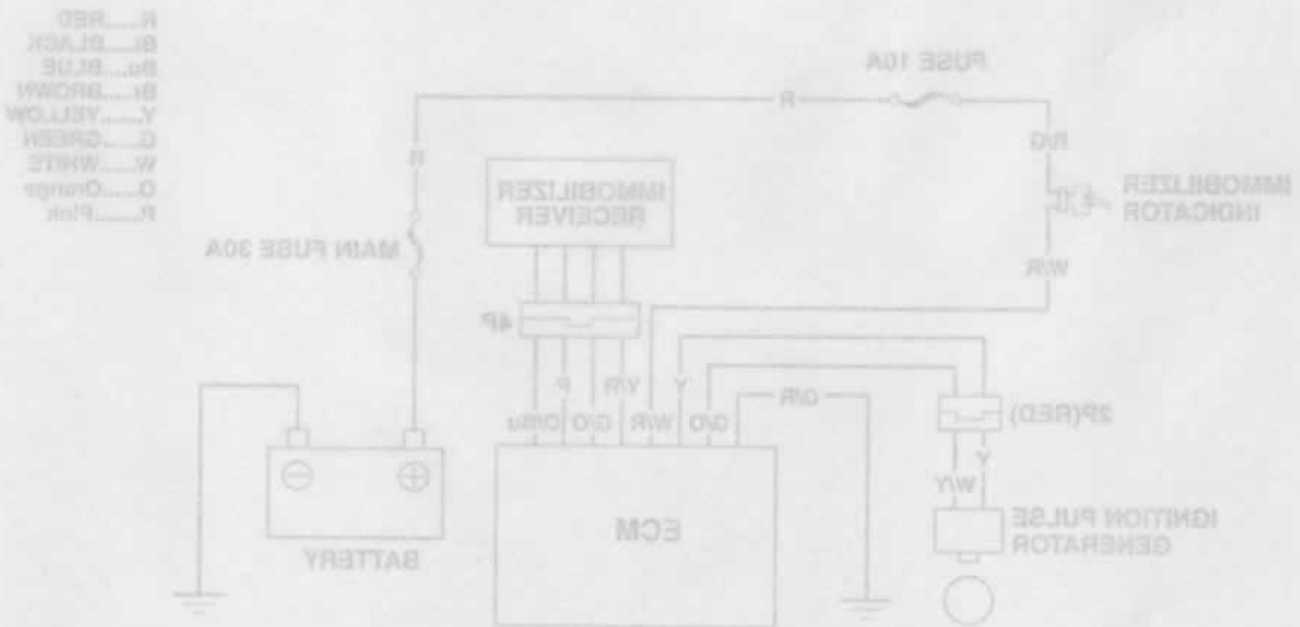


20. IMMOBILIZER SYSTEM (HISS)

SYSTEM DIAGRAM

SYSTEM DIAGRAM.....	20-2	TROUBLESHOOTING.....	20-9
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SYSTEM DIAGRAM

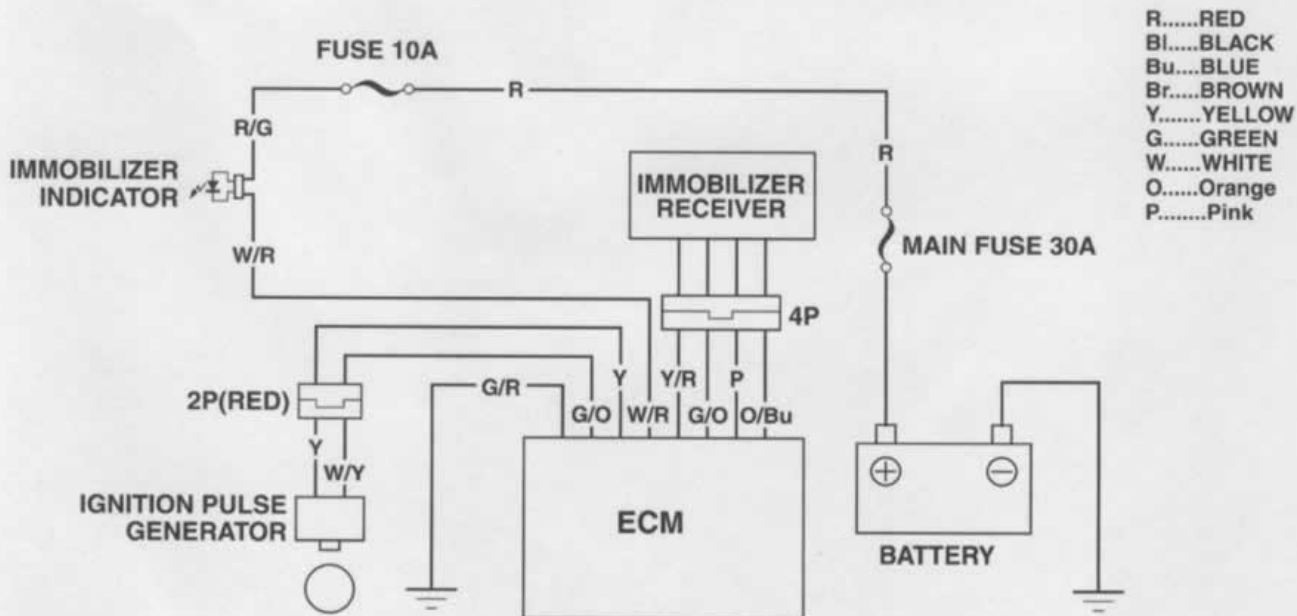
IGNITION SWITCH
IMMOBILIZER RECEIVER

MAIN FUSE (30A)

BATTERY

ECM

IGNITION PULSE GENERATOR



SERVICE INFORMATION

GENERAL

- HISS is the abbreviation of Honda Ignition Security System.
- When checking the immobilizer system (HISS), follow the steps in the troubleshooting flow chart (page 20-4).
- Keep the immobilizer key away from the other vehicle's immobilizer key when using it. The jamming of the key code signal may occur and the proper operation of the system will be obstructed.
- The key has built-in electronic part (transponder). Do not drop and strike the key against a hard material object, and do not leave the key on the dashboard in the car, etc. where the temperature will rise. Do not leave the key in the water for a prolonged time such as by washing the clothes.
- The engine control module (ECM) as well as the transponder keys must be replaced if all transponder keys have been lost.
- The system does not function with a duplicated key code is registered into the transponder with the immobilizer system (HISS).
- The ECM can store up to four key codes. (The four keys can be registered.)
- Do not modify the immobilizer system as it can cause the system failure. (The engine cannot be started.)
- Refer to the ignition system inspection (page 17-5).
- Refer to the ignition switch servicing (page 19-23).

TOOL



KEY REGISTRATION PROCEDURES

When the key has been lost, or additional spare key is required:

1. Obtain a new transponder key.
2. Grind the key in accordance with the shape of the original key.
3. Apply 12 V battery voltage to the ignition pulse generator lines of the Engine Control Module (ECM) using the special tool (page 20-7).
4. Turn the ignition switch ON with the original key. The immobilizer indicator comes on and it remains on.
 - The code of the original key recognized by the ECM.
 - If there is any problem in the immobilizer system (HISS), the system will enter the diagnostic mode and the indicator will remain on for approx. ten seconds, then it will indicate the diagnostic code (page 20-7).
5. Disconnect the red clip of the inspection adaptor from the battery positive (+) terminal for two seconds or more, then connect it again. The indicator remains on for approx. two seconds, then it blinks four times repeatedly.



- The immobilizer system (HISS) enters the registration mode. Registrations of all key except the original key inserted in the ignition switch are cancelled. (Registration of the lost key or spare key is cancelled.)
- The spare key must be registered again.
6. Turn the ignition switch OFF and remove the key.
 7. Turn the ignition switch ON with a new key or the spare key. (Never use the key registered in previous steps.) The indicator comes on for two seconds then it blinks four times repeatedly.



- The new key or spare key is registered in the ECM.
- If there is any problem in the registration, the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-8).

NOTICE

Keep the other transponder key away from the immobilizer receiver more than 50 mm (2.0 in).

8. Repeat the steps 6 and 7 when you continuously register the other new key.

The ECM can store up to four key codes. (The four keys can be registered.)

9. Turn the ignition switch OFF, remove the inspection adaptor and connect the ignition pulse generator connector.
10. Turn the ignition switch ON with the registered key.

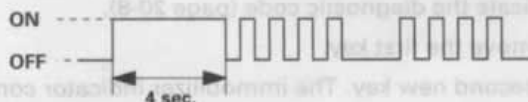
- The immobilizer system (HISS) returns to the normal mode.
11. Check that the engine can be started using all registered key.

When the ignition switch is faulty:

1. Obtain a new ignition switch and two new transponder key.
2. Remove the ignition switch (page 19-23).
3. Apply 12 V battery voltage to the ignition pulse generator lines of the Engine Control Module (ECM) using the special tool (page 20-7).
4. Set the original (registered) key near the immobilizer receiver so that the transponder in the key can communicate with the receiver.
5. Connect a new ignition switch to the wire harness and turn it ON with a new transponder key. (keep the ignition switch away from the receiver.) The immobilizer indicator comes on and it remains on.
 - The code of the original key recognized by the ECM.
 - If there is any problem in the immobilizer system (HISS), the system will enter the diagnostic mode and the indicator will remain on for approx. ten seconds, then it will indicate the diagnostic code (page 20-7).
6. Disconnect the red clip of the inspection adaptor from the battery positive (+) terminal for two seconds or more, then connect it again. The indicator remains on for approx. two seconds then it blinks four times repeatedly.



- The immobilizer system (HISS) enters the registration mode. Registrations of all key except the original key set near the receiver are cancelled.
7. Turn the ignition switch OFF and remove the key.
 8. Install the ignition switch onto the top bridge (page 19-23).
 9. Turn the ignition switch ON with a first new key. The indicator comes on for two seconds then it blinks four times repeatedly.



- The first key or spare key is registered in the ECM.
 - If there is any problem in the registration, the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-8).
10. Turn the ignition switch OFF and disconnect the red clip of the inspection adaptor from the battery positive (+) terminal.
 11. Turn the ignition switch ON (with the first key registered in step 9). The immobilizer indicator comes on for two seconds then it goes off.
 - The immobilizer system (HISS) returns to the normal mode.
 12. Turn the ignition switch OFF and connect the red clip of the inspection adaptor to the battery positive (+) terminal.
 13. Turn the ignition switch ON (with the first key registered in step 9). The immobilizer indicator comes on and it remains on.
 - The code if the first key is recognized by the ECM.
 - If there is any problem in the immobilizer system (HISS), the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-7).
 14. Disconnect the red clip of the inspection adaptor from the battery positive (+) terminal for two seconds or more, then connect it again. The indicator remains on for approx. two seconds then it blinks four times repeatedly.
 - The immobilizer system (HISS) enters the registration mode. Registration of the original key used in step 4 is cancelled.

IMMOBILIZER SYSTEM (HISS)

15. Turn the ignition switch OFF and remove the key.
16. Turn the ignition switch ON with a second new key. (Never use the key registered in previous step.) The indicator comes on for two seconds then it blinks four times repeatedly.
 - The second key or spare key is registered in the ECM.
 - If there is any problem in the registration, the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-8).

NOTICE

Keep the other transponder key away from the immobilizer receiver more than 50 mm (2.0 in).

17. Repeat the steps 15 and 16 when you continuously register the other new key.

The ECM can store up to four key codes. (The four keys can be registered.)

18. Turn the ignition switch OFF, remove the inspection adaptor and connect the ignition pulse generator connector.

19. Turn the ignition switch ON with the registered key.

- The immobilizer system (HISS) returns to the normal mode.

20. Check that the engine can be started using all registered key.

When all keys have been lost, or the Engine Control Module (ECM) is faulty

1. Obtain a new ECM and two new transponder keys.
2. Grind the keys in accordance with the shape of the original key (or use the key number plate when all key have been lost).
3. Replace the ECM with a new one.
4. Turn the ignition switch ON with a first new key. The immobilizer indicator comes on for two seconds, then it blinks four times repeatedly.
 - The first key is registered in the ECM.
 - If there is any problem in the registration, the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-8).
5. Turn the ignition switch OFF and remove the first key.
6. Turn the ignition switch ON with a second new key. The immobilizer indicator comes on for two seconds, then it blinks four times repeatedly.
 - The second key is registered in the ECM.
 - If there is any problem in the registration, the system will enter the diagnostic mode and the indicator will remain for approx. ten seconds, then it will indicate the diagnostic code (page 20-7).
7. Turn the ignition switch OFF and remove the second key.
 - The system (ECM) will not enter the normal mode unless the two keys are registered in ECM.
 - The third new key cannot be continuously registered. When it is necessary to register the third key, follow the procedures "When the key has been lost, or additional key is required" (page 20-4).
8. Check that the engine can be started using all registered keys.

DIAGNOSTIC CODE INDICATION

Remove the right side cover (page 3-4).

Disconnect the ignition pulse generator 2P (Red) connector.

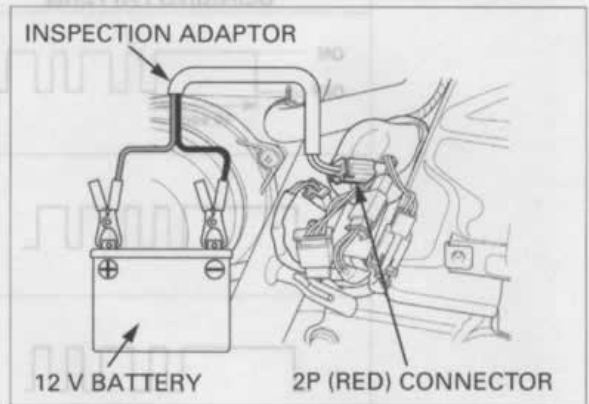
Connect the inspection adaptor to the wire harness side connector.

Connect the Red clip of the adaptor to the 12V battery positive (+) terminal and green clip to the negative (-) terminal.

TOOL:

Inspection adaptor

07XMZ-MBW0101

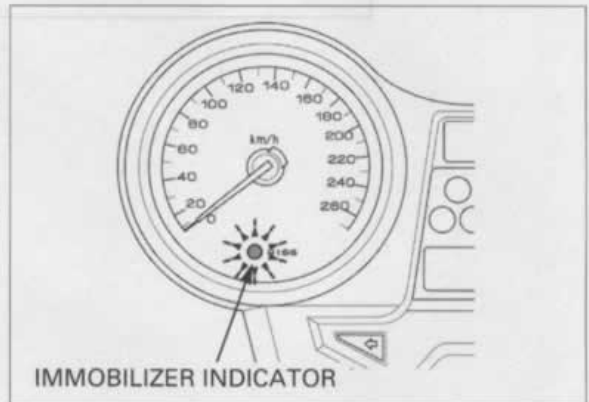


Turn the ignition switch ON with the properly registered key.

The immobilizer indicator will come on for approx. ten seconds then it will start blinking to indicate the diagnostic code if the system is abnormal.

The blinking frequency is repeated.

The immobilizer indicator remains on when the system is normal. (The system is in the normal mode and the diagnostic code does not appear.)






DIAGNOSTIC CODE

When the system (ECM) enters the diagnostic mode from the normal mode:

BLINKING PATTERN	SYMPTOM	PROBLEM	PROCEDURE
<p>ON OFF 10 sec.</p>	ECM data is abnormal	Faulty ECM	Replace the ECM
	Code signals cannot send or receive	Faulty receiver or wire harness	Follow the troubleshooting (page 20-9)
	Identification code is disagree	Jamming by the other transponder	Keep the other vehicle's transponder key away from the immobilizer receiver more than 50 mm (2.0 in)
	Secret code is disagree		

IMMOBILIZER SYSTEM (HISS)

When the system (ECM) enters the diagnostic mode from the registration mode:

BLINKING PATTERN	SYMPTOM	PROBLEM	PROCEDURE
	Registration is overlapped	The key is already registered properly	Use a new key or cancelled key
	Code signals cannot send or receive	Communication fails	Follow the troubleshooting (page 20-9)
	Registration is impossible	The key is already registered on the other system	Use a new key



The immobilizer indicator remains on when the system is normal. (The system is in the normal mode and the diagnostic code does not appear.)
The immobilizer indicator remains on when the system is abnormal. (The system is in the diagnostic mode and the diagnostic code is abnormal.)
The immobilizer indicator will come on for approximately 10 seconds then it will start blinking to indicate the diagnostic code if the system is abnormal. The blinking frequency is repeated.

DIAGNOSTIC CODE

When the system (ECM) enters the diagnostic mode from the normal mode:

BLINKING PATTERN	SYMPTOM	PROBLEM	PROCEDURE
	ECM data is abnormal	Faulty ECM	Replace the ECM
	Code signals cannot send or receive	Faulty receiver or wire harness	Follow the troubleshooting (page 20-9)
	Identification code is diagnosed	Jamming by the other transponder	Keep the other vehicle's transponder key away from the immobilizer receiver more than 50 mm (2.0 in)
	Secret code is diagnosed		

TROUBLESHOOTING

The immobilizer indicator comes on for approx. two seconds then it goes off, when the ignition switch is turned ON with the properly registered key and the immobilizer system (HISS) functions normally. If there is any problem or the properly registered key is not used, the indicator will remain on.

Immobilizer indicator does not come on when the ignition switch is turned ON

1. Fuse Inspection

Check for blown fuse (10 A).

Did the fuse blow?

YES – Replace the fuse

NO – GO TO STEP 2.

2. Combination Meter Inspection

Check that the oil pressure and neutral indicator lights come on with the ignition switch ON.

Is there indicator come on?

NO – GO TO STEP 3.

YES – GO TO STEP 4.

3. Combination Meter Power Input line Inspection

Check the power input line (black/brown wire) at the combination meter connector (page 19-15).

Is the voltage specified?

NO – Open circuit in Black/Brown wire

YES – Faulty combination meter

4. Immobilizer Indicator Line Inspection At The ECM Connector

Check the immobilizer indicator line (White/Red wire) at the Engine Control Module (ECM) connector (page 20-11).

Is the voltage specified?

NO – GO TO STEP 5.

YES – GO TO STEP 6.

5. Immobilizer Indicator Line Inspection At The Combination Meter Connector

Check the immobilizer indicator line (White/Red wire) at the combination meter connector (page 20-11).

Is the voltage specified?

NO – Open circuit in White/Red wire

YES – Faulty combination meter

6. Power Input Line Inspection At The ECM Connector

Check the power input line (Black wire) at the Engine Control Module (ECM) connector (page 20-11).

Is the voltage specified?

NO – Open circuit in Black wire

YES – GO TO STEP 7.

7. Ground Line Inspection At The ECM Connector

Check the ground line (Green wire) at the combination meter connector (page 20-12).

Is there continuity?

NO – Open circuit in Green wire

YES – • Loose or poor ECM connector contact
• Faulty ECM

Immobilizer indicator does not come on when the ignition switch is turned ON

1. Fuse Inspection

Check for blown fuse (10 A).

Did the fuse blow?

YES – Replace the fuse

NO – GO TO STEP 2.

2. First Transponder Key Inspection

Turn the ignition switch ON with the spare transponder key and check the immobilizer indicator. The indicator should come on for 2 seconds then go off.

Is there indicator go off?

YES – Faulty first transponder key

NO – GO TO STEP 3.

3. Diagnostic Code Inspection

Perform the diagnostic code indication procedure (page 20-7) and check that the immobilizer indicator comes on then it starts blinking.

Is there indicator Brinks or Stay Lit?

BRINKS—Read the diagnostic code (page 20-7).

STAY LIT—GO TO STEP 4.

4. Immobilizer Indicator Line Inspection At The ECM Connector

Check the immobilizer indicator line (White/Red wire) at the Engine Control Module (ECM) connector (page 20-11).

Is the voltage specified?

NO – Short circuit in White/Red wire

YES – GO TO STEP 5.

5. Ignition Pulse Generator Line Inspection

Check the ignition pulse generator lines (Yellow and White/Yellow wires) between the ECM and ignition pulse generator connectors (page 20-12).

Is there Continuity?

YES – • Open circuit in Yellow wire
• Open circuit in White/Yellow wire

NO – Faulty ECM

Diagnostic code  is indicated (Code signals cannot send or receive)

1. Immobilizer Receiver Power Input Line Inspection

Check the power input line at the immobilizer receiver connector (page 20-12).

Is there approx. 5V?

NO – Open or short circuit in Yellow/Red wire

YES – GO TO STEP 2.

2. Immobilizer Receiver Ground Line Inspection

Check the ground at the immobilizer receiver connector (page 20-12).

Is there continuity?

NO – Open or short circuit in Green/Orange wire

YES – GO TO STEP 3.

3. Immobilizer Receiver Signal Line Inspection

Check the signal line between the immobilizer receiver and ECM connector (page 20-13).

Is there continuity?

NO – • Open or short circuit in Pink wire
• Open or short circuit in Orange/Blue wire

YES – Faulty immobilizer receiver

IMMOBILIZER INDICATOR

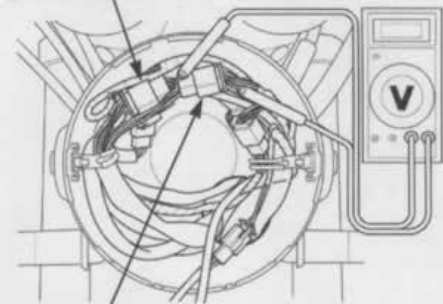
Remove the headlight unit (page 19-6).

Perform the following inspections with the combination meter 9P (Black) and 6P (Natural) connector connected.

POWER INPUT LINE INSPECTION

Measure the voltage between the Black/Brown (+) and Green (-) wire terminals.
Turn the ignition switch ON.
There should be battery voltage.

9P (BLACK) CONNECTOR



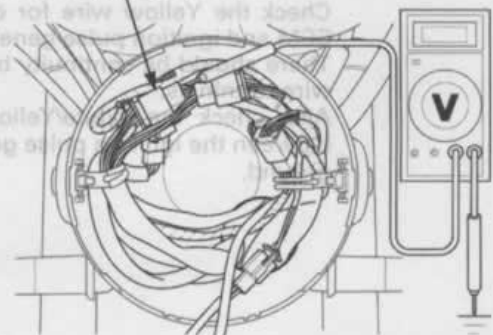
6P (NATURAL) CONNECTOR

IMMOBILIZER INDICATOR LINE INSPECTION

Measure the voltage between the White/Red (+) and ground (-).
Turn the ignition switch ON.
There should be battery voltage.

There should be no voltage for approx. two seconds after the ignition switch is turned ON, then the battery voltage should appear, if the system is normal.

9P (BLACK) CONNECTOR



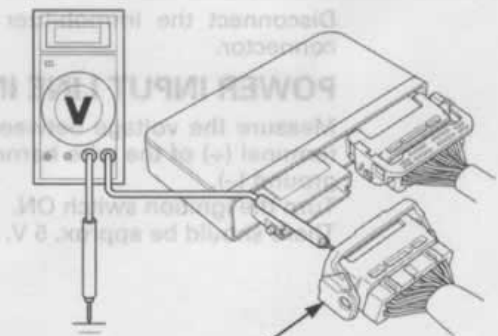
ENGINE CONTROL MODULE (ECM)

Remove the battery cover (page 16-5).

Disconnect the ECM 32P multi-connectors.
Perform the following inspections at the wire harness side connector of the ECM.

IMMOBILIZER INDICATOR LINE INSPECTION

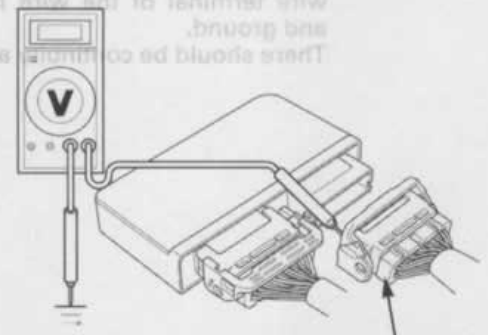
Measure the voltage between the White/Red wire terminal (+) and ground (-).
Turn the ignition switch ON.
There should be battery voltage.



32P (BLACK) CONNECTOR

POWER INPUT LINE INSPECTION

Measure the voltage between the Black/White wire terminal (+) and ground (-).
Turn the ignition switch ON.
There should be battery voltage.



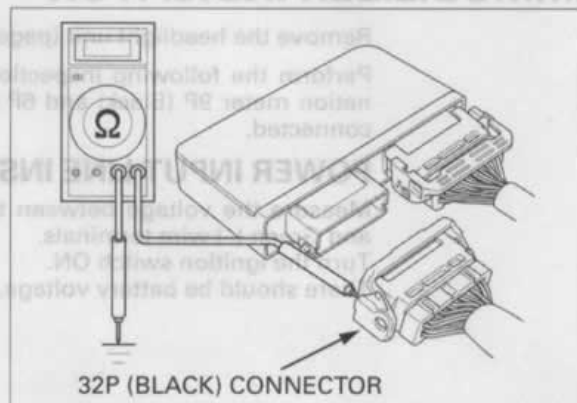
32P (LIGHT GRAY) CONNECTOR

IMMOBILIZER SYSTEM (HISS)

GROUND LINE INSPECTION

Check for continuity between the Green wire terminal and ground.

There should be continuity at all times.



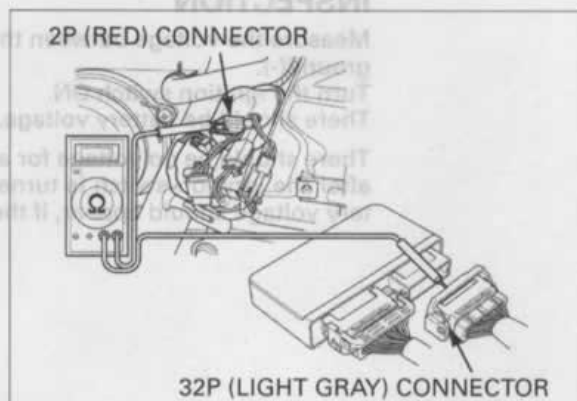
IGNITION PULSE GENERATOR LINE INSPECTION

Disconnect the ignition pulse generator 2P (Red) connector (page 20-7).

Check the Yellow wire for continuity between the ECM and ignition pulse generator connector.

There should be continuity between the same color wire terminals.

Also check the White/Yellow wire for continuity between the ignition pulse generator connector and ground.



IMMOBILIZER RECEIVER

Remove the headlight unit (page 19-6).

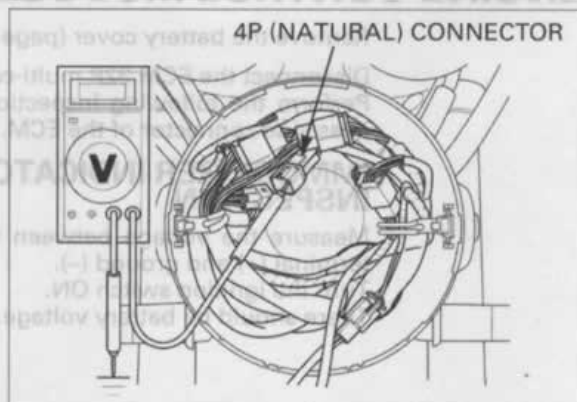
Disconnect the immobilizer receiver 4P (Natural) connector.

POWER INPUT LINE INSPECTION

Measure the voltage between the Yellow/Red wire terminal (+) of the wire harness side connector and ground (-).

Turn the ignition switch ON.

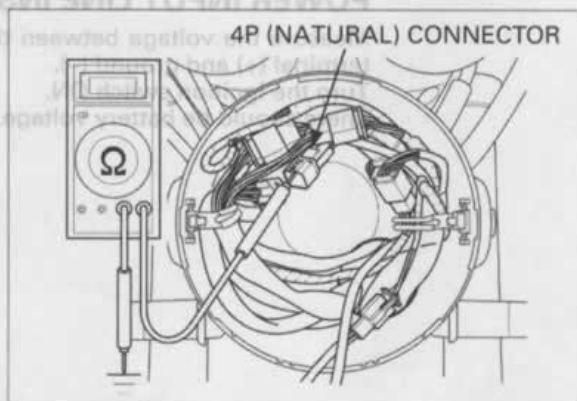
There should be approx. 5 V.



GROUND LINE INSPECTION

Check for continuity between the Green/Orange wire terminal of the wire harness side connector and ground.

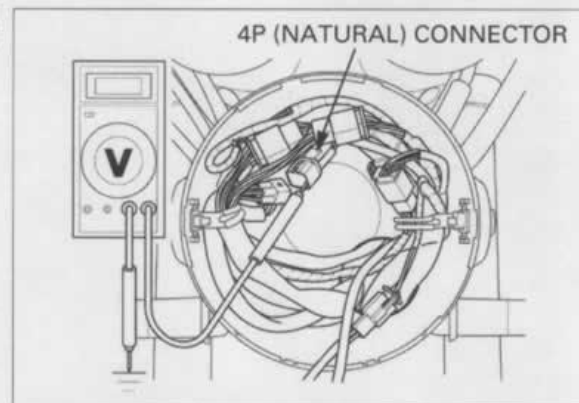
There should be continuity at all times.



SIGNAL LINE INSPECTION

Measure the voltage between the Pink wire terminal (+) of the wire harness side connector and ground (-).

Turn the ignition switch ON.
There should be approx. 5 V.

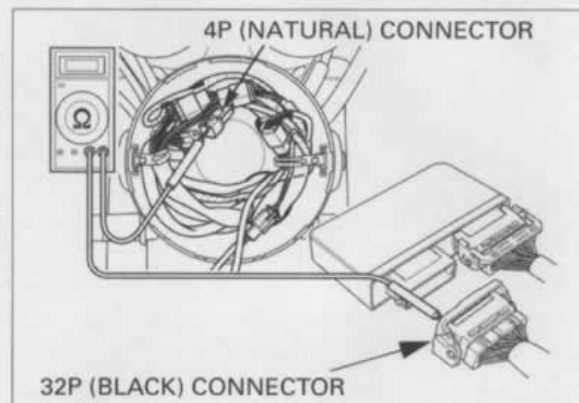


Remove the battery cover (page 16-5).

Disconnect the engine control module (ECM) connector.

Check the Orange/Blue wire for continuity between the immobilizer receiver and ECM connectors.
There should be continuity.

Check for continuity between the Orange/Blue wire terminal and ground.
There should be no continuity.

**REPLACEMENT**

Remove the combination meter (page 19-11).

Remove the two screws and the immobilizer receiver.

Install a new receiver and tighten the two screws.
Route the receiver wire properly (page 1-23).

Install the removed parts in the reverse order of removal.

**REPLACEMENT PARTS FOR PROBLEM**

Problem	Replacement parts				
	Transponder Key	Immobilizer receiver	ECM	Ignition switch	*Accessory lock and key
One Key has been lost, or additional spare key is required	○				
All key have been lost, or ECM is faulty	○		○		
Immobilizer receiver is faulty		○			
Ignition switch is faulty	○			○	
*Accessory lock is faulty					○

*Accessory lock means the seat lock, fuel fill cap or helmet holder.