SUPPLEMENTARY SERVICE MANUAL
FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and data for the FJR1300(S)/FJR1300A(S) 2004. For complete service information procedures it is necessary to use this Supplementary Service Manual together with the following manuals.

FJR1300(N) 2001 SERVICE MANUAL: 5JW1-AE1
FJR1300(P) 2002 SUPPLEMENTARY SERVICE MANUAL: 5JW1-AE2
FJR1300(R)/FJR1300A(R) 2003 SUPPLEMENTARY SERVICE MANUAL: 5JW1-AE4
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.

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.

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.
### 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 checks and adjustments
4. Chassis
5. Engine
6. Cooling system
7. Fuel injection system
8. Electrical system
9. 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 H to M in the exploded diagrams indicate the types of lubricants and lubrication points.

18. Engine oil
19. Gear oil
20. Molybdenum disulfide oil
21. Wheel bearing grease
22. Lithium soap base grease
23. Molybdenum disulfide grease

Symbols O to 2 in the exploded diagrams indicate the following.

24. Apply locking agent (LOCTITE®)
25. Replace the part
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FJR1300 WIRING DIAGRAM

FJR1300A WIRING DIAGRAM
The main function of a fuel supply system is to provide fuel to the combustion chamber at the optimum air-fuel ratio in accordance with the engine operating conditions and the atmospheric temperature.

In the conventional carburetor system, the air-fuel ratio of the mixture that is supplied to the combustion chamber is created by the volume of the intake air and the fuel that is metered by the jet that is used in the respective carburetor. Despite the same volume of intake air, the fuel volume requirement varies by the engine operating conditions, such as acceleration, deceleration, or operating under a heavy load. Carburetors that meter the fuel through the use of jets have been provided with various auxiliary devices, so that an optimum air-fuel ratio can be achieved to accommodate the constant changes in the operating conditions of the engine.

As the requirements for the engine to deliver more performance and cleaner exhaust gases increase, it becomes necessary to control the air-fuel ratio in a more precise and finely tuned manner. To accommodate this need, this model has adopted an electronically controlled fuel injection (FI) system, in place of the conventional carburetor system. This system can achieve an optimum air-fuel ratio required by the engine at all times by using a microprocessor that regulates the fuel injection volume according to the engine operating conditions detected by various sensors.

The adoption of the FI system has resulted in a highly precise fuel supply, improved engine response, better fuel economy, and reduced exhaust emissions. Furthermore, the air induction system (AI system) has been placed under computer control together with the FI system in order to realize cleaner exhaust gases.
FI SYSTEM

The fuel pump delivers fuel to the injector via the fuel filter. The fuel pump maintains the fuel pressure that is applied to the injector at only 324 kPa (3.24 kg/cm², 46.08 psi). Accordingly, when the energizing signal from the ECU energizes the injector, the fuel passage opens, causing the fuel to be injected into the intake manifold only during the time the passage remains open. Therefore, the longer the length of time the injector is energized (injection duration), the greater the volume of fuel that is supplied. Conversely, the shorter the length of time the injector is energized (injection duration), the lesser the volume of fuel that is supplied.

The injection duration and the injection timing are controlled by the ECU. Signals that are input from the throttle position sensor, crankshaft position sensor, intake air pressure sensor, intake air temperature sensor, coolant temperature sensor, and O2 sensor enable the ECU to determine the injection duration. The injection timing is determined through the signals from the crankshaft position sensor and the cylinder identification sensor. As a result, the volume of fuel that is required by the engine can be supplied at all times in accordance with the driving conditions.
## GENERAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model code</td>
<td>FJR1300: 5JWG (for Europe)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>5JWH (for F)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>5JWJ (for Oceania)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>FJR1300A: 5VS7 (for Europe)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>5VS8 (for F)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>5VS9 (for Oceania)</td>
<td>----</td>
</tr>
</tbody>
</table>

## ENGINE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fuel pump</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump type</td>
<td>Electric</td>
<td>----</td>
</tr>
<tr>
<td>Model (manufacturer)</td>
<td>5JW 21 (DENSO)</td>
<td>----</td>
</tr>
<tr>
<td>Maximum consumption amperage</td>
<td>6.0 A</td>
<td>----</td>
</tr>
<tr>
<td>Output pressure</td>
<td>324 kPa (3.24 kg/cm², 46.08 psi)</td>
<td>----</td>
</tr>
<tr>
<td><strong>Throttle bodies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model (manufacturer)</td>
<td>42EHS (MIKUNI) × 4</td>
<td>----</td>
</tr>
<tr>
<td>× quantity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intake vacuum pressure</td>
<td>33.3 kPa (250 mmHg, 9.8 inHg)</td>
<td>----</td>
</tr>
<tr>
<td>Throttle cable free play (at the flange of the throttle grip)</td>
<td>3 ~ 5 mm (0.12 ~ 0.20 in)</td>
<td>----</td>
</tr>
<tr>
<td>ID mark</td>
<td>5JW1 50</td>
<td>----</td>
</tr>
<tr>
<td><strong>Fuel injectors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>INP-151</td>
<td>----</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>NIPPON INJECTOR</td>
<td>----</td>
</tr>
<tr>
<td>Quantity</td>
<td>4</td>
<td>----</td>
</tr>
</tbody>
</table>
## ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ignition system</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ignition system type</td>
<td>Transistorized coil ignition (digital)</td>
<td>-----</td>
</tr>
<tr>
<td>Ignition timing</td>
<td>5° BTDC at 1,050 r/min</td>
<td>-----</td>
</tr>
<tr>
<td>Advancer type</td>
<td>Electric</td>
<td>-----</td>
</tr>
<tr>
<td>Pickup coil resistance/color</td>
<td>420.8 ~ 569.3 Ω/Gy–B</td>
<td>-----</td>
</tr>
<tr>
<td>Transistorized coil ignition unit model</td>
<td>F8T818 (MITSUBISHI)</td>
<td>-----</td>
</tr>
<tr>
<td>(manufacturer)</td>
<td>F8T819 (MITSUBISHI) (for F)</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Starting circuit cut-off relay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model (manufacturer)</td>
<td>G8R-30Y-R (OMRON)</td>
<td>-----</td>
</tr>
<tr>
<td>Coil resistance</td>
<td>180 Ω</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Fuel injection system relay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model (manufacturer)</td>
<td>G8R-30Y-R (OMRON)</td>
<td>-----</td>
</tr>
</tbody>
</table>
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.

PERIODIC MAINTENANCE AND LUBRICATION CHART

NOTE:
- The annual checks must be performed every year, except if a kilometer-based maintenance is performed instead.
- From 50,000 km, repeat the maintenance intervals starting from 10,000 km.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

<table>
<thead>
<tr>
<th>No.</th>
<th>ITEM</th>
<th>CHECK OR MAINTENANCE JOB</th>
<th>ODOMETER READING (&lt; 1,000 km)</th>
<th>ANNUAL CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fuel line</td>
<td>Check fuel hoses for cracks or damage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Spark plugs</td>
<td>Check condition.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clean and regap.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Valves</td>
<td>Check valve clearance.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjust.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>Air filter element</td>
<td>Clean.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>Clutch</td>
<td>Check operation, fluid level and vehicle for fluid leakage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>Front brake</td>
<td>Check operation, fluid level and vehicle for fluid leakage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace brake pads.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Rear brake</td>
<td>Check operation, fluid level and vehicle for fluid leakage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace brake pads.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>Brake hoses</td>
<td>Check for cracks or damage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>9</td>
<td>Wheels</td>
<td>Check runout and for damage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>10</td>
<td>Tires</td>
<td>Check tread depth and for damage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace if necessary.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check air pressure.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correct if necessary.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>11</td>
<td>Wheel bearings</td>
<td>Check bearing for looseness or damage.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>12</td>
<td>Swingarm</td>
<td>Check operation and for excessive play.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lubricate with lithium-soap-based grease.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>13</td>
<td>Steering bearings</td>
<td>Check bearing play and steering for roughness.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lubricate with lithium-soap-based grease.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>14</td>
<td>Chassis fasteners</td>
<td>Make sure that all nuts, bolts and screws are properly tightened.</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
### PERIODIC MAINTENANCE AND LUBRICATION CHART

<table>
<thead>
<tr>
<th>No.</th>
<th>ITEM</th>
<th>CHECK OR MAINTENANCE JOB</th>
<th>ODOMETER READING (&lt; 1,000 km)</th>
<th>ANNUAL CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>15</td>
<td>Sidestand, center-stand</td>
<td>• Check operation.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lubricate.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>16</td>
<td>* Sidestand switch</td>
<td>• Check operation.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>17</td>
<td>* Front fork</td>
<td>• Check operation and for oil leakage.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>18</td>
<td>* Shock absorber assembly</td>
<td>• Check operation and shock absorber for oil leakage.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>19</td>
<td>* Rear suspension relay arm and con-</td>
<td>• Check operation.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td>necting arm pivot-</td>
<td>• Lubricate with lithium-soap-based grease.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td>ing points</td>
<td></td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>20</td>
<td>* Electronic fuel injection</td>
<td>• Adjust engine idling speed and synchronization.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>21</td>
<td>Engine oil</td>
<td>• Change.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Check oil level and vehicle for oil leakage.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>22</td>
<td>Engine oil filter cartridge</td>
<td>• Replace.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>23</td>
<td>* Cooling system</td>
<td>• Check coolant level and vehicle for coolant leakage.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lubricate with lithium-soap-based grease.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Change.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Every 3 years</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Final gear oil</td>
<td>• Check oil level and vehicle for oil leakage.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Change.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>25</td>
<td>* Front and rear brake switches</td>
<td>• Check operation.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>26</td>
<td>Moving parts and cables</td>
<td>• Lubricate.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>27</td>
<td>* Throttle grip housing and cable</td>
<td>• Check operation and free play.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adjust the throttle cable free play if necessary.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lubricate the throttle grip housing and cable.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>28</td>
<td>* Muffler and exhaust pipe</td>
<td>• Check the screw clamp for looseness.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>29</td>
<td>* Lights, signals and switches</td>
<td>• Check operation.</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adjust headlight beam.</td>
<td>✅</td>
<td>✅</td>
</tr>
</tbody>
</table>

**NOTE:**
- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake and clutch service
- Regularly check and, if necessary, correct the brake and clutch fluid levels.
- Every two years replace the internal components of the brake master cylinders and calipers as well as the clutch master and release cylinders, and change the brake and clutch fluids.
- Replace the brake and clutch hoses every four years and if cracked or damaged.
## Removing the fuel tank

Remove the parts in the order listed. Refer to “SEATS AND FUEL TANK” in chapter 3. (Manual No.: 5JW1-AE1)

**Fuel**

<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fuel tank side panel (left and right)</td>
<td>1/1</td>
<td>Drain</td>
</tr>
<tr>
<td>2</td>
<td>Bolt</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nut</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Fuel sender coupler</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fuel pump coupler</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Fuel tank overflow hose</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Fuel tank breather hose</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Hose holder</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Fuel hose holder</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### Order Job/Part Q'ty Remarks

<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Fuel hose</td>
<td>1</td>
<td>Refer to “REMOVING THE FUEL TANK”. Refer to “INSTALLING THE FUEL HOSE” in chapter 3. (Manual No.: 5JW1-AE1)</td>
</tr>
<tr>
<td>11</td>
<td>Bolt</td>
<td>1</td>
<td>Refer to “REMOVING THE FUEL TANK”. For installation, reverse the removal procedure.</td>
</tr>
<tr>
<td>12</td>
<td>Fuel tank</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
REMOVING THE FUEL TANK

1. Remove the fuel in the fuel tank through the fuel tank filler hole with a pump.
2. Remove:
   • fuel hose

**CAUTION:**

Although the fuel has been removed from the fuel tank, be careful when removing the fuel hose since there may be fuel remaining in it.

**NOTE:**

• To remove the fuel hose from the fuel injection pipe, slide the cover a on the end of the hose in the direction of the arrow shown, and then remove the hose.
• Before removing the hose, place a few rags in the area under the hose.

3. Remove:
   • fuel tank

**NOTE:**

Do not set the fuel tank down on the installation surface of the fuel pump. Be sure to lean the fuel tank up against a wall, etc., in an upright position.
Removing the air filter case

<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Air shroud</td>
<td>1</td>
<td>Remove the parts in the order listed.</td>
</tr>
<tr>
<td>2</td>
<td>Air filter case cover</td>
<td>1</td>
<td>Refer to “SEATS AND FUEL TANK” in chapter 3.</td>
</tr>
<tr>
<td>3</td>
<td>Air filter element</td>
<td>1</td>
<td>(Manual No.: 5JW1-AE1)</td>
</tr>
<tr>
<td>4</td>
<td>Tray</td>
<td>1</td>
<td>Refer to “SEATS AND FUEL TANK”.</td>
</tr>
<tr>
<td>5</td>
<td>Fuel tank bracket</td>
<td>1</td>
<td>Refer to “COWLINGS AND COVERS”.</td>
</tr>
<tr>
<td>6</td>
<td>Plastic locking tie</td>
<td>1</td>
<td>(Manual No.: 5JW1-AE2)</td>
</tr>
<tr>
<td>7</td>
<td>Intake air temperature sensor coupler</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>8</td>
<td>Bypass air unit inlet hose</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>9</td>
<td>Crankcase breather hose</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
10 Air induction system hose 5
11 Clamp screw
12 Air filter case
13 Air filter case breather hose

Order | Job/Part | Q'ty | Remarks
--- | --- | --- | ---
10 | Air induction system hose 5 | 1 | Disconnect.
11 | Clamp screw | 4 | Loosen.
12 | Air filter case | 1 | 
13 | Air filter case breather hose | 1 | For installation, reverse the removal procedure.
FUEL INJECTION SYSTEM

1. Ignition coil
2. Air filter case
3. Intake air temperature sensor
4. Fuel delivery hose
5. Fuel tank
6. Fuel pump
7. Intake air pressure sensor
8. Throttle position sensor
9. Fuel injector
10. O2 sensor
11. Catalytic converter
12. Crankshaft position sensor
13. Coolant temperature sensor
14. Spark plug
15. Cylinder identification sensor
16. Battery
17. ECU
18. Fuel injection system relay
19. Engine trouble warning light
20. Lean angle cut-off switch
21. Air cut-off valve
### Table of self-diagnostic fault code numbers displayed on meter

<table>
<thead>
<tr>
<th>No.</th>
<th>Symptom</th>
<th>Able/ unable to start</th>
<th>Able/ unable to drive</th>
<th>No.</th>
<th>Symptom</th>
<th>Able/ unable to start</th>
<th>Able/ unable to drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>No normal signals are received from the cylinder identification sensor.</td>
<td>Able</td>
<td>Able</td>
<td>30</td>
<td>The motorcycle has overturned.</td>
<td>Unable</td>
<td>Unable</td>
</tr>
<tr>
<td>12</td>
<td>No normal signals are received from the crankshaft position sensor.</td>
<td>Unable</td>
<td>Unable</td>
<td>31</td>
<td>The amount of air-fuel ratio feedback compensation is maintained continuously in the vicinity of the upper limit (lean air-fuel ratio).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>13</td>
<td>Intake air pressure sensor - open or short circuit detected.</td>
<td>Able</td>
<td>Able</td>
<td>32</td>
<td>The amount of air-fuel ratio feedback compensation is maintained continuously in the vicinity of the lower limit (rich air-fuel ratio).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>14</td>
<td>Faulty intake air pressure sensor pipe system; a hose is detached or clogged.</td>
<td>Able</td>
<td>Able</td>
<td>33</td>
<td>Open circuit detected in the primary wire of the ignition coil (#1,4).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>15</td>
<td>Throttle position sensor - open or short circuit detected.</td>
<td>Able</td>
<td>Able</td>
<td>34</td>
<td>Open circuit detected in the primary wire of the ignition coil (#2, 3).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>16</td>
<td>A stuck throttle position sensor is detected.</td>
<td>Able</td>
<td>Able</td>
<td>41</td>
<td>Lean angle cut-off switch - open or short circuit detected.</td>
<td>Unable</td>
<td>Unable</td>
</tr>
<tr>
<td>19</td>
<td>A break or disconnection of the black/red lead of the ECU is detected.</td>
<td>Unable</td>
<td>Unable</td>
<td>42</td>
<td>No normal signals are received from the speed sensor; or, an open or short circuit is detected in the neutral switch.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>21</td>
<td>Coolant temperature sensor - open or short circuit detected.</td>
<td>Able</td>
<td>Able</td>
<td>43</td>
<td>The ECU is unable to monitor the battery voltage (an open circuit in the line to the ECU).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>22</td>
<td>Intake air temperature sensor - open or short circuit detected.</td>
<td>Able</td>
<td>Able</td>
<td>44</td>
<td>An error is detected while reading or writing on EEPROM (CO adjustment value).</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>24</td>
<td>No normal signals are received from the O2 sensor.</td>
<td>Able</td>
<td>Able</td>
<td>50</td>
<td>Faulty ECU memory. When this malfunction is detected, the code number might not appear on the meter.</td>
<td>Unable</td>
<td>Unable</td>
</tr>
</tbody>
</table>

**How to erase the self-diagnostic fault code from memory:**

If the ECU detects a normal signal upon the completion of the repair of the malfunction, the self-diagnostic fault code disappears from the meter and is replaced by the normal clock display. However, the self-diagnostic fault code of the previous malfunction remains in the ECU memory as part of the malfunction history. To erase the self-diagnostic fault code from the malfunction history, the operation for diagnostic code 62 must be performed in the diagnosis mode.
**SUBSTITUTE CHARACTERISTICS OPERATION CONTROL (FAIL-SAFE ACTION)**

If the ECU detects an abnormal signal from a sensor while the motorcycle is being driven, the ECU illuminates the engine trouble warning light and provides the engine with substitute characteristic operation instructions that are appropriate for the type of the malfunction.

When an abnormal signal is received from a sensor, the ECU processes the specified values that are programmed for every sensor, in order to provide the engine with substitute characteristics operation instructions that enable the engine to continue to operate (or to stop its operation, depending on circumstances).

The ECU takes fail-safe actions in two ways: one in which the sensor output is set to a prescribed value, and the other in which the ECU directly operates an actuator. Details on the fail-safe actions are given in the table below.

### Table of substitute characteristic operation control by self-diagnostic fault code

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Item Description</th>
<th>Fail-safe action</th>
<th>Able/unable to start</th>
<th>Able/unable to drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Cylinder identification sensor</td>
<td>Continues to operate the engine based on the results of the cylinder identification that existed up to that point.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>12</td>
<td>Crankshaft position sensor</td>
<td>Stops the engine (by stopping the injection and ignition).</td>
<td>Unable</td>
<td>Unable</td>
</tr>
<tr>
<td>13-14</td>
<td>Intake air pressure sensor (open or short circuit) (pipe system)</td>
<td>Fixes the intake air pressure to 760 mmHg.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>15-16</td>
<td>Throttle position sensor (open or short circuit) (stuck)</td>
<td>Fixes the throttle position sensor to fully open.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>19</td>
<td>Broken or disconnected black/red lead of the ECU</td>
<td>(No start)</td>
<td>Unable</td>
<td>Unable</td>
</tr>
<tr>
<td>21</td>
<td>Coolant temperature sensor</td>
<td>Fixes the coolant temperature to 60 °C.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>22</td>
<td>Intake air temperature sensor</td>
<td>Fixes the intake temperature to 20 °C.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>24, 31, 32</td>
<td>O2 sensor (inactive) (compensation stuck to upper limit) (compensation stuck to lower limit)</td>
<td>--</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>33, 34</td>
<td>Faulty ignition</td>
<td>Fuel is cut off only to the cylinder in which a malfunction is detected.</td>
<td>Able (depending on the number of faulty cylinders)</td>
<td>Able (depending on the number of faulty cylinders)</td>
</tr>
<tr>
<td>30, 41</td>
<td>Lean angle cut-off switch (latch up detected) (open or short circuit)</td>
<td>Turns OFF the fuel injection system relay of the fuel system.</td>
<td>Unable</td>
<td>Unable</td>
</tr>
<tr>
<td>42</td>
<td>Speed sensor, neutral switch</td>
<td>Fixes the gear to the top gear.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>43</td>
<td>Fuel system voltage (monitor voltage)</td>
<td>Fixes the battery voltage to 12 V.</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>44</td>
<td>Error in writing the amount of CO adjustment on EEPROM</td>
<td>--</td>
<td>Able</td>
<td>Able</td>
</tr>
<tr>
<td>50</td>
<td>ECU internal malfunction (memory check error)</td>
<td>--</td>
<td>Unable</td>
<td>Unable</td>
</tr>
</tbody>
</table>
## Self-diagnostic fault codes, symptoms, and probable causes

### Diagnostic code indication

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Symptom</th>
<th>Probable cause of malfunction</th>
<th>Diagnostic code</th>
</tr>
</thead>
</table>
| 11       | No normal signals are received from the cylinder identification sensor. | • Open or short circuit in wiring sub lead.  
• Open or short circuit in wiring harness.  
• Defective cylinder identification sensor.  
• Malfunction in ECU.  
• Improperly installed sensor. | — |
| 12       | No normal signals are received from the crankshaft position sensor. | • Open or short circuit in wiring harness.  
• Defective crankshaft position sensor.  
• Malfunction in pickup rotor.  
• Malfunction in ECU.  
• Improperly installed sensor. | — |
| 13       | Intake air pressure sensor - open or short circuit detected. | • Open or short circuit in wiring sub lead.  
• Open or short circuit in wiring harness.  
• Defective intake air pressure sensor.  
• Malfunction in ECU. | 03 |
| 14       | Faulty intake air pressure sensor pipe system; a hose is detached or clogged. | • Intake air pressure sensor hose is detached, clogged, kinked, or pinched.  
• Malfunction of the intake air pressure sensor in the intermediate electrical potential.  
• Malfunction in ECU. | 03 |
| 15       | Throttle position sensor - open or short circuit detected. | • Open or short circuit in wiring sub lead.  
• Open or short circuit in wiring harness.  
• Defective throttle position sensor.  
• Malfunction in ECU.  
• Improperly installed throttle position sensor. | 01 |
| 16       | A stuck throttle position sensor is detected.  
Or, Faulty intake air pressure sensor pipe system; a hose is detached or clogged. | • Open or short circuit in wiring sub lead.  
• Open or short circuit in wiring harness.  
• Defective sensor (stuck throttle position sensor).  
• Intake air pressure sensor hose is detached, clogged, kinked, or pinched.  
• Malfunction of the intake air pressure sensor in the intermediate electrical potential.  
• Malfunction in ECU. | 01  
03 |
| 19       | A break or disconnection of the black/red of the ECU is detected when the start switch is pressed. | • Open circuit in wiring harness.  
• Malfunction in ECU.  
• Defective ECU coupler. | 20 |
| 21       | Coolant temperature sensor - open or short circuit detected. | • Open or short circuit in wiring harness.  
• Defective coolant temperature sensor.  
• Malfunction in ECU.  
• Improperly installed sensor. | 06 |
| 22       | Intake air temperature sensor - open or short circuit detected. | • Open or short circuit in wiring harness.  
• Defective intake air temperature sensor.  
• Malfunction in ECU.  
• Improperly installed sensor. | 05 |
<table>
<thead>
<tr>
<th>Code No.</th>
<th>Symptom</th>
<th>Probable cause of malfunction</th>
<th>Diagnostic code</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>No normal signals are received from the O2 sensor.</td>
<td>• Open or short circuit in wiring harness.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Defective O2 sensor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improperly installed sensor.</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>The motorcycle has overturned.</td>
<td>• Overturned.</td>
<td>08</td>
</tr>
<tr>
<td>31</td>
<td>The amount of air-fuel ratio feedback compensation is maintained contin-</td>
<td>• Open or short circuit in wiring harness.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>uously in the vicinity of the upper limit (lean air-fuel ratio).</td>
<td>• Fuel pressure too low.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clogged injectors.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Defective O2 sensor (unable to output a rich signal).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in other areas of the fuel system.</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>The amount of air-fuel ratio feedback compensation is maintained contin-</td>
<td>• Open or short circuit in wiring harness.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>uously in the vicinity of the lower limit (rich air-fuel ratio).</td>
<td>• Fuel pressure too high.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Faulty injectors (excessive injection volume).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Defective O2 sensor (unable to output a lean signal).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in other areas of the fuel system.</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Open circuit is detected in the primary wire of the ignition coil (#1, 4).</td>
<td>• Open or short circuit in wiring harness.</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ignition coil.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in a component of ignition cutoff circuit system.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Open circuit is detected in the primary wire of the ignition coil (#2, 3).</td>
<td>• Open or short circuit in wiring harness.</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ignition coil.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in a component of ignition cutoff circuit system.</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Lean angle cut-off switch - open or short circuit detected.</td>
<td>• Open or short circuit in wiring harness.</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ignition coil.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in a component of ignition cutoff circuit system.</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>No normal signals are received from the speed sensor; or, an open or</td>
<td>• Open or short circuit in wiring harness.</td>
<td>07 21</td>
</tr>
<tr>
<td></td>
<td>short circuit is detected in the neutral switch.</td>
<td>• Defective speed sensor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in vehicle speed sensor detected unit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Defective neutral switch.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in the engine side of the neutral switch.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>The ECU is unable to monitor the battery voltage (an open circuit in the</td>
<td>• Open circuit in wiring harness.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>monitor line to the ECU).</td>
<td>• Malfunction in ECU.</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>An error is detected while reading or writing on EEPROM.</td>
<td>• Malfunction in ECU.</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(The CO adjustment value is not properly written on or read from the internal memory).</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Faulty ECU memory. When this malfunction is detected, the code number</td>
<td>• Malfunction in ECU.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>might not appear on the meter.</td>
<td>(The program and data are not properly written on or read from the internal memory.)</td>
<td></td>
</tr>
</tbody>
</table>
Sensor operation data display verification table

**NOTE:**
- Check the intake air temperature and coolant temperature as close as possible to the area in which the respective sensor is mounted.
- If it is not possible to check the intake temperature, use the ambient temperature as reference (use the compared values for reference).

<table>
<thead>
<tr>
<th>Diag code</th>
<th>Item</th>
<th>Description of action</th>
<th>Data displayed on meter (reference value)</th>
</tr>
</thead>
</table>
| 01        | Throttle angle | Displays the throttle angle.  
  * Check with throttle fully closed.  
  * Check with throttle fully open. | 0 – 125 degrees  
  * Fully closed position (15 – 17)  
  * Fully open position (97 – 100) |
| 03        | Pressure difference (atmospheric pressure - intake air pressure) | Displays the pressure difference (atmospheric pressure - intake air pressure).  
  Engine stop switch is on.  
  * Generate the pressure difference by cranking the engine with the starter, without actually starting the engine. | Before cranking: Atmospheric pressure (standard pressure is 760 mmHg)  
  After cranking: Value is lower than the atmospheric pressure |
| 05        | Intake air temperature | Displays the intake air temperature.  
  * Check the temperature in the air cleaner case. | Compare it to the value displayed on the meter. |
| 06        | Coolant temperature | Displays the coolant temperature.  
  * Check the temperature of the coolant. | Compare it to the value displayed on the meter. |
| 07        | Vehicle speed pulse | Displays the accumulation of the vehicle pulses that are generated when the tire is spun. | (0 – 999; resets to 0 after 999) OK if the numbers appear on the meter. |
| 08        | Lean angle cut-off switch | Displays the lean angle cut-off switch values.  
  Upright: 0.4 – 1.4 V  
  Overturned: 3.8 – 4.2 V | |
| 09        | Fuel system voltage (battery voltage) | Displays the fuel system voltage (battery voltage).  
  Engine stop switch is on. | 0 – 18.7 V  
  Normally, approximately 12.0 V |
| 20        | Sidestand switch | Displays that the switch is ON or OFF. (When the gear is in a position other than neutral.) | Stand retracted: ON  
  Stand extended: OFF |
| 21        | Neutral switch | Displays that the switch is ON or OFF. | Neutral: ON  
  In gear: OFF |
| 60        | E2PROM fault code display | Transmits the abnormal portion of the data in the E2PROM that has been detected as a self-diagnostic fault code 44.  
  If multiple malfunctions have been detected, different codes are displayed at 2-second intervals, and this process is repeated. | (01 – 04) Displays the cylinder number.  
  (00) Displays when there is no malfunction. |
| 61        | Malfunction history code display | Displays the codes of the history of the self-diagnosis malfunctions (i.e., a code of a malfunction that occurred once and which has been corrected).  
  If multiple malfunctions have been detected, different codes are displayed at 2-second intervals, and this process is repeated. | 11 – 50  
  (00) Displays when there is no malfunction. |
| 62        | Malfunction history code erasure | Displays the total number of codes that are being detected through self diagnosis and the fault codes in the past history.  
  Erases only the history codes when the engine stop switch is turned from OFF to ON. If the engine stop switch is ON, turn it OFF once, and then turn it back ON. | 00 – 21  
  (00) Displays when there is no malfunction. |
| 70        | Control number | Displays the program control number. | 00 – 255 |
**Troubleshooting details**
Troubleshooting the self-diagnostic fault code

<table>
<thead>
<tr>
<th>Code No.</th>
<th>19</th>
<th>Symptom</th>
<th>A break or disconnection of the black/red lead of the ECU is detected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used diagnostic code No. 20 (sidestand switch)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection operation item and probable cause</td>
<td>Operation item and countermeasure</td>
<td>Reinstatement method</td>
<td></td>
</tr>
<tr>
<td>Defective sidestand switch</td>
<td>Replace if defective. Refer to “CHECKING THE SWITCHES” in chapter 8. (Manual No.: 5JW1-AE1)</td>
<td>If the transmission is in gear, it is reinstated by retracting the sidestand. If the transmission is in neutral, it is reinstated by reconnecting the wiring.</td>
<td></td>
</tr>
<tr>
<td>Open circuit in wiring harness or sub lead.</td>
<td>Repair or replace if there is an open circuit. (Between ECU and black/red lead)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connected state of connector</td>
<td>Inspect the coupler for any pins that may have pulled out. Check the locking condition of the coupler.</td>
<td>If there is a malfunction, repair it and connect it securely. Main wiring harness ECU coupler (black/red)</td>
<td></td>
</tr>
</tbody>
</table>
## Removing the throttle bodies

<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>O₂ sensor coupler</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>2</td>
<td>Cylinder identification sensor coupler</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>3</td>
<td>Sub-wire harness 2 coupler</td>
<td>2</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>4</td>
<td>Throttle stop screw</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Throttle body joint clamp screw</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Throttle bodies</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Remove the parts in the order listed. Refer to “SEATS AND FUEL TANK” in chapter 3. (Manual No.: 5JW1-AE1)

Refer to “SEATS AND FUEL TANK”. Refer to “AIR FILTER CASE”. Drain.

Refer to “CHANGING THE COOLANT” in chapter 3. (Manual No.: 5JW1-AE1)
<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Throttle cable</td>
<td>2</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>8</td>
<td>Plunger control unit hose 1</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>9</td>
<td>Plunger control unit hose 2</td>
<td>1</td>
<td>Disconnect.</td>
</tr>
<tr>
<td>10</td>
<td>Throttle body joint</td>
<td>4</td>
<td>For installation, reverse the removal procedure.</td>
</tr>
</tbody>
</table>

For installation, reverse the removal procedure.
Order Job/Part Q'ty Remarks
--- --- --- ---
1 Removing the injectors 1 Throttle position sensor coupler 1 Remove the parts in the order listed.
2 Intake air pressure sensor coupler 1 Disconnect.
3 Cylinder #1-injector coupler 1 Disconnect.
4 Cylinder #2-injector coupler 1 Disconnect.
5 Cylinder #3-injector coupler 1 Disconnect.
6 Cylinder #4-injector coupler 1 Disconnect.
7 Sub-wire harness 2 1 Disconnect.
8 Negative pressure hose 1 Disconnect.
9 Bypass air unit 1
10 Bypass air unit outlet hose 4
### Order Job/Part

<table>
<thead>
<tr>
<th>Order</th>
<th>Job/Part</th>
<th>Q'ty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Intake air pressure sensor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Fuel injection pipe</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Injector</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Throttle position sensor</td>
<td>1</td>
<td>For installation, reverse the removal procedure.</td>
</tr>
</tbody>
</table>

For installation, reverse the removal procedure.
AIR INDUCTION SYSTEM
INSTALLING THE REED VALVES

1. Install:
   • plate ①

NOTE: ______________________
Align the notch ③ in each plate with the projection ⑤ of each reed valve seat on the cylinder head cover.
ELECTRICAL

ELECTRICAL COMPONENTS

1. Windshield drive unit
2. Battery
3. Starter relay
4. Fuel injection system fuse
5. Front brake light switch
6. Clutch switch
7. Fuse box
8. Radiator fan motor
9. Wire harness
10. Neutral switch
11. Sidestand switch
12. Oil level switch
13. Rear brake light switch
14. Horn
15. Ignition coil
16. Main fuse
17. ABS motor fuse (FJR1300A)
1. Coolant temperature sensor
2. Intake air pressure sensor
3. Intake air temperature sensor
4. Relay unit
5. Lean angle cut-off switch
6. Hydraulic unit (FJR1300A)
7. Fail-safe relay (FJR1300A)
8. ECU (engine)
9. ECU (ABS) (FJR1300A)
10. Speed sensor
11. Cylinder identification sensor
12. O2 sensor
13. Crankshaft position sensor
14. Accessory box solenoid
15. Accessory box relay
16. Headlight relay 1
17. Radiator fan motor relay
18. Turn signal relay
19. Headlight relay 2
CHECKING THE FUEL PUMP

WARNING

Gasoline is extremely flammable and under certain circumstances there can be a danger of an explosion or fire. Be extremely careful and note the following points:

• Stop the engine before refueling.
• Do not smoke, and keep away from open flames, sparks, or any other source of fire.
• If you do accidentally spill gasoline, wipe it up immediately with dry rags.
• If gasoline touches the engine when it is hot, a fire may occur. Therefore, make sure the engine is completely cool before performing the following test.

1. Check:
• fuel pump operation

a. Fill the fuel tank.
b. Put the end of the fuel hose into an open container.
c. Connect the battery (12 V) to the fuel pump terminals as shown.

Battery positive lead → red/blue ①
Battery negative lead → black ②
d. If fuel flows out of the fuel hose, the fuel pump is OK. If fuel does not flow, replace the fuel pump.
FJR1300 WIRING DIAGRAM

1 Immobilizer unit
2 Main switch
3 Rectifier/regulator
4 Generator
5 Backup fuse (odometer, clock and windshield)
6 Main fuse
7 Battery
8 Fuel injection system fuse
9 Starter relay
10 Starter motor
11 Relay unit
12 Starting circuit cut-off relay
13 Fuel injection system relay
14 Neutral switch
15 Sidestand switch
16 Accessory box solenoid
17 Accessory box relay
18 Fuel pump
19 O2 sensor
20 Cylinder identification sensor
21 Throttle position sensor
22 Intake air pressure sensor
23 Lean angle cut-off switch
24 Intake air temperature sensor
25 Coolant temperature sensor
26 Crankshaft position sensor
27 ECU (engine)
28 Cylinder #1 - injector
29 Cylinder #2 - injector
30 Cylinder #3 - injector
31 Cylinder #4 - injector
32 Air induction system solenoid
34 Speed sensor
35 Cylinders #1, #4 - ignition coil
36 Cylinders #2, #3 - ignition coil
38 Spark plug
39 Meter assembly
40 Immobilizer system indicator light
41 Oil level warning light
42 Neutral indicator light
43 Multifunction meter
44 Engine trouble warning light
45 High beam indicator light
46 Left turn signal indicator light
47 Right turn signal indicator light
48 Meter light
49 Oil level switch
50 Left handlebar switch
51 Clutch switch
52 Pass switch
53 Dimmer switch
54 Windshield position switch
55 Turn signal switch
56 Horn switch
57 Horn
58 Front turn signal light (left)
59 Front turn signal light (right)
60 Hazard switch
61 Headlight relay 1
62 Headlight relay 2
63 Headlight assembly
64 Auxiliary light
65 Headlight
66 Taillight assembly
67 Tail/brake light
68 Rear turn signal light (left)
69 Rear turn signal light (right)
70 Rear brake light switch
71 Turn signal relay
72 Windshield drive unit
73 Radiator fan motor
74 Radiator fan motor relay
75 Parking lighting fuse
76 Hazard lighting fuse
77 Ignition fuse
78 Headlight fuse
79 Signaling system fuse
80 Radiator fan motor fuse
81 Windshield motor fuse
82 CYCLELOCK
83 Right handlebar switch
84 Front brake light switch
85 Engine stop switch
86 Start switch

COLOR CODE
B.............Black
Br............Brown
Ch...........Chocolate
Dg...........Dark green
G.............Green
Gy.........Gray
L ..........Blue
Lg ..........Light green
O...........Orange
P ..........Pink
R.........Red
Sb ..........Sky blue
W ..........White
Y ..........Yellow
B/L .........Black/Blue
B/R .........Black/Red
B/W .........Black/White
B/Y .........Black/Yellow
Br/B .........Brown/Black
Br/G .........Brown/Green
Br/L .........Brown/Blue
Br/R .........Brown/Red
Br/W .........Brown/White
Br/Y .........Brown/Yellow
G/B .........Green/Black
G/L .........Green/Blue
G/W .........Green/White
G/Y .........Green/Yellow
Gy/G .........Gray/Green
Gy/R .........Gray/Red
L/B .........Blue/Black
L/G .........Blue/Green
L/R .........Blue/Red
L/W .........Blue/White
L/Y .........Blue/Yellow
O/B .........Orange/Black
P/W .........Pink/White
R/B .........Red/Black
R/G .......Red/Green
R/L .........Red/Blue
R/W .........Red/White
R/Y .........Red/Yellow
W/B .........White/Black
W/Y .........White/Yellow
Y/B .........Yellow/Black
Y/G .........Yellow/Green
Y/L .........Yellow/Blue
FJR1300A WIRING DIAGRAM

1. Immobilizer unit
2. Main switch
3. Rectifier/regulator
4. Generator
5. ABS fuse
6. Backup fuse (odometer, clock and windshield)
7. Main fuse
8. ABS motor fuse
9. Battery
10. Fuel injection system fuse
11. Starter relay
12. Starter motor
13. Relay unit
14. Starting circuit cut-off relay
15. Fuel injection system relay
16. Neutral switch
17. Sidestand switch
18. Accessory box solenoid
19. Accessory box relay
20. Fuel pump
21. O2 sensor
22. Cylinder identification sensor
23. Throttle position sensor
24. Intake air pressure sensor
25. Lean angle cut-off switch
26. Intake air temperature sensor
27. Coolant temperature sensor
28. Crankshaft position sensor
29. ECU (engine)
30. Cylinder #1 - injector
31. Cylinder #2 - injector
32. Cylinder #3 - injector
33. Cylinder #4 - injector
34. Air induction system solenoid
35. Speed sensor
36. Sub-wire harness (ABS)
37. ECU (ABS)
38. Rear wheel sensor
39. Fail-safe relay
40. Hydraulic unit
41. ABS test coupler
42. Front wheel sensor
43. Cylinders #1, #4 - ignition coil
44. Cylinders #2, #3 - ignition coil
45. Spark plug
46. Meter assembly
47. Immobilizer system indicator light
48. Oil level warning light
49. Neutral indicator light
50. ABS warning light
51. Multifunction meter
52. Engine trouble warning light
53. High beam indicator light
54. Left turn signal indicator light
55. Right turn signal indicator light
56. Meter light
57. Oil level switch
58. Left handlebar switch
59. Clutch switch
60. Pass switch
61. Dimmer switch
62. Windshield position switch
63. Turn signal switch
64. Horn switch
65. Horn
66. Front turn signal light (left)
67. Front turn signal light (right)
68. Hazard switch
69. Headlight relay 1
70. Headlight relay 2
71. Headlight assembly
72. Auxiliary light
73. Headlight
74. Taillight assembly
75. Tail/brake light
76. Rear turn signal light (left)
77. Rear turn signal light (right)
78. Rear brake light switch
79. Turn signal relay
80. Windshield drive unit
81. Radiator fan motor
82. Radiator fan motor relay
83. Parking lighting fuse
84. Hazard lighting fuse
85. Ignition fuse
86. Headlight fuse
87. Signaling system fuse
88. Radiator fan motor fuse
89. Windshield motor fuse
90. CYCLELOCK
91. Right handlebar switch
92. Front brake light switch
93. Engine stop switch
94. Start switch

COLOR CODE

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