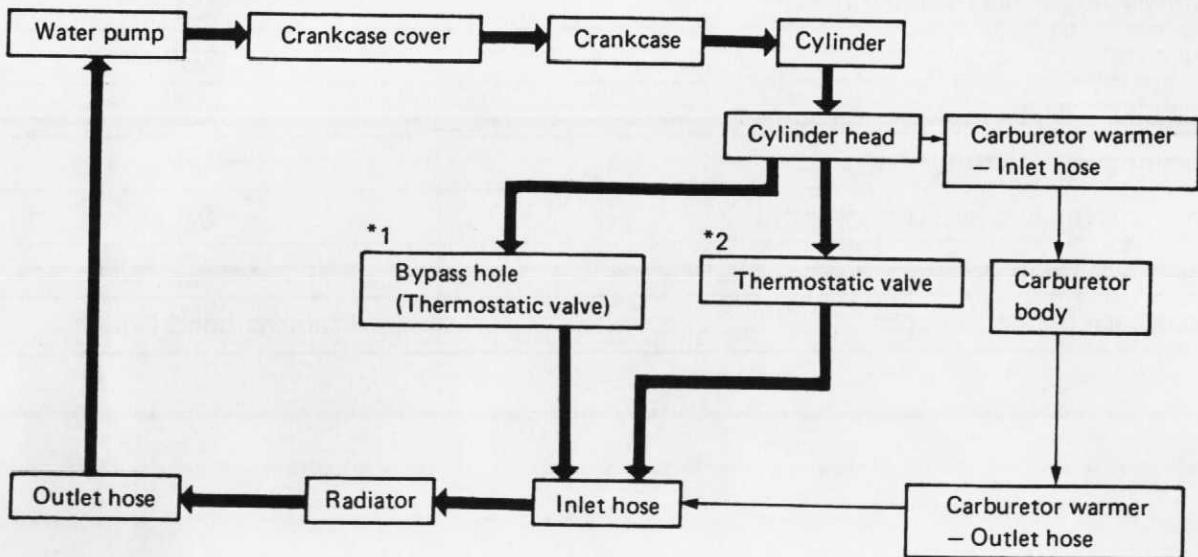
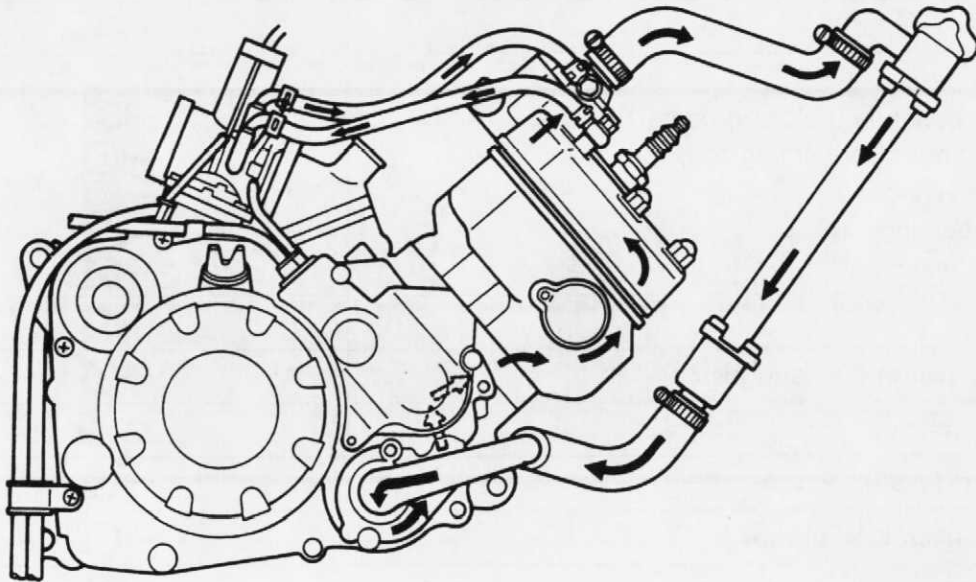


- A: Distance across flats
B: Outside thread diameter

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	10^{-3} meter	Length
cm	centimeter	10^{-2} meter	Length
kg	kilogram	10^3 gram	Weight
N	Newton	$1 \text{ kg} \times \text{m}/\text{sec}^2$	Force
Nm	Newton meter	$\text{N} \times \text{m}$	Torque
m•kg	Meter kilogram	$\text{m} \times \text{kg}$	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter		Volume or Capacity
cm^3	Cubic centimeter		
r/min	Rotation per minute		Engine Speed

COOLANT FLOW CHART



*1 Coolant is cooled (Less than 65°C (149°F)).
 *2 Coolant is hot (65°C (149°F) or more).



LUBRICATION POINTS AND LUBRICANT TYPE

ENGINE

Lubrication Points (Part name)	Lubricant Type
Oil seal lips (All)	
O-rings (All)	
Bearing retainer Crankshaft bearings (Left and center) Needle bearings (Connecting rod) Main axle bearings Drive axle bearings Push lever bearing	
Crank pins	
Piston rings, piston pins and pistons	
Power valve holders	
Impeller shaft (Water pump)	
Worm shaft (Autolube pump)	
Kick idle gear	
Kick axle	
Primary driven gear (Clutch housing)	
Push rod	
Push lever axle	
Sliding gear (Transmission)	
Free movement gear (Transmission)	
Guide bar (Shift forks)	
Crankcase mating surfaces	Yamaha bond No. 4®

LUBRICATION POINTS AND LUBRICANT TYPE

SPEC



CHASSIS

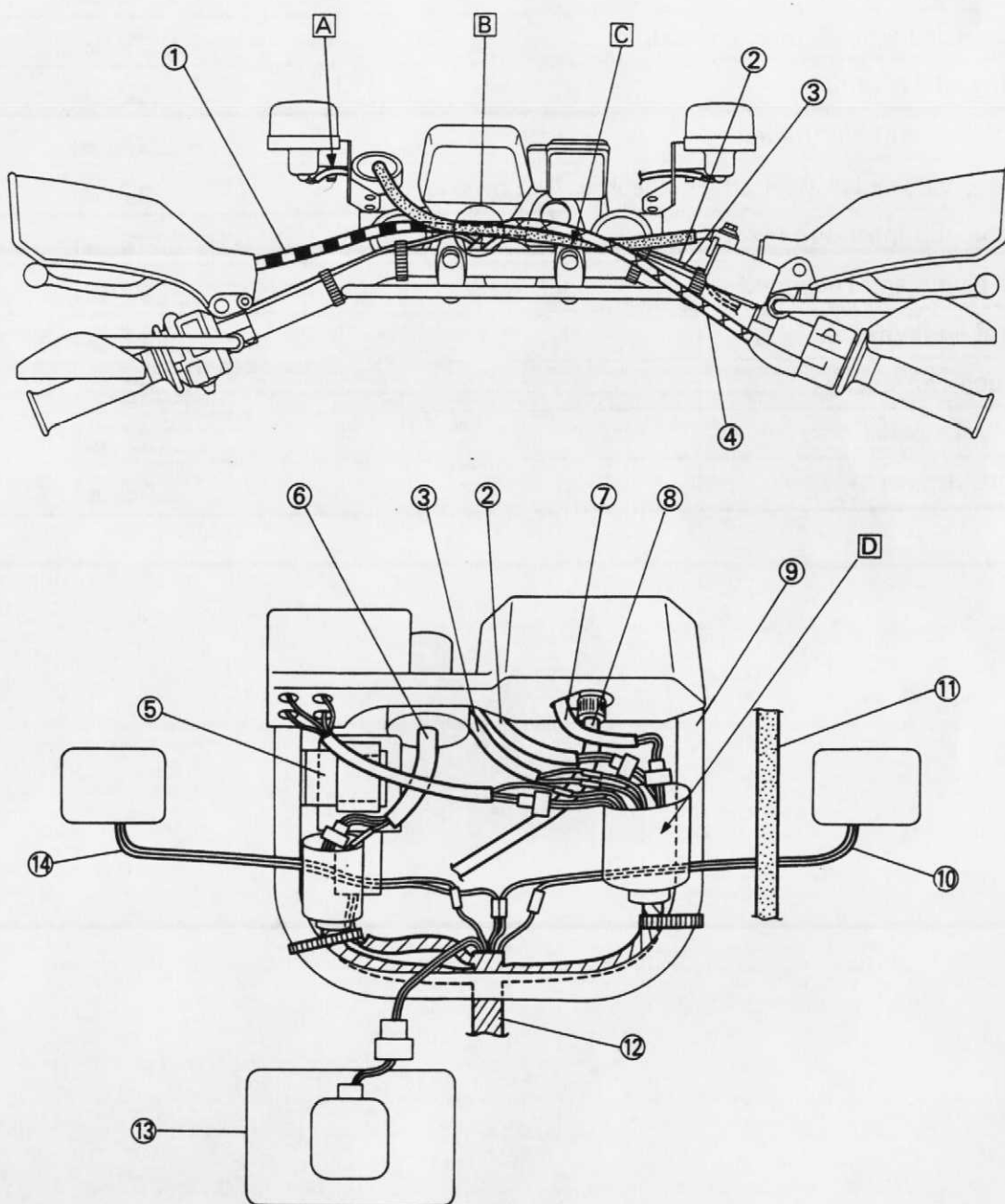
Lubrication Points (Part name)	Lubricant Type
Ball bearing (Steering shaft)	
Bearing (Steering shaft)	
Pivot shaft (Swingarm)	
Oil seal lip (Swingarm, Steering shaft, Relay arm)	
Bearing (Swingarm)	
Collar (Swingarm)	
Bush (Relay arm, Connecting rod)	
Collar (Relay arm, Connecting rod)	
Bearing (Relay arm)	
Bolt (Relay arm and frame)	
Bearing, oil seal lip (Rear shock absorber – Lower)	
Throttle grip inner surface	
Lever pivots and cable end	
Oil seal lip (Wheels)	
Speedometer gear	
Rear brake pedal boss	
Sidestand pivot	



CABLE ROUTING

- | | | |
|---------------------------|------------------------------|--|
| ① Clutch cable | ⑧ Speedometer cable | A Pass the flasher light lead in front of stay. |
| ② Front brake switch lead | ⑨ Headlight stay | B Pass the cables and leads between meter and handlebar crown. |
| ③ Engine stop switch lead | ⑩ Flasher light (left) lead | C Pass the front brake hose inside of throttle cable. |
| ④ Throttle cable | ⑪ Brake hose | D Clamp the couplers between the speedometer cable and headlight stay. |
| ⑤ Flasher relay | ⑫ Wireharness | |
| ⑥ Handlebar switch lead | ⑬ Headlight | |
| ⑦ Meter light lead | ⑭ Flasher light (right) lead | |

For Oceania



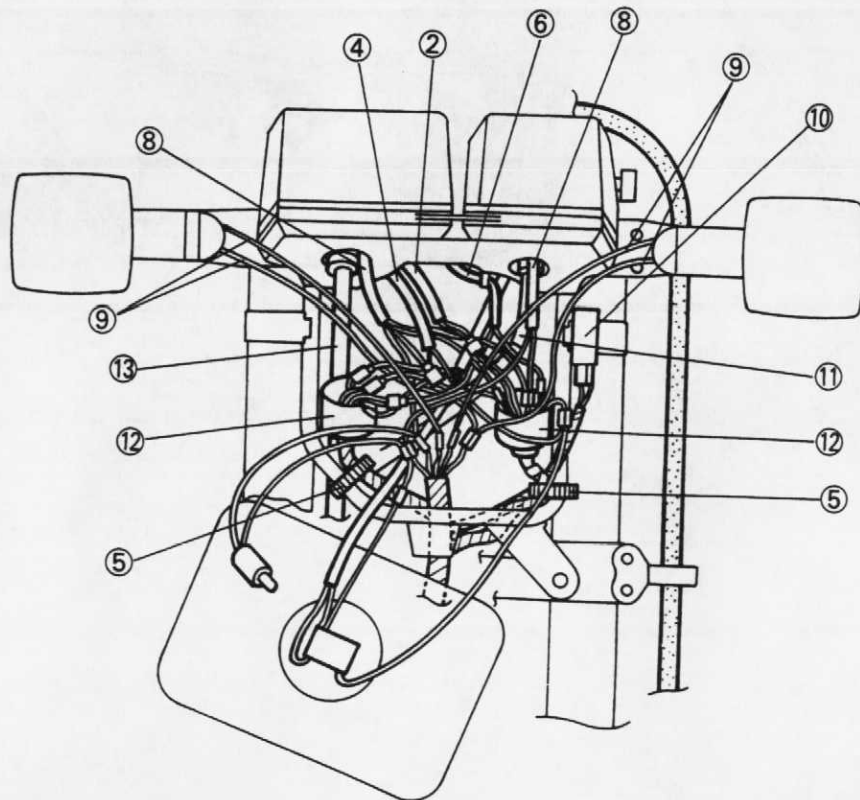
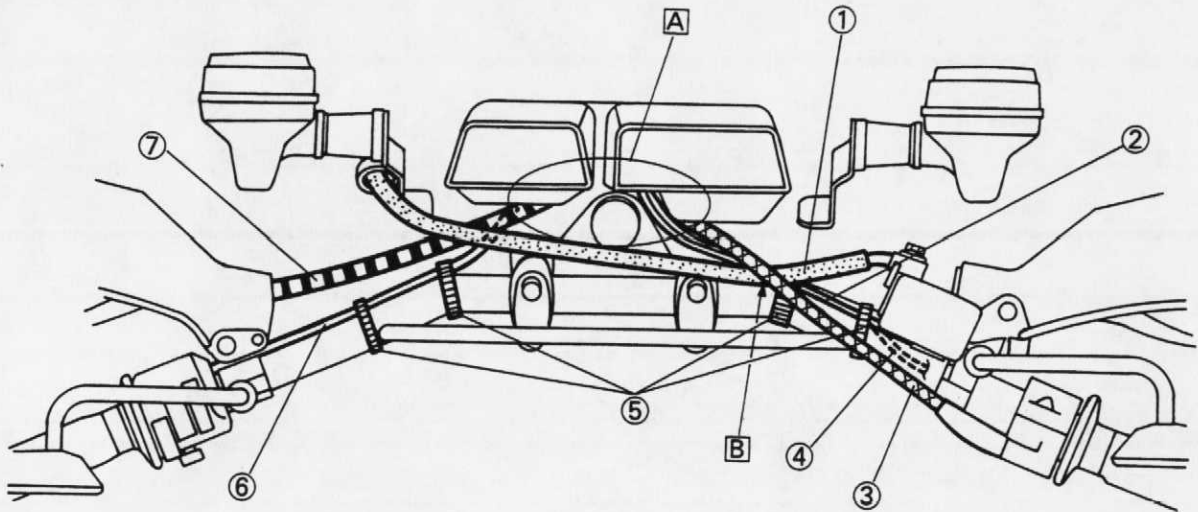


CABLE ROUTING

- ① Front brake hose
- ② Front brake switch lead
- ③ Throttle cable
- ④ "ENGINE STOP" switch lead
- ⑤ Band
- ⑥ Handlebar switch (Left) lead
- ⑦ Clutch cable
- ⑧ Metr light lead
- ⑨ Flasher light lead
- ⑩ Flasher relay
- ⑪ Speedometer cable
- ⑫ Rubber boot
- ⑬ Tachometer cable

- A Pass the cables and leads between meter and handlebar crown.
- B Pass the front brake hose inside of throttle cable.

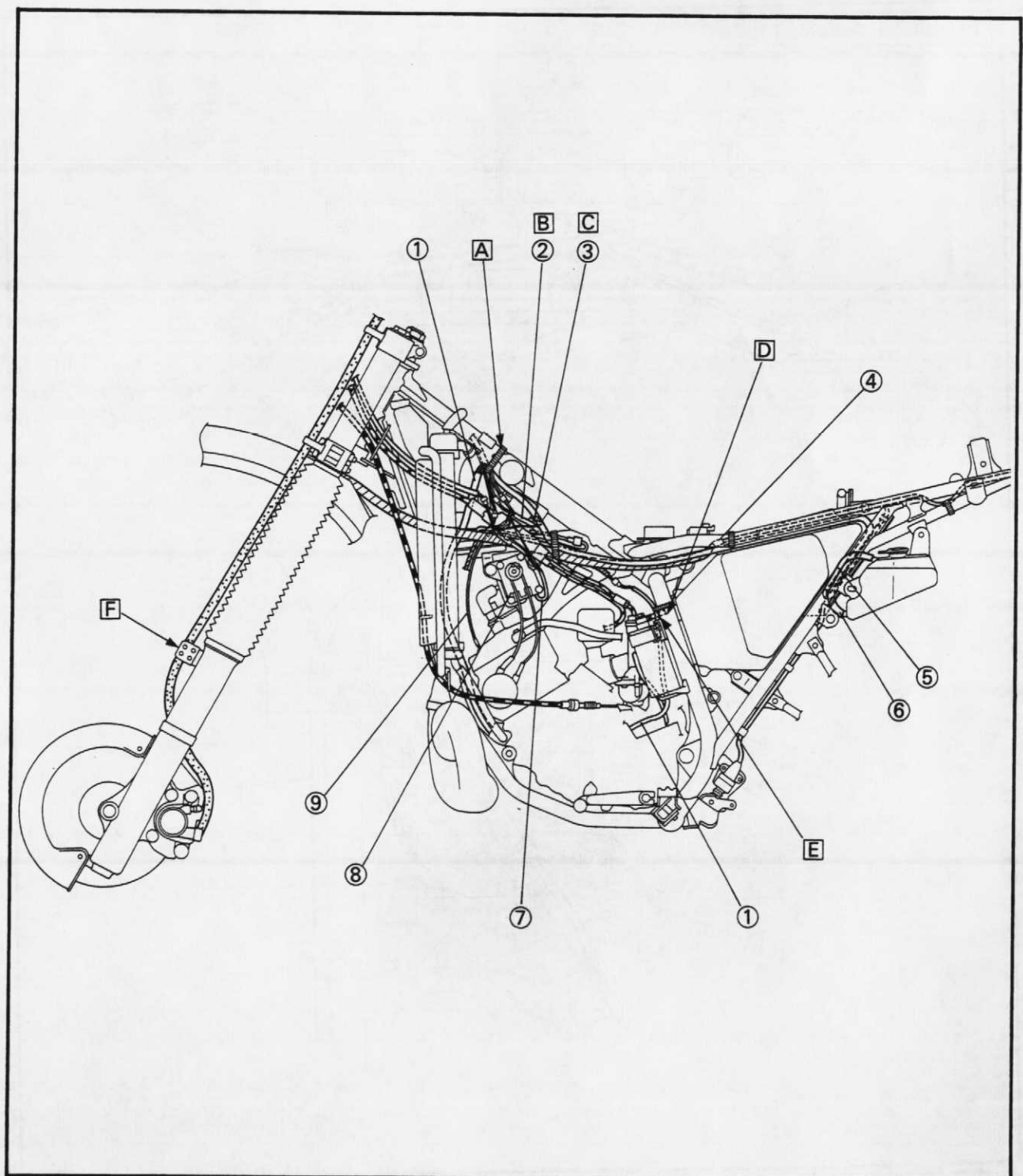
Except for Oceania



CABLE ROUTING

SPEC 

- ① CDI magneto lead
 - ② CDI unit lead
 - ③ Earth lead
 - ④ White tape
 - ⑤ Breather hose
 - ⑥ Overflow hose
 - ⑦ Y.P.V.S. motor lead
 - ⑧ Y.P.V.S. motor
 - ⑨ Thermo unit lead
 - ⑩ Sidestand switch lead
- A** Clamp the CDI magneto lead.
 - B** Pass the CDI unit lead between the main pipe and tension pipe.
 - C** Pass the earth lead inside of throttle cable and secure with screw (Ignition coil).
 - D** Pass the sub-tank hose on the left side of rear shock absorber.
 - E** Pass the CDI magneto lead outside of sub-tank hose.
 - F** Clamp the brake hose while pulling it up.



CABLE ROUTING

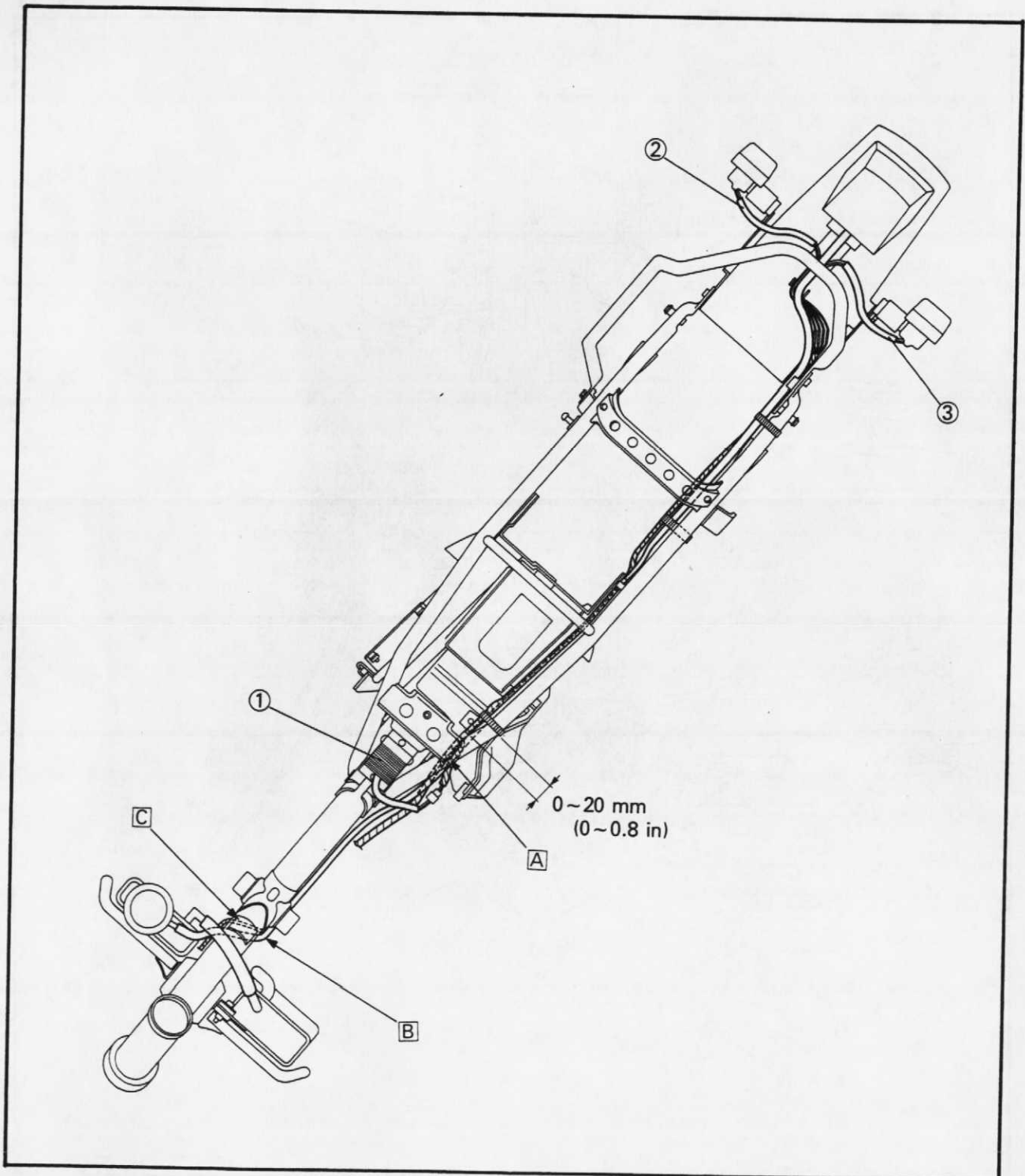
SPEC



M

- ① Rectifier/Regulator
- ② Flasher light (right) lead
- ③ Flasher light (left) lead

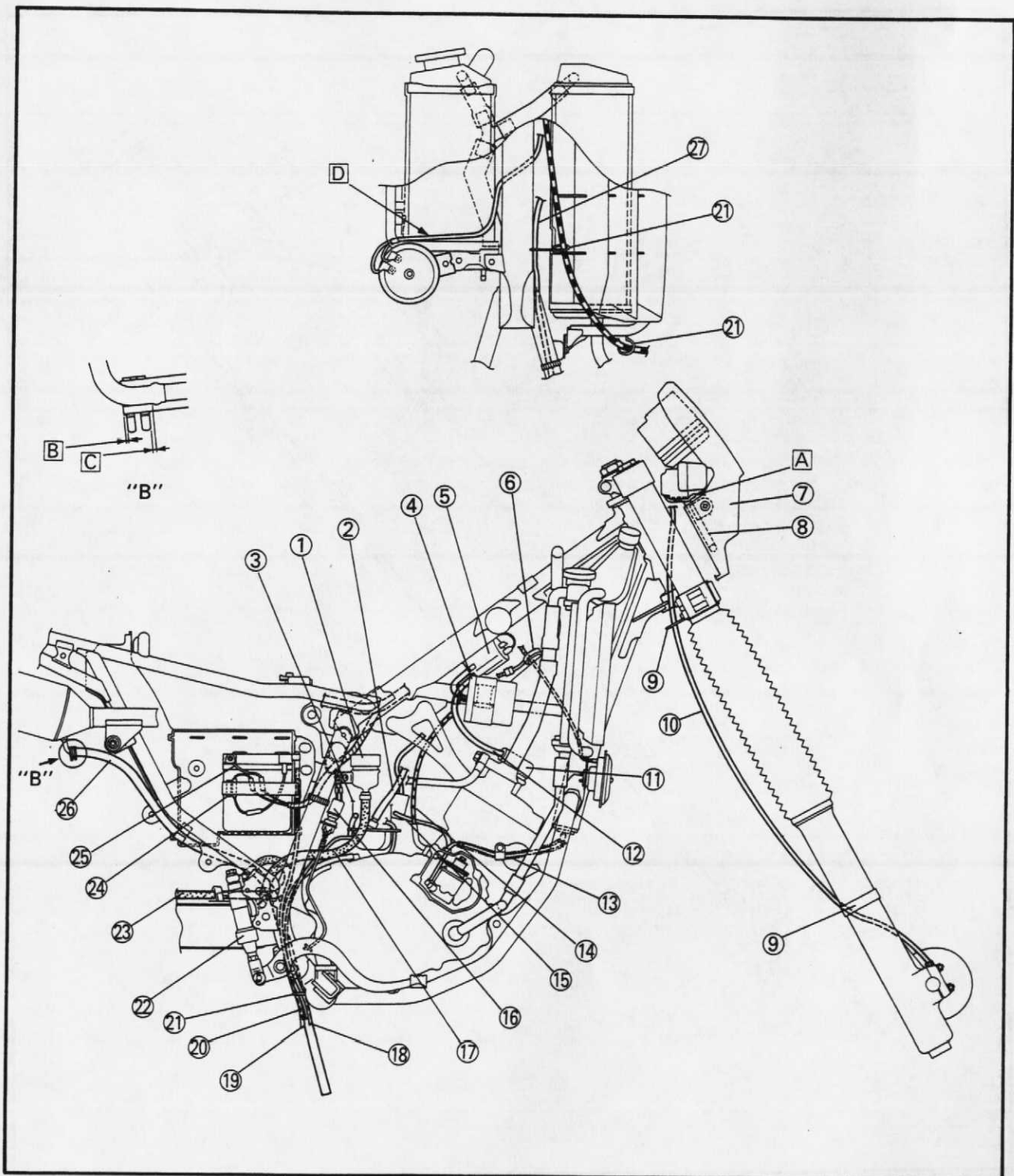
- A White tape for wireharness locating.
- B Pass the radiator overflow hose between main pipe and tension pipe.
- C Pass the wireharness under the tension pipe.



CABLE ROUTING



- | | | |
|-------------------------------|----------------------------|--------------------------------|
| ① Reservoir tank (rear brake) | ⑩ Speedometer cable | ⑲ Crankcase breather hose |
| ② Fuel hose | ⑪ Spark plug cap | ⑳ Battery breather hose |
| ③ Carburetor air-vent hose | ⑫ Spark plug lead | ㉑ Cable guide |
| ④ CDI unit | ⑬ Oil hose | ㉒ Master cylinder (Rear brake) |
| ⑤ Ignition coil | ⑭ Autolube pump cable | ㉓ Rear brake hose |
| ⑥ Oil level gauge | ⑮ Oil delivery hose | ㉔ Fuse holder |
| ⑦ Headlight cowl | ⑯ Rear brake switch | ㉕ Battery negative lead |
| ⑧ Headlight stay | ⑰ Reservoir tank hose | ㉖ Silencer drain hose |
| ⑨ Cable holder | ⑱ Carburetor overflow hose | ㉗ CDI magneto lead |



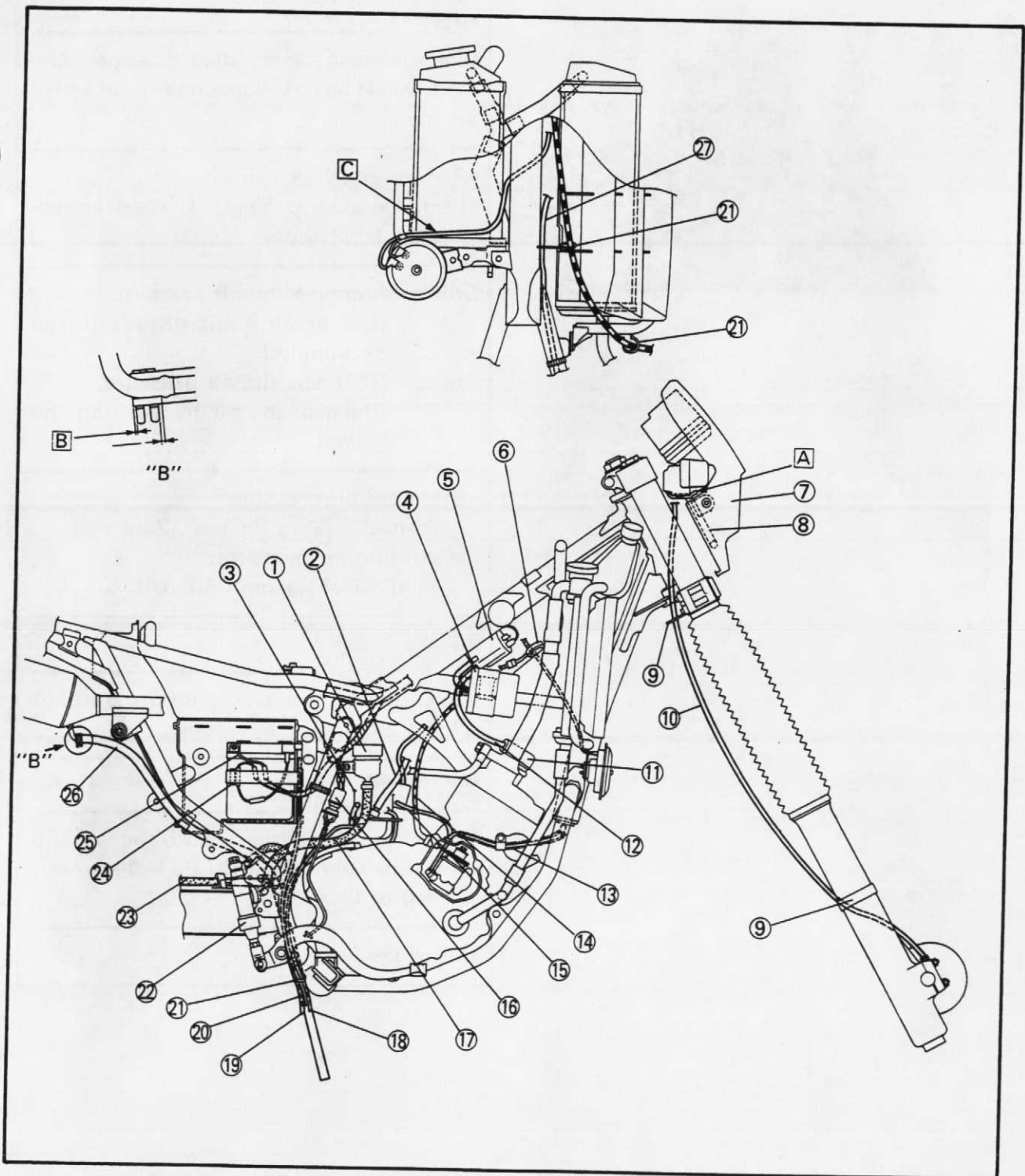
CABLE ROUTING

SPEC



M

- A Pass the flasher light leads between headlight cowl and stay.
- B Keep clearance 1~2 mm (0.04~0.08 in)
- C Pass the horn lead in front of the radiator.

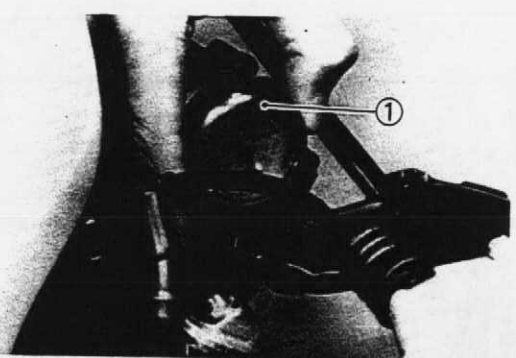


PERIODIC INSPECTION AND ADJUSTMENT

CHASSIS

FRONT FORK ADJUSTMENT

- Adjust:
 - Front fork air pressure



<p>Adjustment steps:</p> <ul style="list-style-type: none"> •Elevate the front wheel by placing a suitable stand under the engine. <p>NOTE: _____</p> <p>When checking and adjusting the air pressure, there should be no weight on the front end of the motorcycle.</p> <hr/> <ul style="list-style-type: none"> •Remove the valve cap. •Using the air check gauge ①, check and adjust the air pressure.
<p>Stiffer → Increase the air pressure. (Use an air pump or pressurized air supply.)</p> <p>Softer → Decrease the air pressure. (Release the air by pushing the valve.)</p>
<p>Standard air pressure: Zero kPa (Zero kg/cm², Zero psi)</p> <p>Maximum air pressure: 40 kPa (0.4 kg/cm², 5.7 psi)</p>
<p>⚠CAUTION: _____</p> <p>Never exceed the maximum pressure, or oil seal damage may occur.</p> <hr/> <p>⚠WARNING: _____</p> <p>The difference between both the left and right tubes should be 10 kPa (0.1 kg/cm², 1.4 psi) or less.</p> <hr/> <ul style="list-style-type: none"> •Install the valve cap.

REAR SHOCK ABSORBER ADJUSTMENT

INSP	
ADJ	

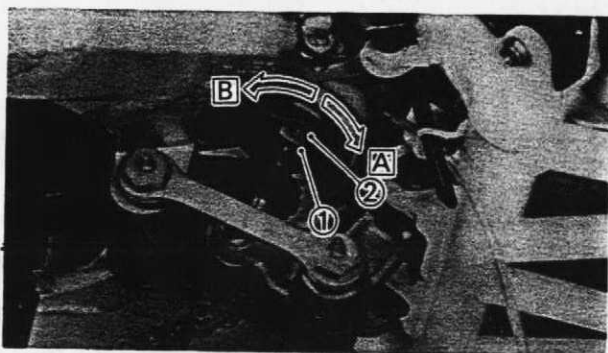


REAR SHOCK ABSORBER ADJUSTMENT

⚠ WARNING:

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

- Do not tamper with or attempt to open the cylinder assembly.
- 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.
- Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.



1. Adjust:
 - Spring preload

Adjustment steps:

- Elevate the rear wheel by placing the suitable stand.
- Loosen the locknut ①.
- Adjust the spring preload.

NOTE:

The length of the spring (Installed) changes 1.0 mm (0.04 in) per turn of the adjuster.

Turn adjuster ② clockwise A	Increase the spring preload.
Turn adjuster ② counterclockwise B	Decrease the spring preload.



Standard spring length (installed):

250 mm (9.8 in)

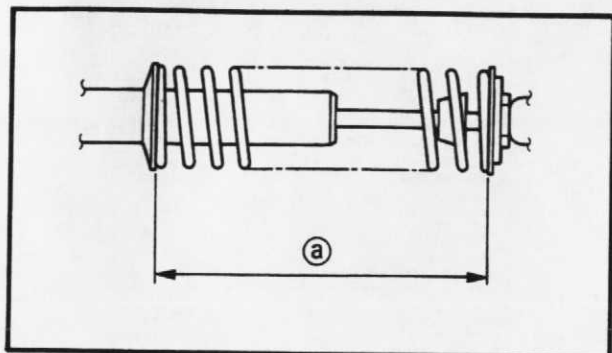
Minimum length (installed):

235 mm (9.3 in)

Maximum length (installed):

255 mm (10.0 in)

② Spring length (Installed)



REAR SHOCK ABSORBER ADJUSTMENT

INSP
ADJ



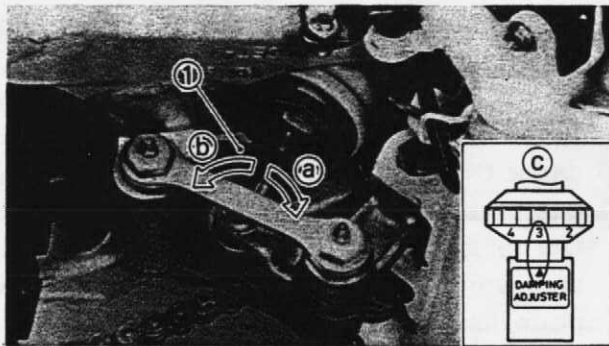
CAUTION:

Never attempt to turn the adjuster beyond the maximum or minimum setting.

- Tighten the locknuts.



Locknut:
55 Nm (5.5 m•kg, 40 ft•lb)



2. Adjust:

- Rebound damping force

Adjustment steps:

- Adjust the rebound damping force by turning the adjuster ①.

Slower (a) → Increase the rebound damping force. (Turn the adjuster ① in.)

Faster (b) → Decrease the rebound damping force. (Turn the adjuster ① out.)

Adjusting Position	Hard		STD (c)	Soft	
		5	4	3	2	1

CAUTION:

Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

RECOMMENDED COMBINATIONS OF FRONT FORK AND REAR SHOCK ABSORBER SETTINGS



RECOMMENDED COMBINATIONS OF FRONT FORK AND REAR SHOCK ABSORBER SETTINGS

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

	Front fork Air pressure	Rear shock absorber		Loading condition			
		Spring length	Damping adjuster	Solo rider	With passenger	With accessories and equipment	With accessories, equipment and passenger
1.	0 kPa (0 kg/cm ² , 0 psi)	250 mm (9.8 in)	1~3	○			
2.	0 kPa (0 kg/cm ² , 0 psi)	250~245 mm (9.8~9.6 in)	3~5		○		
3.	0 kPa (0 kg/cm ² , 0 psi)	250 mm (9.8 in)	1~3			○	
4.	0~40 kPa (0~0.4 kg/cm ² , 0~5.7 psi)	250~240 mm (9.8~9.4 in)	3~5				○



COOLING SYSTEM

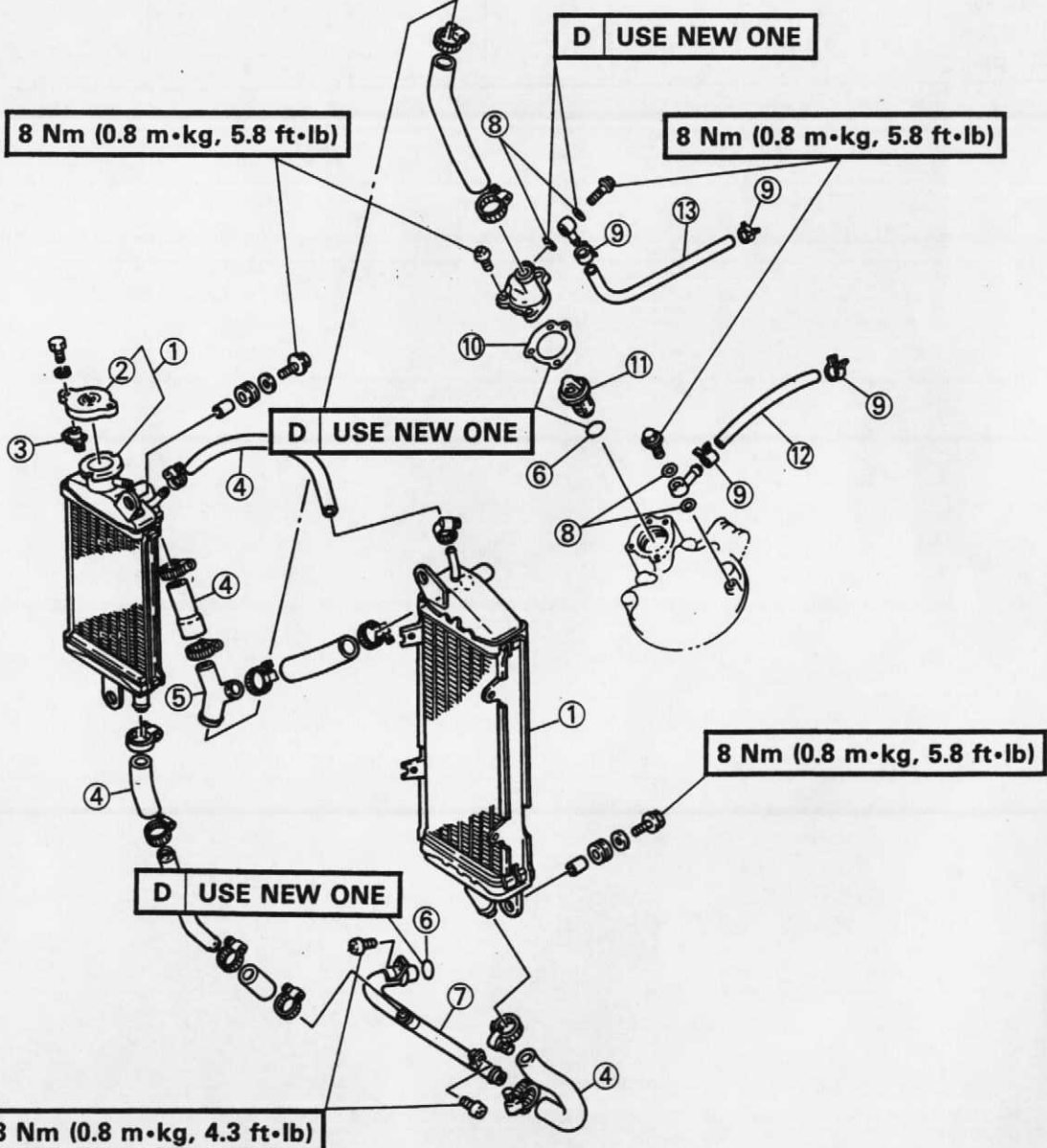
THERMOSTATIC VALVE AND RADIATOR

- ① Radiator assembly
- ② Radiator cap
- ③ Stopper
- ④ Radiator hose
- ⑤ Joint
- ⑥ O-ring
- ⑦ Water outlet pipe
- ⑧ Copper washer
- ⑨ Clip
- ⑩ Gasket
- ⑪ Thermostatic valve
- ⑫ Hose (Carburetor warmer — Inlet)
- ⑬ Hose (Carburetor warmer — Outlet)

A RADIATOR CAP OPENING PRESSURE:
 75~105 kPa
 (0.75~1.05 kg/cm², 10~14 psi)

B COOLANT CAPACITY:
 1.20 L (1.06 Imp qt, 1.27 US qt)
 Including all routes.

C THERMOSTATIC VALVE OPENING TEMPERATURE:
 63~67°C (146~153°F)

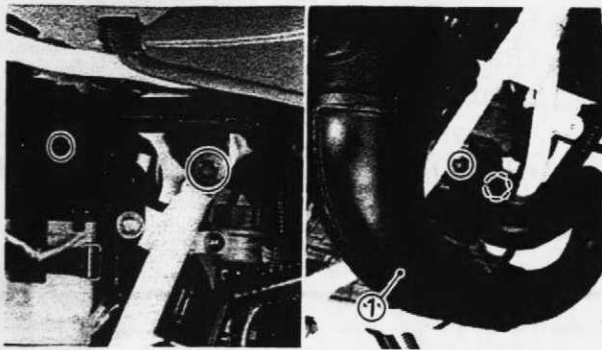


THERMOSTATIC VALVE AND RADIATOR

COOL



A



REMOVAL

1. Remove:

- Side covers (Left and right)
- Seat
- Exhaust pipe ①

2. Remove:

- Radiator cover
- Oil tank cover
- Fuel tank

3. Drain:

- Cooling system

NOTE:

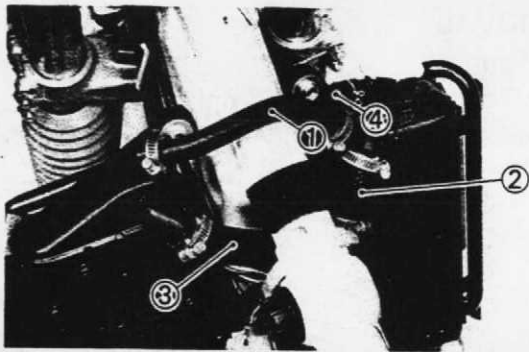
Thoroughly flush the cooling system with clean tap water.

⚠ CAUTION:

Take care so that coolant does not splash to painted surfaces. If splashes, wash it away with water.

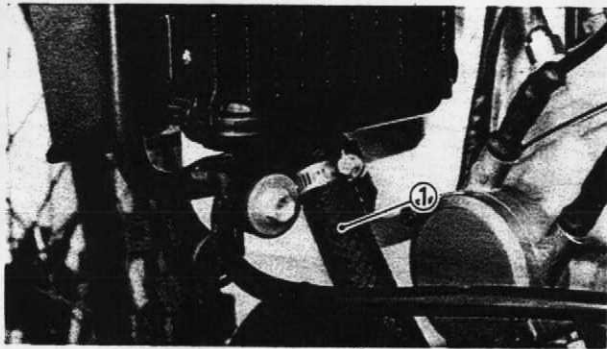
⚠ WARNING:

Do not remove the radiator cap, drain bolts and hoses especially when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, place a thick rag like a towel over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.



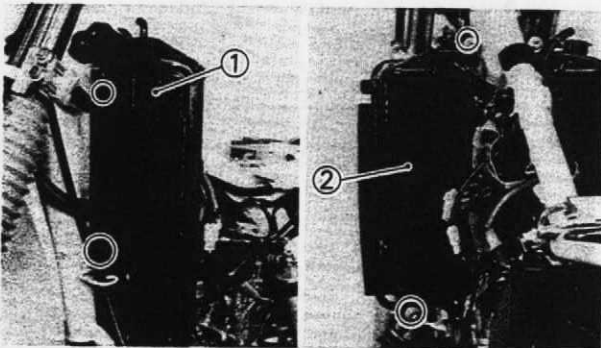
4. Remove:

- Radiator hose ①
- Radiator hose ②
- Radiator hose ③
- Radiator breather hose ④



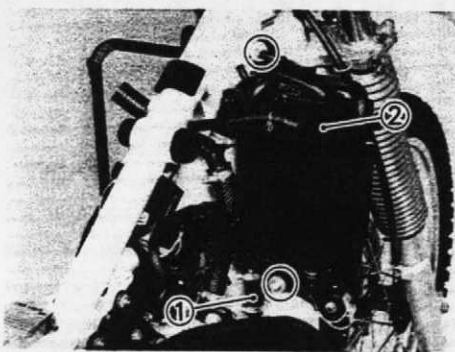
5. Remove:

- Radiator hose ①



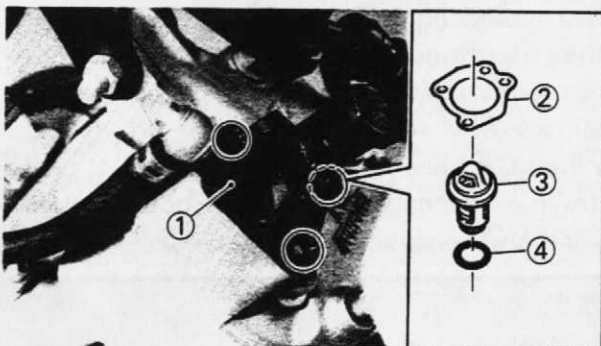
6. Remove:

- Panel ①
- Radiator (left) ②



7. Remove:

- Radiator hose ①
- Radiator (right) ②

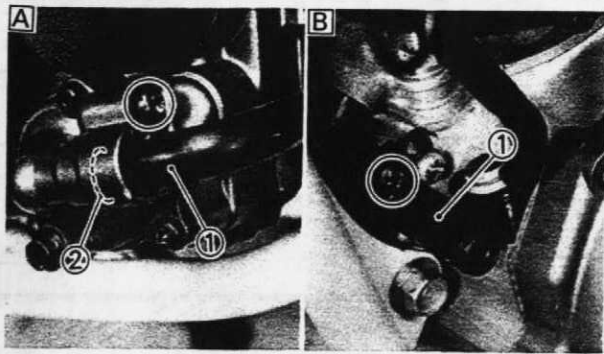


8. Remove:

- Thermostatic valve cover ①
- Gasket ②
- Thermostatic valve ③
- O-ring ④

THERMOSTATIC VALVE AND RADIATOR

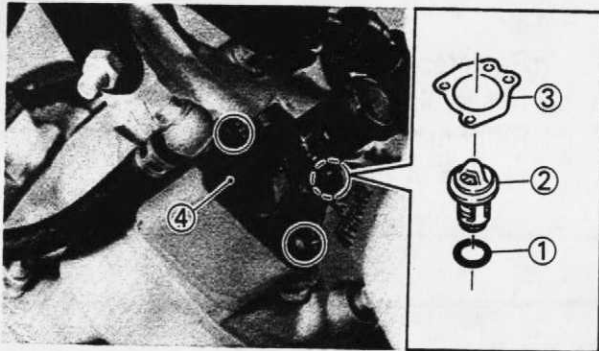
COOL



9. Remove:

- Radiator pipe ①
- O-ring ②

A Right
B Left



INSTALLATION

Reverse the "REMOVAL" procedure Note the following points.

1. Install:

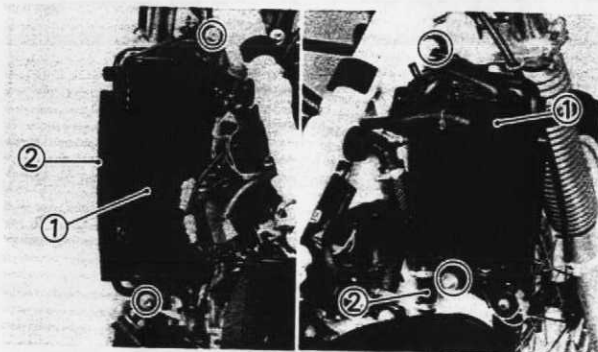
- O-ring ①
- Thermostatic valve ②
- Gasket ③
- Thermostatic valve cover ④

⚠ WARNING:

Always use new O-ring and gasket.



Screw (thermostatic valve cover):
8 Nm (0.8 m·kg, 5.8 ft·lb)

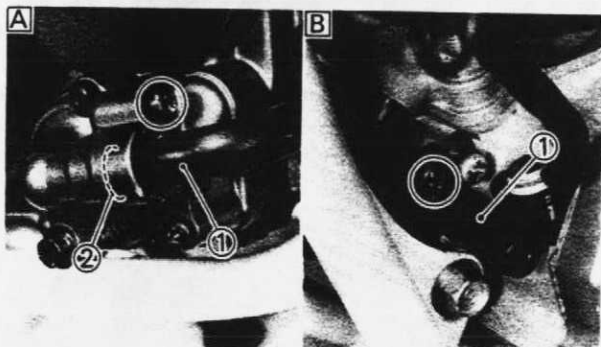


2. Install:

- Radiators ①
- Panel ②



Bolt (radiator):
8 Nm (0.8 m·kg, 5.8 ft·lb)



3. Apply the grease to the O-ring ①.

4. Install:

- O-ring ①
- Water outlet pipe ②

A Right
B Left

4

THERMOSTATIC VALVE AND RADIATOR

COOL



⚠ WARNING:

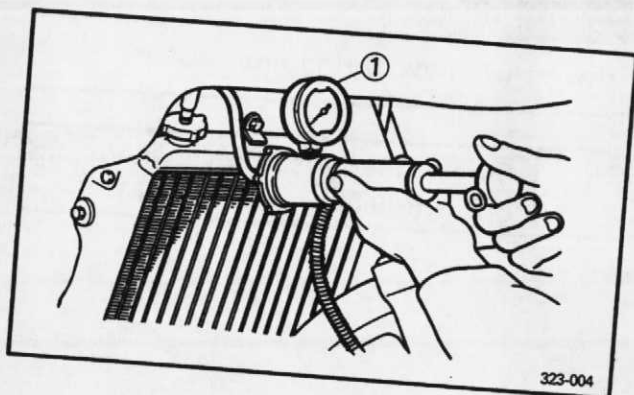
Always use a new O-ring.



**Screw (water outlet pipe):
8 Nm (0.8 m·kg, 5.8 ft·lb)**

5. Fill:

- Radiator
 - Reservoir tank (radiator)
- Refer to the "COOLANT REPLACEMENT" section in the CHAPTER 3.



6. Inspect:

- Cooling system
- Decrease of pressure (leaks) → Repair as required.

Inspection steps:

- Attach the Cooling System Tester ① to the radiator.



**Cooling system tester:
90890-01325**

- Apply 100 kPa (1.0 kg/cm², 14 psi) pressure.
- Measure the indicated pressure with the gauge.

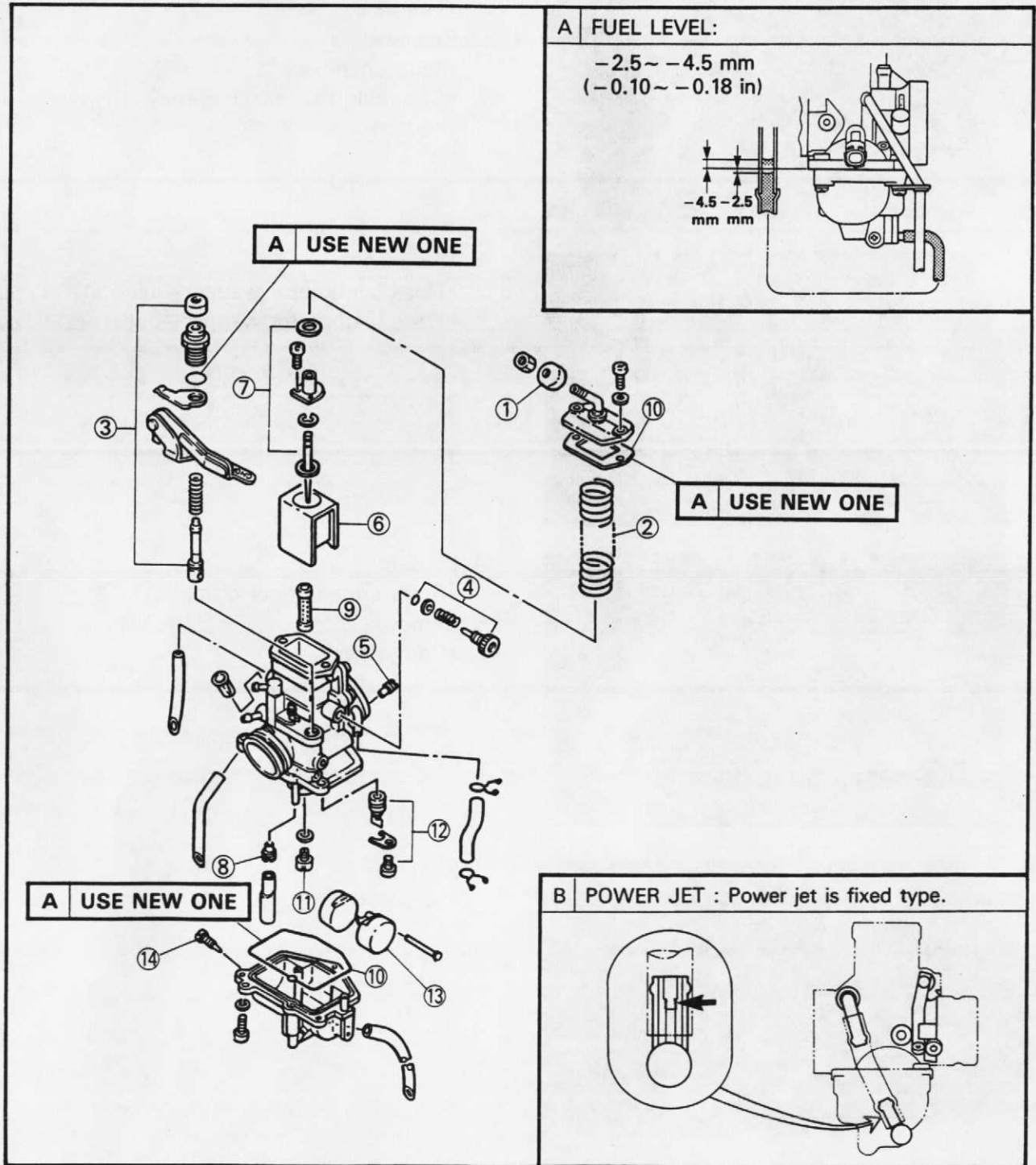


CARBURETION

CARBURETOR

- ① Cap
- ② Throttle valve spring
- ③ Starter plunger
- ④ Throttle stop screw
- ⑤ Pilot air jet
- ⑥ Throttle valve
- ⑦ Needle set
- ⑧ Pilot jet
- ⑨ Needle jet
- ⑩ Gasket
- ⑪ Main jet
- ⑫ Needle valve assembly
- ⑬ Float
- ⑭ Drain screw

SPECIFICATIONS		
MAIN JET (M.J.)	# 150	
MAIN AIR JET (M.A.J.)	φ0.5	
JET NEEDLE (J.N.)	5J10-4	
NEEDLE JET (N.J.)	P-2	
PILOT JET (P.J.)	#25	
POWER JET (PW.J.)	#65	
FLOAT HEIGHT (F.H.)	20~21 mm (0.79~0.83 in)	
ENGINE IDLING SPEED	1,300~1,400 r/min	



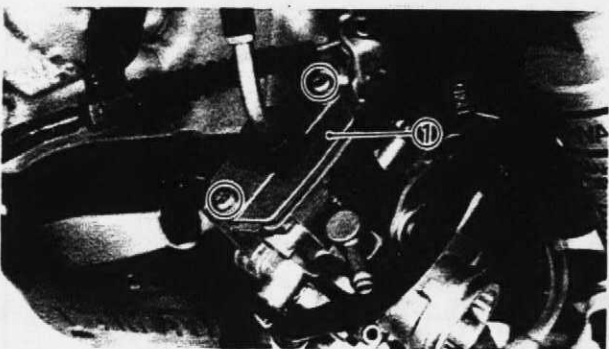
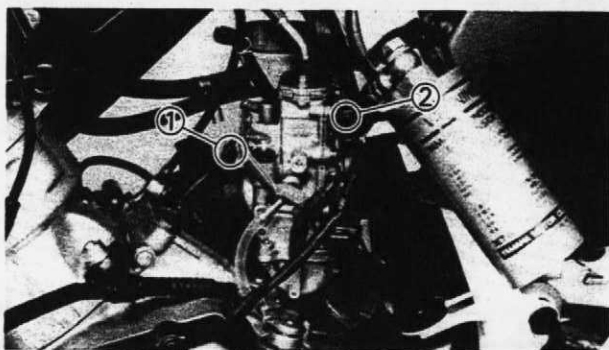
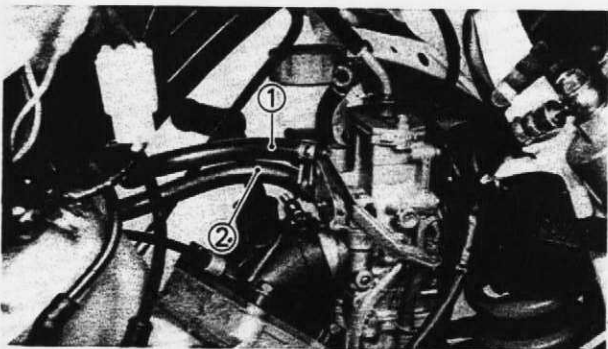
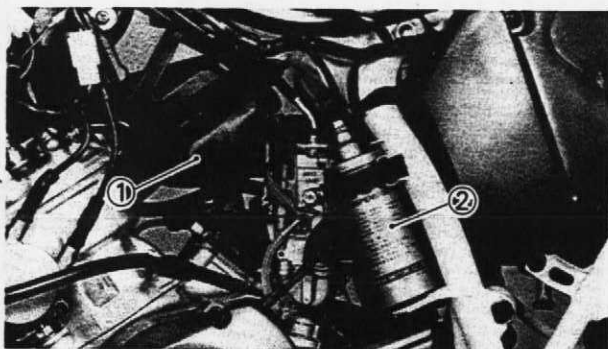


REMOVAL

NOTE:

The following parts can be cleaned and inspected without disassembly.

- Throttle valve
- Starter plunger



1. Remove:

- Side covers
- Seat
- Radiator covers
- Fuel tank

2. Remove:

- YEIS chamber ①
- Sub-tank (rear shock absorber) ②

3. Disconnect:

- Hose (carburetor warmer—inlet) ①
- Hose (carburetor warmer—outlet) ②

4. Loosen:

- Screws (carburetor clamp) ①, ②

5. Remove:

- Carburetor

6. Remove:

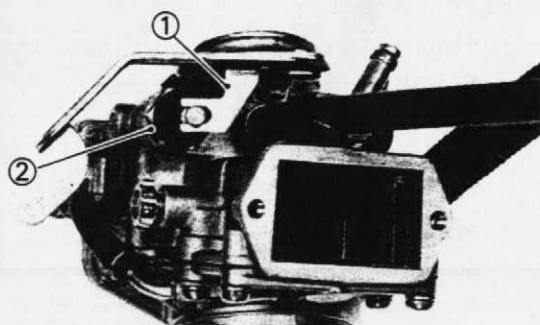
- Carburetor top ①



DISASSEMBLY

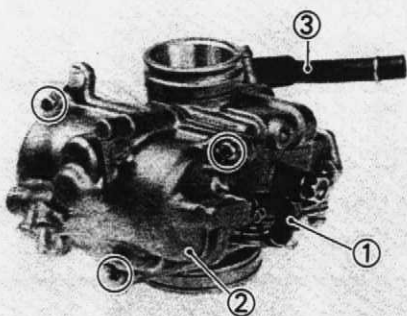
1. Remove:

- Starter lever ①
- Starter plunger ②



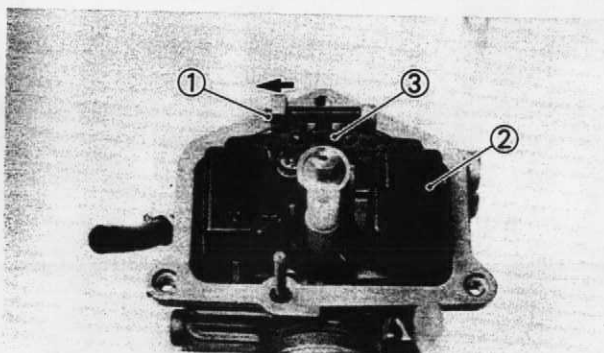
2. Remove:

- Hose ①
- Float chamber ②
- Fuel hose ③



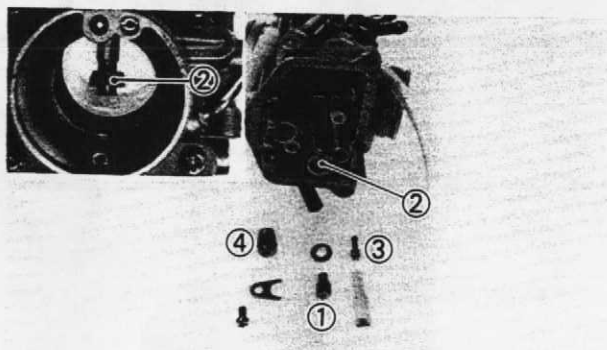
3. Remove:

- Float pin ①
- Float ②
- Needle valve ③



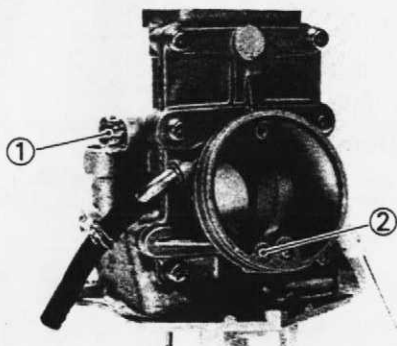
4. Remove:

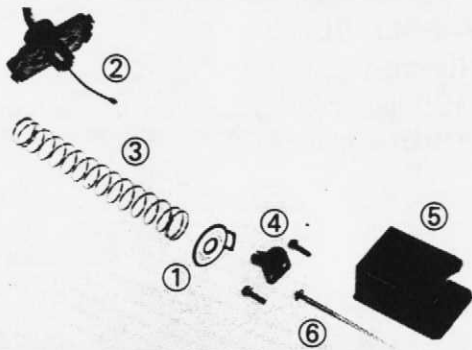
- Main jet ①
- Needle jet ②
- Pilot jet ③
- Valve seat ④



5. Remove:

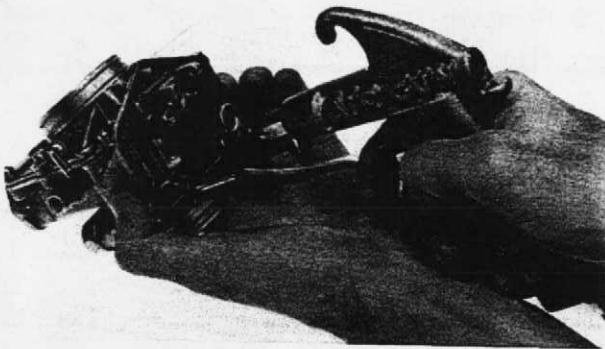
- Throttle stop screw ①
- Pilot air jet ②





6. Remove:

- Ring ①
- Throttle cable ②
- Spring ③
- Joint ④
- Piston valve ⑤
- Needle jet ⑥



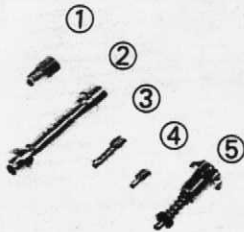
INSPECTION

1. Inspect:

- Carburetor mixing chamber body
Contamination → Clean.

NOTE:

Use a petroleum based solvent for cleaning. Blow out all passages and jets with compressed air.



2. Inspect:

- Main jet ①
- Needle jet ②
- Pilot jet ③
- Pilot air jet ④
- Throttle stop screw ⑤

Contamination → Blow out passage of jets with compressed air.

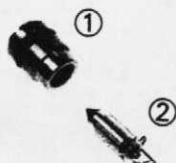
Damage → Replace.



3. Inspect:

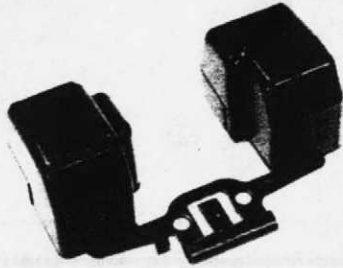
- Valve seat ①
- Needle valve ②

Wear/Damage → Replace.



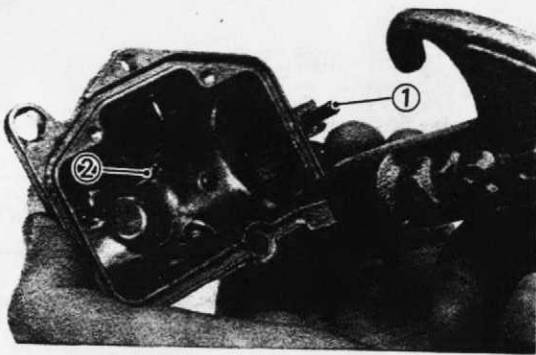
CARBURETOR

CARB



4. Inspect:

- Float
- Damage → Replace.

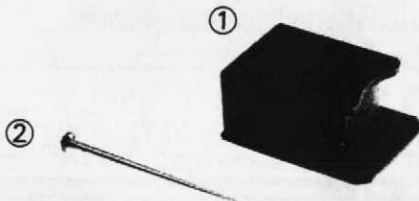


5. Inspect:

- Starter jet ①
 - Power jet ②
- Contamination → clean.

NOTE:

Starter jet and power jet are fixed type.



6. Inspect:

- Throttle valve ①
- Wear/Damage → Replace.
- Jet needle ②
- Bends/Wear → Replace.

7. Check:

- Free movement
- Stick → Replace.
- Insert the throttle valve into the carburetor body, and check for free movement.

8. Inspect:

- Starter plunger
- Wear/Contamination → Replace.

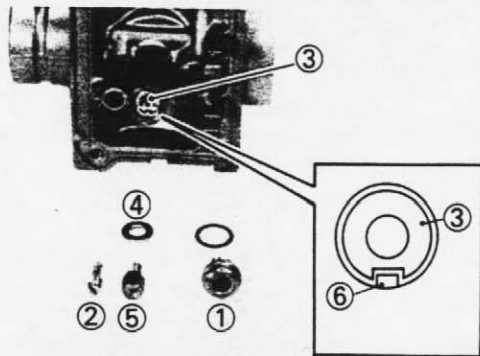


ASSEMBLY

Reverse the "DISASSEMBLY" procedures. Note the following points.

⚠ CAUTION:

Before reassembling, wash the all parts with a clean gasoline.

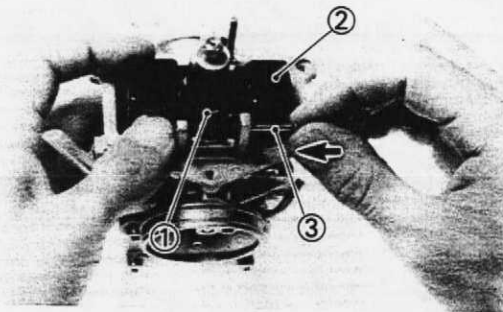


1. Install:

- Valve seat ①
- Pilot jet ②
- Needle jet ③
- Plain washer ④
- Main jet ⑤

NOTE:

Align the knock pin ⑥ with the pin slot in the needle jet.

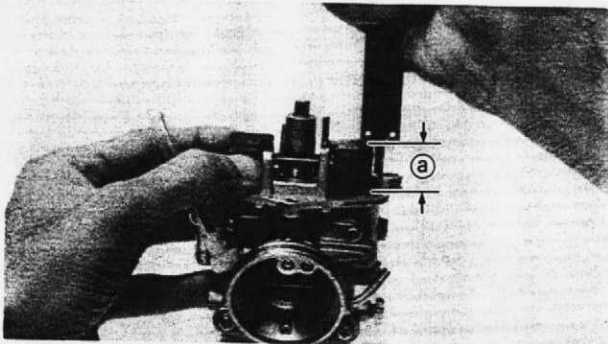


2. Install:

- Needle valve ①
- Float ②
- Float pin ③

NOTE:

Install the float pin in the arrow mark direction.



3. Measure:

- Float height ①
- Out of specification → Adjust.



Float height (F.H.):

20 ~ 21 mm (0.79 ~ 0.83 in)

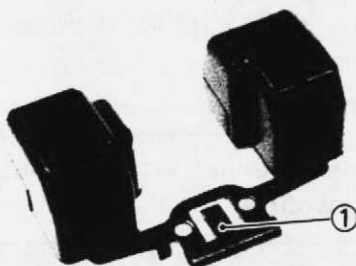
Measurement and adjustment steps:

- Hold the carburetor in an upside down position.
- Measure the distance from the mating surface of the float chamber (gasket removed) to the top of the float.

NOTE:

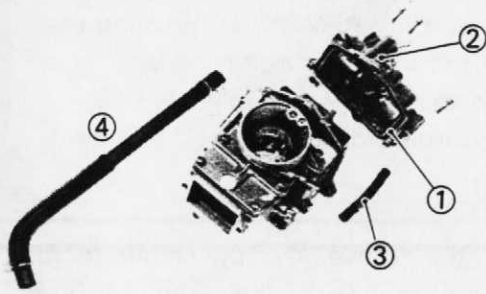
The float arm should be resting on the needle valve, but not compressing the needle valve.

- If the float height is not within specification, inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float tang ① on the float.
- Recheck the float height.



CARBURETOR

CARB

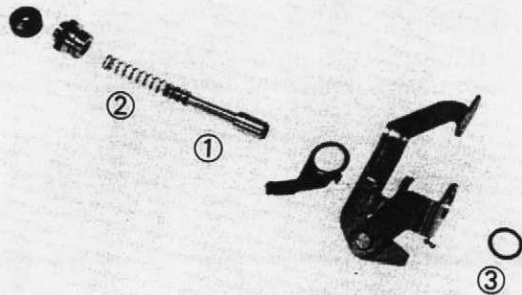


4. Install:

- O-ring ①
- Float chamber body ②
- Hose ③
- Fuel hose ④

⚠ WARNING: _____

Always use a new O-ring.

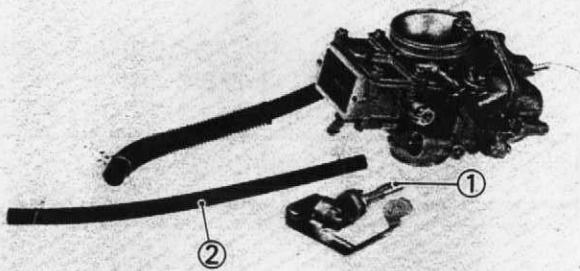


5. Install:

- Starter plunger ①
- Spring ②
- O-ring ③

⚠ WARNING: _____

Always use a new O-ring.

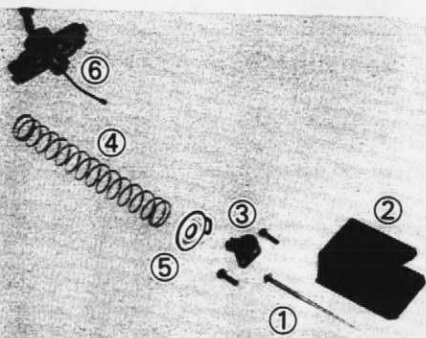


6. Install:

- Starter plunger ①
- Vacuum hose ②



Nut (starter plunger):
3 Nm (0.3 m•kg, 2.2 ft•lb)

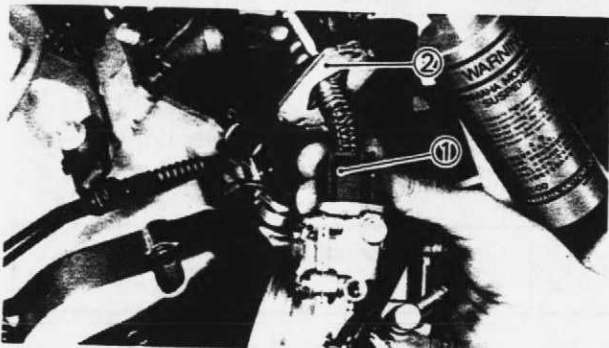


7. Install:

- Jet needle ①
- Throttle valve ②
- Joint ③
- Spring ④
- Ring ⑤
- Throttle cable ⑥

NOTE:

Hook the throttle cable end to the joint while compressing the spring.

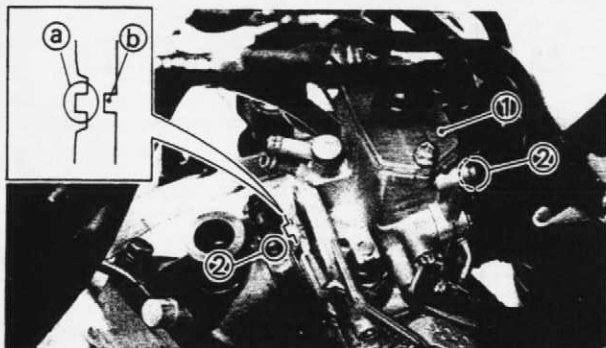


8. Install:

- Throttle valve ①
- Gasket ②

⚠ WARNING: _____

Always use a new O-ring.

**INSTALLATION**

Reverse the "REMOVAL" procedures.
Note the following points.

1. Install:
 - Carburetor assembly ①

NOTE:

Align the groove (a) of the carburetor joint with the projection (b) of the carburetor body.

2. Tighten:
 - Screws (carburetor clamp) ②

3. Adjust:
 - Idle speed
Refer to the "IDLE SPEED ADJUSTMENT" section in the CHAPTER 3.



Engine idle speed:
1,300 ~ 1,400 r/min

4. Adjust:
 - Throttle cable free play
Refer to the "THROTTLE CABLE FREE PLAY ADJUSTMENT" section in the CHAPTER 3.

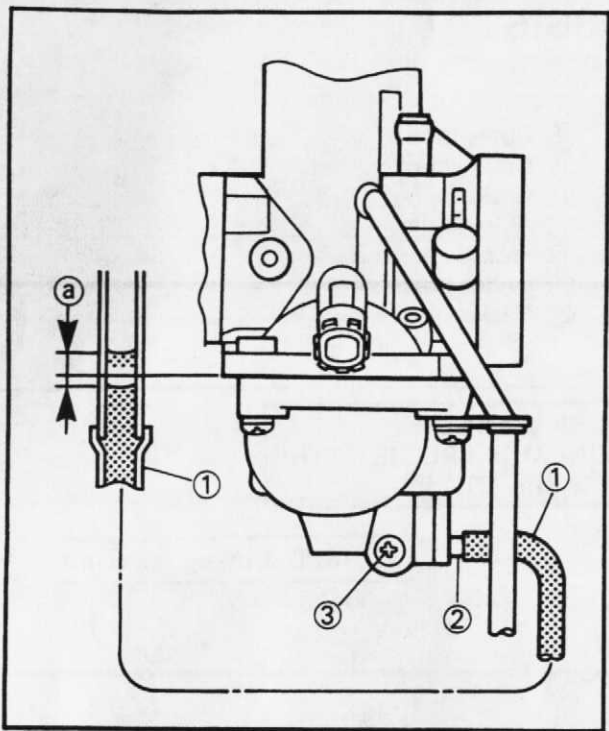


Throttle cable free play:
2 ~ 5 mm (0.08 ~ 0.20 in)

5. Adjust
 - Carburetor cable free play
Refer to the "CARBURETOR CABLE FREE PLAY ADJUSTMENT" section in the CHAPTER 3.



Carburetor cable free play:
1.0 mm (0.04 in)



ADJUSTMENT

Fuel Level Adjustment

1. Measure:

- Fuel level (a)

Out of specification → Adjust.



Fuel level (a):

-2.5 ~ -4.5 mm

(-0.10 ~ -0.18 in)

In the middle of the float chamber below the carburetor body edge.

Measurement and adjustment steps:

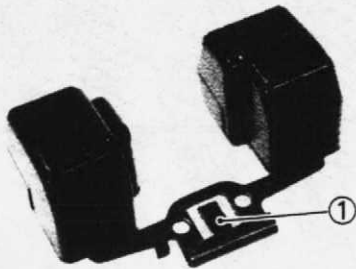
- Place the motorcycle on a level surface.
- Use a garage jack under the engine to ensure that the carburetor is positioned vertically.
- Connect the Fuel Level Gauge (1) to the drain pipe (2).



Fuel level gauge:

90890-01312

- Loosen the drain screw (3) and warm up the engine for several minutes.
- Measure the fuel level (a) with the gauge.
- If the fuel level is incorrect, adjust the fuel level.
- Remove the carburetor.
- Inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust float level by bending the float tang (1) slightly.
- Install the carburetor.
- Recheck the fuel level.



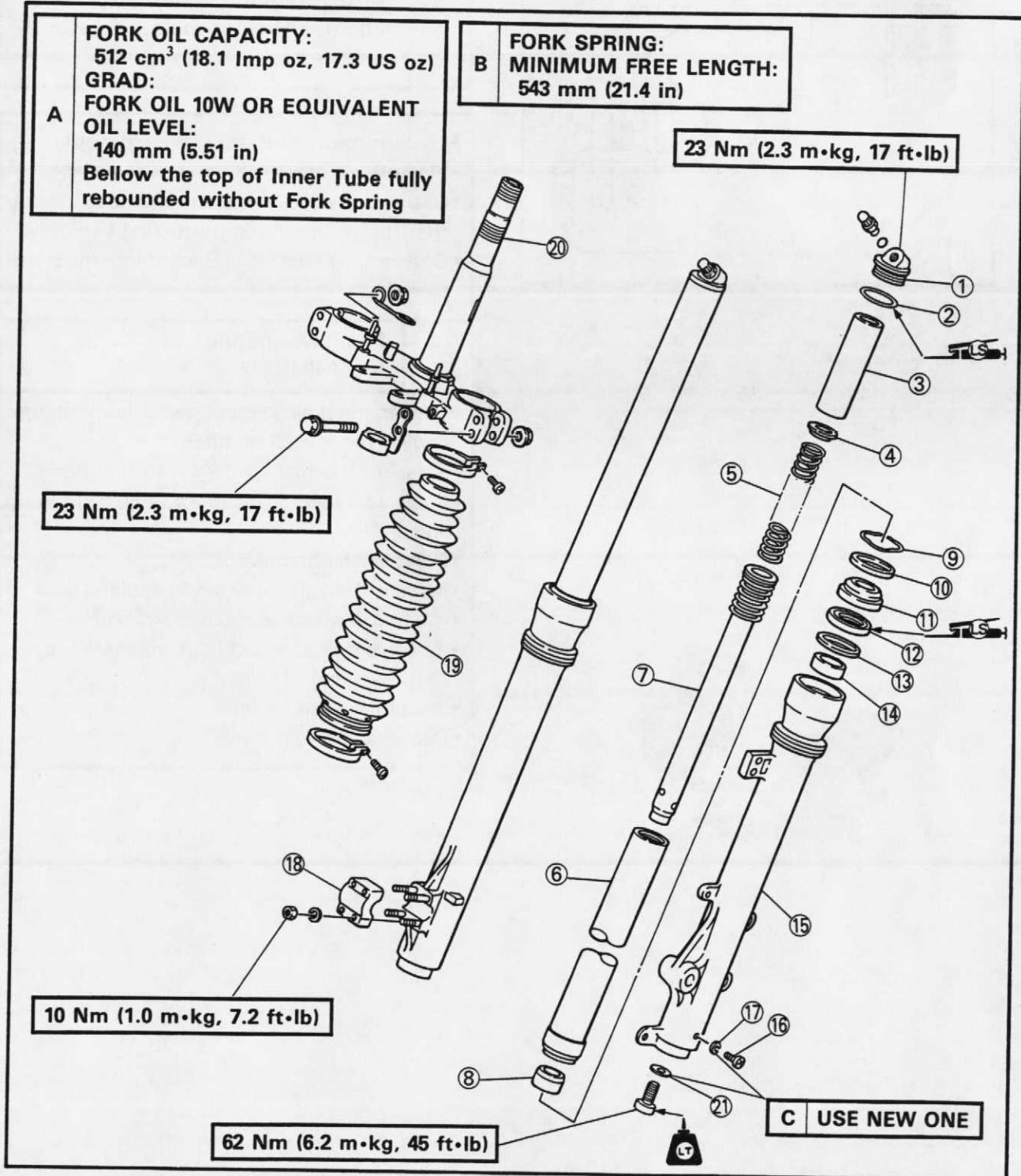
CHASSIS

FRONT FORK

- | | | |
|---------------|-------------------|-------------------|
| ① Cap bolt | ⑧ Oil lock piece | ⑮ Outer tube |
| ② O-ring | ⑨ Circlip | ⑯ Drain screw |
| ③ Spacer | ⑩ Oil seal washer | ⑰ Gasket |
| ④ Spring seat | ⑪ Dust seal | ⑱ Axle holder |
| ⑤ Fork spring | ⑫ Oil seal | ⑲ Front fork boot |
| ⑥ Inner tube | ⑬ Oil seal washer | ⑳ Under bracket |
| ⑦ Damper rod | ⑭ Slide metal | ㉑ Gasket |

A **FORK OIL CAPACITY:**
512 cm³ (18.1 Imp oz, 17.3 US oz)
GRAD:
FORK OIL 10W OR EQUIVALENT
OIL LEVEL:
140 mm (5.51 in)
Bellow the top of Inner Tube fully rebounded without Fork Spring

B **FORK SPRING:**
MINIMUM FREE LENGTH:
543 mm (21.4 in)

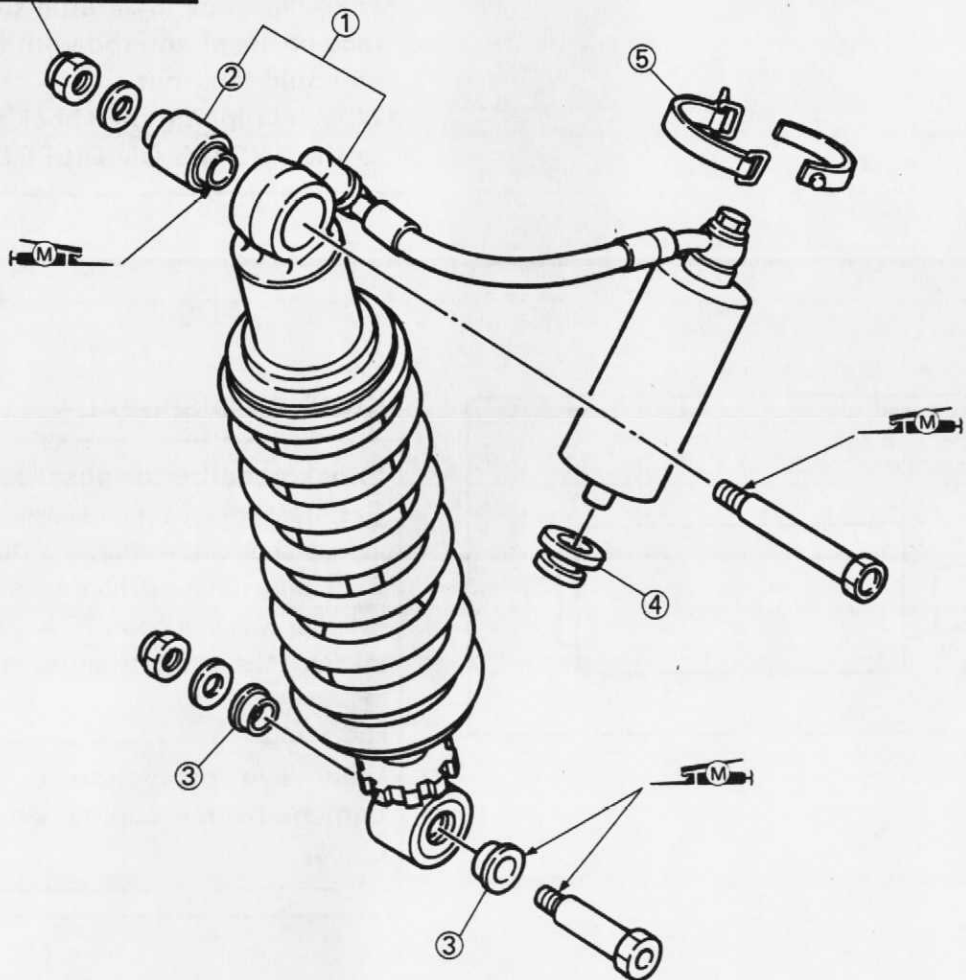


REAR SHOCK ABSORBER

- ① Rear shock absorber
- ② Bush
- ③ Collar
- ④ Damper
- ⑤ Band

A **SPRING PRELOAD (INSTALLED):**
STANDARD LENGTH:
 250 mm (9.8 in)
MINIMUM LENGTH:
 235 mm (9.3 in)
MAXIMUM LENGTH:
 255 mm (10.0 in)

33 Nm (3.3 m•kg, 27 ft•lb)



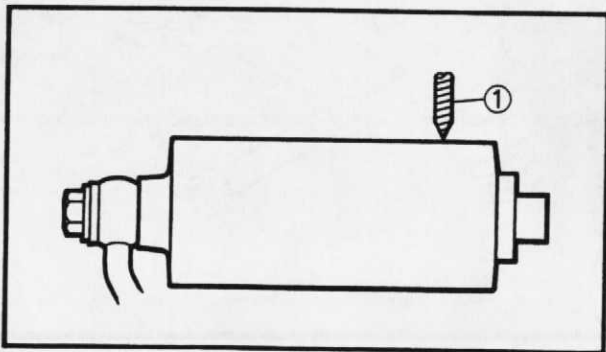
HANDLING NOTES

⚠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.

- Do not tamper with or attempt to open the cylinder assembly.
- 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.
- Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.
- Take care not to scratch the contact surface of the piston rod with the cylinder; or oil could leak out.
- When scrapping the shock absorber, refer to the "NOTES ON DISPOSAL" section.



NOTES ON DISPOSAL

Shock absorber disposal steps:

Gas pressure must be released before disposing of shock absorber. To do so, drill ① a 2~3 mm (0.08~0.12 in) hole through the cylinder wall at a point 15 ~ 20 mm (0.6~0.8 in) from the end of the gas chamber.

⚠WARNING:

Wear eye protection to prevent eye damage from escaping gas and/or metal chips.



REMOVAL

Rear Shock Absorber

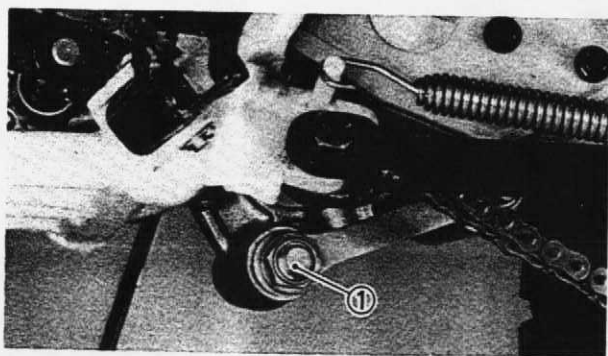
1. Remove:

- Side covers (left and right)
- Seat
- Exhaust pipe
- Carburetor

2. Elevate the rear wheel by placing a suitable stand under the engine.

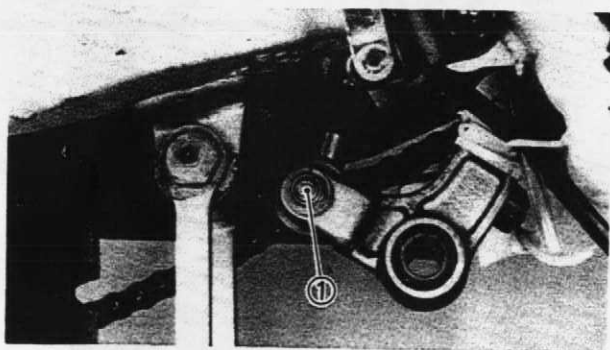
⚠ WARNING: _____

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



3. Remove:

- Bolt (connecting arm-swingarm) ①
(from swingarm side)

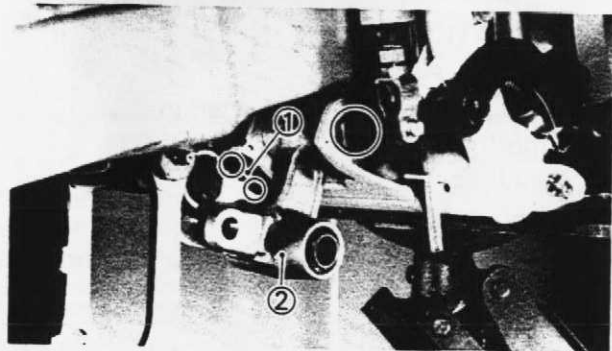


4. Remove:

- Bolt (shock absorber – lower) ①

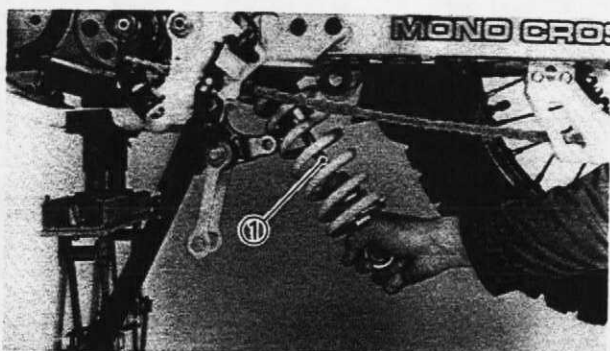
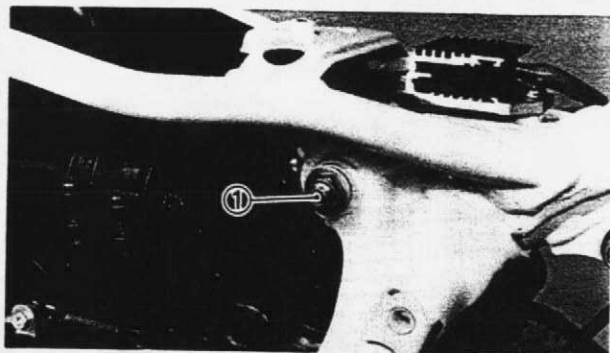
⚠ WARNING: _____

When removing the bolt ①, hold the swing-arm so that it does not drop downwards when the lower bolt removed.



5. Remove:

- Chain tensioner ①
- Relay arm ②



5. Remove:

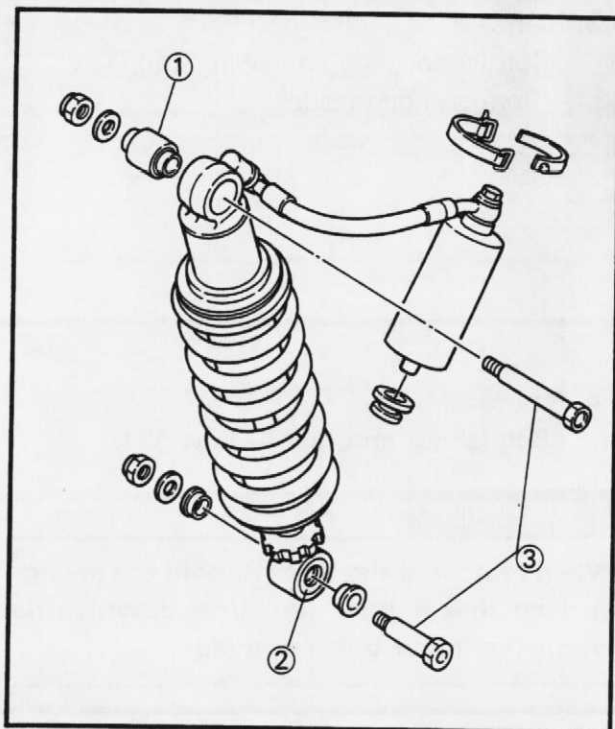
- Bolt (shock absorber – upper) ①

6. Remove:

- Rear shock absorber ①

NOTE:

Pull up the swingarm, then remove the rear shock absorber, through between the swingarm and relay arm.

**INSPECTION**

1. Inspect:

- Shock absorber rod
Bends/Damage → Replace the shock absorber assembly.
- Shock absorber
Oil leaks/Gas leaks → Replace the shock absorber assembly.
- Spring
Wear/Damage → Replace the shock absorber assembly.
- Bushings ①
- Dust seals ②
Wear/Damage → Replace.
- Bolts ③
Wear/Bends/Damage → Replace.

INSTALLATION**Rear Shock Absorber**

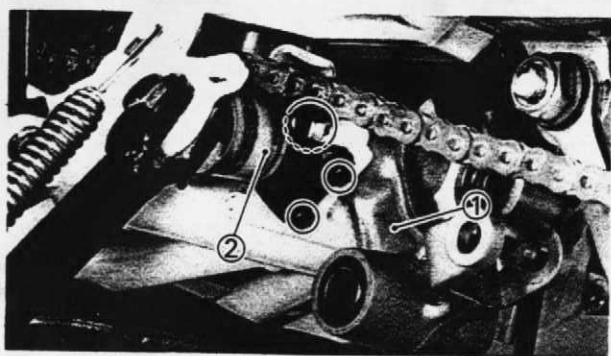
Reverse the "REMOVAL" procedure.

Note the following points.

1. Apply:

- Lithium soap base grease
To bearing, dust seal and mounting bolts.

REAR SHOCK ABSORBER

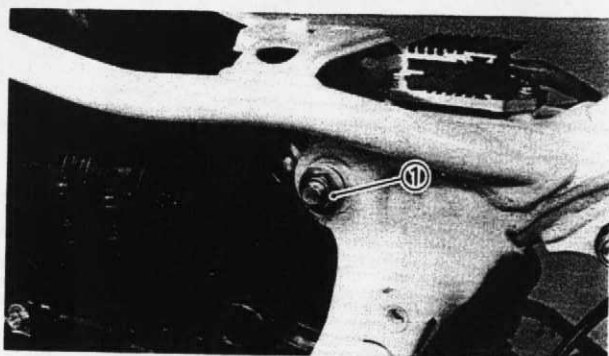
CHAS**A**

2. Tighten:

- Nut (relay arm – frame) ①
- Chain tensioner ②



Nut (relay arm – frame):
58 Nm (5.8 m•kg, 42 ft•lb)
Chain tensioner:
10 Nm (1.0 m•kg, 7.2 ft•lb)

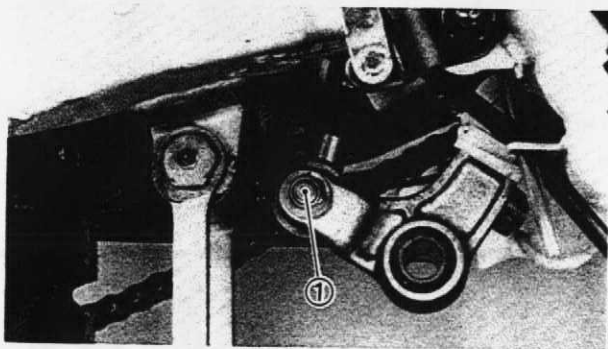


3. Tighten:

- Nut (shock absorber – upper) ①



Nut (shock absorber – upper):
33 Nm (3.3 m•kg, 24 ft•lb)

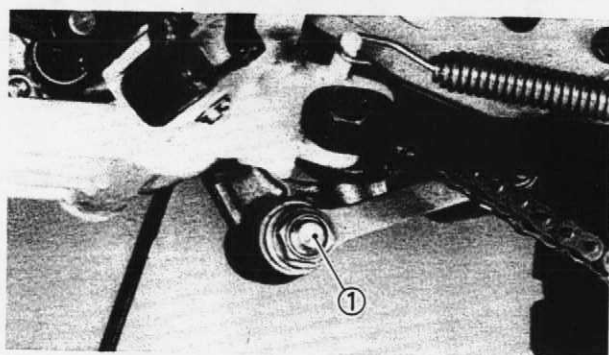


4. Tighten:

- Nut (shock absorber – lower) ①



Nut (shock absorber – lower):
33 Nm (3.3 m•kg, 24 ft•lb)



5. Tighten:

- Nut (connecting arm – swingarm) ①



Nut (connecting arm – swingarm):
58 Nm (5.8 m•kg, 42 ft•lb)

6. Adjust:

- Rear shock absorber
Refer to the "REAR SHOCK ABSORBER ADJUSTMENT" section in the CHAPTER 3.

12

REAR SHOCK ABSORBER



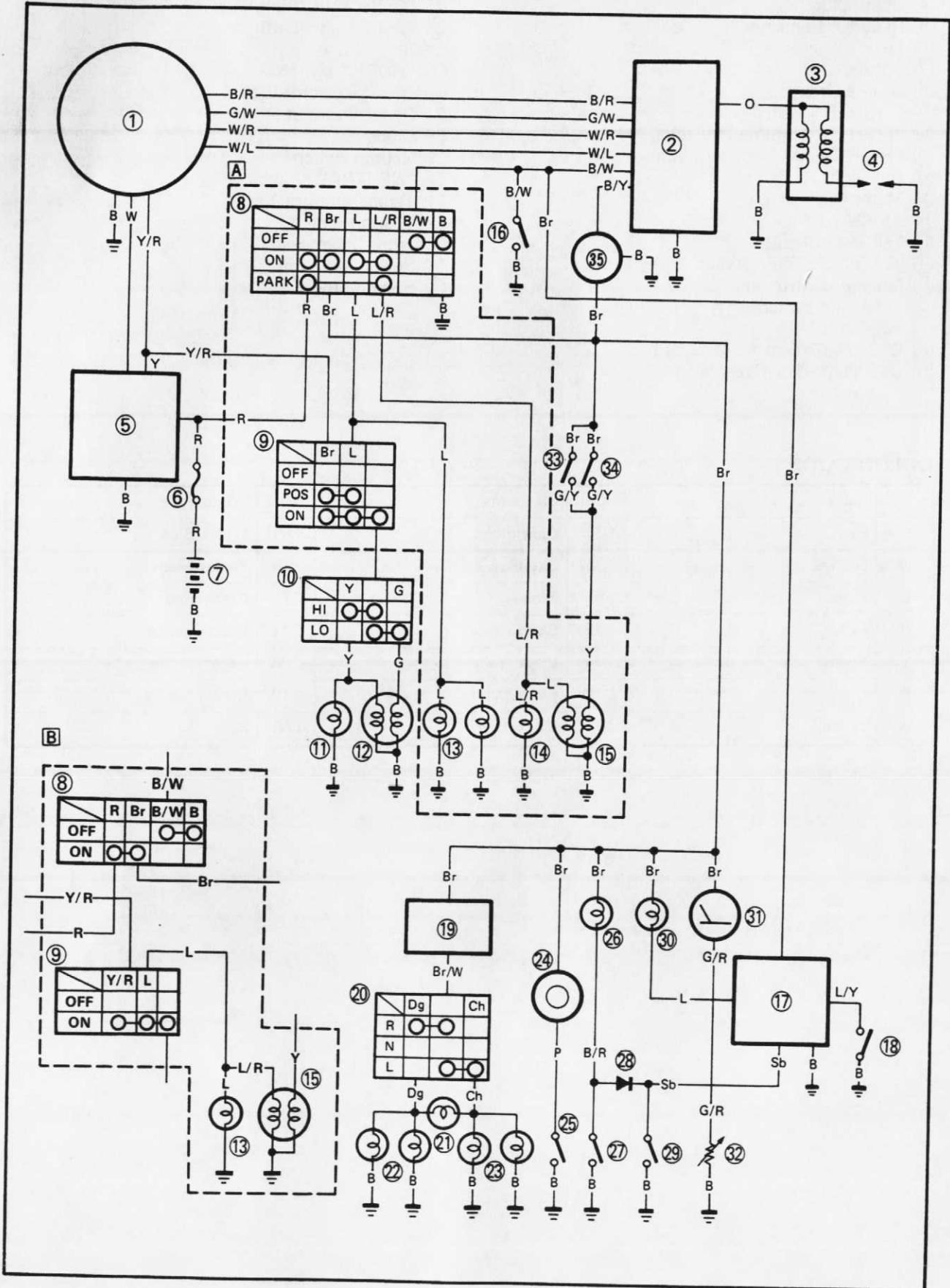
DT200R(W) CIRCUIT DIAGRAM

ELEC



ELECTRICAL

DT200R(W) CIRCUIT DIAGRAM



DT200R(W) CIRCUIT DIAGRAM

ELEC



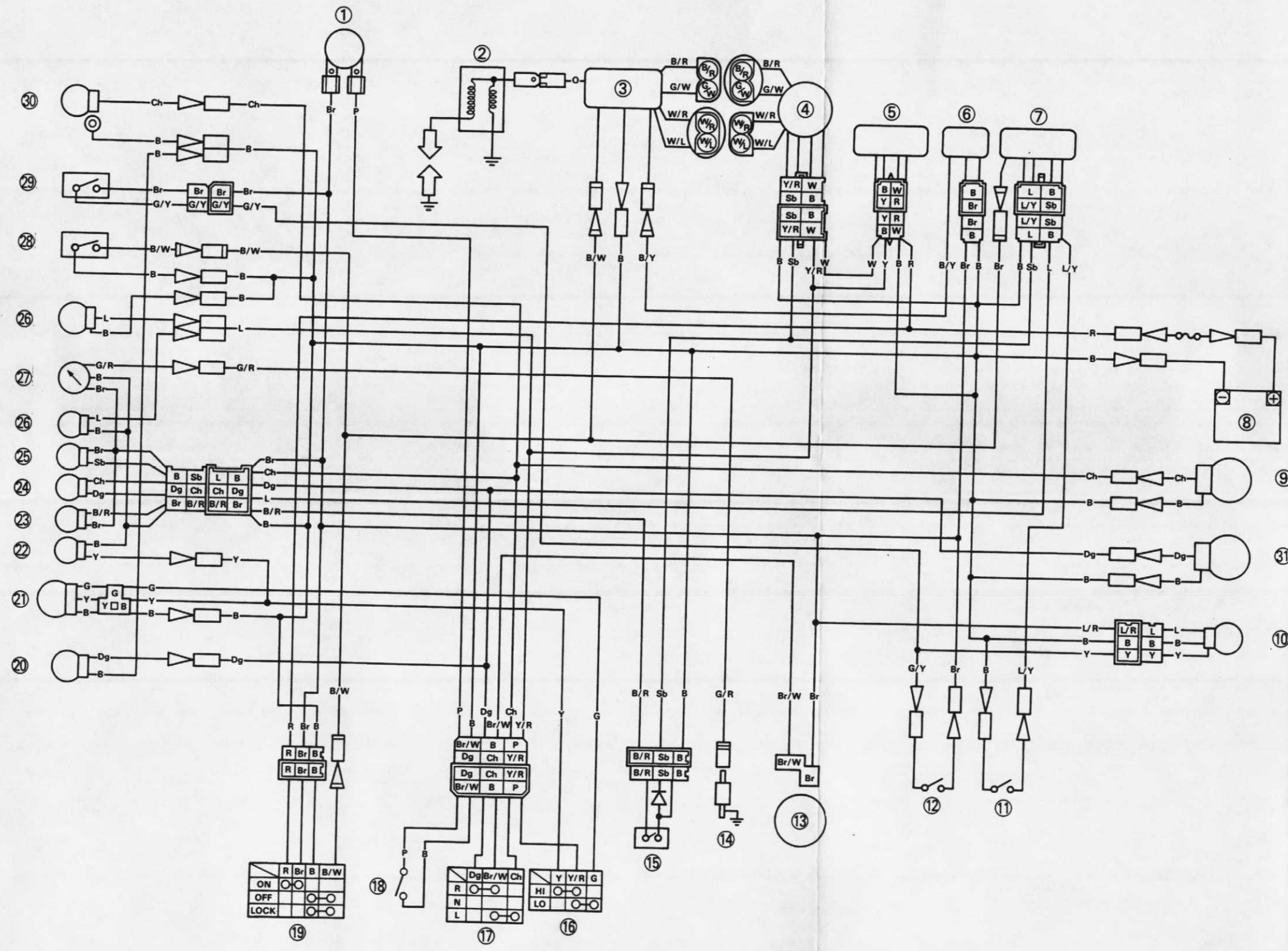
- | | |
|-------------------------------|-----------------------------|
| ① CDI magneto | ⑱ Flasher relay |
| ② CDI unit | ⑳ "TURN" switch |
| ③ Ignition coil | ㉑ "TURN" indicator light |
| ④ Spark plug | ㉒ Flasher light (Right) |
| ⑤ Rectifier/Regulator | ㉓ Flasher light (Left) |
| ⑥ Fuse | ㉔ Horn |
| ⑦ Battery | ㉕ "HORN" switch |
| ⑧ Main switch | ㉖ "OIL" indicator light |
| ⑨ "LIGHTS" switch | ㉗ Oil level switch |
| ⑩ "LIGHTS" (Dimmer) switch | ㉘ Diode |
| ⑪ "HIGH BEAM" indicator light | ㉙ Neutral switch |
| ⑫ Headlight | ㉚ "NEUTRAL" indicator light |
| ⑬ Meter light | ㉛ Temperature gauge |
| ⑭ Auxiliary light | ㉜ Thermo unit |
| ⑮ Tail/Brake light | ㉝ Front brake switch |
| ⑯ "ENGINE STOP" switch | ㉞ Rear brake switch |
| ⑰ Ignition control unit | ㉟ Servomotor |
| ⑱ Sidestand switch | |

A DT200R (Except for Oceania)

B DT200RW (For Oceania)

COLOR CODE

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



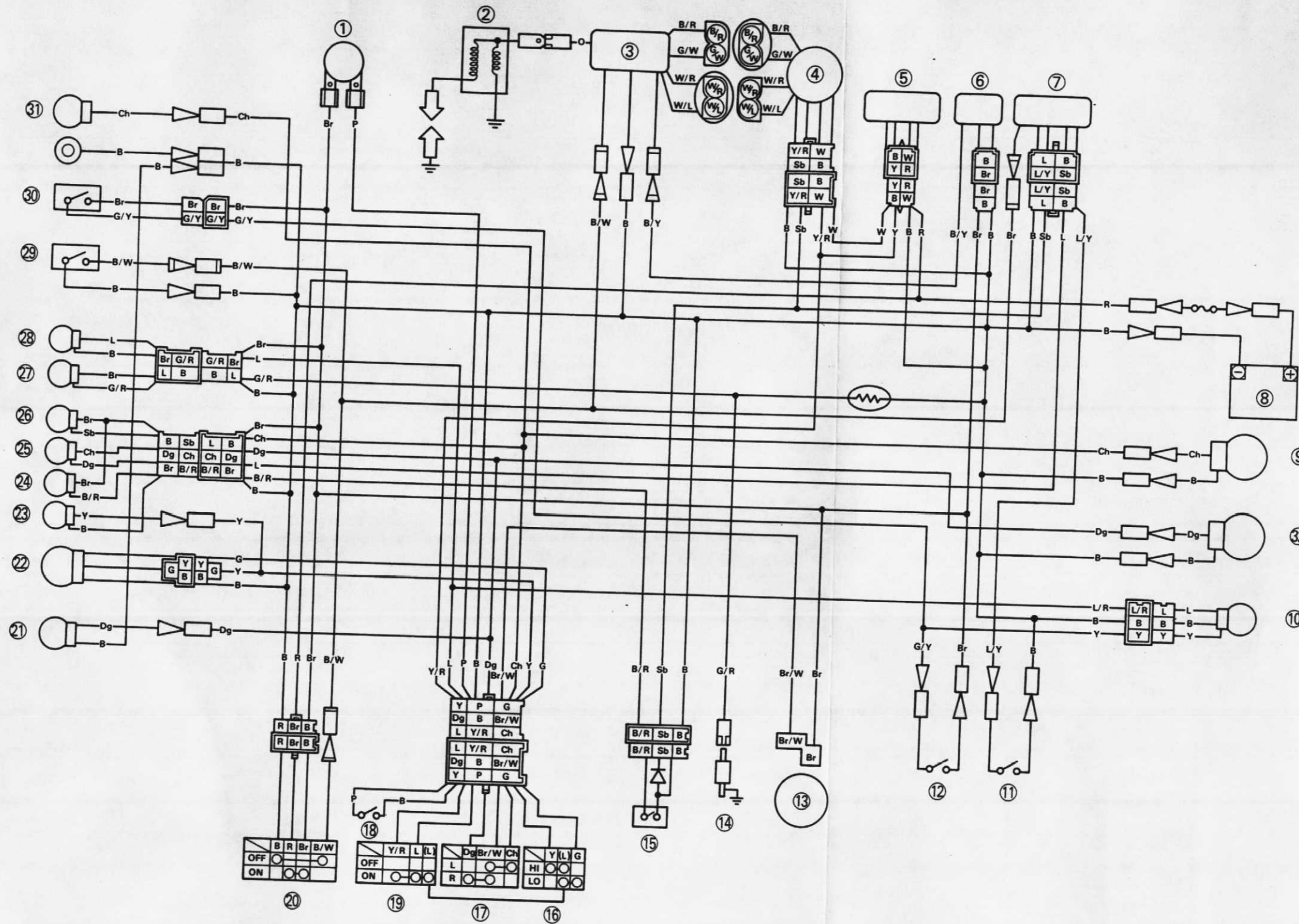
- ① Horn
- ② Ignition coil
- ③ CDI unit
- ④ Flywheel magneto
- ⑤ Rectifier/Regulator
- ⑥ YPVS
- ⑦ Control unit
- ⑧ Battery
- ⑨ Rear flasher light (L)
- ⑩ Tail/Brake light
- ⑪ Sidestand switch
- ⑫ Brake switch
- ⑬ Flasher relay
- ⑭ Thermo switch
- ⑮ Oil level gauge
- ⑯ "LIGHTS" (Dimmer) switch
- ⑰ "TURN" switch
- ⑱ "HORN" switch
- ⑲ Main switch
- ⑳ Front flasher light (R)
- ㉑ Headlight
- ㉒ "HIGH BEAM" indicator light
- ㉓ "OIL" indicator light
- ㉔ "TURN" indicator light
- ㉕ "NEUTRAL" indicator light
- ㉖ Meter light
- ㉗ Temperature gauge
- ㉘ "ENGINE STOP" switch
- ㉙ Front brake switch
- ㉚ Front flasher light (L)
- ㉛ Rear flasher light (R)

COLOR CODE

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

DT200RW WIRING DIAGRAM
(For Oceania)

A-14



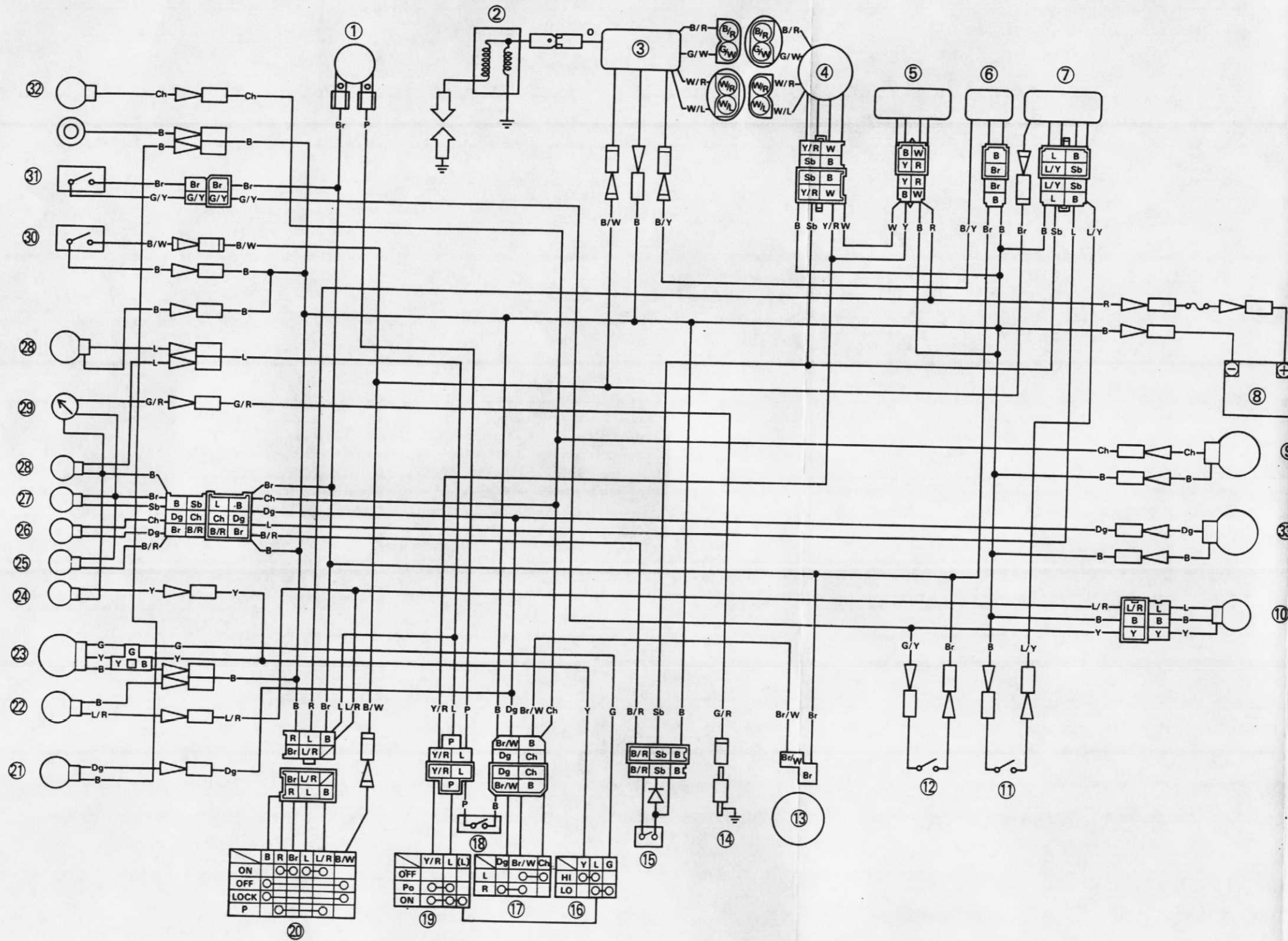
- ① Horn
- ② Ignition coil
- ③ CDI unit
- ④ CDI magneto
- ⑤ Rectifier/Regulator
- ⑥ Servomotor
- ⑦ Ignition control unit
- ⑧ Battery
- ⑨ Rear flasher light (R)
- ⑩ Tail/Brake light
- ⑪ Sidestand switch
- ⑫ Rear brake switch
- ⑬ Flasher relay
- ⑭ Thermo unit
- ⑮ Oil level gauge
- ⑯ "LIGHTS" (Dimmer) switch
- ⑰ "TURN" switch
- ⑱ "HORN" switch
- ⑲ "LIGHTS" switch
- ⑳ Main switch
- ㉑ Front flasher light (L)
- ㉒ Headlight
- ㉓ "HIGH BEAM" indicator light
- ㉔ "OIL" indicator light
- ㉕ "TURN" indicator light
- ㉖ "NEUTRAL" indicator light
- ㉗ "Coolant temp" indicator light
- ㉘ Meter light
- ㉙ "ENGINE STOP" switch
- ㉚ Front brake switch
- ㉛ Front flasher light (R)
- ㉜ Rear flasher light (L)

COLOR CODE

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

DT200R WIRING DIAGRAM
(Except for Oceania)

A-15



- ① Horn
 - ② Ignition coil
 - ③ CDI unit
 - ④ CDI magneto
 - ⑤ Rectifier/Regulator
 - ⑥ Servomotor
 - ⑦ Ignition control unit
 - ⑧ Battery
 - ⑨ Rear flasher light (R)
 - ⑩ Tail/Brake light
 - ⑪ Sidestand switch
 - ⑫ Rear brake switch
 - ⑬ Flasher relay
 - ⑭ Thermo unit
 - ⑮ Oil level gauge
 - ⑯ "LIGHTS" (Dimmer) switch
 - ⑰ "TURN" switch
 - ⑱ "HORN" switch
 - ⑲ "LIGHTS" switch
 - ⑳ Main switch
 - ㉑ Front flasher light (L)
 - ㉒ Auxiliary light
 - ㉓ Headlight
 - ㉔ "HIGH BEAM" indicator light
 - ㉕ "OIL" indicator light
 - ㉖ "TURN" indicator light
 - ㉗ "NEUTRAL" indicator light
 - ㉘ Meter light
 - ㉙ Temperature gauge
 - ㉚ "ENGINE STOP" switch
 - ㉛ Front brake switch
 - ㉜ Front flasher light (R)
 - ㉝ Rear flasher light (L)
- COLOR CODE**
- B.....Black
 - Br.....Brown
 - Ch.....Chocolate
 - Dg.....Dark green
 - G.....Green
 - L.....Blue
 - O.....Orange
 - P.....Pink
 - R.....Red
 - Sb.....Sky blue
 - W.....White
 - Y.....Yellow
 - G/W...Green/White
 - W/L...White/Blue
 - L/B...Blue/Black
 - B/R...Black/Red
 - B/W...Black/White
 - B/Y...Black/Yellow
 - Br/W...Brown/White
 - G/R...Green/Red
 - G/Y...Green/Yellow
 - L/R...Blue/Red
 - L/Y...Blue/Yellow
 - W/R...White/Red
 - Y/R...Yellow/Red