

## 4. Seat Belt Warning System

### A: WIRING DIAGRAM

Refer to “Seat Belt Warning System” in the wiring diagram.

- Gasoline engine model <Ref. to WI(w/o HEV)-197, WIRING DIAGRAM, Seat Belt Warning System.>
- HEV model <Ref. to WI(HEV)-201, WIRING DIAGRAM, Seat Belt Warning System.>

### B: INSPECTION

#### CAUTION:

- Before diagnosing the seat belt warning system and airbag system, always turn the ignition switch to OFF, disconnect the battery ground cable, and then wait for 60 seconds or more.
- When inspecting the airbag main harness, disconnect the connectors of the driver’s airbag module, passenger’s airbag module and knee airbag module for safety reasons.
- When inspecting the airbag rear harness, disconnect the side airbag module connector, curtain airbag module connector and seat belt pretensioner connector for safety reasons.

Step	Check	Yes	No
<b>1</b> <b>CHECK FUNCTION.</b> 1) Sit on the driver’s seat and passenger’s seat and disconnect the seat belts of the both. 2) Turn the ignition switch to ON (engine OFF). 3) Check the illumination of the driver’s seat belt warning light in the combination meter, and the passenger’s seat belt warning light in the MFD, and the sounding of the buzzer.	Do the driver’s warning light and passenger’s warning light blink and the buzzer sound while blinking?	Go to step 2.	Go to step 12.
<b>2</b> <b>CHECK FUNCTION.</b> 1) Wait until the buzzer sound stops in step 1. (for approximately six seconds after starting sounding) 2) Connect and disconnect the seat belts of the driver’s and passenger’s. 3) Check the illumination of the driver’s seat belt warning light in the combination meter and the passenger’s seat belt warning light in the MFD.	Do the seat belts warning light illuminate ←→ go off according to the operation?	Go to step 3.	Go to step 8.
<b>3</b> <b>CHECK FUNCTION.</b> 1) Wait until the buzzer sound stops in step 2. (for approximately six seconds after starting sounding) 2) Start the engine, and set the vehicle speed at 20 km/h (12 MPH) or more. 3) Check the seat belt warning lights of the driver’s and the passenger’s, and if the warning buzzer sounds.	Do the driver’s warning light and passenger’s warning light blink and the buzzer sound while blinking?	Go to step 4.	Go to step 14.
<b>4</b> <b>CHECK HARNESS.</b> 1) Disconnect the negative terminal from the battery, and wait for 60 seconds or more. <b>NOTE:</b> For the 12 volt engine restart battery of HEV model, disconnect the ground terminal from 12V engine restart battery sensor. 2) Disconnect the connectors of the combination meter and the seat belt buckle switch LH. 3) Check for short circuit to battery, open circuit and short circuit to ground between the combination meter and the seat belt buckle switch LH. <b>Connector &amp; terminal</b> <b>(i10) No. 15 — (R107) No. 2:</b>	Is the harness normal?	Go to step 5.	Repair or replace the harness.

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<b>5 CHECK HARNESS.</b> Measure the resistance between the seat belt buckle switch LH and chassis ground. <b>Connector &amp; terminal</b> <b>(R107) No. 1 — Chassis ground:</b>	Is the resistance less than 10 $\Omega$ ?	Go to step 6.	Repair or replace the harness.
<b>6 CHECK SEAT BELT BUCKLE SWITCH LH.</b> Measure the resistance between the connector terminals of the driver's seat belt switch when the driver's seat belt is fastened and detached. <b>Connector &amp; terminal</b> <b>(R107) No. 2 — (R107) No. 1:</b>	Is the resistance when the belt is fastened 1 M $\Omega$ or more, and less than 10 $\Omega$ when the belt is detached?	Go to step 7.	Replace the seat belt inner - front LH. <Ref. to SB-16, SEAT BELT OUTER - FRONT, REMOVAL, Front Seat Belt.>
<b>7 CHECK COMBINATION METER.</b> Perform the self-diagnosis of combination meter. <Ref. to IDI-8, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	At the start of combination meter self diagnosis, did the buzzer sound and the seat belt warning light illuminate?	Replace the combination meter. There may be a reception failure of the combination meter.	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>
<b>8 CHECK CURRENT DATA.</b> 1) Sit in the passenger's seat. 2) Select "Current Data Display" and display the data of "Passenger seat seat-belt wearing state". 3) Fasten and detach the passenger's side seat belt buckle, and read the data of the seat belt switch. <Ref. to IDI(diag)-17, LIST, Read Current Data.>	Does the seat belt switch display turn ON $\longleftrightarrow$ OFF according to the operation of the seat belt buckle?	Go to step 12.	Go to step 9.
<b>9 CHECK AIRBAG SYSTEM AND OCCUPANT DETECTION SYSTEM.</b> Perform the check in accordance with the diagnostic procedure DTC B1650 of the airbag system. <Ref. to OD(diag)-19, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is the inspection result normal?	Go to step 10.	Repair or replace with new parts according to DTC B1650.
<b>10 CHECK BUCKLE SWITCH RH.</b> Perform the check in accordance with the diagnostic procedure DTC B1655 of the occupant detection system. <Ref. to OD(diag)-22, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is the inspection result normal?	Go to step 11.	Repair or replace with new parts according to DTC B1655.
<b>11 CHECK AIRBAG CONTROL MODULE AND COMBINATION METER.</b> Check the airbag control module, occupant detection sensor and seat belt buckle switch RH. Perform the check in accordance with the diagnostic procedure DTC B16F1 of the airbag system. <Ref. to AB(diag)-97, DTC B16F1 PASSENGER'S SEAT BELT WARNING FAILURE, Diagnostic Chart with Trouble Code.>	Is the inspection result normal?	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>	Repair or replace with new parts according to DTC B16F1.
<b>12 CHECK MFD POWER SUPPLY VOLTAGE.</b> 1) Disconnect the MFD connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the ignition power supply and the MFD. <b>Connector &amp; terminal</b> <b>(i122) No. 3 (+) — Chassis ground (-):</b>	Is the voltage 10 V or more?	Go to step 13.	Check the harness for open or short between the fuse and MFD.

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<b>13 CHECK MFD GROUND CIRCUIT.</b> 1) Turn the ignition switch to OFF. 2) Measure the resistance between MFD and chassis ground. <b>Connector &amp; terminal</b> <b>(i122) No. 2 — Chassis ground:</b>	Is the resistance less than 10 $\Omega$ ?	Go to step 14.	Repair or replace the harness.
<b>14 CHECK HARNESS BETWEEN MFD AND COMBINATION METER.</b> 1) Disconnect the harness of the MFD and the combination meter. 2) Measure the resistance between MFD and combination meter. <b>Connector &amp; terminal</b> <b>(i122) No. 9 — (i10) No. 28:</b>	Is the resistance less than 10 $\Omega$ ?	Go to step 15.	Repair or replace the harness.
<b>15 CHECK COMMUNICATION STATUS BETWEEN MFD AND COMBINATION METER.</b> 1) Remove the MFD, and install a properly operating MFD (new MFD). 2) Connect the connector and then turn the ignition switch to ON. <b>Connector &amp; terminal</b> <b>(i122) No. 9 — (i10) No. 28:</b>	Is the MFD properly displayed?	Replace the MFD.	Replace the combination meter case assembly.