

# Headlamp (HI) Circuit

## Description

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM via the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 34 and 35, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

## Component Function Check

### 1. CHECK HEADLAMP (HI) OPERATION

#### ⊗ WITHOUT CONSULT-III

1. Start IPDM E/R auto active test.
2. Check that the headlamp switches to the high beam.

#### 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 item operating, check that the headlamp switches to high beam.

**HI** : Headlamp switches to the high beam.

**OFF** : Headlamp OFF

Does the headlamp switch to high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to ["Diagnosis Procedure"](#).

## Diagnosis Procedure

### 1. CHECK HEADLAMP (HI) FUSES

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

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	34	10A
Headlamp HI (RH)	IPDM E/R	35	10A

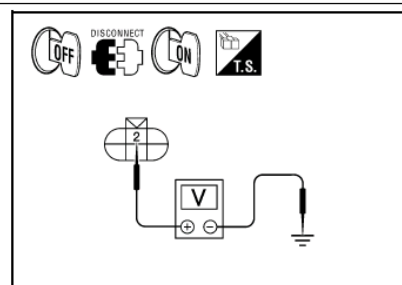
Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2

### 2. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector E11 or E107.
3. Turn the ignition switch ON.
4. Turn the high beam headlamps ON.
5. With the high beam headlamps ON, check the voltage between the combination lamp connector and ground.



(+)		Terminal	(-)	Voltage
Connector				
LH	E11	2	Ground	Battery voltage
RH	E107	2		

Are the voltage readings as specified?

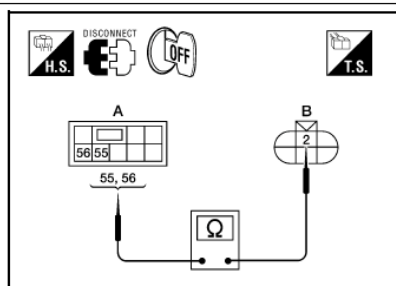
YES >> GO TO 4

NO >> GO TO 3

### 3. CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E123.
3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E123	55	E11	Yes
RH		56	E107	



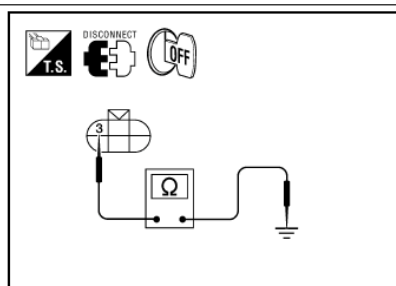
Does continuity exist?

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

### 4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

Connector	Terminal	—	Continuity
LH	E11	3	Yes
RH	E107	3	



Does continuity exist?

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

LAUNCH