

# EMISSION CONTROL INFORMATION

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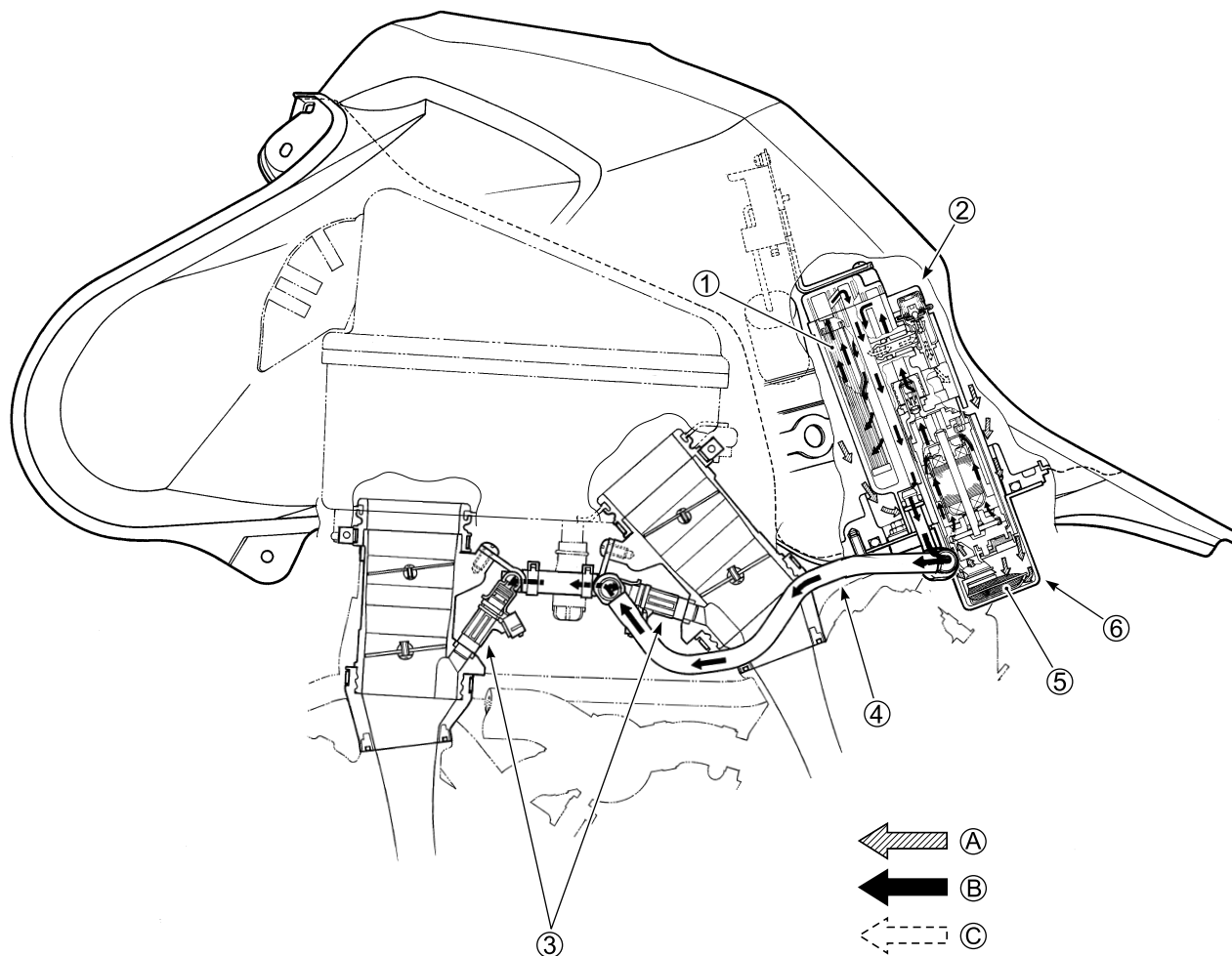
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## EMISSION CONTROL SYSTEMS

### FUEL INJECTION SYSTEM

DL650 motorcycles are equipped with a fuel injection system for emission level control.

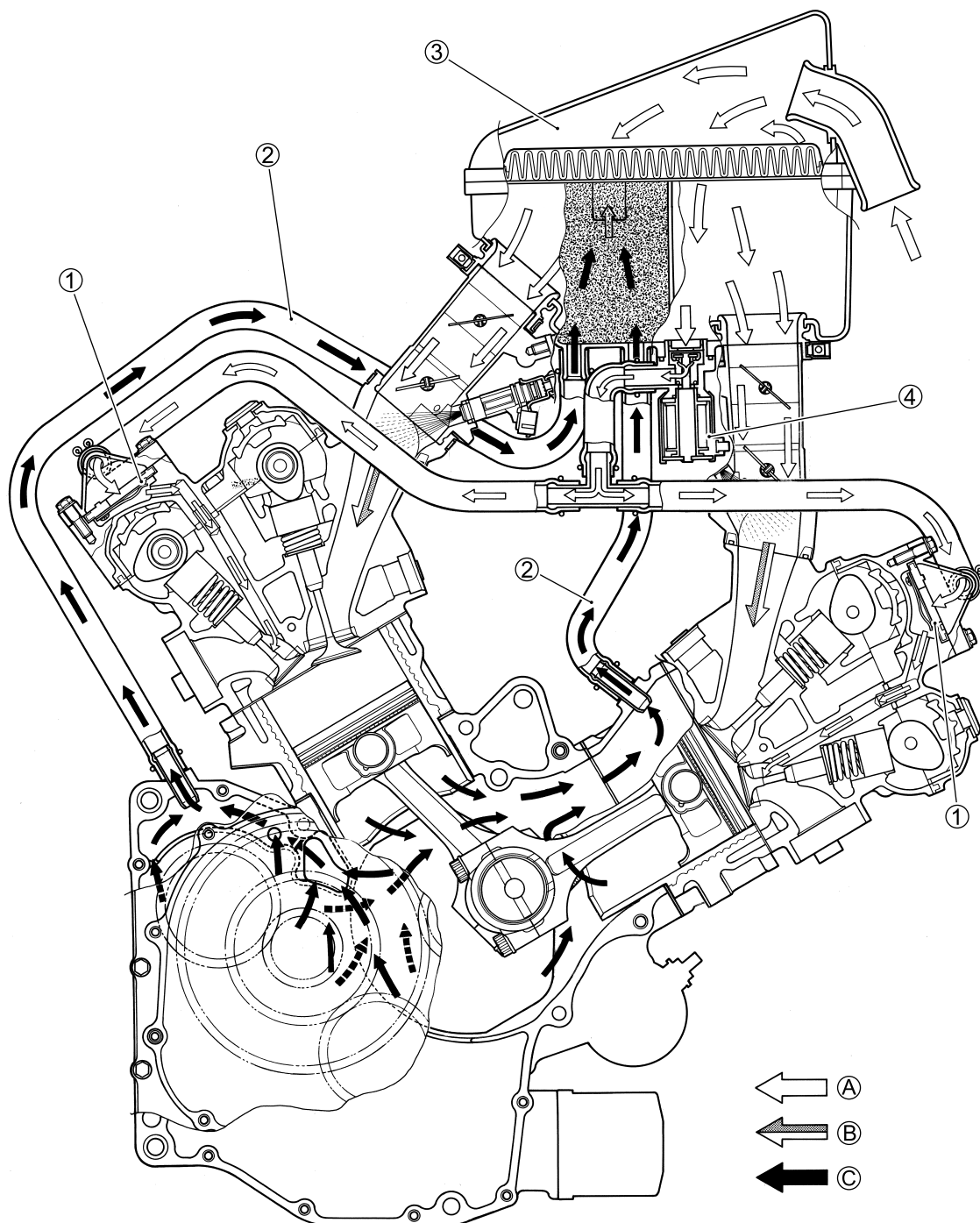
This fuel injection system is precision designed, manufactured and adjusted to comply with the applicable emission limits.



① Fuel filter (For high pressure)	Ⓐ BEFORE-PRESSURIZED FUEL
② Fuel pressure regulator	Ⓑ PRESSURIZED FUEL
③ Fuel injector	Ⓒ RELIEVED FUEL
④ Fuel feed hose	
⑤ Fuel mesh filter (For low pressure)	
⑥ Fuel pump	

## CRANKCASE EMISSION CONTROL SYSTEM

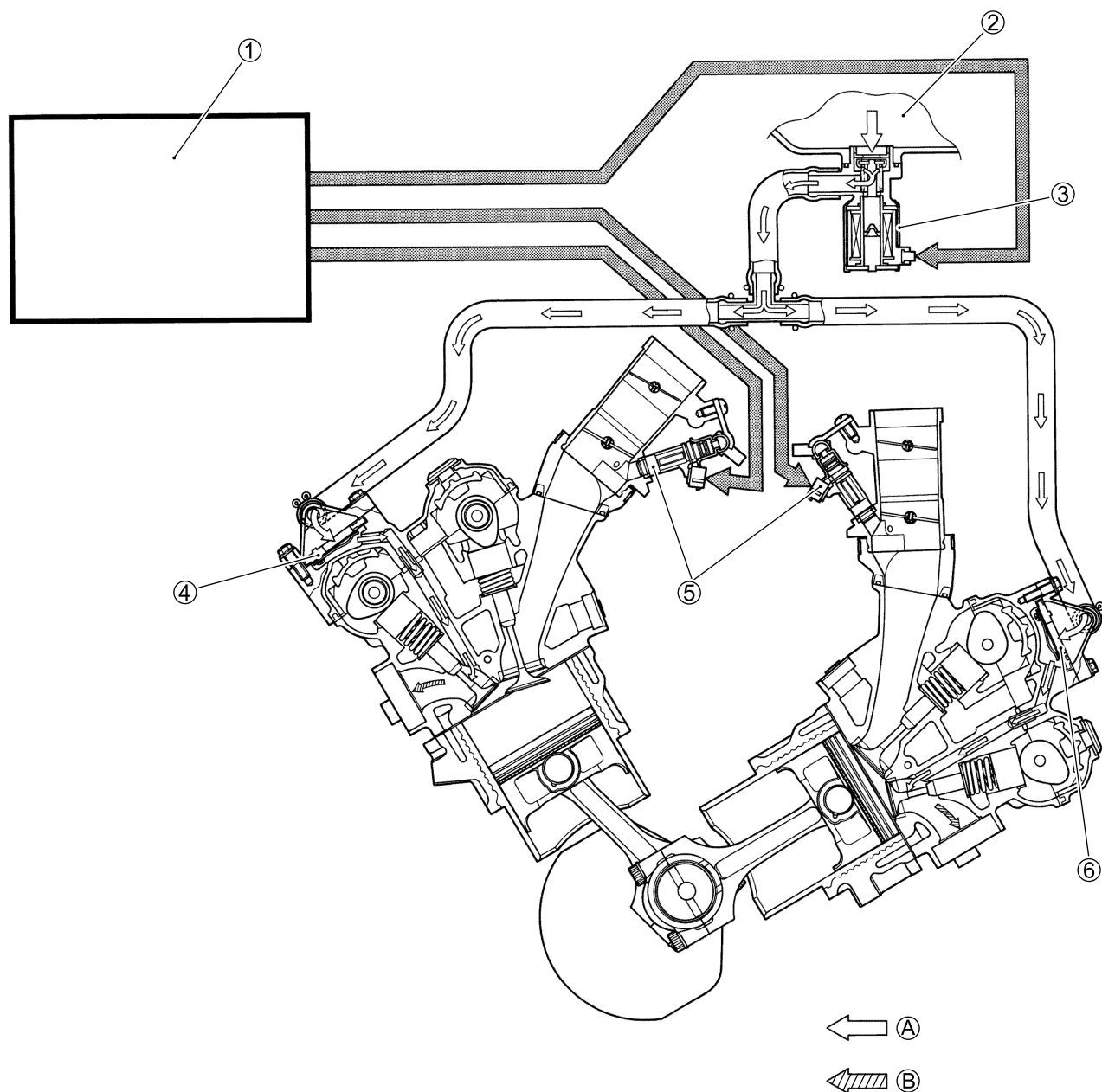
The engine is equipped with a PCV system. Blow-by gas in the engine is constantly drawn into the crankcase, which is returned to the combustion chamber through the breather hose, air cleaner and throttle body.



① PAIR reed valve	④ PAIR control solenoid valve	Ⓐ FRESH AIR
② Breather hose		Ⓑ FUEL/AIR MIXTURE
③ Air cleaner box		Ⓒ BLOW-BY GAS

## EXHAUST EMISSION CONTROL SYSTEM (PAIR SYSTEM)

The exhaust emission control system is composed of the PAIR system and THREE-WAY CATALYST system. (Except for E-03, -24 and -28) The fresh air is drawn into the exhaust port with the PAIR solenoid valve and PAIR reed valve. The PAIR solenoid valve is operated by the ECM, and the fresh air flow is controlled according to the TPS, ECTS, IATS and IAPS.



① ECM	⑤ Injector
② Air cleaner box	⑥ PAIR reed valve
③ PAIR control solenoid valve	Ⓐ FRESH AIR
④ PAIR reed valve	Ⓑ EXHAUST GAS

## NOISE EMISSION CONTROL SYSTEM

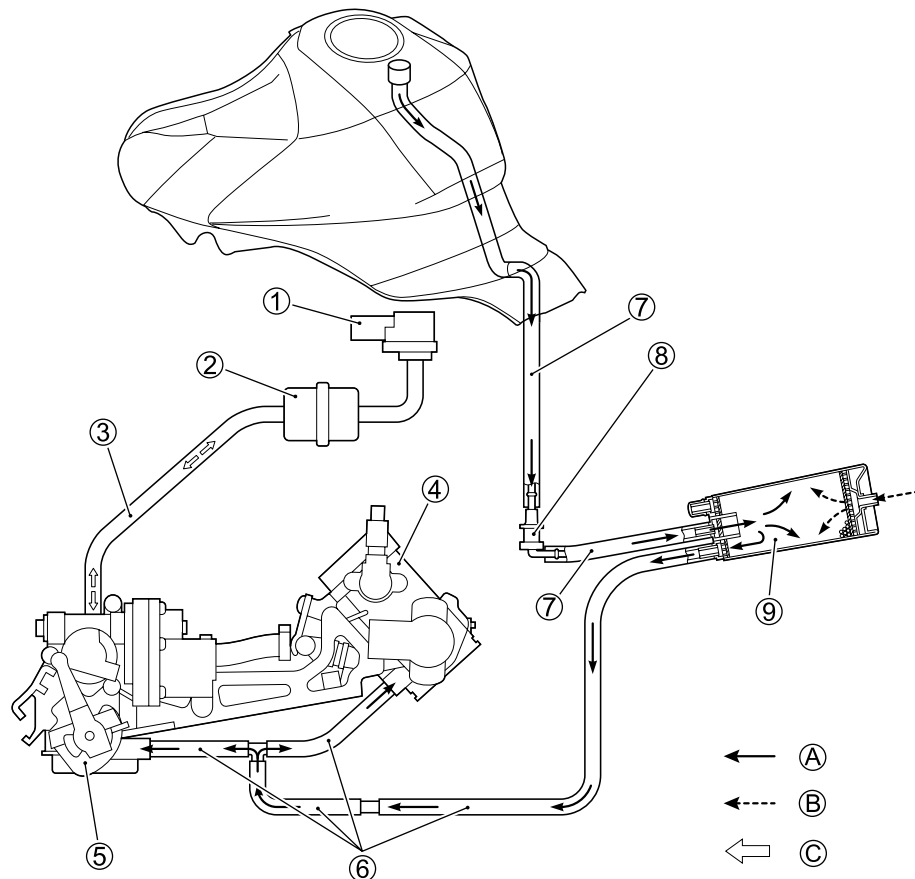
**TAMPERING WITH THE NOISE CONTROL SYSTEM PROHIBITED:** Federal law prohibits the following acts or the causing thereof:

1. The removal or rendering inoperative by any person, other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
2. The use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

### AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW:

- Removing or puncturing the muffler, baffles, header pipes, screen type spark arrester (if equipped) or any other component which conducts exhaust gases.
- Removing or puncturing the air cleaner case, air cleaner cover, baffles or any other component which conducts intake air.
- Replacing the exhaust system or muffler with a system or muffler not marked with the same model specific code as the code listed on the Motorcycle Noise Emission Control Information label.

## EVAPORATIVE EMISSION CONTROL SYSTEM (Only for E-33)



①	IAP sensor	⑦	Surge hose
②	Vacuum damper	⑧	Fuel shut-off valve
③	Vacuum hose	⑨	EVAP canister
④	No.2 Throttle body	Ⓐ	HC VAPOR
⑤	No.1 Throttle body	Ⓑ	FRESH AIR
⑥	Purge hose	Ⓒ	VACUUM

## PAIR (AIR SUPPLY) SYSTEM INSPECTION HOSES

- Inspect the hoses for wear or damage.
- Inspect that the hoses are securely connected.

## PAIR REED VALVE

- Remove the PAIR reed valve cover. (🔧 3-36)
- Inspect the reed valve for the carbon deposit.
- If the carbon deposit is found in the reed valve, replace the PAIR reed valve with a new one
- Installation is in the reverse order of removal.

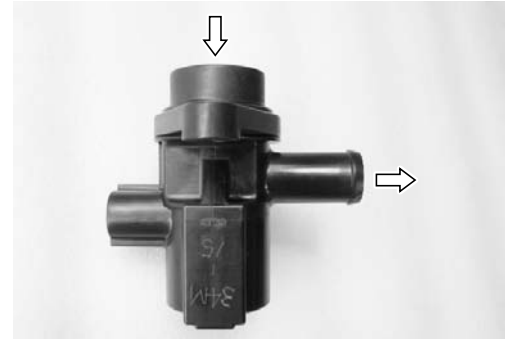


## PAIR CONTROL SOLENOID VALVE

- Remove the air cleaner box. (➡ 5-15)
- Remove the PAIR control solenoid valve ①.



- Check that air flows through the air inlet port to the air outlet port.
- If air does not flow out, replace the PAIR control solenoid valve with a new one.



- Connect the 12 V battery to the PAIR control solenoid valve terminals and check the air flow.
- If air does not flow out, the solenoid valve is in normal condition.

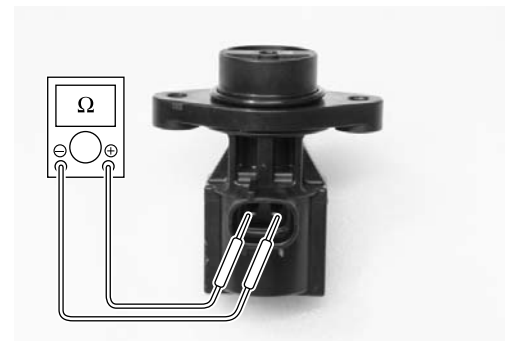


- Check the resistance between the terminals of the PAIR control solenoid valve.

**DATA** Resistance: 20 – 24  $\Omega$  (at 20 °C/68 °F)

**TOOL** 09900-25008: Multi circuit tester set


**Tester knob indication: Resistance ( $\Omega$ )**




If the resistance is not within the standard range, replace the PAIR control solenoid valve with a new one.

- Connect the PAIR control solenoid valve lead wire coupler securely.
- Installation is in the reverse order of removal.

## **PAIR (AIR SUPPLY) SYSTEM HOSE ROUTING**

 9-30

## **HEATED OXYGEN SENSOR (HO2S) WIRE ROUTING (E-02, 19)**

 9-18



## HEATED OXYGEN SENSOR (HO2S) INSPECTION (E-02, 19)

- Remove the seat. (☞ 7-4)
- Disconnect the HO2 sensor coupler.
- Remove the HO2 sensor unit.

### ⚠ WARNING

**Do not remove the HO2 sensor while it is hot.**

### CAUTION

**Be careful not to expose it to excessive shock.  
Do not use an impact wrench while removing or installing the HO2 sensor unit.  
Be careful not to twist or damage the sensor lead wire.**

- Inspect the HO2 sensor and its circuit referring to flow table of the malfunction code (C44).
- Disconnect the HO2 sensor coupler.
- Check the resistance between the terminals (white – white) of the HO2 sensor.

**DATA** Resistance: 4 – 5  $\Omega$  (at 23 °C/73.4 °F)

**TOOL** 09900-25008: Multi circuit tester set

**Tester knob indication: Resistance ( $\Omega$ )**

If the resistance is not within the standard range, replace the HO2 sensor with a new one.

### NOTE:

- \* Temperature of the sensor affects resistance value largely.
- \* Make sure that the sensor heater is at correct temperature.
- Connect the HO2 sensor coupler securely.

- Installation is in the reverse order of removal.

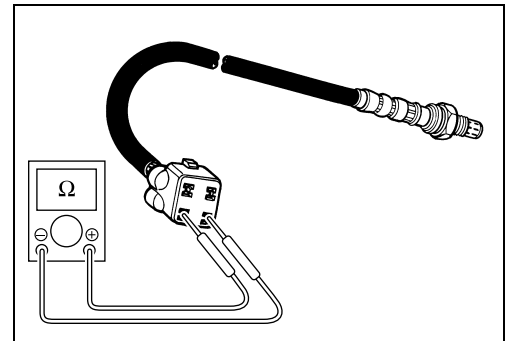
### CAUTION

**Do not apply oil or other materials to the sensor air hole.**

- Tighten the sensor unit to the specified torque.

**HO2 SENSOR: 47.5 N·m (4.75 kgf-m, 34.3 lb-ft)**

- Route the HO2 sensor lead wire into the frame.
- Connect the HO2 sensor coupler.



## EVAPORATIVE EMISSION CONTROL SYSTEM INSPECTION (Only for E-33)

- Remove the frame cover. (🔧 7-5)
- Lift and support the fuel tank with its prop stay. (🔧 5-7)

### HOSES

Inspect the hoses for wear or damage.

Make sure that the hoses are securely connected.

### EVAP CANISTER

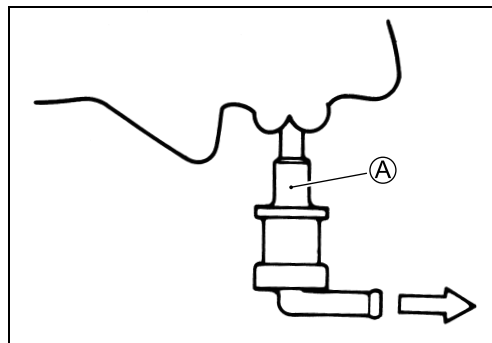
Inspect the canister for damage to the body.

### FUEL-SHUT OFF VALVE

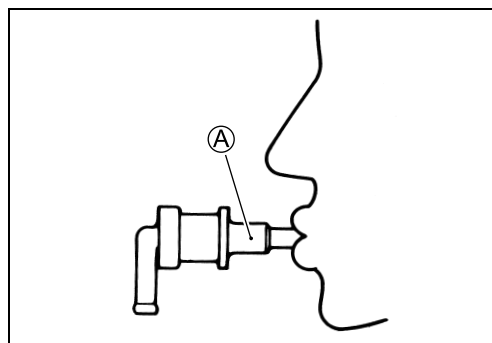
Inspect the fuel-shut off valve body for damage.

Inspect the fuel-shut off valve operation in the following procedure.

- Remove the fuel-shut off valve.
- When air is blown into the fuel-shut off valve with its side ① positioned upward, the air can pass through to the canister side.



- When air is blown into the fuel-shut off valve with its side ① positioned sideways, the air cannot pass through to the canister side.
- If the fuel-shut off valve operates otherwise, it must be replaced.

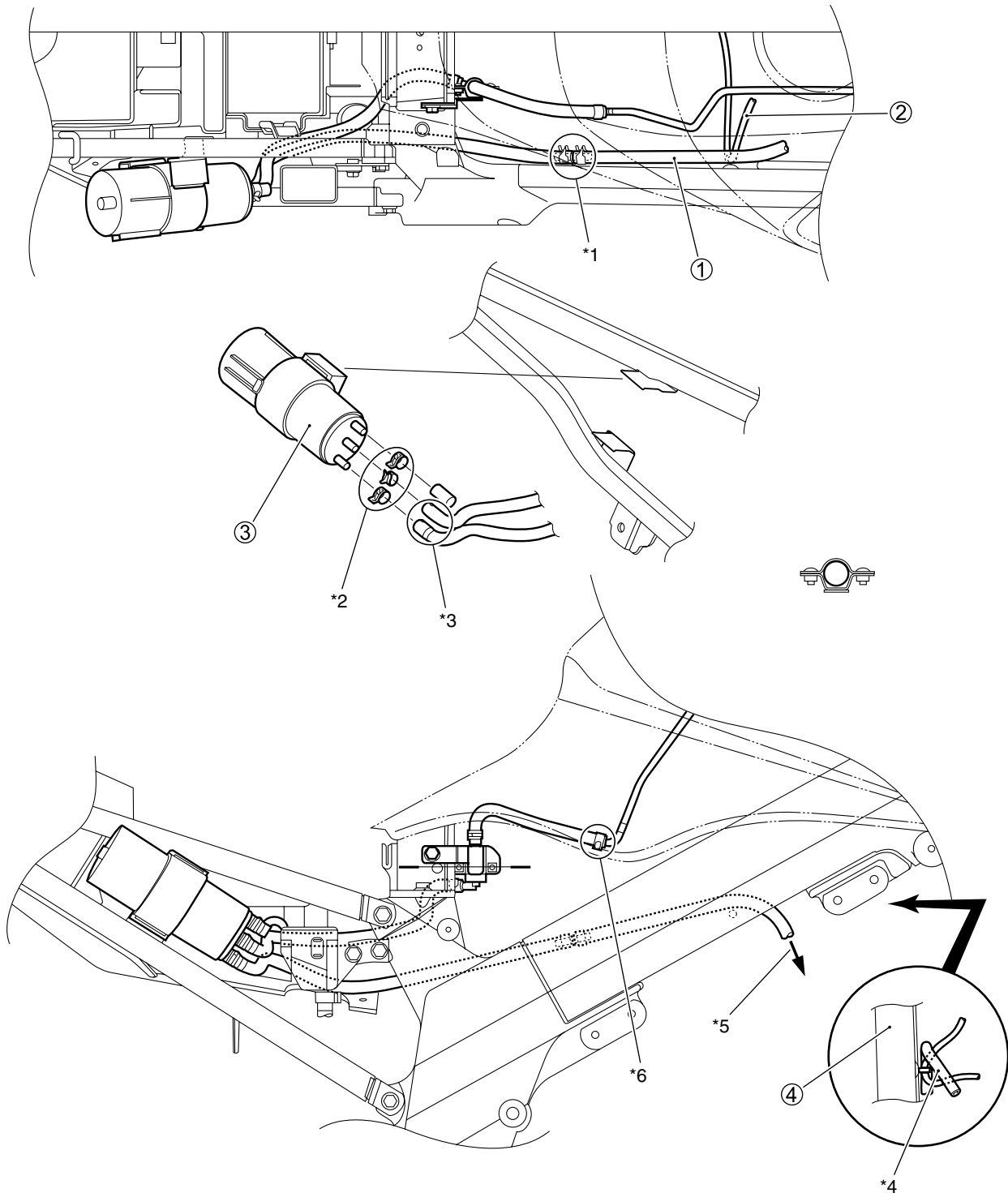


#### **⚠ WARNING**

**Gasoline and gasoline vapor is toxic. A small amount of fuel remains in the fuel-shut off valve when checking it.**

**Do not swallow the fuel when blowing the fuel-shut off valve.**

## EVAP CANISTER HOSE ROUTING (Only for E-33)

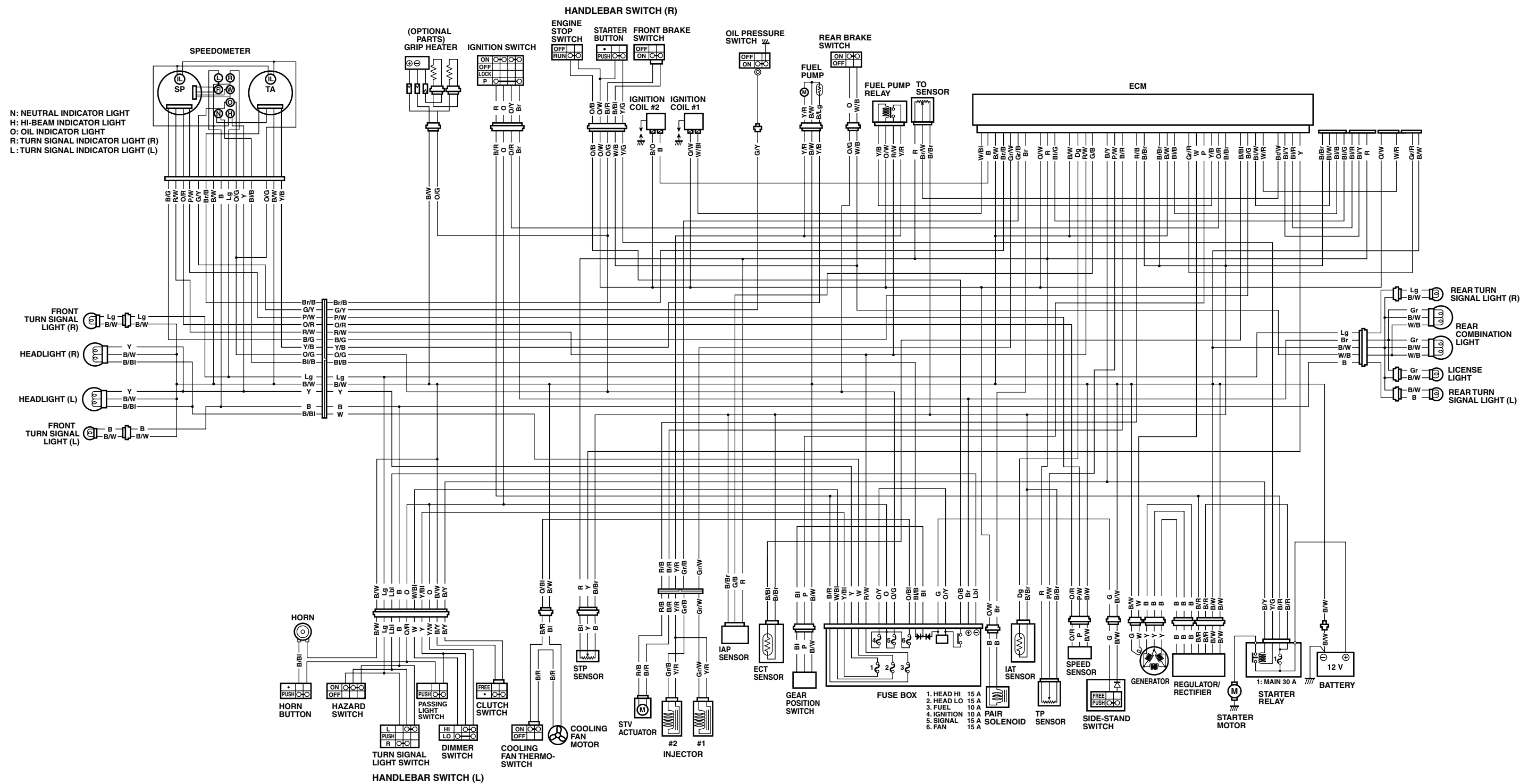


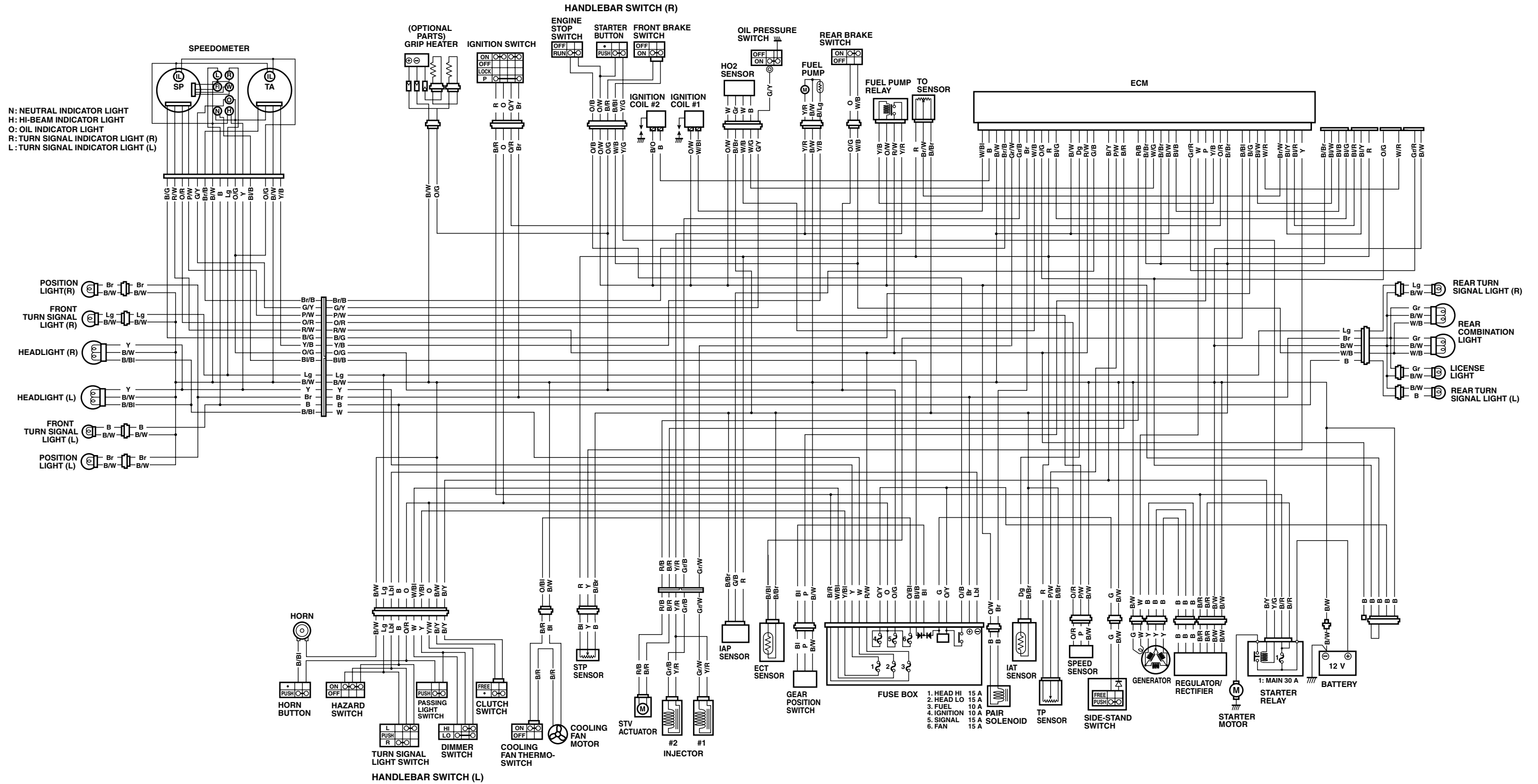
①	Purge hose	*2	Clamp ends should face outside.
②	Wiring harness	*3	White paint mark should face top side.
③	EVAP canister	*4	Pass through the purge hose between the frame and wiring harness.
④	Frame	*5	To throttle body.
*1	Clamp ends should face inside.	*6	Clamp ends should face down side.

WIRING DIAGRAM

E-03, 24, 28, 33

Wirning diagrams wire color, refer to section “WIRE COLOR”.





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