



Except for California (06 Model)

XVS11AWV

XVS11ATV

For California (04 Model)

XVS1100ASC

XVS1100ATSC

**SUPPLEMENTARY
SERVICE MANUAL**

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and data for the XVS1100A. For complete service information procedures it is necessary to use this Supplementary Service Manual together with the following manual.

XVS1100L/XVS1100LC SERVICE MANUAL: LIT-11616-12-63 (5EL-28197-E0)

XVS1100AM/XVS1100AMC SUPPLEMENTARY SERVICE

MANUAL: LIT-11616-13-36 (5KS-28197-E0)

XVS1100AWR(C)/XVS1100ATR(C) SUPPLEMENTARY SERVICE

MANUAL: LIT-11616-16-46 (5KS-28197-E1)

EAS00001

**XVS11AWV/XVS11ATV
XVS1100ASC/XVS1100ATSC
SUPPLEMENTARY
SERVICE MANUAL**

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First Edition, October 2005

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P/ N LIT-11616-19-82

NOTICE

This manual was produced by the Yamaha Motor Company, Ltd. 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. Therefore, anyone who uses this book to perform maintenance and repairs on Yamaha Vehicles should have a basic understanding of mechanics and the techniques to repair these types of vehicles. Repair and maintenance work attempted by anyone without this knowledge is likely to render the vehicle unsafe and unfit for use.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the vehicle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his vehicle and to conform with federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all of 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.

This Service Manual contains information regarding periodic maintenance to the emission control system. Please read this material carefully.

NOTE:

Designs and specifications are subject to change without notice.

IMPORTANT MANUAL INFORMATION

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



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

⚠ WARNING

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

② Each chapter is divided into sections. The current section title is shown at the top of each page, except in Chapter 3 ("PERIODIC CHECKS AND ADJUSTMENTS"), where the sub-section title(s) appears.

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. Refer to "SYMBOLS".

⑦ A job instruction chart accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.

⑧ Jobs requiring more information (such as special tools and technical data) are described sequentially.

CLUTCH ENG

CLUTCH
CRANKCASE COVER (RIGHT)

⑤ → ④ → ⑦

Order	Job name/Part name	Q'ty	Remarks
	Crankcase cover (right) removal		Remove the parts in the order below. Stand the motorcycle on a level surface. WARNING Securely support the motorcycle so there is no danger of it falling over. Refer to "ENGINE OIL REPLACE-MENT" in CHAPTER 3.
	Engine oil		Refer to "ENGINE REMOVAL".
1	Muffler assembly 1,2	1	
2	Brake pedal link	1	
3	Oil filter cover plate	1	L=70 mm × 1,65 mm × 1,25 mm × 3
4	O-ring	1	
5	Oil filter	1	L=65 mm × 1,55 mm × 1,45 mm × 4, 30 mm × 4
6	Crankcase cover (right)	1	

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CLUTCH ENG

CLUTCH REMOVAL

1. Straighten:
• Lock washer tab

2. Loosen:
• Nut (clutch boss) ①

NOTE:
Loosen the nut (clutch boss) ① while holding the clutch boss ② with the clutch holding tool ③.

Clutch holding tool:
90890-04086

PRIMARY DRIVE GEAR REMOVAL

1. Straighten:
• Lock washer tab

2. Loosen:
• Nut (primary drive gear) ①

NOTE:
Place a copper plate ② between the teeth of the primary drive gear ③ and primary driven gear to lock them.

CLUTCH INSPECTION

1. Inspect:
• Friction plates
Wear/damage → Replace the friction plates as a set.

2. Measure:
• Friction plate thickness
Out of specification → Replace the friction plates as a set.
Measure at four places.

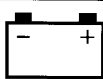
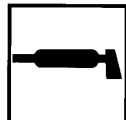
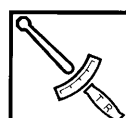
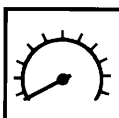
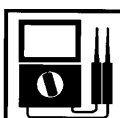
Thickness (friction plate):
2.9 ~ 3.1 mm
•Wear limits: 2.6 mm

3. Inspect:
• Clutch plate
Damage → Replace the clutch plates as a set.

4. Measure:
• Clutch plate warpage
Out of specification → Replace the clutch plates as a set.
Use a surface plate and a feeler gauge ①.

Warp limit (clutch plate):
Less than 0.2 mm

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① GEN INFO 	② SPEC 	
③ CHK ADJ 	④ ENG 	
⑤ CARB 	⑥ CHAS 	
⑦ ELEC 	⑧ TRBL SHTG 	
⑨ 	⑩ 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	⑲ 
⑳ 	㉑ 	㉒ 
㉓ 	㉔ New	

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ILLUSTRATED SYMBOLS

The following symbols are not relevant to every vehicle.

Symbols ① to ⑧ indicate the subject of each chapter.

- ① General information
- ② Specifications
- ③ Periodic checks and adjustments
- ④ Engine
- ⑤ Carburetor
- ⑥ Chassis
- ⑦ Electrical system
- ⑧ Troubleshooting

Symbols ⑨ to ⑯ indicate the following.

- ⑨ Serviceable with engine mounted
- ⑩ Filling fluid
- ⑪ Lubricant
- ⑫ Special tool
- ⑬ Tightening torque
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Electrical data

Symbols ⑰ to ㉒ in the exploded diagrams indicate the types of lubricants and lubrication points.

- ⑰ Engine oil
- ⑱ Gear oil
- ⑲ Molybdenum-disulfide oil
- ⑳ Wheel-bearing grease
- ㉑ Lithium-soap-based grease
- ㉒ Molybdenum-disulfide grease

Symbols ㉓ to ㉔ in the exploded diagrams indicate the following.

- ㉓ Apply locking agent (LOCTITE®)
- ㉔ Replace the part

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**XVS11AWV/XVS11ATV/XVS1100ASC/XVS1100ATSC
WIRING DIAGRAM (for US and CAL)**



SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Standard
Model code:	XVS1100ASC : 5YS1 (For CAL) XVS1100ATSC : 5YS4 (For CAL) XVS1100ATTC : 5YSD (For CAL) XVS1100AWTC : 5YS9 (For CAL) XVS11ATV : 5YSM (For U.S.A.) XVS11ATVC : 5YSN (For CAL) XVS11AWV : 5YSH (For U.S.A.) XVS11AWVC : 5YSJ (For CAL)
Basic weight With oil and fuel Maximum load	XVS1100ASC/XVS1100ATSC/XVS1100ATTC/ XVS1100AWTC/XVS11ATVC/XVS11AWVC : 288.0 kg (635 lb) XVS11ATV/XVS11AWV : 285.0 kg (628 lb) XVS1100ASC/XVS1100ATSC/XVS1100ATTC/ XVS1100AWTC/XVS11ATVC/XVS11AWVC : 200 kg (441 lb) XVS11ATV/XVS11AWV : 203 kg (448 lb)



MAINTENANCE SPECIFICATIONS ENGINE

Item	Standard	Limit
Final gear oil:		
Type	SAE80 API GL-4 Hypoid gear oil	...
Quantity	0.19 L (0.20 US qt) (0.17 Imp.qt)	...
Carburetor:		
Type × quantity	BSR37 × 2	...
Manufacturer	MIKUNI	...
ID mark	5YS1 00	...
Main jet	#1:#112.5 #2:#115	...
Main air jet	#55	...
Jet needle	5DL43-53-1	...
Needle jet	P-0M	...
Pilot air jet 1	#63.8	...
Pilot air jet 2	#145	...
Pilot outlet	1	...
Pilot jet	#17.5	...
Bypass 1	0.8	...
Bypass 2	0.8	...
Bypass 3	0.8	...
Valve seat size	1.2	...
Starter jet 1	#42.5	...
Starter jet 2	0.8	...
Throttle valve size	#125	...
Fuel level	4–5 mm (0.16–0.20 in)	...



CHASSIS

Item	Standard	Limit
Front suspension:		
Type	Telescopic fork	...
Spring/shock absorber type	Coil spring/oil damper	...
Shock absorber travel	140.0 mm (5.51 in)	...
Fork spring free length	371.9 mm (14.64 in)	...
Collar length	183.0 mm (7.20 in)	...
Installed length	334.4 mm (13.17 in)	...
Spring rate K1	4.40 N/mm (25.12 lb/in) (0.45 kgf/mm)	...
Spring rate K2	6.30 N/mm (35.97 lb/in) (0.64 kgf/mm)	...
Spring stroke K1	0.0–77.5 mm (0.00–3.05 in)	...
Spring stroke K2	77.5–140.0 mm (3.05–5.51 in)	...
Inner tube outer diameter	41.0 mm (1.61 in)	...
Optional spring available	No	...
Recommended oil	Yamaha fork oil 10WT	...
Quantity	488.0 cm ³ (16.50 US oz) (17.21 Imp.oz)	...
Level	99.0 mm (3.90 in)	...



ELECTRICAL

Item	Standard	Limit
TCI:		
Pickup coil resistance	189–231 Ω Gray–Black	...
TCI unit model/manufacturer	J4T145/MITSUBISHI	...
Battery:		
Model	GT14B-4	...
Voltage, capacity	12 V, 12.0 Ah	...
Specific gravity	1.32	...
Manufacturer	GS YUASA	...
Ten hour rate amperage	1.20 A	...
Bulb voltage, wattage $\times$ quantity:		
Headlight	12 V, 60 W/55.0 W $\times$ 1	...
Tail/brake light	12 V, 8.0 W/27.0 W $\times$ 1	...
Front turn signal/position light	XVS1100ASC/XVS1100ATSC : 12 V, 27 W/8.0 W $\times$ 2	...
	XVS1100ATTC/XVS1100AWTC/ XVS11ATV/XVS11ATVC/XVS11AWV/ XVS11AWVC :	
Rear turn signal light	12 V, 23 W/8.0 W $\times$ 2 XVS1100ASC/XVS1100ATSC : 12 V, 27.0 W $\times$ 2	...
	XVS1100ATTC/XVS1100AWTC/ XVS11ATV/XVS11ATVC/XVS11AWV/ XVS11AWVC :	
Meter lighting	12 V, 21.0 W $\times$ 2 14 V, 1.4 W $\times$ 2	...
Starting circuit cut-off relay:		
Model/manufacturer	G8R-30Y-U0/OMRON	...
Coil resistance	162–198 Ω	...
Fuel pump relay:		
Model/manufacturer	G8R-30Y-U0/OMRON	...
Coil resistance	162–198 Ω	...



Item	Standard	Limit
Fuses:		
Main fuse	30.0 A	...
Headlight fuse	15.0 A	...
Signaling system fuse	10.0 A	...
Ignition fuse	10.0 A	...
Backup fuse	5.0 A	...
Carburetor heater fuse	15.0 A	...
Ignitor unit fuse	5.0 A	...
Reserve fuse	30.0 A	...
Reserve fuse	15.0 A	...
Reserve fuse	10.0 A	...
Reserve fuse	5.0 A	...



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PERIODIC CHECKS AND ADJUSTMENTS

INTRODUCTION

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

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PERIODIC MAINTENANCE CHART FOR EMISSION CONTROL SYSTEM

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	* Fuel line	- Check fuel hoses for cracks or damage. - Replace if necessary.		✓	✓	✓	✓	✓
2	* Fuel filter	Replace.						Replace.
3	Spark plugs	- Check condition. - Adjust gap and clean. - Replace every 8000 mi (13000 km) or 12 months.		✓	Replace.	✓	Replace.	✓
4	* Valve clearance	Check and adjust valve clearance when engine is cold.	✓	✓	✓	✓	✓	✓
5	* Crankcase breather system	- Check breather hose for cracks or damage. - Replace if necessary.		✓	✓	✓	✓	✓
6	* Carburetor synchronization	Adjust synchronization of carburetors.	✓	✓	✓	✓	✓	✓
7	* Idle speed	Check and adjust engine idle speed.		✓	✓	✓	✓	✓
8	* Exhaust system	- Check for leakage. - Tighten if necessary. - Replace gasket(s) if necessary.		✓	✓	✓	✓	✓
9	* Evaporative emission control system (For California only)	- Check control system for damage. - Replace if necessary.				✓		

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

GENERAL MAINTENANCE AND LUBRICATION CHART

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	* Air filter element	- Clean with compressed air. - Replace if necessary.		✓	✓	✓	✓	✓
2	* Clutch	- Check operation. - Adjust or replace cable.	✓	✓	✓	✓	✓	✓
3	* Front brake	- Check operation, fluid level, and for fluid leakage. - Replace brake pads if necessary.	✓	✓	✓	✓	✓	✓
4	* Rear brake	- Check operation, fluid level, and for fluid leakage. - Replace brake pads if necessary.	✓	✓	✓	✓	✓	✓

GENERAL MAINTENANCE AND LUBRICATION CHART

CHK
ADJ



No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS					
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months	
5	*	Brake hoses	• Check for cracks or damage.		✓	✓	✓	✓	✓	
			• Replace.	Every 4 years						
6	*	Wheels (XVS11V)	• Check runout, spoke tightness and for damage. • Tighten spokes if necessary.		✓	✓	✓	✓	✓	
7	*	Wheels (XVS11AWV /XVS11ATV)	• Check runout and for damage. • Replace if necessary.		✓	✓	✓	✓	✓	
8	*	Tires	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		✓	✓	✓	✓	✓	
9	*	Wheel bearings	• Check bearings for smooth operation. • Replace if necessary.		✓	✓	✓	✓	✓	
10	*	Swingarm pivot bearings	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.			✓		Repack.		
11	*	Steering bearings	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease every 16000 mi (25000 km) or 24 months.	✓	✓	✓	✓	Repack.	✓	
12	*	Chassis fasteners	• Check all chassis fitting and fasteners. • Correct if necessary.		✓	✓	✓	✓	✓	
13		Brake and clutch lever pivot shafts	• Apply lithium-soap-based grease (all-purpose grease) lightly.		✓	✓	✓	✓	✓	
14		Brake and shift pedal pivot shafts	• Apply lithium-soap-based grease (all-purpose grease) lightly.		✓	✓	✓	✓	✓	
15		Sidestand pivot	• Check operation. • Apply lithium-soap-based grease (all-purpose grease) lightly.		✓	✓	✓	✓	✓	
16	*	Sidestand switch	• Check operation and replace if necessary.	✓	✓	✓	✓	✓	✓	
17	*	Front fork	• Check operation and for oil leakage. • Replace if necessary.		✓	✓	✓	✓	✓	
18	*	Shock absorber assembly	• Check operation and for oil leakage. • Replace if necessary.		✓	✓	✓	✓	✓	
19	*	Rear suspension link pivots	• Apply lithium-soap-based grease lightly.					✓		
20		Engine oil	• Change (warm engine before draining).	✓	✓	✓	✓	✓	✓	
21	*	Engine oil filter element	• Replace.	✓		✓		✓		
22		Final gear oil	• Check oil level and for oil leakage. • Change at initial 600 mi (1000 km) or 1 month, and thereafter every 16000 mi (25000 km) or 24 months.	Change.	✓	✓	✓	Change.	✓	
23	*	Control cables	• Apply Yamaha chain and cable lube or engine oil SAE 10W-30 thoroughly.	✓	✓	✓	✓	✓	✓	
24	*	Throttle grip housing and cable	• Check operation and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.		✓	✓	✓	✓	✓	

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

GENERAL MAINTENANCE AND LUBRICATION CHART



NOTE:

From 24000 mi (37000 km) or 36 months, repeat the maintenance intervals starting from 8000 mi (13000 km) or 12 months.

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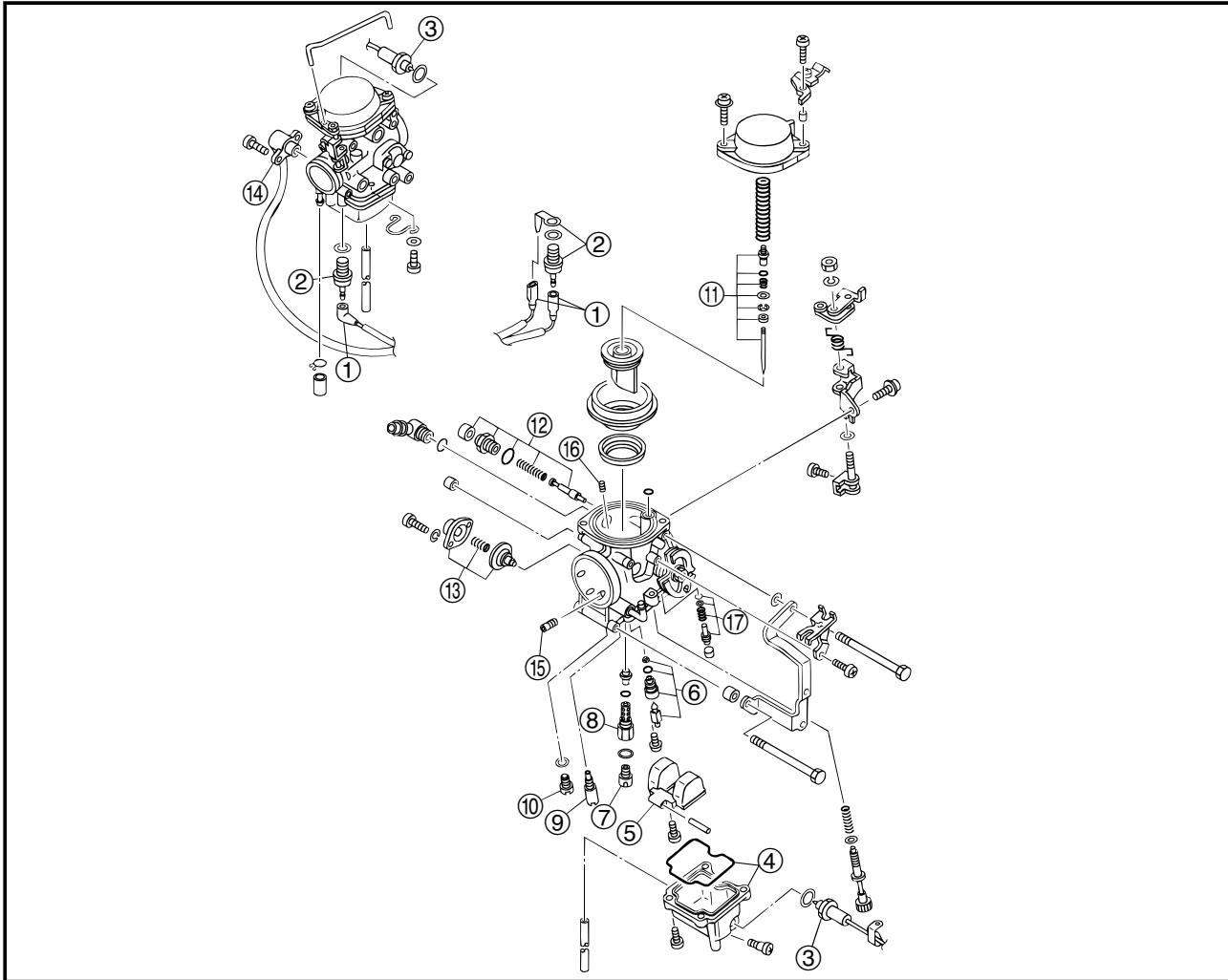
NOTE:

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
 - Hydraulic brake service
 - After disassembling the brake master cylinders and calipers, always change the fluid. Regularly check the brake fluid levels and fill the reservoirs as required.
 - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
 - Replace the brake hoses every four years and if cracked or damaged.
-

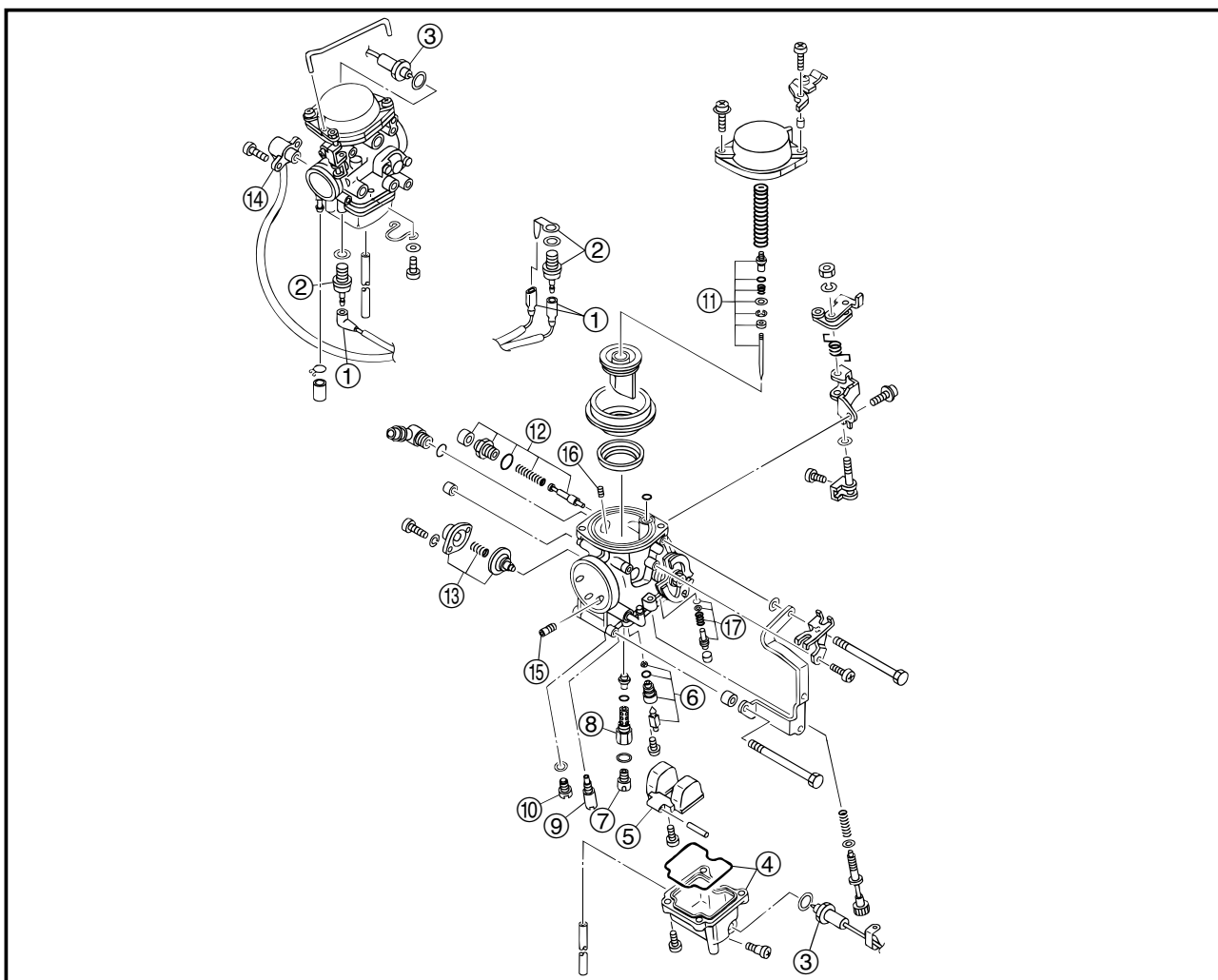


CARBURETOR

CARBURETOR



Order	Job name/Part name	Q'ty	Remarks
	Disassembling the carburetor.		Disassemble the parts in the order listed.
①	Carburetor heater leads	2	12V 30W
②	Carburetor heaters	2	
③	Fuel cut solenoid valve	2	Refer to "CARBURETOR ASSEMBLY" in 5EL-28197-E0 Chapter 5.
④	Float chamber/gasket	1/1	
⑤	Float	1	
⑥	Needle valve set	1	
⑦	Main jet	1	
⑧	Jet holder	1	
⑨	Pilot jet	1	
⑩	Starter jet	1	
⑪	Jet needle set	1	
⑫	Starter plunger set	1	



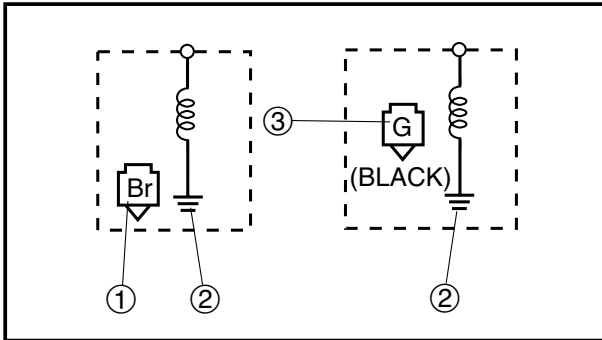
Order	Job name/Part name	Q'ty	Remarks
⑬	Diaphragm set	1	Refer to "ASSEMBLING THE CARBURETORS" in 5EL-28197-E0 Chapter 5.
⑭	Throttle position sensor	1	
⑮	Main air jet	1	Refer to "CHECKING AND ADJUSTING THE THROTTLE POSITION SENSOR (TPS)" in 5EL-28197-E0 Chapter 5.
⑯	Pilot air jet 2	1	
⑰	Throttle stop screw set	1	
			For assembly, reverse the disassembly procedure.



CHECKING THE FUEL CUT SOLENOID

1. Check:

- fuel cut solenoid valve



- Disconnect the fuel cut solenoid valve coupler from the wireharness.
- Remove the fuel cut solenoid valve from the carburetor.
- Connect the pocket tester ($\Omega \times 1k$) to the terminals of the fuel cut solenoid valve coupler and fuel cut solenoid body. (ground)

Fuel cut solenoid valve #1

Positive (+) pocket tester probe → brown terminal ①

Negative (–) pocket tester probe → ground ②

Fuel cut solenoid valve #2

Positive (+) pocket tester probe → green terminal ③

Negative (–) pocket tester probe → ground ②

- Measure the fuel cut solenoid valve resistance.

Out of specification → Replace the fuel cut solenoid valve.

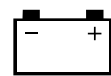


Fuel cut solenoid valve resistance

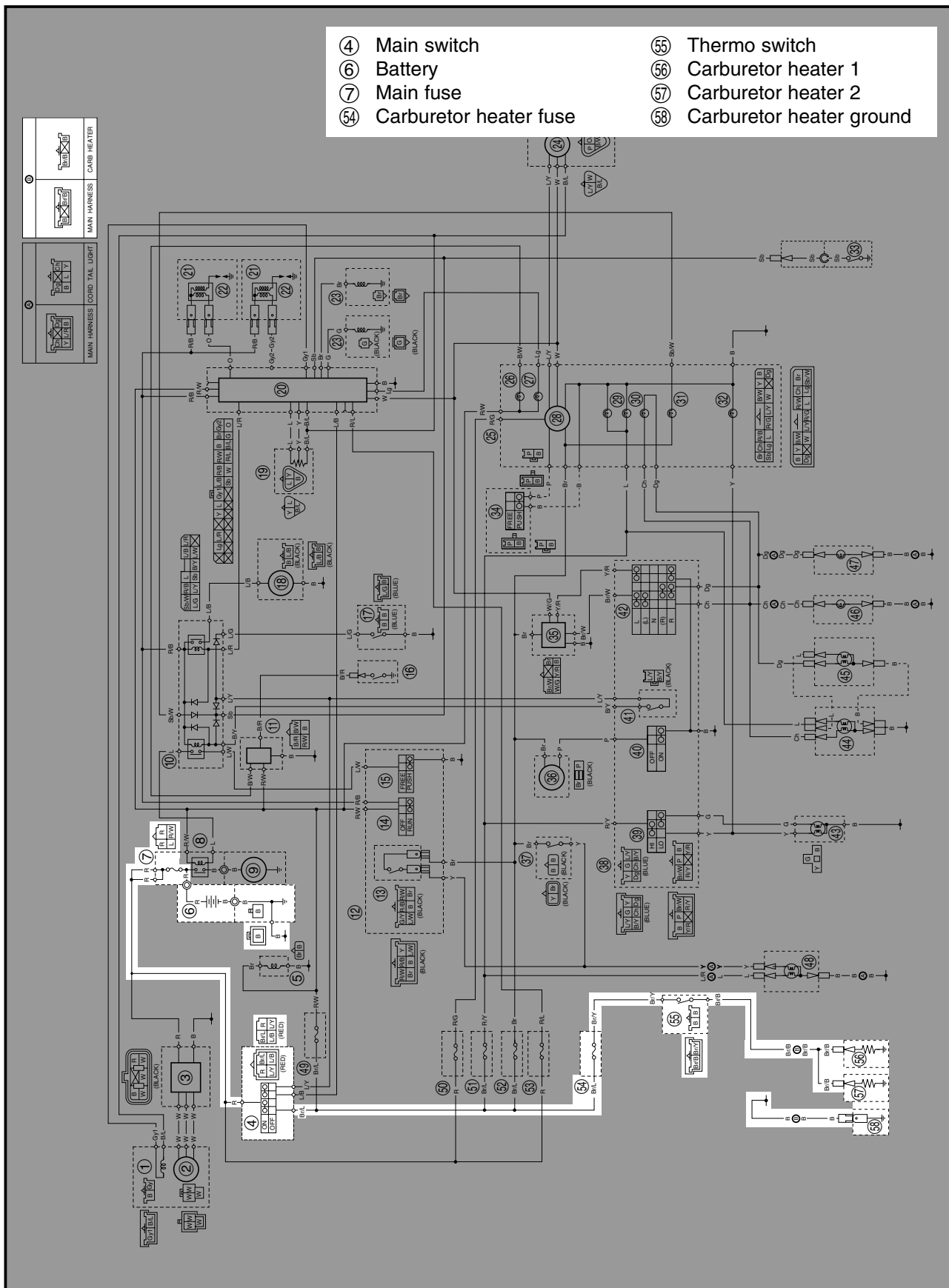
12 Ω at 20°C (68°F)

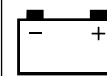
(brown – ground)

(green – ground)



ELECTRICAL

CARBURETOR HEATER SYSTEM
CIRCUIT DIAGRAM



EAS00781

TROUBLESHOOTING

The carburetor heater fails to operate.

Check:

1. main, and carburetor heater
2. battery
3. main switch
4. thermo switch
5. carburetor heater
6. wiring
(of the entire carburetor heater system)

NOTE:

- Before troubleshooting, remove the following part (-s):
 1. battery cover
 2. rider's seat
 3. fuel tank
 4. steering head side covers
 5. tool box cover
- Troubleshoot with the following special tool (-s).



Pocket tester:
90890-03112, YU-03112-C

EAS00738

1. Main, and carburetor heater fuses

- Check the main, and carburetor heater fuses for continuity.
Refer to "CHECKING THE FUSES" in 5EL-28197-E0 chapter 3.
- Are the main, and carburetor heater fuses OK?

YES

NO

Replace the fuse(-s).

EAS00739

2. Battery

- Check the condition of the battery.
Refer to "CHECKING AND CHARGING THE BATTERY" in 5EL-28197-E0 chapter 3.



Open-circuit voltage
12.8V or more at 20 °C (68 °F)

- Is the battery OK?

YES

NO

- Clean the battery terminals.
- Recharge or replace the battery.

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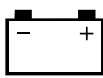
3. Main switch

- Check the main switch for continuity.
Refer to "CHECKING THE SWITCHES" in 5EL-28197-E0 chapter 7.
- Is the main switch OK?

YES

NO

Replace the main switch.

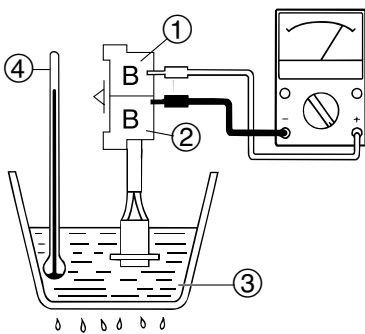


4. Thermo switch

- Remove the thermo switch from the thermo switch plate.
- Connect the pocket tester to the thermo switch lead.

Tester positive lead → black ①

Tester negative lead → black ②



- Immerse the thermo switch in the water ③.
- Check the thermo switch for continuity.
Note the temperatures while heating the water with the temperature gauge ④.

Test step	Water temperature	Good condition
1	Less than $16 \pm 3^{\circ}\text{C}$ ($60.8 \pm 5.4^{\circ}\text{F}$)	○
2	More than $16 \pm 3^{\circ}\text{C}$ ($60.8 \pm 5.4^{\circ}\text{F}$)	×
3	More than $11 \pm 3^{\circ}\text{C}$ ($51.8 \pm 5.4^{\circ}\text{F}$)	×
4	Less than $11 \pm 3^{\circ}\text{C}$ ($51.8 \pm 5.4^{\circ}\text{F}$)	○

Test 1 & 2 : Heat-up test

Test 3 & 4 : Cool-down test

○ : Continuity × : No continuity



Thermo switch
 $11 \pm 3^{\circ}\text{C}$
($51.8 \pm 5.4^{\circ}\text{F}$)

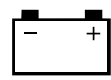
Thermo switch
 $16 \pm 3^{\circ}\text{C}$
($60.8 \pm 5.4^{\circ}\text{F}$)

•Is the thermo switch OK?

↓ YES

↓ NO

Replace the thermo switch.

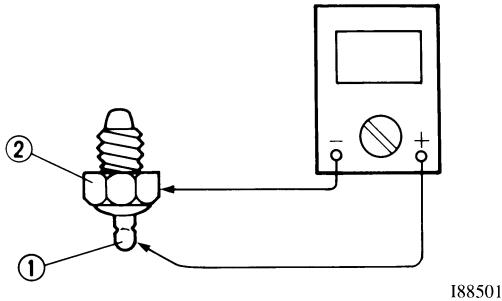


5. Carburetor heater

- Remove the carburetor heater from the carburetor body.
- Connect the pocket tester to the carburetor heater.

Tester positive lead → Heater terminal ①

Tester negative lead → Heater body ②



- Measure the heater resistance.



Carburetor heater resistance:

12 V 30 W : 3.2–5.8 Ω

at 20°C (68°F)

- Is the carburetor heater OK?

↓ YES

↓ NO

Replace the carburetor heater.

EAS00766

6. Wiring

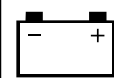
- Check the entire carburetor heater system's wiring.
Refer to "CIRCUIT DIAGRAM".
- Is the carburetor heater system's wiring properly connected and without defects?

↓ NO

↓ YES

Properly connect or repair the carburetor system's wiring.

The carburetor heater system circuit is OK.



SELF-DIAGNOSIS

The XVS11A features self-diagnosis.

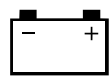
When the main switch is turned to “ON”, the following items are monitored and the condition codes are displayed on the engine indicator light (irrespective of whether the engine is running or not).

NOTE:

The XVS11A features a self-diagnosing system.

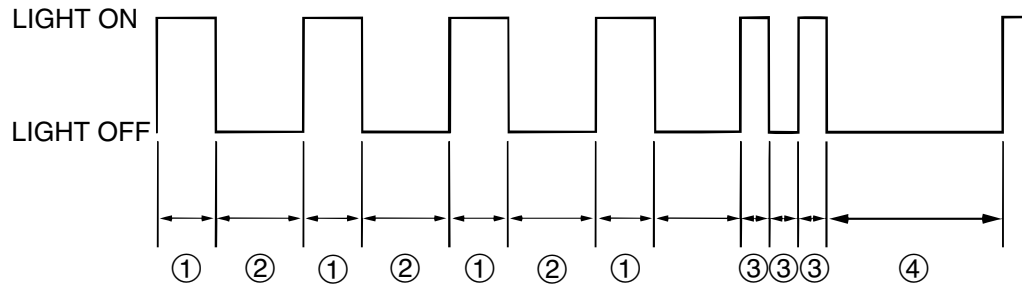
In the XVS11A, when the main switch is turned on the “Engine indicator light” in the speedometer comes on for 1.4 seconds then goes off. However, if there is a malfunction, it comes on for 1.4 seconds, goes off and then begins flashing. (However, it is on while the engine is running.)

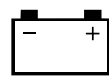
Item	Condition	Fail-safe action	Display condition code	
			When engine is stationary	When engine is running
Throttle position sensor (TPS)	Disconnected or short-circuit	Fixes the throttle position sensor to fully open.	Blinks in Fault code: 15	Light on
	Locked		Blinks in Fault code: 16	Light on
	When the main switch is turned to ON, a stuck is detected.		—	Light on
Speed sensor	Defective speed sensor pulse	—	Blinks in Fault code: 42	Light on
Ignition coil #1	Primary coil lead is short-circuit	Fuel cut solenoid valve #1 on.	Blinks in Fault code: 33	Light on
Ignition coil #2	Primary coil lead is short-circuit	Fuel cut solenoid valve #2 on.	Blinks in Fault code: 34	Light on
Fuel cut solenoid valve #1	Disconnected or short-circuit	—	Blinks in Fault code: 57	Light on
Fuel cut solenoid valve #2	Disconnected or short-circuit	—	Blinks in Fault code: 58	Light on

**Display order on the engine indicator light**

<Example> 42

- ① Light on (second)1 second
- ② Light off (seconds)1.5 seconds
- ③ Light on (seconds)0.5 seconds
- ④ Light off (seconds)3 seconds





TROUBLESHOOTING

The engine trouble warning light starts to display the self-diagnosis sequence.

Check:

1. throttle position sensor
2. speed sensor
3. ignition coil
4. fuel cut solenoid

NOTE:

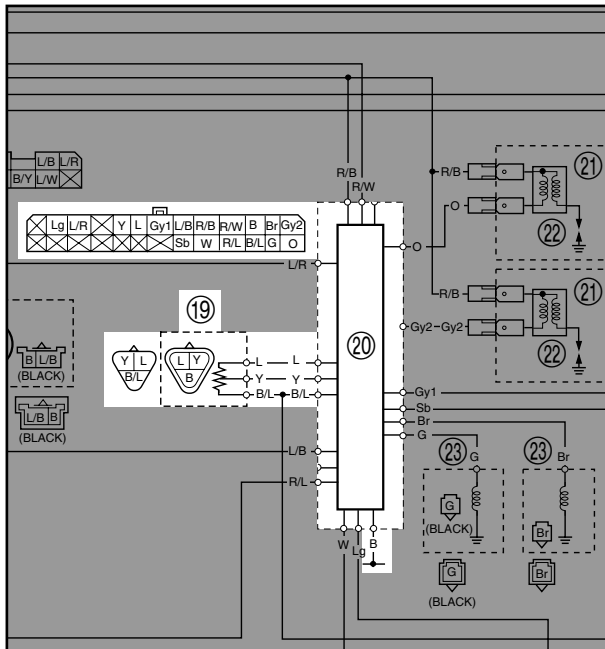
- Before troubleshooting, remove the following part(-s):
 1. rider seat
 2. fuel tank
 3. air filter case
 4. left side cover
- Troubleshoot with the following special tool(-s).



Pocket tester:
90890-03112, YU-03112-C

EAS00836

1. Throttle position sensor CIRCUIT DIAGRAM



- ①9 Throttle position sensor
②0 Ignitor unit

1. Wireharness

- Check the wireharness for continuity. Refer to "CIRCUIT DIAGRAM".
- Is the wireharness OK?



YES



NO

Repair or replace the wireharness.

EB812401

2. Throttle position sensor

- Check the throttle position sensor for continuity. Refer to "CHECKING AND ADJUSTING THE THROTTLE POSITION SENSOR" in 5EL-28197-E0 chapter 6.
- Is the throttle position sensor OK?



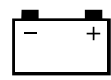
YES



NO

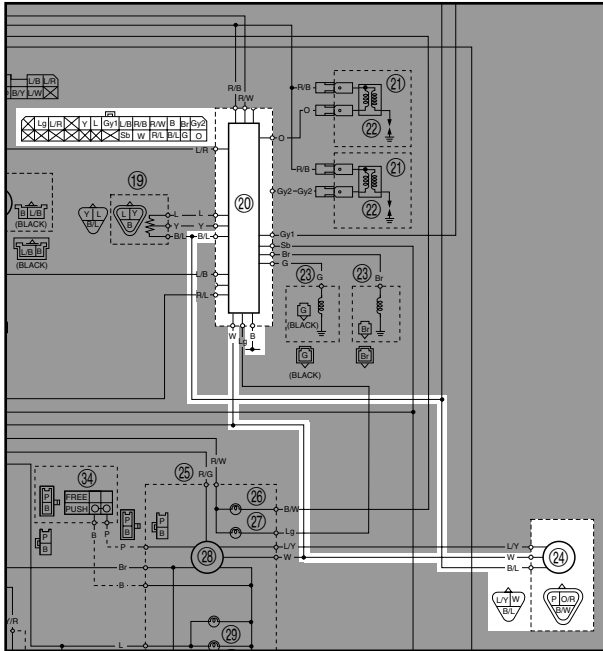
Replace the ignitor unit.

Replace the throttle position sensor.

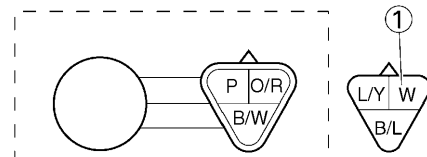


2. Speed sensor

CIRCUIT DIAGRAM



- ②① Ignitor unit
- ②④ Speed sensor



- Set the main switch to “ON”.
- Turn the rear wheel slowly.
- Check the tester voltage (0 V – 5 V – 0 V).
- Is the speed sensor OK?

↓ YES

Replace the ignitor unit.

↓ NO

Replace the speed sensor.

1. Wireharness

- Check the wireharness for continuity. Refer to “CIRCUIT DIAGRAM”.
- Is the wireharness OK?

↓ YES

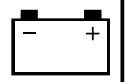
↓ NO

Repair or replace the wireharness.

2. Speed sensor

- Place the motorcycle on a suitable stand so that the rear wheel is elevated.
- Connect the pocket tester (DC 20 V) to the speed sensor connector.

Tester positive lead → White ① terminal
Tester negative lead → Body earth



3. Ignition coil

1. Wireharness

- Check the wireharness for continuity. Refer to "IGNITION SYSTEM" in 5EL-28197-E0 chapter 7.
- Is the wireharness OK?



YES



NO

Repair or replace the wireharness.

EAS00747

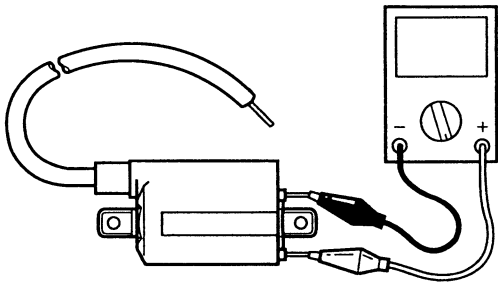
2. Ignition coil resistance

The following procedure applies to all of the ignition coils.

- Disconnect the ignition coil connectors from the ignition coil terminals.
- Connect the pocket tester ($\Omega \times 1$) to the ignition coil as shown.

Tester positive probe → red/black

Tester negative probe → orange (gray)



18110104

- Measure the primary coil resistance.



Primary coil resistance

3.57 ~ 4.83 Ω at 20°C (68°F)

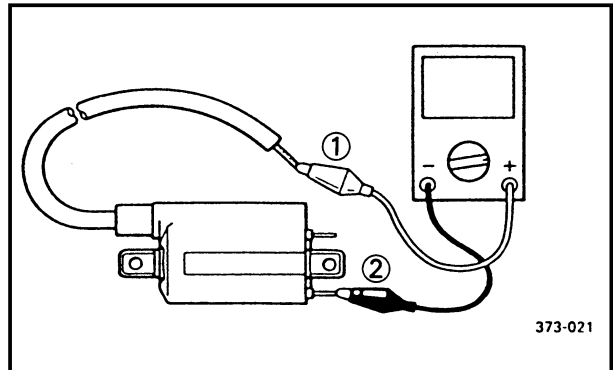
- Connect the pocket tester ($\Omega \times 1k$) to the ignition coil as shown.
- Measure the secondary coil resistance.

Tester positive probe →

spark plug lead ①

Tester negative probe →

Orange (gray) lead ②



373-021



Secondary coil resistance

10.7 ~ 14.5 k Ω at 20°C (68°F)

- Is the ignition coil OK?



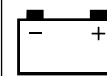
YES

Replace the ignitor unit.



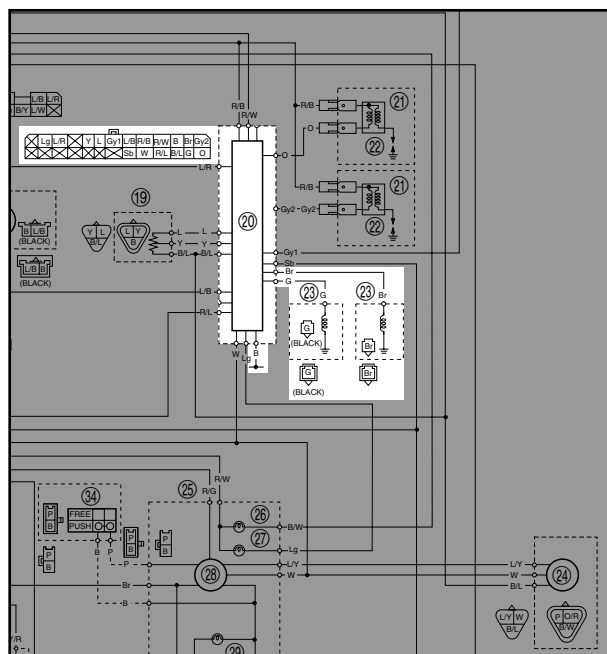
NO

Replace the ignition coil.



4. Fuel-cut solenoid

CIRCUIT DIAGRAM



- ② Igniter unit
- ② Fuel-cut solenoid 1 (#1 carburetor) (brown)
- ② Fuel-cut solenoid 2 (#2 carburetor) (green)

1. Wireharness

- Check the wireharness for continuity. Refer to "CIRCUIT DIAGRAM".
- Is the wireharness OK?

↓ YES

Replace the fuel-cut solenoid 1 or 2.

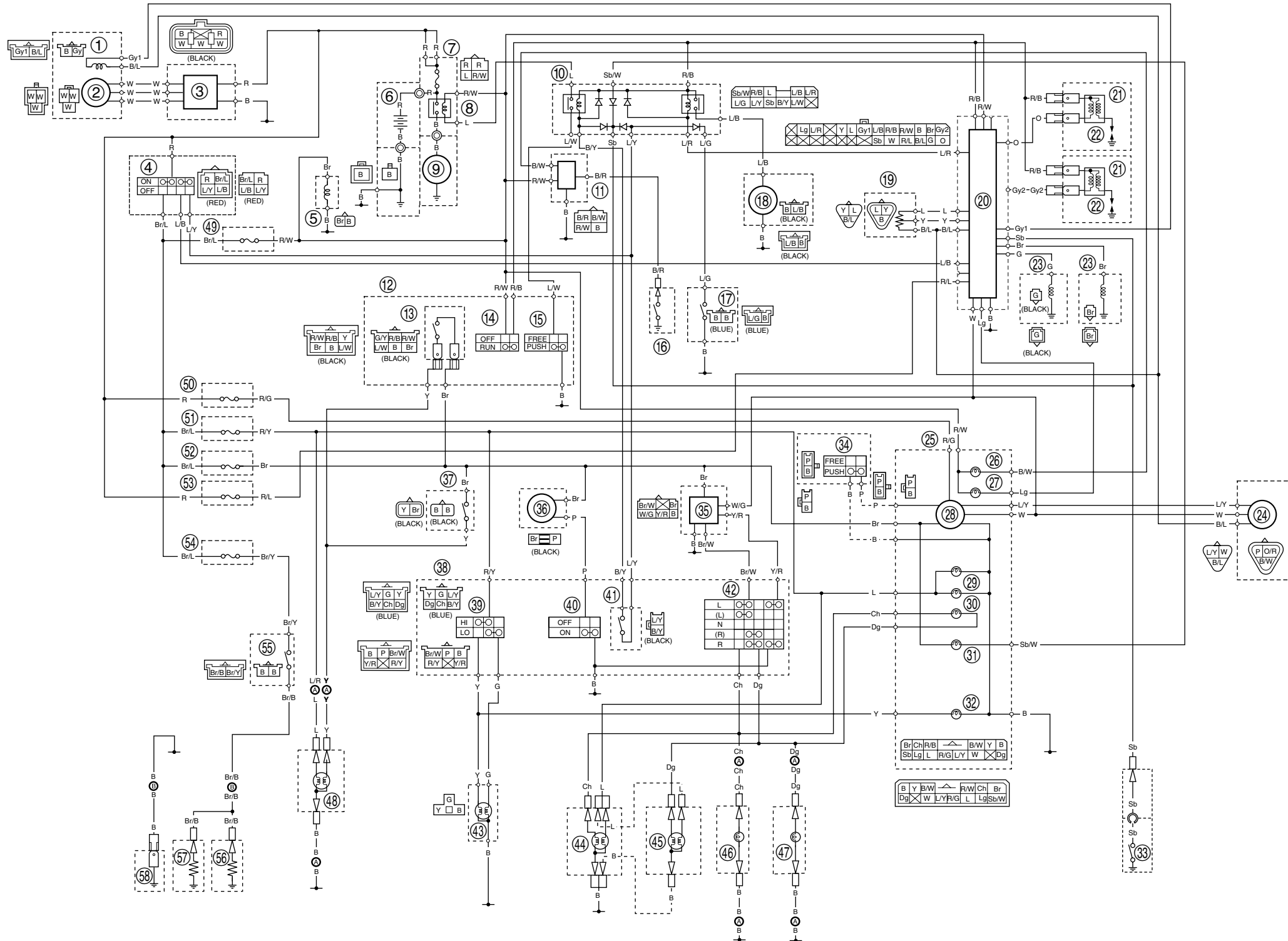
↓ NO

Repair or replace the wireharness.



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XVS11AWV/XVS11ATV/XVS1100ASC/XVS1100ATSC WIRING DIAGRAM (for US and CAL)



COLOR CORD

B.....Black
BrBrown
ChChocolate
DgDark green
GGreen
GyGray

L.....Blue
Lg.....Light green
Or.....Orange
P.....Pink
R.....Red
Sb.....Sky blue

W.....White
Y.....Yellow
B/ LBlack/ Blue
B/ WBlack/ White
B/ YBlack/ Yellow
Br/ BBrown/ Black

Br/ LBrown/ Blue
Br/ WBrown/ White
Br/ YBrown/ Yellow
L/ BBlue/ Black
L/ RBlue/ Red
L/ WBlue/ White

L/ YBlue/ Yellow
R/ BRed/ Black
R/ GRed/ Green
R/ WRed/ White
R/ Y Red/ Yellow
Y/ RYellow/ Red

- ① Pickup coil
- ② A.C. magneto (stator coil)
- ③ Rectifier/ regulator
- ④ Main switch
- ⑤ Solenoid (for CAL.)
- ⑥ Battery
- ⑦ Main fuse
- ⑧ Starter relay
- ⑨ Starter motor
- ⑩ Starting circuit cut-off relay
- ⑪ Oil lamp relay
- ⑫ Right handlebar switch
- ⑬ Front brake switch
- ⑭ Engine stop switch
- ⑮ Start switch
- ⑯ Oil level gauge
- ⑰ Sidestand switch
- ⑱ Fuel pump
- ⑲ Throttle position sensor
- ⑳ Ignitor unit
- ㉑ Ignition coil
- ㉒ Spark plug
- ㉓ Fuel cut solenoid valve
(#1: brown, #2: green)
- ㉔ Speed sensor
- ㉕ Meter assembly
- ㉖ Oil level caution light
- ㉗ Engine warning light
- ㉘ Speedmeter
- ㉙ Meter light
- ㉚ Turn signal indicator light
- ㉛ Neutral indicator light
- ㉜ High beam indicator light
- ㉝ Neutral switch
- ㉞ Trip switch
- ㉟ Flasher relay
- ㊱ Horn
- ㊲ Rear brake switch
- ㊳ Left handlebar switch
- ㊴ Dimmer switch
- ㊵ Horn switch
- ㊶ Clutch switch
- ㊷ Turn signal switch
- ㊸ Headlight
- ㊹ Rear turn signal light (right)
- ㊺ Rear turn signal light (left)
- ㊻ Front turn signal/ position light (right)
- ㊼ Front turn signal/ position light (left)
- ㊽ Tail / brake light
- ㊾ Ignition fuse
- ㊿ Backup fuse
- 1 Headlight fuse
- 2 Signal fuse
- 3 Igniter fuse
- 4 Carburetor heater fuse
- 5 Thermo switch
- 6 Carburetor heater 1
- 7 Carburetor heater 2
- 8 Carburetor heater ground