

HESD (Honda Electronic Steering Damper) TROUBLESHOOTING

- The HESD (Honda Electronic Steering Damper) system is equipped with a Self-Diagnostic System that is linked to the PGM-FI system. If the malfunction indicator lamp (MIL) blinks (page 6-9), follow the Self-Diagnostic Procedures to remedy the problem (Refer to MIL troubleshooting; page 14-8). The HESD system is also equipped with a Function Test Mode that makes it possible to check the HESD under maximum damping characteristics. If there is any abnormal condition in the HESD system without MIL blinking, follow the HESD function test and check the HESD function.
- The HESD system includes a fail-safe function to secure a minimum running capability when there is any trouble in the system. When any abnormality is detected by the self-diagnosis function, the ECM stops the HESD system control by shutting off the current supply to the linear solenoid and the HESD will operate under minimum damping characteristics accordingly.
- Refer to system diagram in the PGM-FI system (page 6-8).
- Refer to PGM-FI self-diagnosis information for self-diagnosis procedure and reset procedure in the PGM-FI system (page 6-9).
- Refer to test harness connection (page 6-11) and terminal location (page 6-12).
- Refer to MIL code information (page 14-8) before starting troubleshooting.
- A faulty HESD system is often related to poorly connected or corroded connectors. Check those connections before proceeding.

If the following symptoms occur to the HESD, check the MIL blinking and perform the troubleshooting in accordance with MIL blinks.

- MIL blink 11 times (page 6-22)
- MIL blink 51 times (page 14-8)
- MIL does not blink, although HESD does not work.
 - When the vehicle speed rises, the damping force does not increase.
 - Although vehicle is not running, the damping force is strong (hard steering).

HESD FUNCTION TEST

NOTE:

- The HESD system is also equipped with a Function Test Mode so that a technician can compare the minimum with maximum damping characteristics without riding. The HESD system is set to minimum damping at no vehicle speed under normal conditions. By using the Function Test Mode, the ECM operates the linear solenoid with maximum current so the HESD system is temporarily set to maximum damping.
- It is not possible to use the HESD Function Test Mode when any problems occur (MIL blinking).
- Before performing the HESD function test, remove the HESD unit from the vehicle (page 14-34) and check the following.
 - Steering stem pre-load (page 14-44)
 - Wear or damage of steering head bearing (page 14-35)
 - HESD-to-steering linkage (page 14-34)

HESD FUNCTION TEST PROCEDURE

- Support the motorcycle securely using a hoist or equivalent and raise the front wheel off the ground.
- Before function the test, check the feel for minimum damping characteristics by moving the steering right and left quickly several times. Operate the steering quickly and at a uniform force during the test.

Perform the HESD function test as follows:

1. Lower the side stand (side stand switch OFF).
2. Shift the transmission into any gear other than neutral.
3. Open the throttle grip fully.
4. Turn the ignition switch ON with keeping the state of 1 – 3.

The HESD indicator starts blinking and the HESD system enters the Function Test Mode for 10 seconds.

Make sure that the damping characteristics (force) changes, by means of comparing the minimum damping characteristics before Function Test with the maximum damping characteristics under the Function Test.

If the HESD damping characteristics (force) in Function Test Mode does not change at all, replace the HESD unit with a new one (page 14-34).