

## 2012 - Mazda6 - Body and Accessories

### NO. 6 INSTRUMENT CLUSTER ILLUMINATION DOES NOT ILLUMINATE WHEN TAILLIGHTS ILLUMINATE [INSTRUMENT CLUSTER (WITH MALFUNCTION WARNING LIGHT)]

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6              | Instrument cluster illumination does not illuminate when taillights illuminate                                                                                                                                                                                                                                                                                                                                                                                                                            |
| POSSIBLE CAUSE | <ul style="list-style-type: none"> <li>• Instrument cluster malfunction</li> <li>• Connector or pin malfunction</li> <li>• Fuse malfunction</li> <li>• BCM malfunction</li> <li>• Short circuit in wiring harness between CAN-L, CAN-H and ground</li> <li>• Open circuit in CAN wiring harness (CAN-L, CAN-H)</li> <li>• CAN wiring harness (CAN-L, CAN-H) short each other</li> <li>• Light switch malfunction</li> <li>• Malfunction in vehicle wiring harness between light switch and BCM</li> </ul> |

#### Diagnostic procedure

| STEP | INSPECTION                                                                                                                                                  | ACTION                                                                                                                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>• Turn the light switch to the TNS position.</li> <li>• Does the instrument cluster illumination turn on?</li> </ul> | Yes Troubleshooting completed. (The system is normal.)                                                                                                                                                       |
|      |                                                                                                                                                             | No Go to the next step.                                                                                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>• Inspect the ROOM and ILLUMI fuse.</li> <li>• Are the fuses normal?</li> </ul>                                      | Yes Go to the next step.                                                                                                                                                                                     |
|      |                                                                                                                                                             | No Replace the fuse. <ul style="list-style-type: none"> <li>• If the fuse is melted, inspect the wiring harness for short to ground. Repair or replace the wiring harness, then replace the fuse.</li> </ul> |
| 3    | <ul style="list-style-type: none"> <li>• Retrieve DTCs from</li> </ul>                                                                                      | Yes Go to the applicable DTC inspection.                                                                                                                                                                     |

|   |                                                                                                                                                                                                                                                                                 |     |                                                                                                                                                                                                                                                                                                   |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>the instrument cluster and BCM using the M-MDS.</p> <p>(See <b>DTC INSPECTION [INSTRUMENT CLUSTER]</b>.)</p> <p>(See <b>DTC INSPECTION [BCM]</b>.)</p> <ul style="list-style-type: none"><li>• Can DTCs be verified?</li></ul>                                               |     | <p>(See <b>DTC TABLE [INSTRUMENT CLUSTER]</b>.)</p> <p>(See <b>DTC TABLE [BCM]</b>.)</p>                                                                                                                                                                                                          |
|   |                                                                                                                                                                                                                                                                                 | No  | Go to the next step.                                                                                                                                                                                                                                                                              |
| 4 | <ul style="list-style-type: none"><li>• Monitor the BCM PID TNS_SW using the M-MDS.</li></ul> <p>(See <b>PID/ DATA MONITOR INSPECTION [BCM]</b>.)</p> <ul style="list-style-type: none"><li>• Does the M-MDS monitored value correspond to the light switch position?</li></ul> | Yes | Replace the instrument cluster.                                                                                                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                 | No  | <p>Inspect the following and repair or replace the malfunctioning location.</p> <ul style="list-style-type: none"><li>• Light switch</li></ul> <p>(See <b>LIGHT SWITCH INSPECTION</b>.)</p> <ul style="list-style-type: none"><li>• Vehicle wiring harness between light switch and BCM</li></ul> |

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| 1    | <ul style="list-style-type: none"> <li>• Turn the light switch to the TNS position.</li> <li>• Does the instrument cluster illumination turn on?</li> </ul> | Yes Troubleshooting completed. (The system is normal.)                                                                                                                                                       |
|      |                                                                                                                                                             | No Go to the next step.                                                                                                                                                                                      |
| 2    | <ul style="list-style-type: none"> <li>• Inspect the ROOM and ILLUMI fuse.</li> <li>• Are the fuses normal?</li> </ul>                                      | Yes Go to the next step.                                                                                                                                                                                     |
|      |                                                                                                                                                             | No Replace the fuse. <ul style="list-style-type: none"> <li>• If the fuse is melted, inspect the wiring harness for short to ground. Repair or replace the wiring harness, then replace the fuse.</li> </ul> |
| 3    | <ul style="list-style-type: none"> <li>• Retrieve DTCs from</li> </ul>                                                                                      | Yes Go to the applicable DTC inspection.                                                                                                                                                                     |

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|   |                                                                                                                                                                                                                                                                                 | No  | Go to the next step.                                                                                                                                                                                                                                                                              |
| 4 | <ul style="list-style-type: none"><li>• Monitor the BCM PID TNS_SW using the M-MDS.</li></ul> <p>(See <b>PID/ DATA MONITOR INSPECTION [BCM]</b>.)</p> <ul style="list-style-type: none"><li>• Does the M-MDS monitored value correspond to the light switch position?</li></ul> | Yes | Replace the instrument cluster.                                                                                                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                 | No  | <p>Inspect the following and repair or replace the malfunctioning location.</p> <ul style="list-style-type: none"><li>• Light switch</li></ul> <p>(See <b>LIGHT SWITCH INSPECTION</b>.)</p> <ul style="list-style-type: none"><li>• Vehicle wiring harness between light switch and BCM</li></ul> |