

# FZS600

2000

5DM1-AE2

## SUPPLEMENTARY SERVICE MANUAL

#### **FOREWORD**

This Supplementary Service Manual has been prepared to introduce new service and data for the FZS600 2000. For complete service information procedures it is necessary to use this Supplementary Service Manual together with the following manual.

**FZS600 SERVICE MANUAL: 5DM1-AE1** 

FZS600 2000
SUPPLEMENTARY
SERVICE MANUAL
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#### NOTICE

This manual was produced by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to include all the knowledge of a mechanic in one manual, so it is assumed that anyone who uses this book to perform maintenance and repairs on Yamaha scooter has a basic understanding of the mechanical ideas and the procedures of scooter repair. Repairs attempted by anyone without this knowledge are likely to render the scooter unfit for use.

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

NOTE: -

Designs and specifications are subject to change without notice.

#### IMPORTANT INFORMATION

Particularly important information is distinguished in this manual by the following.

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

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

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

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

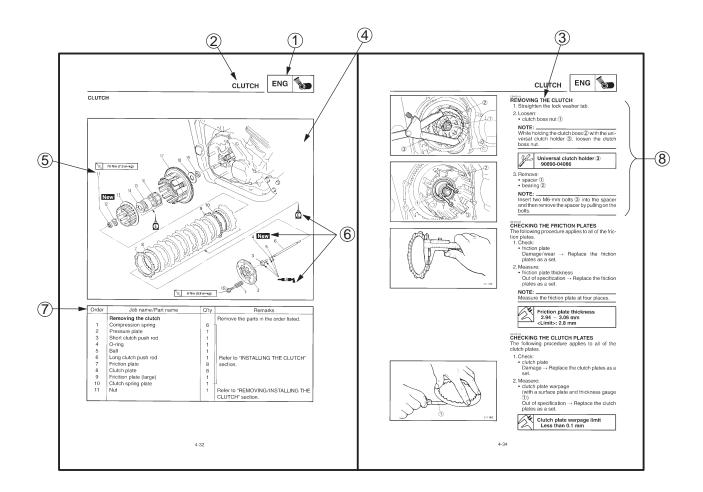
#### **HOW TO USE THIS MANUAL**

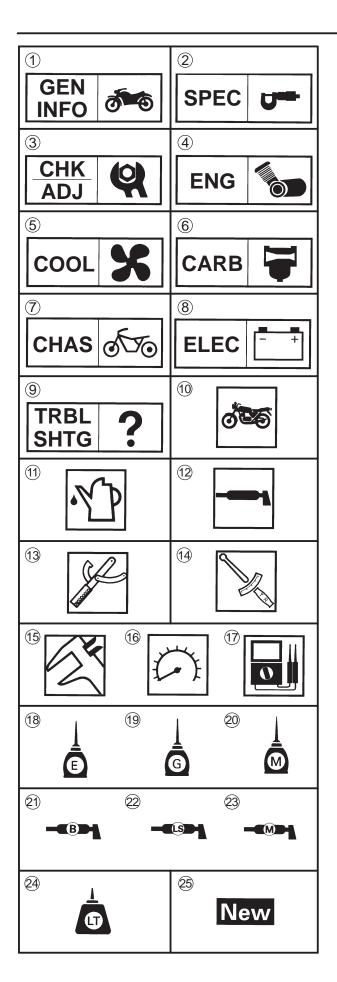
This manual is intended as a handy, easy-to-read reference book for the mechanic. Comprehensive explanations of all installation, removal, disassembly, assembly, repair and inspection procedures are laid out with the individual steps in sequential order.

- ① The manual is divided into chapters. An abbreviation and symbol in the upper right corner of each page indicate the current chapter. Refer to "SYMBOLS" on the following page.
- ② Each chapter is divided into sections. The current section title is shown at the top of each page, except in Chapter 3 ("Periodic Inspections and Adjustments"), where the sub-section title (-s) appear.

(In Chapter 3, "Periodic Inspections and Adjustments", the sub-section title appears at the top of each page, instead of the section title.)

- 3 Sub-section titles appear in smaller print than the section title.
- ④ To help identify parts and clarify procedure steps, there are exploded diagrams at the start of each removal and disassembly section.
- ⑤ Numbers are given in the order of the jobs in the exploded diagram. A circled number indicates a disassembly step.
- 6 Symbols indicate parts to be lubricated or replaced (see "SYMBOLS").
- The A job instruction chart accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.
- ® Jobs requiring more information (such as special tools and technical data) are described sequentially.





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#### **SYMBOLS**

The following symbols are not relevant to every vehicle.

Symbols 1 to 9 indicate the subject of each chapter.

- 1 General information
- 2 Specifications
- 3 Periodic inspection and adjustment
- 4 Engine
- (5) Cooling system
- 6 Carburetor(-s)
- (7) Chassis
- (8) Electrical system
- Troubleshooting

Symbols 10 to 17 indicate the following.

- (10) Serviceable with engine mounted
- (11) Filling fluid
- (12) Lubricant
- 13 Special tool
- 14) Tightening torque
- (15) Wear limit, clearance
- (16) Engine speed
- (17) Electrical data

Symbols ® to ② in the exploded diagrams indicate the types of lubricants and lubrication points.

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

Symbols 24 to 25 in the exploded diagrams indicate the following:

- 24 Apply locking agent (LOCTITE®)
- 25) Use new one

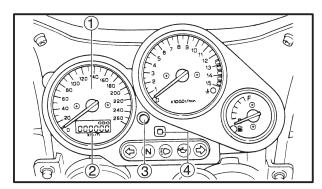
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#### GENERAL INFORMATION

#### FEATURES SPEEDOMETER



- (1) Speedometer
- 2 Odometer/Tripmeter/Clock
- ③ "SELECT" button
- (4) "RESET" button

This speedometer is equipped with:

- an odometer
- two tripmeters
- a clock

#### Odometer and tripmeter modes

When set to "ODO", the motorcycle's total mileage is indicated.

When set to "TRIP 1" or "TRIP 2", the motorcycle's mileage since the tripmeter was last reset is indicated. Use the tripmeters to estimate how far you can ride on a tank of fuel. This information will enable you to plan fuel stops in the future.

#### Selecting a mode

Push the "SELECT" button 3 to change between the odometer mode "ODO", the tripmeter modes "TRIP 1" and "TRIP 2", and the clock mode in the following order: "ODO"  $\rightarrow$  "TRIP 1"  $\rightarrow$  "TRIP 2"  $\rightarrow$  Clock  $\rightarrow$  "ODO"

#### Resetting a meter

To reset either tripmeter 1 or 2 to 0.0, select either by pushing the "SELECT" button ③ and push the "RESET" button ④ for at least one second.

#### Clock mode

To change the display to the clock mode, push the "SELECT" button  $\ensuremath{\mathfrak{G}}$ .

To change the display back to the odometer mode, push the "SELECT" button ③.

#### To set the clock

- 1. Push both the "SELECT" button ③ and "RESET" button ④ for at least two seconds.
- 2. When the hour digits start flashing, push the "RESET" button 4 to set the hours.
- 3. Push the "SELECT" button (3) to change the minutes.
- 4. When the minute digits start flashing, push the "RESET" button 4 to set the minutes.
- 5. Push the "SELECT" button 3 to start the clock.

#### NOTE

After setting the clock, be sure to push the "SELECT" button before turning the main switch to "OFF", otherwise the clock will not be set.

#### **GENERAL SPECIFICATIONS**



#### **SPECIFICATIONS**

#### **GENERAL SPECIFICATIONS**

Model	FZS600
Model code:	5DM7
	5DM8
	5DM9
Fuel:	
Type	Regular unleaded gasoline
Fuel tank capacity	20 L
Fuel reserve amount	3.5 L
Tire pressure:	
Maximum load-except motorcycle	187 kg
Loading condition A*	$0 \sim 90 \text{ kg}$
front	225 kPa (2.25 kg/cm <sup>2</sup> , 2.25 bar)
rear	250 kPa (2.5 kg/cm <sup>2</sup> , 2.5 bar)
Loading condition B*	90 ~ 187 kg
front	225 kPa (2.25 kg/cm <sup>2</sup> , 2.25 bar)
rear	290 kPa (2.9 kg/cm <sup>2</sup> , 2.9 bar)
High-speed riding	
front	225 kPa (2.25 kg/cm <sup>2</sup> , 2.25 bar)
rear	290 kPa (2.9 kg/cm <sup>2</sup> , 2.9 bar)
Bulb voltage, wattage × quantity:	
Headlight	12 V 60 W/55 W × 1
Marker light	12 V 5 W × 1
Brake/tail light	12 V 21 W/5 W × 2
Front turn signal light	12 V 21 W × 2
Rear turn signal light	12 V 21 W × 2
Meter light	12 V 2 W × 3
Indicator light	
Neutral indicator light	14 V 1.4 W × 1
High beam indicator light	14 V 1.4 W × 1
Oil level warning light	14 V 1.4 W × 1
Turn indicator light	$14 \text{ V } 1.4 \text{ W } \times 2$
Fuel level warning light	12 V 2 W × 1
Engine temperature warning light	LED

<sup>\*</sup>Load is the total weight of cargo, rider, passenger and accessories.



## MAINTENANCE SPECIFICATIONS ENGINE

Item		Standard	Limit
Valve spring: Free length Set length (valve clo Compressed pressu Tilt limit Direction of winding	ire IN/EX IN/EX	40.09 mm 34.5 mm 131.4 ~ 153.0 N (13.4 ~ 15.6 kg) ••• Clockwise	37.5 mm ••• 2.5°/1.8 mm
Carburetor: I.D. mark		5DM1 01 (GB) (N) (SF) (DK) (D) (NL) (B) (F) (E) (P) (IRL) (GR) 5DM2 11 (D) (F)	•••
Main jet Main air jet Jet needle	(M.J) (M.A.J) (J.N)	#115 #80 5D86-3/5 (GB) (N) (SF) (DK) (D) (NL)	•••
Needle jet Pilot air jet	(N.J) (P.A.J.1)	(B) (F) (E) (P) (IRL) (GR) 5D92-3/5 (D) (F) P-0 #130	•••
Pilot outlet Pilot jet Bypass 1	(P.O) (P.J) (B.P.1)	0.95 #12.5 0.9	•••
Bypass 2 Bypass 3 Pilot screw Valve seat size	(B.P.2) (B.P.3) (P.S)	0.8 0.8 2 1.0	•••
Starter jet Starter jet Throttle valve size	(V.S) (G.S.1) (G.S.2) (TH.V)	0.6 0.8 #110	•••
Fuel level  Engine idle speed	(F.L) (with special tool)	3.5 mm 1,150 ~ 1,250 r/min	•••
Intake vacuum		30.7 ∼ 33.3 kPa (230 ∼ 250 mmHg)	•••



#### **CHASSIS**

Item	Standard	Limit
Front suspension:		
Front fork travel	120 mm	•••
Fork spring free length	316.8 mm	319 mm
Fitting length	309.8 mm	•••
Collar length	183 mm	•••
Spring Rate (K1)	7.35 N/mm (0.75 kg/mm)	•••
(K2)	13.72 N/mm (1.4 kg/mm)	•••
Stroke (K1)	0 ~ 70 mm	•••
(K2)	70 ~ 120 mm	•••
Optional spring	No	•••
Oil capacity	465 cm <sup>3</sup>	•••
Oil level	132 mm	•••
Oil grade	Fork oil 10W or equivalent	•••
Drive chain:		
Type/manufacturer	50VA7/DAIDO	•••
No. of links	110	•••
Chain free play	30 ~ 45 mm	•••

## TIGHTENING TORQUES CHASSIS

Part to be tightened	Thread size	Tightening torque		Remarks
		Nm	m•kg	
Holder, clutch lever 1	M6 × 1.0	11	1.1	



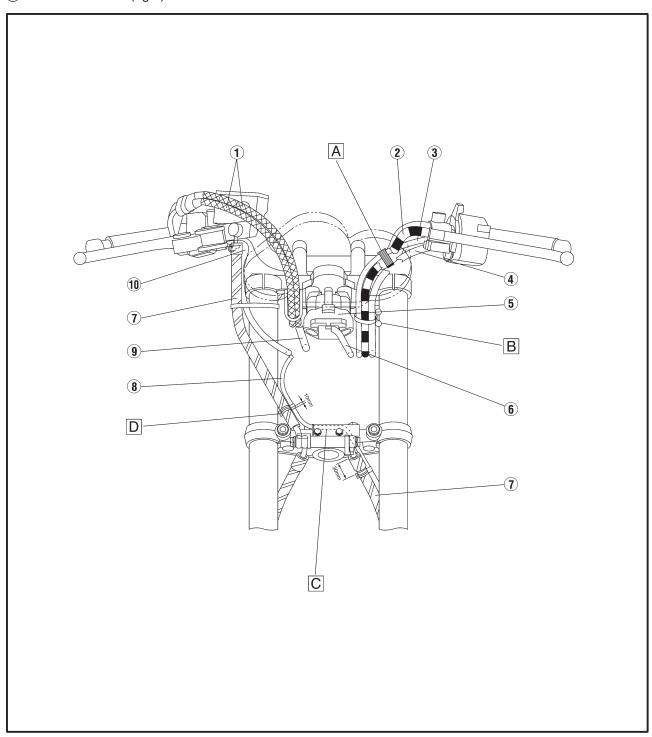
#### **ELECTRICAL**

Item	Standard	Limit
Ignition system: Ignition timing (B.T.D.C.) Advanced timing (B.T.D.C.) Advance type	10°/1,250 r/min 50°/4,500 r/min Digital type	•••
T.C.I.: Pickup coil resistance T.C.I. unit model/manufacturer	189 $\sim$ 231 $\Omega$ Y-L J4T095/MITSUBISHI	•••
Charging system: Type Model/manufacturer Standard output Stator coil resistance	A.C. magneto F4T359/MITSUBISHI 14 V 18 A at 5,000 r/min 0.36 ~ 0.44 Ω at 20°C/W-W	•••
Starter motor: Model/manufacturer I.D. number Output Armature coil resistance Brush overall length Brush spring pressure Commutator dia. Mica undercut (depth) Mica undercut (width)	SM-13/MITSUBA SM-13 0.7 kW 0.0015 ~ 0.0025 Ω at 20°C 10 mm 7.64 ~ 10.00 N (779 ~ 1,020 gf) 28 mm 0.7 mm 0.8 mm	4 mm 27 mm
Starter relay:  Model/manufacturer  Amperage rating  Coil winding resistance	MS5F-631/JIDECO 180 A 4.18 ~ 4.62 Ω at 20°C	•••
Horn: Type Quantity Model manufacturer Maximum amperage Performance Coil winding resistance	Plane type 1 pcs YF-12/NIKKO 3.0 A 105 ~ 113 db/2 m 1.15 ~ 1.25 Ω at 20°C	•••
Flasher/hazard relay: Type Model/manufacturer Self cancelling device Hazard flasher device Flasher frequency Wattage	Full transistor type FE246BH/DENSO No Yes 75 ~ 95 cyl/min 21 W × 2 + 3.4 W	•••
Thermostat switch:  Model/manufacture	4BA/DENSO	•••



Item	Standard	limit
Starting circuit cut-off relay: Model/manufacture Coil winding resistance	G8R-30Y-B/OMRON 202.5 ~ 247.5 Ω at 20°C	•••
Fuel pump relay: Model/manufacture Coil winding resistance	G8R-30Y-B/OMRON 202.5 ~ 247.5 Ω at 20°C	•••
Amperage for individual circuit: Main Headlight Signal Ignition Fan Parking/Hazard Back up Reserve	30 A 20 A 20 A 20 A 10 A 10 A 5 A 30 A 20 A 10 A	•••

- 1) Throttle cable
- 2 Clutch cable
- (3) Handlebar switch (left)
- (4) Starter cable
- (5) Main switch
- (6) Main switch lead
- 7 Brake hose
- 8 Speed sensor lead
- 9 Headlight lead
- 10 Handlebar switch (right)
- A Use a plastic band to fasten to- D Pass the brake hose out side of gether the handlebar switch lead (L) and the handlebar.
- B Use a plastic clamp to fasten together the handlebar switch lead (left), clutch cable and starter cable
- C Pass the speed sensor lead inside of the clamp code.
- the speed sensor lead, then use a plastic clamp to fasten them.

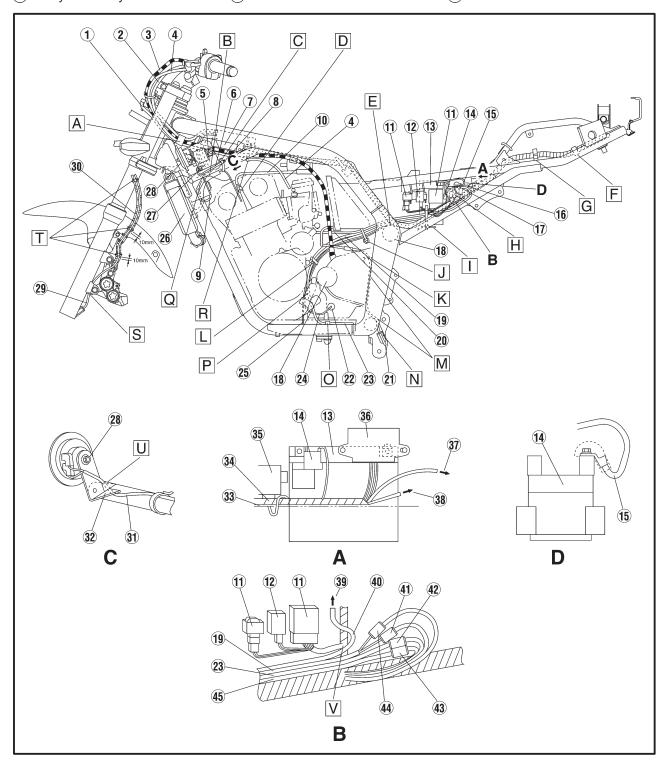




- (1) Main switch lead
- (2) Handlebar switch lead (left)
- (3) Clutch cable
- (4) Starter cable
- 5 Rectifier/regulator
- 6 Horn lead
- 7 Box
- 8 Air guide plate
- 9 Fan motor lead
- 10 High tension code
- (11) Relay assembly

- 12 Flasher leray
- 13 Battery
- 14) Starter relay
- 15 Battery positive (+) lead
- 16 Seat lock cable
- 17) Seat lock stay
- (18) Cross tube
- 19 AC magneto lead
- 20 Starter motor lead
- 21 Air filter drain hose
- 22 Neutral switch

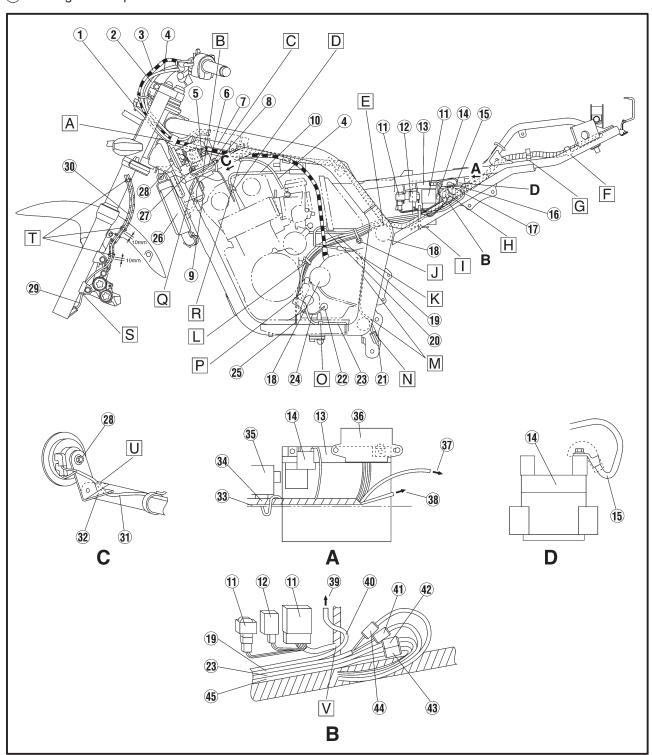
- 23 Sidestand switch lead
- 24 Neutral switch lead
- 25) Oil level switch lead
- 26 Radiator
- 27 Rectifier/regulator lead
- 28 Horn
- 29 Speed sensor lead
- 30 Brake hose
- 31) Horn lead
- 32 Horn bracket
- 33 Rear fender





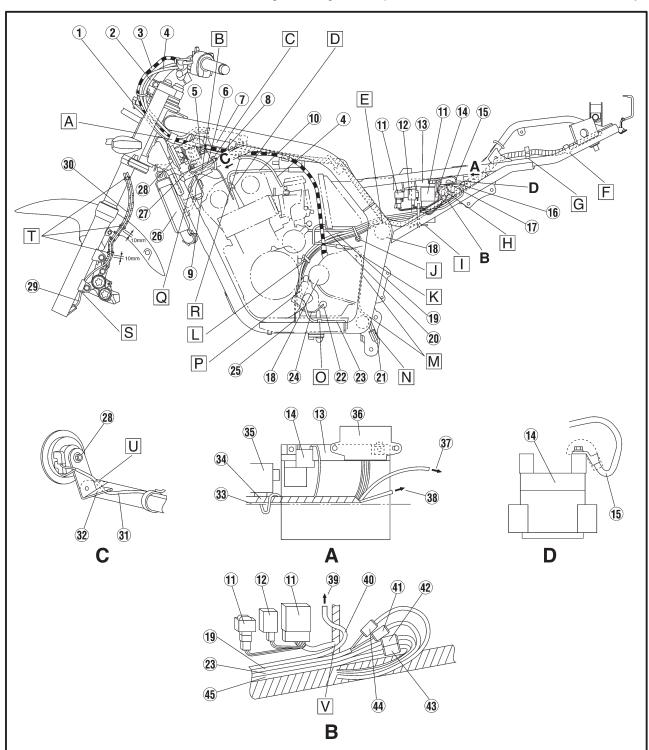
- 34 Wire harness
- 35 Relay
- 36 Fuse box
- (37) To front brake switch
- 38 To battery negative (-) lead
- 39 To starter relay
- 40 Starter motor lead
- (41) Pickup coupler
- 42 Sidestand switch coupler
- 43 Oil level/neutral switch coupler
- (44) AC magneto coupler

- 45) Oil level/neutral switch lead
- A Use a plastic clamp to fasten the handlebar switch lead (left), main switch lead, clutch cable and starter cable to the frame.
- B Pass the fan motor lead through the guide gear, then into the box.
- C Use a plastic clamp to fasten the F Use a plastic clamp to fasten tohorn lead and air guide plate to the frame.
- D When installing the plug cap, the high tension code should be facing the inside of the body.
- E Pass the wire harness, starter motor lead, AC magneto lead, sidestand switch lead and oil/ neutral switch lead over the cross tube.
  - gether the wire harness and the frame.





- G Use a plastic clamp to fasten together the wire harness and the frame.
- H Push couplers into the lock stay of the frame after connecting wires.
- Use a plastic band to fasten together wireharness, starter motor lead, AC magneto lead, sidestand switch lead and oil level/neutral switch lead, then hold
- the clamp to the frame bracket. Position the band end to out side of chassis.
- J Use a plastic locking tie to fasten the starter motor lead, AC magneto lead, sidestand switch lead and oil level/neutral switch lead to the frame bracket. Cut off the excess end of the tie.
- K Pass the air cleaner drain hose through the engine clamp.
- L Use a steel holder to fasten together the AC magneto lead, sidestand lead and oil level/neutral switch lead.
- M Pass the air cleaner drain hose in front of the rear arm pivot shaft and back of the cross tube.
- N Pass the air cleaner drain hose through the pipe holder of rear shock absorber bracket, then draw it out to the left side of the body.





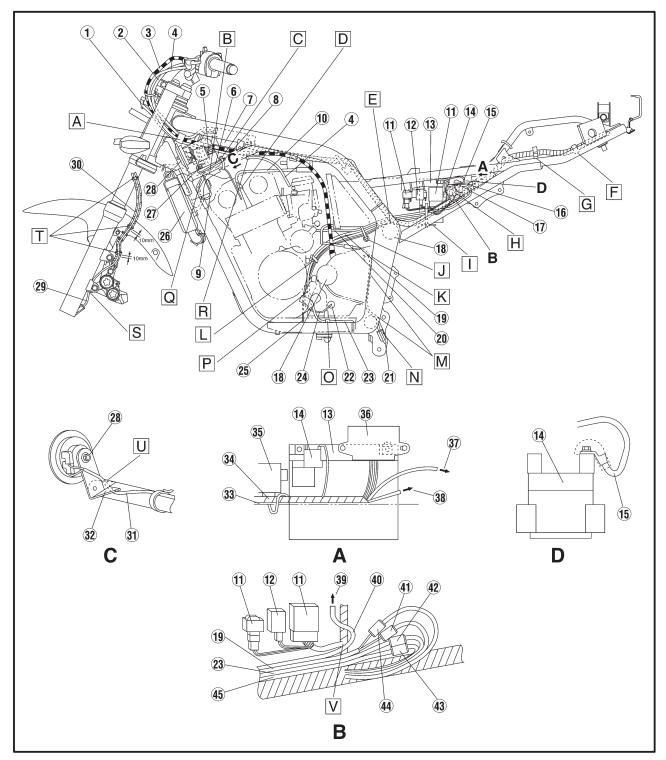
- gether the sidestand switch lead and the frame.
- P Pass the sidestand switch lead through the bottom of the coolant
- Q Do not loosen the fan motor lead here.
- R Pass the clutch cable and starter cable outside of high tension code#1.
- O Use a plastic clamp to fasten to- S Use a steel holder to fasten together the speed sensor lead and outer tube.
  - T Use a plastic clamp to fix the speed sensor lead at 3 points afoutside of the brake hose.

First. Fasten the bottom end of the speed sensor lead without loosening.

Second. Fasten the lead several

times from the bottom end by running along the brake hose.

- U Pass the hom lead under the horn bracket, then connect it at the back of the horn.
- ter running the lead along the  $\overline{V}$  Pass only the starter lead through the bottom of the joint of wire harness.

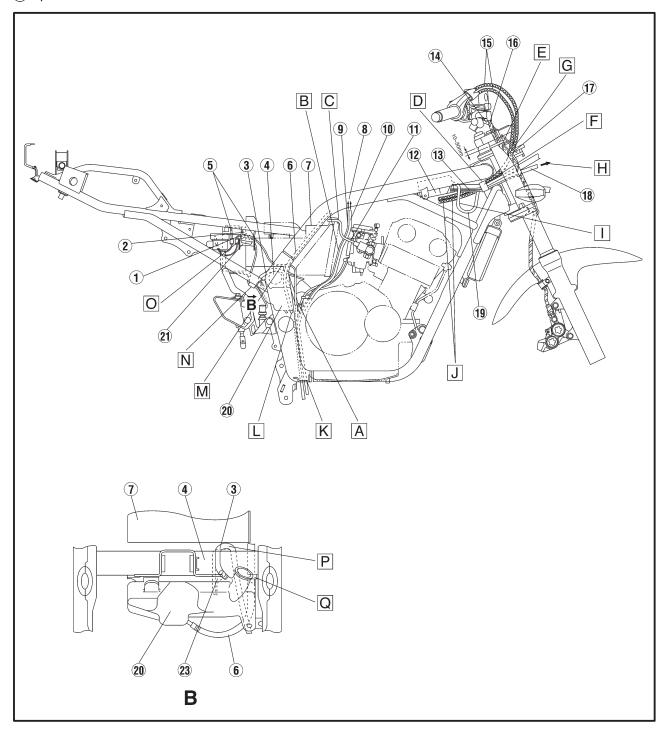




- 1) Rear brake switch lead
- (2) Battery
- (3) Reservoir tank over flow hose
- (4) Cross tube
- (5) Battery negative (-) lead
- 6 Reservoir tank hose
- 7 Air filter
- (8) To fuel tank
- (9) Fuel tank breather hose
- 10 Fuel tank drain hose
- 11) T.P.S. lead
- (12) Box
- (13) Speed sensor lead

- (14) Handlebar switch lead (right)
- 15 Throttle cable
- 16 Brake hose
- (17) Guide wire
- 18 Headlight lead
- 19 Main switch lead
- 20 Reservoir tank
- 21) Air filter box bracket
- 22 Swingarm bracket
- 23 Engine bracket

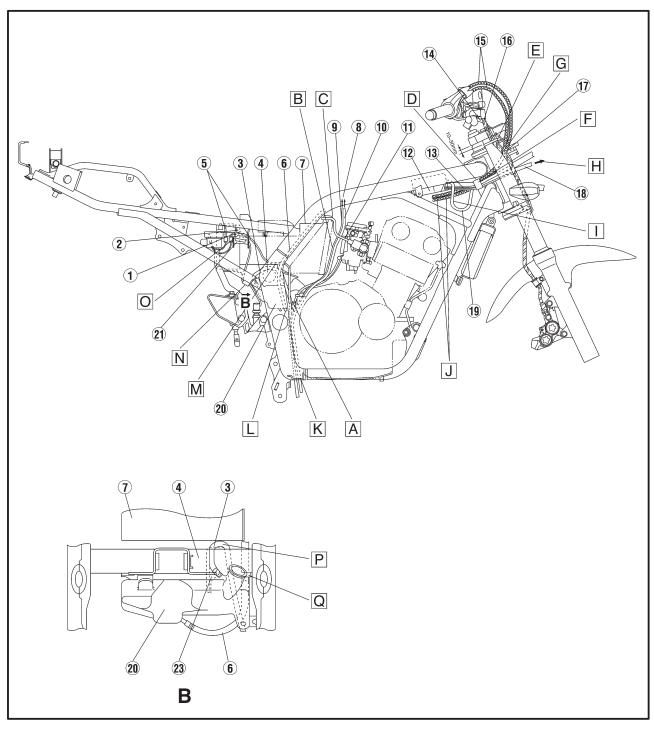
- A Pass the fuel tank drain hose, fuel tank breather hose and reservoir tank over flow pipe between the rear arm and the engine crankcase.
- B Pass the fuel tank drain hose and fuel tank breather hose between air filter joint #3 and #4. After installing the fuel tank, pull it down toward the air filter joint so that there will be no bend of loosening between them.



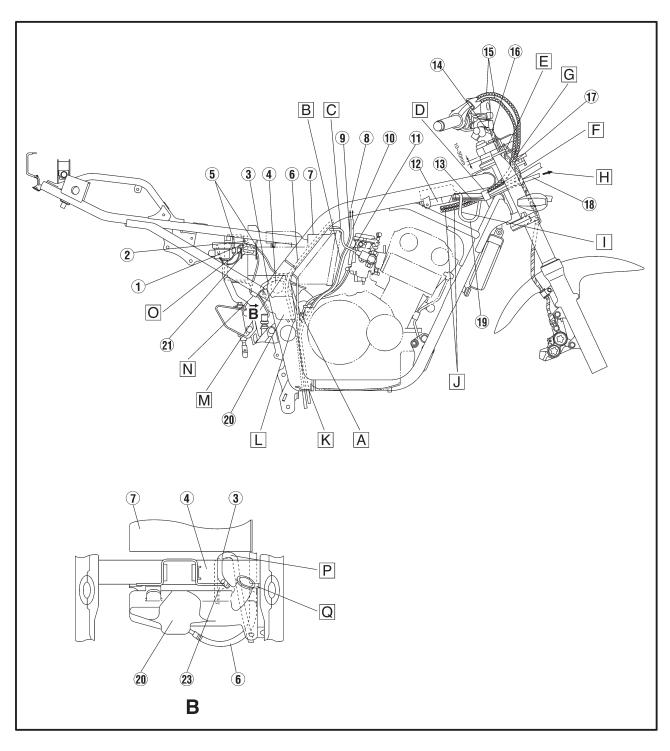


- C Pass the T.P.S lead as shown, F Pass the throttle cable, with the J Pass the throttle cable under the then install cover to the air filter case.
- D Use a plastic clamp to fasten together the throttle cables, headlight lead, handlebar switch (right) and speed sensor lead.
- E Use a plastic locking tie to fasten the handlebar switch (right) and brake hose to the right front fork inner tube.
- pull side up, through the center of the clamp.
- G Pass the throttle cable through the guide wire installed to the handle crown.
- H To front cowling.
- T Pass the main switch lead under the throttle cables, headlight lead, handlebar switch lead (right) and speed sensor lead, then insert it right side of the box.
- K Pass the reservoir tank over flow hose and fuel tank drain hose through the cable holder.
- L To coolant reservoir tank.
- M Pass the battery negative (-) lead inside of the reservoir hose.
- N Use the plastic clamp to fasten together the rear brake switch lead and the frame.

The latch of the clamp must face the outside of the body.



- O Pass the battery negative lead and rear brake switch lead inside the air filter bracket of the frame.
- Pass the reservoir tank over flow pipe between the air filter case and cross tube, and then outside of engine bracket.
- Q Use a clamp to fasten together the coolant reservoir hose and the bracket rear arm.

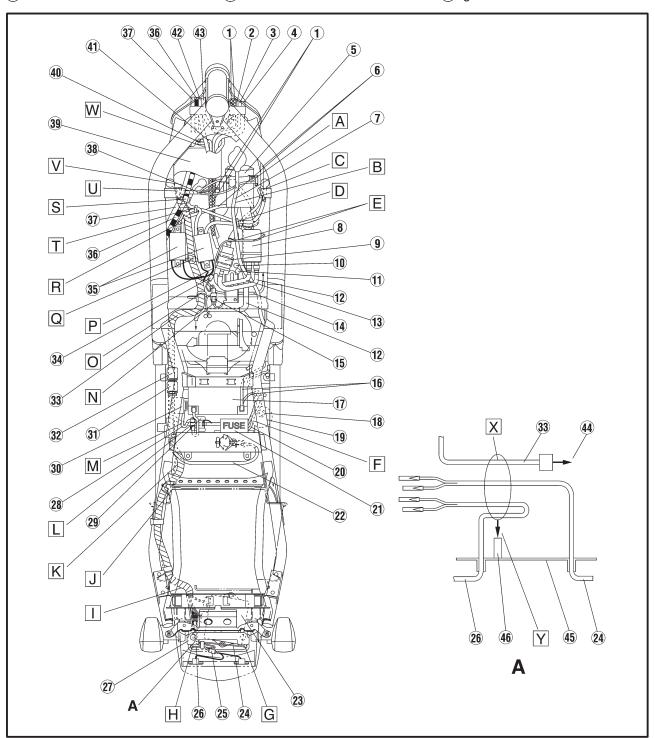




- 1 Throttle cable
- 2 Speed sensor lead
- (3) Handlebar switch lead (right)
- (4) Headlight lead
- (5) Thermostat housing
- 6 Carburetor heater hose
- 7 Reservoir tank hose
- (8) Throttle cable
- 9 Fuel pump
- 10 Fuel filter
- 11) Fuel tank breather hose
- 12 Fuel tank drain hose

- 13 Pipe
- 14) Fuel hose
- 15 T.P.S lead
- 16 Fuel pipe
- 17 Fuel sender, coupler
- (18) Battery negative (-) lead
- 19 Battery
- 20 Rear brake hose
- 21) Rear brake reservoir tank
- 22 Rear brake switch lead
- 23 Fuse box
- 24 Seat lock cable

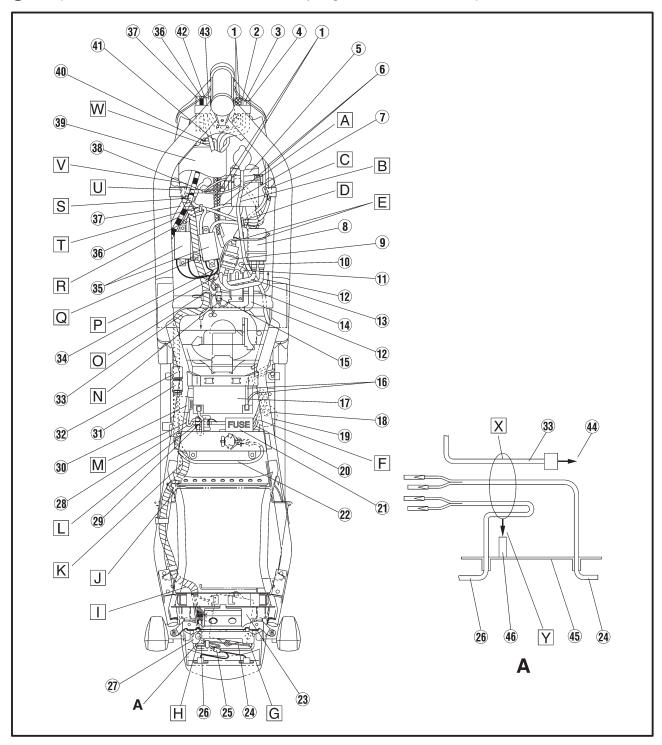
- 25) Ignitor
- 26 Rear turn signal light lead (right)
- 27 Taillight lead
- 28 Rear turn signal light lead (left)
- 29 Taillight bracket
- 30 Starter motor lead
- 31) Starter relay
- 32 Relay
- 33 Relay assembly
- (34) Wire harness
- (35) Fuel pump lead coupler
- 36 Ignition coil





- 37 Clutch cable
- 38 Starter cable
- 39 Ground lead
- 40 Box
- (41) Fan motor lead
- 42 Rectifier/regulator lead.
- 43 Handlebar switch lead (left)
- 44 Main switch lead
- 45 Wire harness
- 46 To taillight
- (47) Rear fender
- 48 Clamp

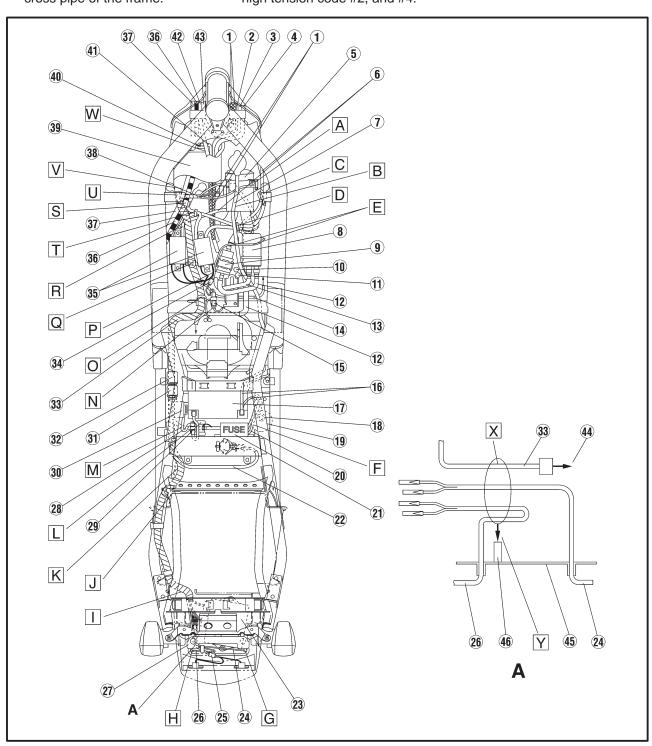
- A Tighten the ground lead and the thermostat housing together with a bolt.
- B Pass the reservoir hose left side of thermo stat housing.
- C Do not fasten the high tension cord #4 with locking tie.
- D Use a plastic band to fasten the high tension cord #3, #4.
- E Fuel pump lead comes over.
- and battery negative lead under
- the coolant reservoir tank, between the reservoir hose and the battery, then are connected at the right side of the battery.
- G Pass the rear flasher lead (R) through the rear fender.
- H Pass the rear flasher lead (L) through the rear fender.
- Pass the wire harness through the groove of the rear fender.
- F Pass the rear brake switch lead J Wire harness shouldn't come top of the rear fender rib.





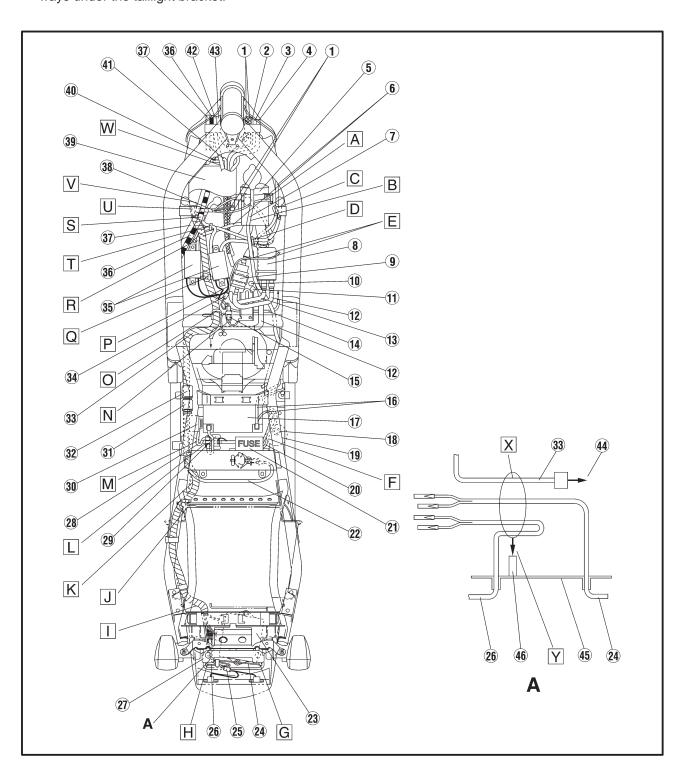
- K Pass the wire harness inside of P Pass the fuel pump lead be- U Set the clamp, which is fixed to the rear fender rib.
- L Pass the wireharness under the starter relay.
- M Pass the starter motor lead under the joint of the harness, then pull upward.
- N Set the fuel sender coupler in the cross pipe of the frame.
- O Use a plastic clamp to fasten tocross pipe of the frame.
- tween the ignition coil and fuel filter, then push under.
- Q Use a plastic clamp to fasten together the wire harness and stay.
- R Pass the carburetor inlet hose under the high tension cord #2, #4.
- S Use a clamp to fasten the clutch cable and starter cable.
- gether the wire harness and T Use a plastic clamp to fasten high tension code #2, and #4.

- the wire harness, in T-stud of the
- V Put the wire harness into the box through the groove at the back, then connect it in the box.





- W Pass the rectifier/regulator lead, fan motor lead, handlebar switch lead (left), main switch lead, headlight lead, handlebar switch lead (right) and speed sensor lead through front side of the box, then connecte each coupler in the box.
- X Use a plastic clamp to fasten the wire harness after passing always under the taillight bracket.



#### PERIODIC MAINTENANCE/LUBRICATION INTERVALS



EB3000000

## PERIODIC INSPECTIONS AND ADJUSTMENTS PERIODIC MAINTENANCE/LUBRICATION INTERVALS

					EVERY	
NO	Э.	ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL (1,000 km)	6,000 km or 6 months (whichever comes first)	12,000 km or 12 months (whichever comes first)
1	*	Fuel line	Check fuel hoses for cracks or damage.     Replace if necessary.		<b>V</b>	<b>V</b>
2	*	Fuel filter	Check condition.     Replace if necessary.			<b>V</b>
3		Spark plugs	Check condition.     Clean, regap or replace if necessary.	<b>V</b>	<b>V</b>	<b>V</b>
4	*	Valves	Check valve clearance.     Adjust if necessary.		12,000 km or 42 liichever comes fi	
5		Air filter	Clean or replace if necessary.		√	√
6		Clutch	Check operation.     Adjust or replace cable.	<b>√</b>	<b>V</b>	V
7	*	Front brake	Check operation, fluid level and vehicle for fluid leakage. (See NOTE) Correct accordingly. Replace brake pads if necessary.	V	V	V
8	*	Rear brake	Check operation, fluid level and vehicle for fluid leakage. (See NOTE) Correct accordingly. Replace brake pads if necessary.	V	V	V
9	*	Wheels	Check balance, runout and for damage.     Rebalance or replace if necessary.		<b>V</b>	<b>V</b>
10	*	Tires	Check tread depth and for damage. Replace if necessary. Check air pressure. Correct if necessary.		V	V
11	*	Wheel bearings	Check bearing for looseness or damage.     Replace if necessary.		<b>V</b>	<b>V</b>
12	*	Swingarm	Check swingarm pivoting point for play. Correct if necessary. Lubricate with molybdenum disulfide grease every 24,000 km or 24 months (whichever comes first).		V	V
13		Drive chain	Check chain slack. Adjust if necessary. Make sure that the rear wheel is properly aligned. Clean and lubricate.	Every 1,000 km and after washing the motorcycle or riding in the rain		
14	*	Steering bearings	Check bearing play and steering for roughness. Correct accordingly. Lubricate with lithium soap base grease every 24,000 km or 24 months (whichever comes first).		V	V
15	*	Chassis fasteners	Make sure that all nuts, bolts and screws are properly tightened.     Tighten if necessary.		<b>√</b>	V

#### PERIODIC MAINTENANCE/LUBRICATION INTERVALS



Г					EVE	RY
NO.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL (1,000 km)	6,000 km or 6 months (whichever comes first)	12,000 km or 12 months (whichever comes first)
16		Sidestand/centerstand	<ul><li>Check operation.</li><li>Lubricate and repair if necessary.</li></ul>		<b>V</b>	√
17	*	Sidestand switch	Check operation.     Replace if necessary.	√	√	√
18	*	Front fork	Check operation and for oil leakage.     Correct accordingly.		<b>V</b>	√
19	*	Rear shock absorber assembly	Check operation and shock absorber for oil leakage.     Replace shock absorber assembly if necessary.		<b>V</b>	V
20	*	Rear suspension relay arm and connecting arm pivoting points	Check operation.     Lubricate with molybdenum disulfide grease every 24,000 km or 24 months (whichever comes first).		٧	<b>V</b>
21	*	Carburetors	Check engine idling speed, synchronization and starter operation.     Adjust if necessary.	<b>V</b>	<b>V</b>	V
22		Engine oil	<ul> <li>Check oil level and vehicle for oil leakage.</li> <li>Correct if necessary.</li> <li>Change. (Warm engine before draining.)</li> </ul>	٧	<b>V</b>	<b>V</b>
23		Engine oil filter cartridge	Replace.	V		V
24	*	Cooling system	Check coolant level and vehicle for coolant leakage. Correct if necessary. Change coolant every 24,000 km or 24 months (whichever comes first).		V	V

<sup>\*</sup> Since these items require special tools, data and technical skills, they should be serviced by a Yamaha dealer.

#### NOTE:

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake system
  - When disassembling the master cylinder or caliper, always replace the brake fluid. Check the brake fluid level regularly and fill as required.
  - Replace the oil seals on the inner parts of the master cylinder and caliper every two years.
  - Replace the brake hoses every four years or if cracked or damaged.

#### ADJUSTING THE FRONT FORK LEGS



EAS00152

#### **CHASSIS**

#### **ADJUSTING THE FRONT FORK LEGS**

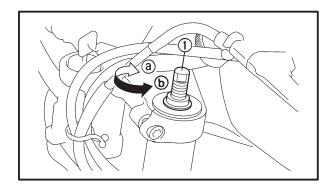
The following procedure applies to both of the front fork legs.

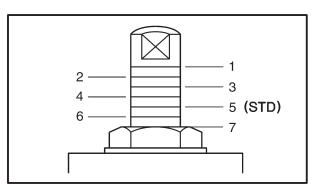
#### **A** WARNING

- Always adjust both front fork legs evenly.
   Uneven adjustment can result in poor handling and loss of stability.
- Securely support the motorcycle so that there is no danger of it falling over.

#### **CAUTION:**

- Grooves are provided to indicate the adjustment position.
- Never go beyond the maximum or minimum adjustment positions.





- 1. Adjust:
  - spring preload

a. Turn the adjusting bolt ① in direction ② or ⑤).

Direction (a)	Spring preload is increased (suspension is harder).
Direction (b)	Spring preload is decreased (suspension is softer).

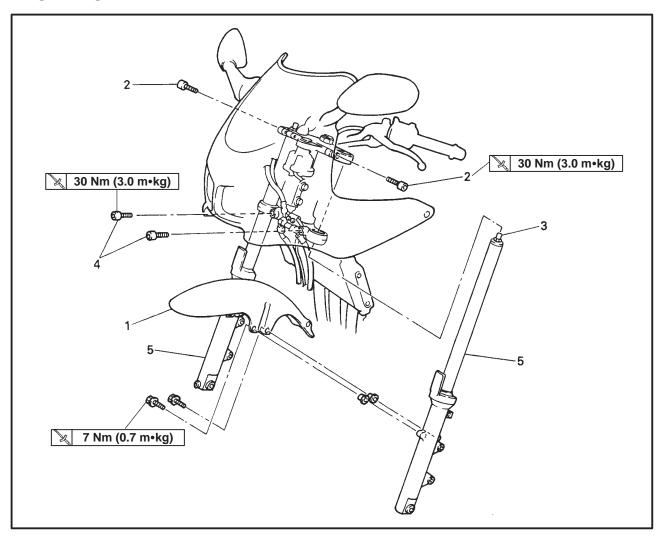
\_\_\_\_\_

**Adjusting positions** 

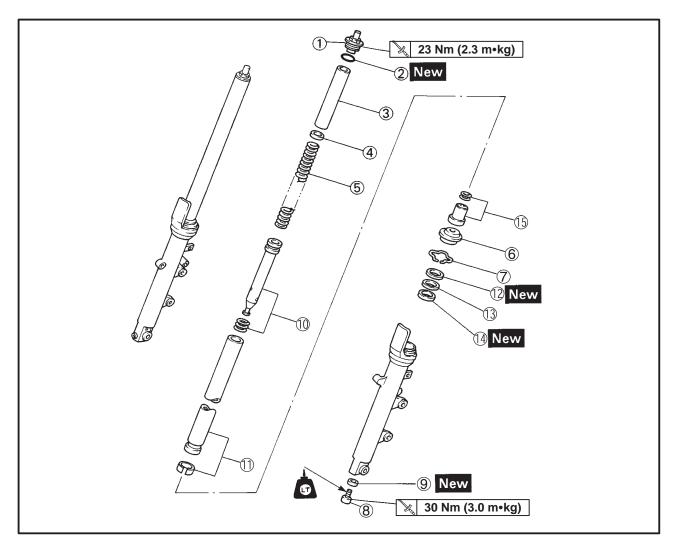
Standard: 5 Minimum: 7 Maximum: 1

#### **CHASSIS**

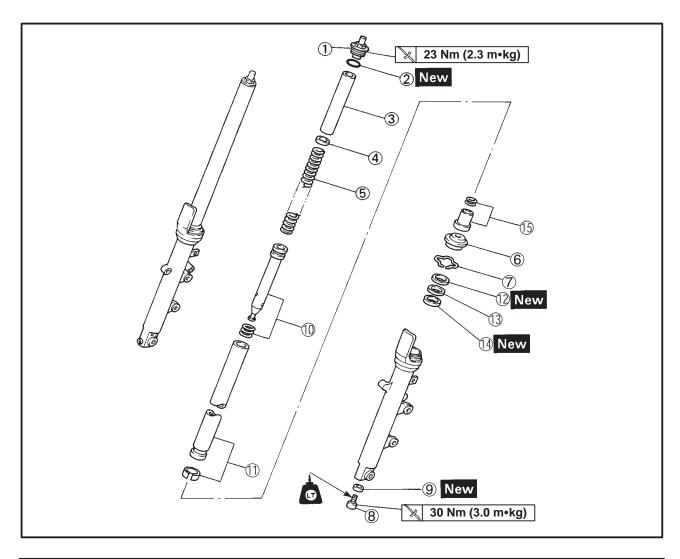
#### **FRONT FORK**



Order	Job name/Part name	Q'ty	Remarks
	Removing the front fork Front wheel		Remove the parts in the order listed. Refer to "FRONT WHEEL AND BRAKE DISCS" section.
	Front brake calipers		Refer to "FRONT AND REAR BRAKES" section.
1	Front fender	1	
2	Bolt (upper bracket)	2	Loosen - Refer to "REMOVING/
3	Cap bolt	2	Loosen INSTALLING THE FRONT
4	Bolt (lower bracket)	2	Loosen ☐ FORK LEGS" section.
5	Front fork assembly (left/right)	1/1	Refer to "REMOVING/INSTALLING THE FRONT FORK LEGS" section. For installation, reverse the removal procedure.



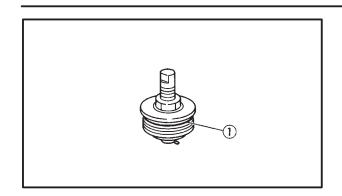
Order	Job name/Part name	Q'ty	Remarks		
	Disassembling the front fork		Disassembly the parts in the order listed.		
1	Cap bolt	1	, 		
	O-ring	1			
(2) (3) (4) (5) (6)	Spacer	1			
( <del>4</del> )	Washer	1			
(5)	Front fork spring	1	Refer to "ASSEMBLING THE FRONT		
<u>6</u>	Dust seal	1	FORK LEGS" section.		
(7)	Oil seal clip	1			
(7) (8)	Bolt	1			
9	Gasket	1			
10	Damper rod/rebound spring	1/1			
<u>(11)</u>	Inner tube/Inner tube bushing	1	Refer to "DISASSEMBLING/		
(11) (12)	Oil seal	1	ASSEMBLING THE FRONT FORK		
13	Washer	1	LEGS" section.		



Order	Job name/Part name	Q'ty	Remarks
(14) (15)	Outer tube bushing Oil flow stopper		Refer to "ASSEMBLING THE FRONT FORK LEGS" section. For assembly, reverse the disassembly procedure.

#### **FRONT FORK**





#### CHECKING THE FRONT FORK LEGS

- 1. Check:
  - cap bolt O-ring ①
    Damage/wear → Replace.

EB703700

#### **ASSEMBLING THE FRONT FORK LEGS**

- 1. Fill:
  - front fork leg (with the specified amount of the recommended fork oil)



Quantity (each front fork leg) 0.465 L



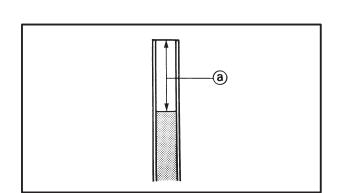
Yamaha fork and shock oil 10 W or equivalent.



Front fork leg oil level (a) (from the top of the inner tube, with the inner tube fully compressed and without the fork spring) 132 mm



- While filling the front fork leg, keep it upright.
- After filling, slowly pump the front fork leg up and down to distribute the fork oil.

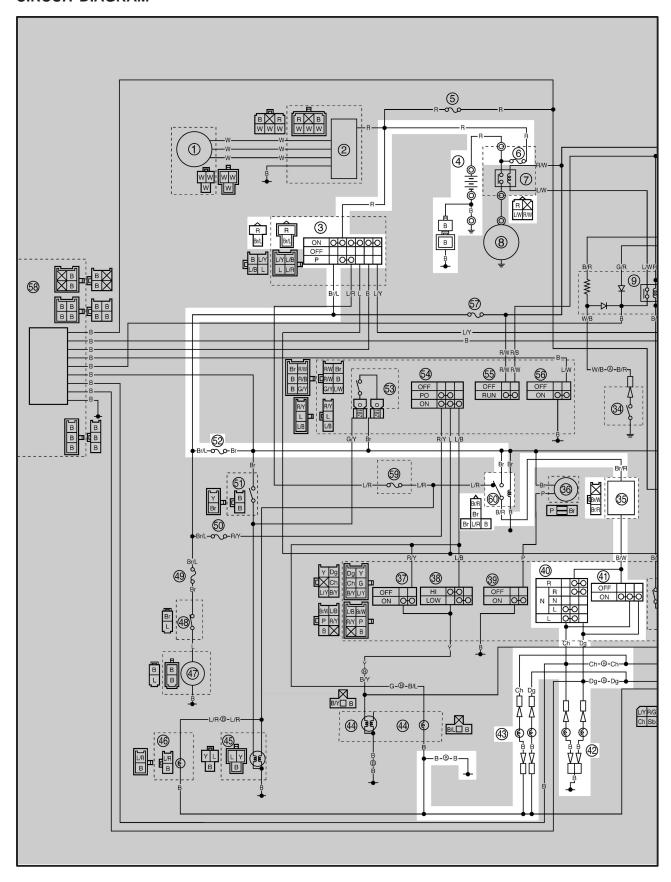




EB806000

#### **ELECTRICAL**

### SIGNAL SYSTEM CIRCUIT DIAGRAM





- 3 Main switch
  4 Battery
  6 Fuse (main)
  35 Flasher relay
  40 Turn switch
- 41 Hazard switch
- 42 Front turn signal light
  43 Rear turn signal light
  52 Fuse (signal)
  60 Relay 2



#### SIGNAL SYSTEM CHECK

EB80602

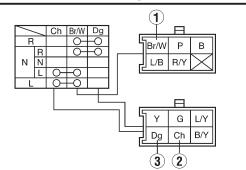
- 1. If the turn signal light and/or turn indicator light fails to blink:
- 1. Bulb and bulb socket
- Check the bulb and bulb socket for continuity.



2. Turn switch

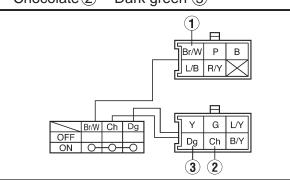
- Disconnect the left handlebar switch couplers from the wire harness.
- Set the hazard switch "OFF"
- Check for continuity as follows: Brown/White ① – Chocolate ②

Brown/White ① – Dark green ③





- 3. Hazard switch
- Disconnect the left handlebar switch couplers from the wire harness.
- Set the turn switch "Neutral position"
- Check for continuity as follows:
- Brown/White ① Chocolate ②
- Brown/White 1 Dark green 3
- Chocolate 2 Dark green 3





**NO CONTINUITY** 

Replace the bulb and/or bulb socket.

**NO CONTINUITY** 

Replace the left handlebar switch.

**NO CONTINUITY** 

Replace the left handlebar switch.





#### 4. Voltage

• Connect the pocket tester (DC 20 V) to the flasher relay coupler.

Tester (+) lead → Brown terminal ①
Tester (-) lead → Frame ground

- Turn the main switch to "ON".
- Check the voltage (12 V) of the "Brown" ① lead at the flasher relay terminal.



#### 5. Voltage

• Connect the pocket tester (DC 20 V) to the flasher relay coupler.

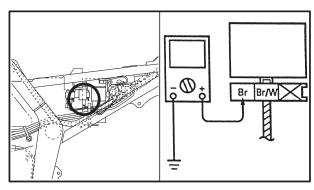
Tester (+) lead  $\rightarrow$ 

Brown/White terminal ①

Tester (–) lead  $\rightarrow$  Frame ground

- Turn the main switch to "ON".
- Turn the turn switch to "L"/"R" or push the hazard switch.
- Check the voltage (12 V) on the "Brown/White" ① lead at the flasher relay terminal.

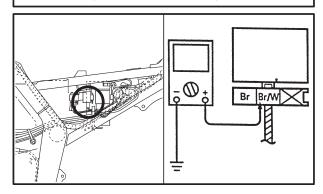




**OUT OF SPECIFICATION** 



The wiring circuit from the main switch to the flasher relay connector is faulty, repair it.



**OUT OF SPECIFICATION** 



The flasher relay is faulty, replace it.





#### 6. Voltage

- Connect the pocket tester (DC 20 V) to the bulb socket connector.
- A Flasher light
- B Turn indicator light

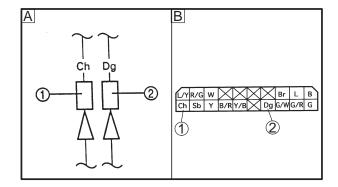
#### At the flasher light (left):

Tester (+) lead → Chocolate lead ①
Tester (-) lead → Frame ground

At the flasher light (right):

**Tester (+) lead** → **Dark green lead** ②

Tester (-) lead → Frame ground



#### • Turn the main switch to "ON".

- Turn the turn switch to "L"/"R" or push the hazard switch.
- Check the voltage (12 V) of the "Chocolate" lead or "Dark green" lead on the bulb socket connector.



This circuit is not faulty.

#### **OUT OF SPECIFICATION**



The wiring circuit from the left handlebar switch to the bulb socket connector is faulty, repair it.

#### **CLOCK**

EAS00805

The clock fails to come on.

- 1. Voltage
- Connect the pocket tester (DC 20 V) to the clock coupler.

Tester (+) read  $\rightarrow$  Brow 1

Tester (−) read → Frame ground

- Turn the main switch to "ON".
- Check the voltage (12 V) on the "Brown" ① lead at the clock terminal.



MEETS SPECIFICATION

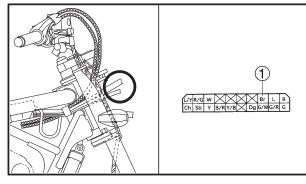
#### 2. Clock

- Check that the clock is operating properly.
- When setting the clock after its power source has been disconnected (e.g., when the battery is removed), first set the clock to 1:00 AM and then to the correct time.



MEETS SPECIFICATION

This circuit is not faulty.



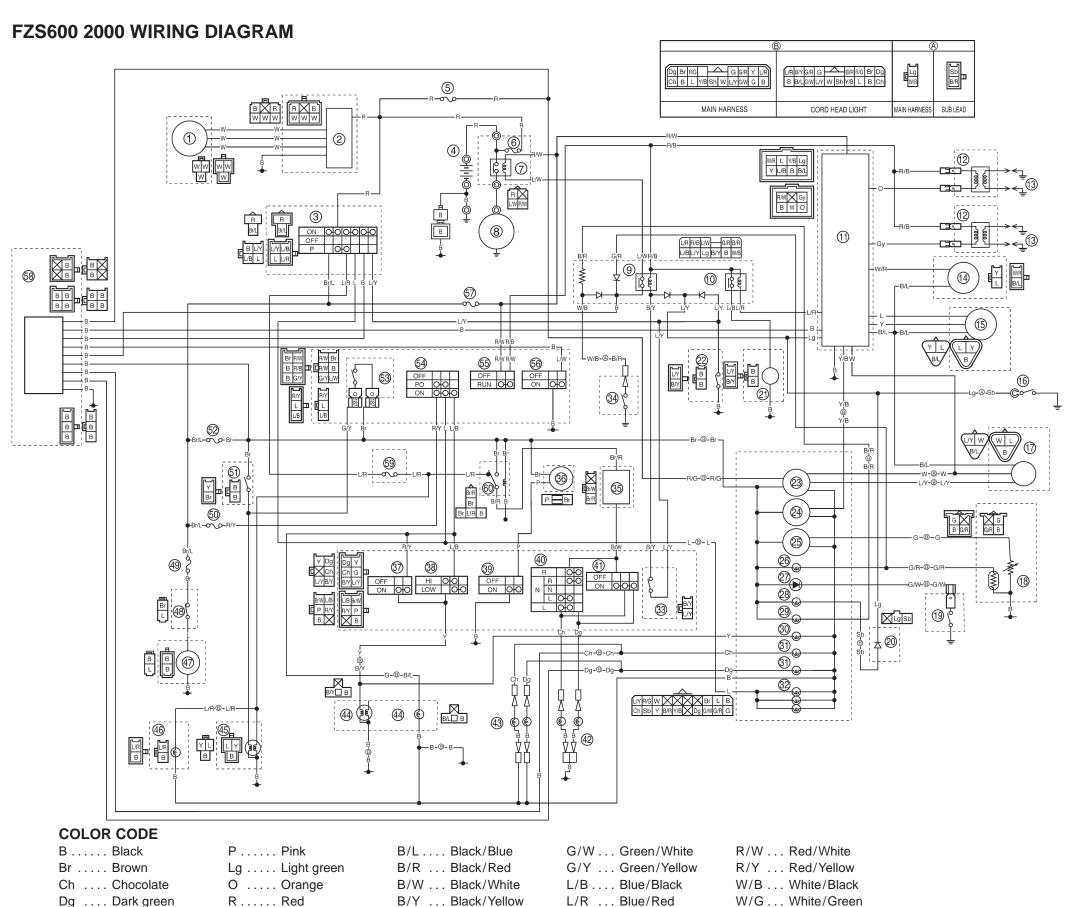
**OUT OF SPECIFICATION** 

The wiring circuit from the main switch to the clock coupler is faulty, repair it.

**OUT OF SPECIFICATION** 



The clock is faulty, replace it.



Br/L ... Brown/Blue

G/R ... Green/Red

Br/W .. Brown/White

L/W ... Blue/White

L/Y . . . . Blue/Yellow

R/B ... Red/Black

W/R ... White/Red

Y/B ... Yellow/Black

Y/R ... Yellow/Red

G ..... Green

Gy .... Gray

L ..... Blue

Sb ..... Skv blue

W ..... White

Y ..... Yellow

- 1 A.C. magneto
- (2) Rectifier/regulator
- (3) Main switch
- (4) Battery
- 5 Fuse (back up)
- 6 Fuse (main)
- 7 Starter relay
- 8 Starter motor
- (9) Starting circuit cut-off relay
- 10 Fuel pump relay
- (11) Ignitor unit
- (12) Ignition coil
- 13 Spark plug
- 14) Pick up coil
- (15) Throttle position sensor
- 16 Neutral switch
- (17) Speed sensor
- 18 Fuel sender
- 19 Thermo switch (engine temperature)
- 20 Diode
- 21) Fuel pump
- 2 Sidestand switch
- 23 Speedometer
- 24) Tachometer
- 25 Fuel meter
- 26 Fuel level warning light 27 Engine temperature
- warning light
- 28 Neutral indicator light
- 29 Oil level warning light
- 30 High beam indicator light

- (31) Turn indicator light
- 32 Meter light
- 33 Clutch switch
- 34 Oil level switch 35 Flasher relay
- 36 Horn
- (37) Pass switch
- 38 Dimmer switch
- 39 Horn switch
- 40 Turn switch
- (41) Hazard switch
- 42 Front turn signal light
- 43 Rear turn signal light
- 44 Headlight
- 45 Tail/Brake light
- 46 Auxiliary light
- 47) Fan motor
- 48 Thermo switch (fan motor)
- 49 Fuse (fan motor) 50 Fuse (head light)
- (51) Rear brake switch
- 52 Fuse (signal)
- 53 Front brake switch 54 Light switch
- (55) Engine stop switch 56 Starter switch
- 57 Fuse
- 58 Alarm
- 59 Fuse (parking)
- 60 Relay 2