

Headlamp (LO) Circuit

Description

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM via the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 40 and 41, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

Component Function Check

1. CHECK HEADLAMP (LO) OPERATION

⊗ WITHOUT CONSULT-III

1. Start IPDM E/R auto active test.
2. Check that the headlamp is turned ON.

NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

Ⓜ CONSULT-III

1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With the test items operating, check that the headlamp is turned ON.

LO : Headlamp ON

OFF : Headlamp OFF

Is the headlamp turned ON?

- YES >> Headlamp (LO) is normal.
NO >> Refer to ["Diagnosis Procedure"](#).

Diagnosis Procedure

1. CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	40	15A
Headlamp LO (RH)	IPDM E/R	41	15A

Is the fuse open?

- YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

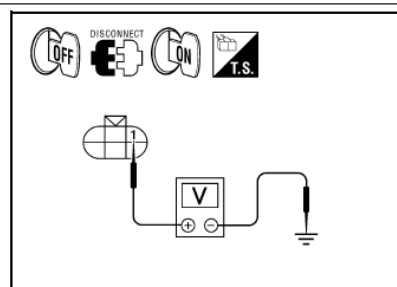
2. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Turn the low beam headlamps ON.
5. With the low beam headlamps ON, check the voltage between the combination lamp connector and ground.

(+)		Terminal	(-)	Voltage
Connector				
LH	E11	1	Ground	Battery voltage
RH	E107	1		

Is voltage reading as specified?

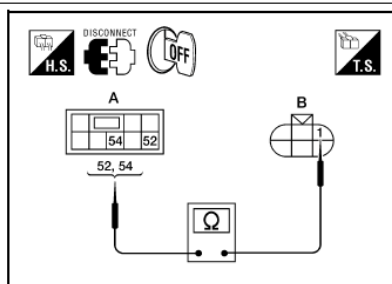
- YES >> GO TO 4
NO >> GO TO 3



3. CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E123	52	E11	Yes
RH		54	E107	



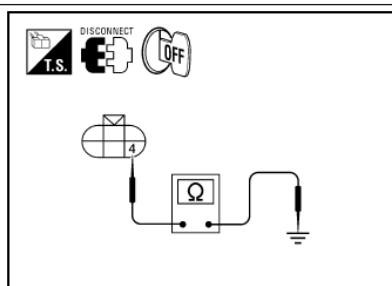
Does continuity exist?

- YES >> GO TO 4
- NO >> Repair the harnesses or connectors.

4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal and ground.

Connector	Terminal	—	Continuity
LH	E11	Ground	Yes
RH	E107		



Does continuity exist?

- YES >> Inspect the headlamp bulb.
- NO >> Repair the harness.

LAUNCH