12.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC U0073 CONTROL MODULE COMMUNICATION BUS OFF

Detected when CAN line abnormality is detected.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

B: DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE

Detected when CAN data (vehicle speed signal) is not received from VDC.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

C: DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE

Detected when CAN data (headlights ON signal) is not received from the body integrated unit.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

D: DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE

DTC DETECTING CONDITION:
Detected when data (vehicle speed signal) from VDC CM is abnormal.
TROUBLE SYMPTOM:
The auto headlight beam leveler does not operate.

NOTE:
Perform the diagnosis for VDC. <Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

E: DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE

Detected when CAN data (headlights ON signal) is invalid.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

F: DTC B2900 AHLCU ERROR

DTC DETECTING CONDITION:
Detected when internal malfunction occurs in the auto headlight beam leveler CM.
TROUBLE SYMPTOM:
The auto headlight beam leveler does not operate.

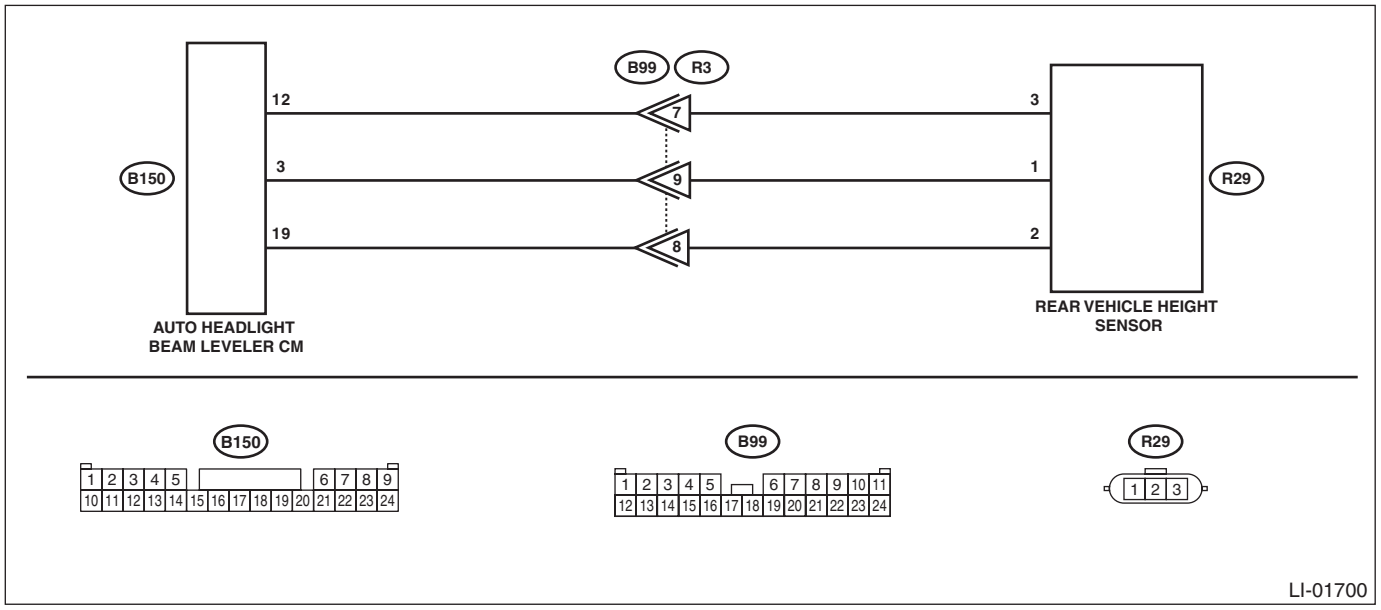
CAUTION:
Initialization is required after replacing the auto headlight beam leveler CM.

Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Using the Subaru Select Monitor, clear the auto headlight beam leveler system memory. 3) Turn the ignition switch to OFF → ON. 4) Use the Subaru Select Monitor and read DTCs.	Is DTC B2900 displayed? (Current malfunction)	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	System is normal. It is possible that temporary poor contact occurs.

G: DTC B2902 REAR HEIGHT SENSOR ERROR

DTC DETECTING CONDITION:
Detected when error occurs in the rear height sensor.
TROUBLE SYMPTOM:
The auto headlight beam leveler does not operate.

CAUTION:
Initialization is required after replacing the auto headlight beam leveler CM.
WIRING DIAGRAM:
Headlight beam leveler system <Ref. to WI-250, WIRING DIAGRAM, Headlight Beam Leveler System.>



Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Using the Subaru Select Monitor, clear the auto headlight beam leveler system memory. 3) Turn the ignition switch to OFF → ON. 4) Use the Subaru Select Monitor and read DTCs.	Is DTC B2902 displayed? (current malfunction)	Go to step **2**.	System is normal. It is possible that temporary poor contact occurs.
2	**CHECK CURRENT DATA.** Display {R Sensor Signal} using Subaru Select Monitor.	Does the data indicate the standard value?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Go to step **3**.
3	**CHECK CURRENT DATA.** 1) Display {R Sensor Signal} using Subaru Select Monitor. 2) Change the vehicle posture.	Does the data change?	Go to step **6**.	Go to step **4**.
4	**CHECK OUTPUT VOLTAGE BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND VEHICLE HEIGHT SENSOR.** 1) Disconnect the vehicle height sensor connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the vehicle height sensor connector and chassis ground. ***Connector & terminal*** ***(R29) No. 3 (+) — Chassis ground (–):***	Is the voltage 5±0.25 V?	Go to step **5**.	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>

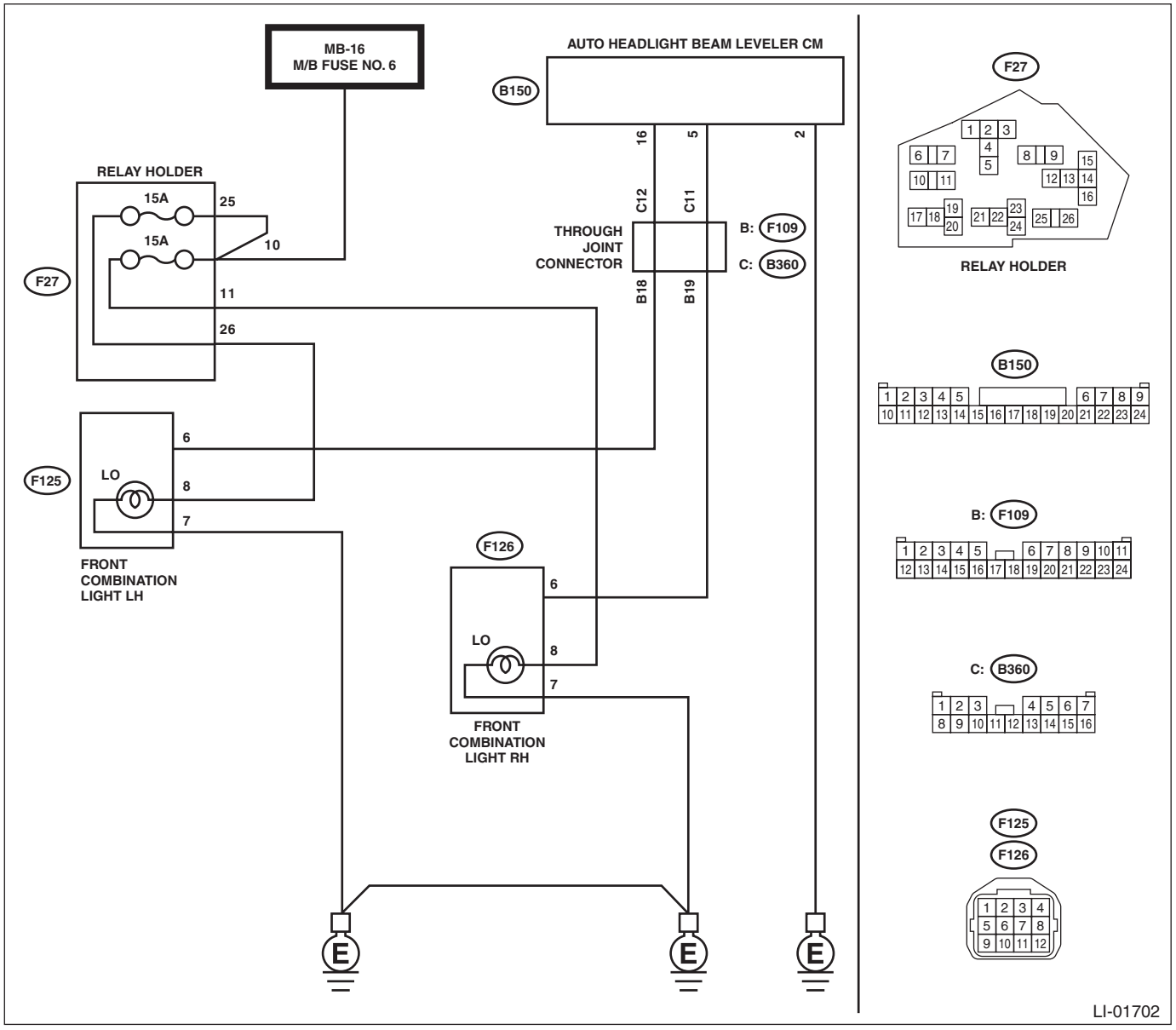
	Step	Check	Yes	No
5	**CHECK REAR HEIGHT SENSOR.** 1) Remove the rear vehicle height sensor. 2) Perform the inspection of rear height sensor unit. <Ref. to LI-75, INSPECTION, Rear Height Sensor.>	Is the rear height sensor normal?	Go to step **6**.	Replace the rear height sensor. <Ref. to LI-74, Rear Height Sensor.>
6	**CHECK HARNESS.** 1) Disconnect the auto headlight beam leveler CM connector. 2) Using a tester, measure the resistance between the auto headlight beam leveler CM connector and rear height sensor connector. ***Connector & terminal*** ***(B150) No. 3 — (R29) No. 1:*** ***(B150) No. 19 — (R29) No. 2:*** ***(B150) No. 12 — (R29) No. 3:***	Is there continuity?	Go to step **7**.	Repair or replace the open circuit of harness.
7	**CHECK HARNESS.** Using a tester, measure the resistance between the auto headlight beam leveler CM connector and chassis ground. ***Connector & terminal*** ***(B150) No. 3 — Chassis ground:*** ***(B150) No. 19 — Chassis ground:*** ***(B150) No. 12 — Chassis ground:***	Is the resistance 10 kΩ or more?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Repair or replace the short circuit of the harness.

H: DTC B2904 LED HEADLAMP(RH) ERROR

DTC DETECTING CONDITION:
LED headlight (RH) malfunction signal line error is detected for 2 seconds or more.
TROUBLE SYMPTOM:
LED headlight malfunction, LED headlight indicator illuminates.

CAUTION:
- **Initialization is required after replacing the auto headlight beam leveler CM.**
- **After replacing the headlight assembly, headlight beam adjustment is required.**

WIRING DIAGRAM:
- Headlight beam leveler system <Ref. to WI-250, WIRING DIAGRAM, Headlight Beam Leveler System.>
- Headlight system <Ref. to WI-253, WIRING DIAGRAM, Headlight System.>



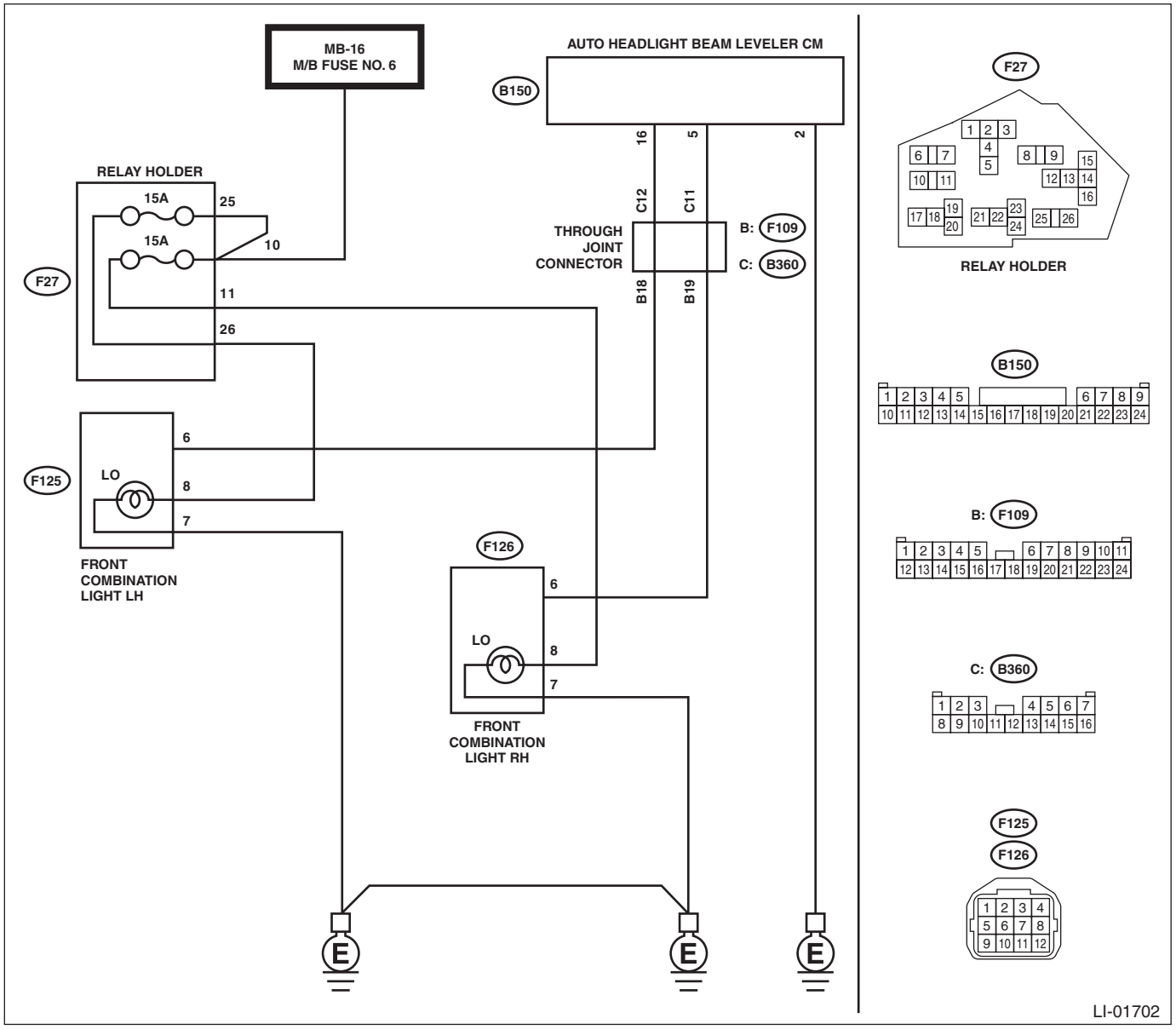
	Step	Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Using the Subaru Select Monitor, clear the auto headlight beam leveler system memory. 3) Turn the ignition switch to OFF → ON. 4) Turn the lighting switch to 2 (HEAD). 5) Use the Subaru Select Monitor and read DTCs.	Is DTC B2904 displayed? (current malfunction)	Go to step **2**.	System is normal. It is possible that temporary poor contact occurs.
2	**CHECK CURRENT DATA.** Display {LED HEADLAMP(RH) error Signal} using Subaru Select Monitor.	Does the data indicate {Light off}?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Go to step **3**.
3	**CHECK HEADLIGHT SYSTEM.** Check the headlight system. <Ref. to LI-6, INSPECTION, Headlight System.>	Is the headlight system normal?	Go to step **4**.	Perform repair according to headlight system inspection.
4	**CHECK HARNESS.** 1) Disconnect the headlight assembly RH connector. 2) Using a tester, measure the resistance between relay holder and headlight assembly RH connector. ***Connector & terminal*** ***(F27) No. 11 — (F126) No. 8:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair or replace the open circuit of harness.
5	**CHECK HARNESS.** Using a tester, measure the resistance between headlight assembly RH connector and chassis ground. ***Connector & terminal*** ***(F126) No. 7 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the open circuit of harness.
6	**CHECK HARNESS.** 1) Disconnect the auto headlight beam leveler CM connector. 2) Using a tester, measure the resistance between auto headlight beam leveler CM connector and headlight assembly RH connector. ***Connector & terminal*** ***(B150) No. 5 — (F126) No. 6:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the open circuit of harness.
7	**CHECK HARNESS.** Using a tester, measure the resistance between the auto headlight beam leveler CM connector and chassis ground. ***Connector & terminal*** ***(B150) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Repair or replace the open circuit of harness.

I: DTC B2905 LED HEADLAMP(LH) ERROR

DTC DETECTING CONDITION:
LED headlight (LH) malfunction signal line error is detected for 2 seconds or more.
TROUBLE SYMPTOM:
LED headlight malfunction, LED headlight indicator illuminates.

CAUTION:
- **Initialization is required after replacing the auto headlight beam leveler CM.**
- **After replacing the headlight assembly, headlight beam adjustment is required.**

WIRING DIAGRAM:
- Headlight beam leveler system <Ref. to WI-250, WIRING DIAGRAM, Headlight Beam Leveler System.>
- Headlight system <Ref. to WI-253, WIRING DIAGRAM, Headlight System.>



	Step	Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Using the Subaru Select Monitor, clear the auto headlight beam leveler system memory. 3) Turn the ignition switch to OFF → ON. 4) Turn the lighting switch to 2 (HEAD). 5) Use the Subaru Select Monitor and read DTCs.	Is DTC B2905 displayed? (current malfunction)	Go to step **2**.	System is normal. It is possible that temporary poor contact occurs.
2	**CHECK CURRENT DATA.** Display {LED HEADLAMP(LH) error Signal} using Subaru Select Monitor.	Does the data indicate {Light off}?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Go to step **3**.
3	**CHECK HEADLIGHT SYSTEM.** Check the headlight system. <Ref. to LI-6, INSPECTION, Headlight System.>	Is the headlight system normal?	Go to step **4**.	Perform repair according to headlight system inspection.
4	**CHECK HARNESS.** 1) Disconnect the headlight assembly LH connector. 2) Using a tester, measure the resistance between relay holder and headlight assembly LH connector. ***Connector & terminal*** ***(F27) No. 26 — (F125) No. 8:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair or replace the open circuit of harness.
5	**CHECK HARNESS.** Using a tester, measure the resistance between headlight assembly LH connector and chassis ground. ***Connector & terminal*** ***(F125) No. 7 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the open circuit of harness.
6	**CHECK HARNESS.** 1) Disconnect the auto headlight beam leveler CM connector. 2) Using a tester, measure the resistance between auto headlight beam leveler CM connector and headlight assembly LH connector. ***Connector & terminal*** ***(B150) No. 16 — (F125) No. 6:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the open circuit of harness.
7	**CHECK HARNESS.** Using a tester, measure the resistance between the auto headlight beam leveler CM connector and chassis ground. ***Connector & terminal*** ***(B150) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the auto headlight beam leveler CM. <Ref. to LI-71, Auto Headlight Beam Leveler Control Module.>	Repair or replace the open circuit of harness.