14. Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC C2021 TIRE 1 AIR PRESSURE DECREASE

NOTE:
Refer to DTC C2024 for diagnostic procedure. <Ref. to TPM(diag)-22, DTC C2024 TIRE 4 AIR PRESSURE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

B: DTC C2022 TIRE 2 AIR PRESSURE DECREASE

NOTE:
Refer to DTC C2024 for diagnostic procedure. <Ref. to TPM(diag)-22, DTC C2024 TIRE 4 AIR PRESSURE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

C: DTC C2023 TIRE 3 AIR PRESSURE DECREASE

NOTE:
Refer to DTC C2024 for diagnostic procedure. <Ref. to TPM(diag)-22, DTC C2024 TIRE 4 AIR PRESSURE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

D: DTC C2024 TIRE 4 AIR PRESSURE DECREASE

DTC DETECTING CONDITION:
Inflation pressure of tires dropped below the specified value.

NOTE:
For the specifications, refer to “CURRENT DATA”. <Ref. to TPM(diag)-12, LIST, Read Current Data.>

TROUBLE SYMPTOM:
Tire pressure warning light illuminates.

<table>
<thead>
<tr>
<th>Step</th>
<th>Check</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHECK TIRES. Lift up the vehicle and check for damage in the tires.</td>
<td>Are there cracks or damage?</td>
<td>Replace the tire.</td>
</tr>
<tr>
<td>2</td>
<td>CHECK TIRES. Check the tire air pressure.</td>
<td>Is the tire pressure in the specifications?</td>
<td>Go to step 3.</td>
</tr>
<tr>
<td>3</td>
<td>CHECK TRANSMITTER. Drive the vehicle at 40 km/h (25 MPH) or faster and compare the data from the transmitter on the four wheels.</td>
<td>Is there a transmitter with different data?</td>
<td>Replace the transmitter (tire pressure sensor).</td>
</tr>
</tbody>
</table>

CAUTION:
When driving vehicle to perform driving test, there should be always 2 persons (driver and checker) to check.
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

E: DTC C2121 TRANSMITTER 1 NO DATA

NOTE:
Refer to DTC C2124 for diagnostic procedure. <Ref. to TPM(diag)-24, DTC C2124 TRANSMITTER 4 NO DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

F: DTC C2122 TRANSMITTER 2 NO DATA

NOTE:
Refer to DTC C2124 for diagnostic procedure. <Ref. to TPM(diag)-24, DTC C2124 TRANSMITTER 4 NO DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

G: DTC C2123 TRANSMITTER 3 NO DATA

NOTE:
Refer to DTC C2124 for diagnostic procedure. <Ref. to TPM(diag)-24, DTC C2124 TRANSMITTER 4 NO DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

H: DTC C2124 TRANSMITTER 4 NO DATA

DTC DETECTING CONDITION:
Data from each transmitter is not received for 8 minutes.

TROUBLE SYMPTOM:
Tire pressure warning light blinks 25 times and then illuminates.

<table>
<thead>
<tr>
<th>Step</th>
<th>Check</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>START FL TRANSMITTER. 1) Connect the Subaru Select Monitor and then turn the ignition switch to ON. 2) Select “Transmit ID data monitor”. «Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).» 3) Use the transmitter registration tool and transmit the ID from the FL transmitter to check “Latest reception ID”.</td>
<td>Is “Latest reception ID” updated?</td>
<td>Go to step 2. Replace front left transmitter.</td>
</tr>
<tr>
<td>2</td>
<td>CHECK FL TRANSMITTER ID. Check the ID displayed in the updated ID display and the tire 1 registered ID.</td>
<td>Are the two IDs same?</td>
<td>Go to step 3. Record the received ID update as the FL transmitter. Go to step 3.</td>
</tr>
<tr>
<td>3</td>
<td>START FR TRANSMITTER. Use the transmitter registration tool and transmit the ID from the FR transmitter to check “Latest reception ID”.</td>
<td>Is “Latest reception ID” updated?</td>
<td>Go to step 4. Replace the front right transmitter.</td>
</tr>
<tr>
<td>4</td>
<td>CHECK FR TRANSMITTER ID. Check the ID displayed in the updated ID display and the tire 2 registered ID.</td>
<td>Are the two IDs same?</td>
<td>Go to step 5. Record the received ID update as the FR transmitter. Go to step 5.</td>
</tr>
<tr>
<td>5</td>
<td>START RR TRANSMITTER. Use the transmitter registration tool and transmit the ID from the RR transmitter to check “Latest reception ID”.</td>
<td>Is “Latest reception ID” updated?</td>
<td>Go to step 6. Replace the RR transmitter.</td>
</tr>
<tr>
<td>6</td>
<td>CHECK RR TRANSMITTER ID. Check the ID displayed in the updated ID display and the tire 3 registered ID.</td>
<td>Are the two IDs same?</td>
<td>Go to step 7. Record the received ID update as the RR transmitter. Go to step 7.</td>
</tr>
<tr>
<td>7</td>
<td>START RL TRANSMITTER. Use the transmitter registration tool and transmit the ID from the RL transmitter to check “Latest reception ID”.</td>
<td>Is “Latest reception ID” updated?</td>
<td>Go to step 8. Replace the RL transmitter.</td>
</tr>
<tr>
<td>8</td>
<td>CHECK RL TRANSMITTER ID. Check the ID displayed in the updated ID display and the tire 4 registered ID.</td>
<td>Are the two IDs same?</td>
<td>Go to step 9. Record the received ID update as the RL transmitter. Go to step 9.</td>
</tr>
<tr>
<td>9</td>
<td>CHECK MALFUNCTION TRANSMITTER. Check the registered ID of the transmitter indicated by DTC.</td>
<td>Is ID recorded by this procedure?</td>
<td>Go to step 10. Go to step 1.</td>
</tr>
<tr>
<td>10</td>
<td>CHECK MALFUNCTION TRANSMITTER. Check the registered ID of the transmitter indicated by DTC.</td>
<td>Is there checked ID in the record?</td>
<td>Replace the transmitter of the recorded position. Replace the transmitter showing the latest ID that is not included in the registered IDs.</td>
</tr>
</tbody>
</table>

CAUTION:
When driving vehicle to perform driving test, there should be always 2 persons (driver and checker) to check.
Diagnostic Procedure with Diagnostic Trouble Code (DTC)
TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

I: DTC C2221 TRANSMITTER 1 PRESSURE DATA ABNORMAL
NOTE:
Refer to DTC C2224 for diagnostic procedure. <Ref. to TPM(diag)-26, DTC C2224 TRANSMITTER 4 PRESSURE DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC C2222 TRANSMITTER 2 PRESSURE DATA ABNORMAL
NOTE:
Refer to DTC C2224 for diagnostic procedure. <Ref. to TPM(diag)-26, DTC C2224 TRANSMITTER 4 PRESSURE DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC C2223 TRANSMITTER 3 PRESSURE DATA ABNORMAL
NOTE:
Refer to DTC C2224 for diagnostic procedure. <Ref. to TPM(diag)-26, DTC C2224 TRANSMITTER 4 PRESSURE DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
L: DTC C2224 TRANSMITTER 4 PRESSURE DATA ABNORMAL

DTC DETECTING CONDITION:
• When comparing the data from each transmitter to the previous data, the change is large.
• The pressure exceeds what the transmitter can measure. (Excessive pressure)

TROUBLE SYMPTOM:
Tire pressure warning light blinks 25 times and then illuminates.

<table>
<thead>
<tr>
<th>Step</th>
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<th>No</th>
</tr>
</thead>
</table>
| 1    | START FL TRANSMITTER.  
1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.  
2) Select “Transmit ID data monitor”. <Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).>  
3) Use the transmitter registration tool and transmit the ID from the FL transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 2. | Replace front left transmitter. |
| 2    | CHECK FL TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 1 registered ID. | Are the two IDs same? | Go to step 3. | Record the received ID update as the FL transmitter. Go to step 3. |
| 3    | START FR TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the FR transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 4. | Replace the front right transmitter. |
| 4    | CHECK FR TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 2 registered ID. | Are the two IDs same? | Go to step 5. | Record the received ID update as the FR transmitter. Go to step 5. |
| 5    | START RR TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the RR transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 6. | Replace the RR transmitter. |
| 6    | CHECK RR TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 3 registered ID. | Are the two IDs same? | Go to step 7. | Record the received ID update as the RR transmitter. Go to step 7. |
| 7    | START RL TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the RL transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 8. | Replace the RL transmitter. |
| 8    | CHECK RL TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 4 registered ID. | Are the two IDs same? | Go to step 9. | Record the received ID update as the RL transmitter. Go to step 9. |
| 9    | CHECK MALFUNCTION TRANSMITTER.  
Check the registered ID of the transmitter indicated by DTC. | Is ID recorded by this procedure? | Go to step 10. | Replace the transmitter showing the latest ID that is not included in the registered IDs. |
| 10   | CHECK MALFUNCTION TRANSMITTER.  
Check the registered ID of the transmitter indicated by DTC. | Is there checked ID in the record? | Replace the transmitter of the recorded position. | Replace the transmitter showing the latest ID that is not included in the registered IDs. |
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

M: DTC C2321 TRANSMITTER 1 FUNCTION CODE ABNORMAL
NOTE:
Refer to DTC C2324 for diagnostic procedure. <Ref. to TPM(diag)-28, DTC C2324 TRANSMITTER 4 FUNCTION CODE ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

N: DTC C2322 TRANSMITTER 2 FUNCTION CODE ABNORMAL
NOTE:
Refer to DTC C2324 for diagnostic procedure. <Ref. to TPM(diag)-28, DTC C2324 TRANSMITTER 4 FUNCTION CODE ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

O: DTC C2323 TRANSMITTER 3 FUNCTION CODE ABNORMAL
NOTE:
Refer to DTC C2324 for diagnostic procedure. <Ref. to TPM(diag)-28, DTC C2324 TRANSMITTER 4 FUNCTION CODE ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

**P: DTC C2324 TRANSMITTER 4 FUNCTION CODE ABNORMAL**

**DTC DETECTING CONDITION:**
Unexpected function codes received from each transmitter.

**TROUBLE SYMPTOM:**
Tire pressure warning light blinks 25 times and then illuminates.

<table>
<thead>
<tr>
<th>Step</th>
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<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>
| 1    | START FL TRANSMITTER.  
1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.  
2) Select "Transmit ID data monitor”. <Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).>  
3) Use the transmitter registration tool and transmit the ID from the FL transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 2. | Replace front left transmitter. |
| 2    | CHECK FL TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 1 registered ID. | Are the two IDs same? | Go to step 3. | Record the received ID update as the FL transmitter. Go to step 3. |
| 3    | START FR TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the FR transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 4. | Replace the front right transmitter. |
| 4    | CHECK FR TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 2 registered ID. | Are the two IDs same? | Go to step 5. | Record the received ID update as the FR transmitter. Go to step 5. |
| 5    | START RR TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the RR transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 6. | Replace the RR transmitter. |
| 6    | CHECK RR TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 3 registered ID. | Are the two IDs same? | Go to step 7. | Record the received ID update as the RR transmitter. Go to step 7. |
| 7    | START RL TRANSMITTER.  
Use the transmitter registration tool and transmit the ID from the RL transmitter to check “Latest reception ID”. | Is “Latest reception ID” updated? | Go to step 8. | Replace the RL transmitter. |
| 8    | CHECK RL TRANSMITTER ID.  
Check the ID displayed in the updated ID display and the tire 4 registered ID. | Are the two IDs same? | Go to step 9. | Record the received ID update as the RL transmitter. Go to step 9. |
| 9    | CHECK MALFUNCTION TRANSMITTER.  
Check the registered ID of the transmitter indicated by DTC. | Is ID recorded by this procedure? | Go to step 10. | Replace the transmitter indicated by diagnostics trouble code (DTC). |
| 10   | CHECK MALFUNCTION TRANSMITTER.  
Check the registered ID of the transmitter indicated by DTC. | Is there checked ID in the record? | Replace the transmitter of the recorded position. | Replace the transmitter indicated by diagnostics trouble code (DTC). |
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

Q: DTC C2421 TRANSMITTER 1 BATTERY VOLTAGE DECREASE

NOTE:
Refer to DTC C2424 for diagnostic procedure. <Ref. to TPM(diag)-29, DTC C2424 TRANSMITTER 4 BATTERY VOLTAGE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

R: DTC C2422 TRANSMITTER 2 BATTERY VOLTAGE DECREASE

NOTE:
Refer to DTC C2424 for diagnostic procedure. <Ref. to TPM(diag)-29, DTC C2424 TRANSMITTER 4 BATTERY VOLTAGE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

S: DTC C2423 TRANSMITTER 3 BATTERY VOLTAGE DECREASE

NOTE:
Refer to DTC C2424 for diagnostic procedure. <Ref. to TPM(diag)-29, DTC C2424 TRANSMITTER 4 BATTERY VOLTAGE DECREASE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

T: DTC C2424 TRANSMITTER 4 BATTERY VOLTAGE DECREASE

DTC DETECTING CONDITION:
Low battery signals received 20 times from each transmitter.

TROUBLE SYMPTOM:
Tire pressure warning light blinks 25 times and then illuminates.

<table>
<thead>
<tr>
<th>Step</th>
<th>Check</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHECK TRANSMITTER.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1)</td>
<td>Replace all transmitters and register their IDs. &lt;Ref. to TPM(diag)-13, OPERATION, Register Transmitter (ID).&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>Perform the Clear Memory Mode, and perform driving test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td>Is the fault eliminated?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>Internal battery of the transmitter had worn out.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5)</td>
<td>Replace the TPMS &amp; keyless entry control module.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TPM(diag)-29
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

U: DTC C2521 VEHICLE SPEED IS ABNORMAL

DTC DETECTING CONDITION:
Vehicle speed function codes were received from the transmitter, but the vehicle speed signal was not input to the module.

TROUBLE SYMPTOM:
Tire pressure warning light blinks 25 times and then illuminates.

WIRING DIAGRAM:
Tire Pressure Monitoring System <Ref. to WI-148, WIRING DIAGRAM, Tire Pressure Monitoring System.>

<table>
<thead>
<tr>
<th>Step</th>
<th>Check</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHECK LAN COMMUNICATION. &lt;Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.&gt;</td>
<td>Is there any fault?</td>
<td>Repair it according to the diagnosis for LAN system.</td>
</tr>
<tr>
<td>2</td>
<td>CHECK HARNESS. Measure the resistance between TPMS &amp; keyless entry control module and body integrated unit. Connector &amp; terminal (R221) No. 11 — (I171) No. 11:</td>
<td>Is the resistance less than 10 Ω?</td>
<td>Go to step 3.</td>
</tr>
<tr>
<td>3</td>
<td>CHECK CONNECTOR. Check each connector.</td>
<td>Is there poor contact or any other faults?</td>
<td>Repair the connector.</td>
</tr>
</tbody>
</table>