

# Diagnostic Procedure with Diagnostic Trouble Code (DTC)

TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

## 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.

| Step  | Check                                       | Yes   | No                       |
|---|---|---|--------------------------|
| 1<br><b>CHECK TIRES.</b><br>Lift up the vehicle and check for damage in the tires.  | Are there cracks or damage?                 | Replace the tire.   | Go to step 2.            |
| 2<br><b>CHECK TIRES.</b><br>Check the tire air pressure.  | Is the tire pressure in the specifications? | Go to step 3.   | Adjust the air pressure. |
| 3<br><b>CHECK TRANSMITTER.</b><br>Drive the vehicle at 40 km/h (25 MPH) or faster and compare the data from the transmitter on the four wheels.   | Is there a transmitter with different data? | Replace the transmitter (tire pressure sensor).   | Go to step 4.            |
| 4<br><b>PERFORM DRIVING TEST.</b><br>1) Perform the Clear Memory Mode. <Ref. to TPM(diag)-11, OPERATION, Clear Memory Mode.><br>2) Perform a driving test. <Ref. to TPM(diag)-15, PROCEDURE, Inspection Mode.><br>3) Read the DTC. <Ref. to TPM(diag)-10, OPERATION, Read Diagnostic Trouble Code (DTC).> | Is DTC displayed?                           | Inspect by referring to "Diagnostic Procedure with Diagnostic Trouble Code (DTC)". <Ref. to TPM(diag)-22, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> | Finish the diagnosis.    |

#### 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.

| Step  | Check                              | Yes   | No  |
|---|------------------------------------|---|---|
| <b>1 START FL TRANSMITTER.</b><br>1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.<br>2) Select "Transmit ID data monitor". <Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).><br>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.   |
| <b>2 CHECK FL TRANSMITTER ID.</b><br>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.                        |
| <b>3 START FR TRANSMITTER.</b><br>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.  |
| <b>4 CHECK FR TRANSMITTER ID.</b><br>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.                        |
| <b>5 START RR TRANSMITTER.</b><br>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.   |
| <b>6 CHECK RR TRANSMITTER ID.</b><br>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.                        |
| <b>7 START RL TRANSMITTER.</b><br>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.   |
| <b>8 CHECK RL TRANSMITTER ID.</b><br>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.                        |
| <b>9 CHECK MALFUNCTION TRANSMITTER.</b>   | Is ID recorded by this procedure?  | Go to step 10.                                    | Go to step 1.   |
| <b>10 CHECK MALFUNCTION TRANSMITTER.</b><br>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. |

#### 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).>

# Diagnostic Procedure with Diagnostic Trouble Code (DTC)

## TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

### 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.

| Step  | Check                              | Yes   | No  |
|---|------------------------------------|---|---|
| <b>1 START FL TRANSMITTER.</b><br>1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.<br>2) Select "Transmit ID data monitor". <Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).><br>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.   |
| <b>2 CHECK FL TRANSMITTER ID.</b><br>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.                        |
| <b>3 START FR TRANSMITTER.</b><br>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.  |
| <b>4 CHECK FR TRANSMITTER ID.</b><br>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.                        |
| <b>5 START RR TRANSMITTER.</b><br>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.   |
| <b>6 CHECK RR TRANSMITTER ID.</b><br>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.                        |
| <b>7 START RL TRANSMITTER.</b><br>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.   |
| <b>8 CHECK RL TRANSMITTER ID.</b><br>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.                        |
| <b>9 CHECK MALFUNCTION TRANSMITTER.</b>   | Is ID recorded by this procedure?  | Go to step 10.                                    | Go to step 1.   |
| <b>10 CHECK MALFUNCTION TRANSMITTER.</b><br>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.

| Step  | Check                              | Yes   | No   |
|---|------------------------------------|---|--|
| <b>1 START FL TRANSMITTER.</b><br>1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.<br>2) Select "Transmit ID data monitor". <Ref. to TPM(diag)-14, OPERATION, Display Transmitter (ID).><br>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.                                      |
| <b>2 CHECK FL TRANSMITTER ID.</b><br>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.   |
| <b>3 START FR TRANSMITTER.</b><br>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.                                 |
| <b>4 CHECK FR TRANSMITTER ID.</b><br>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.   |
| <b>5 START RR TRANSMITTER.</b><br>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.  |
| <b>6 CHECK RR TRANSMITTER ID.</b><br>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.   |
| <b>7 START RL TRANSMITTER.</b><br>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.  |
| <b>8 CHECK RL TRANSMITTER ID.</b><br>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.   |
| <b>9 CHECK MALFUNCTION TRANSMITTER.</b>   | Is ID recorded by this procedure?  | Go to step 10.                                    | Replace the transmitter indicated by diagnostics trouble code (DTC). |
| <b>10 CHECK MALFUNCTION TRANSMITTER.</b><br>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.

|   | Step  | Check                    | Yes   | No   |
|---|---|--------------------------|---|--|
| 1 | <b>CHECK TRANSMITTER.</b><br>1) Replace all transmitters and register their IDs. <Ref. to TPM(diag)-13, OPERATION, Register Transmitter (ID).><br>2) Perform the Clear Memory Mode, and perform driving test. | Is the fault eliminated? | Internal battery of the transmitter had worn out. | Replace the TPMS & keyless entry control module. |



# Diagnostic Procedure with Diagnostic Trouble Code (DTC)

## TIRE PRESSURE MONITORING SYSTEM (DIAGNOSTICS)

### U: DTC C2521 VEHICLE SPEED IS ABNORMAL

#### DTC DETECTING CONDITION:

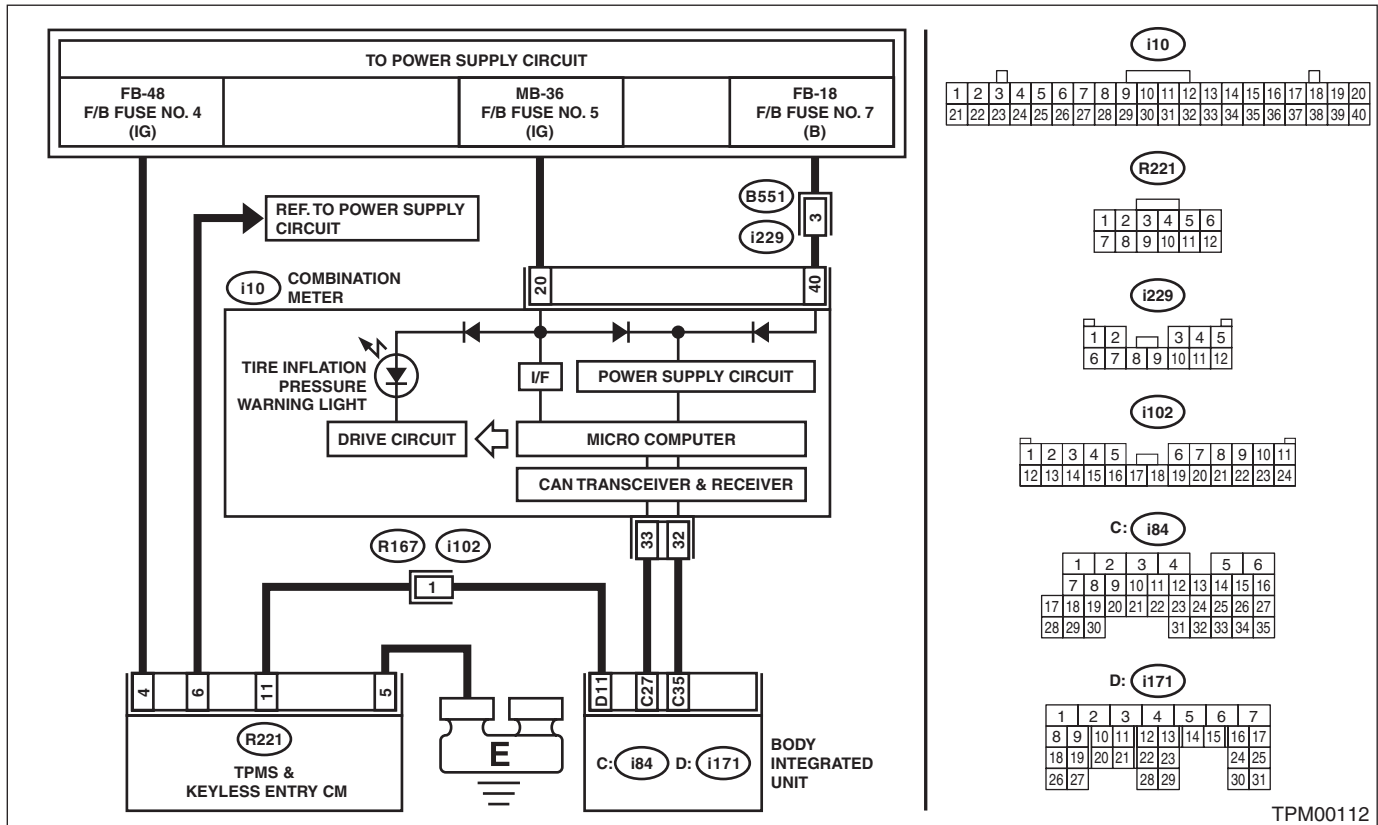
Vehicle speed function codes were received from the transmitter, but the vehicle speed signal was not input to the module.

#### 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.>



TPM00112

| Step | Check   | Yes  | No   |
|------|---|--|--|
| 1    | <b>CHECK LAN COMMUNICATION.</b><br>Inspect LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>  | Repair it according to the diagnosis for LAN system. | Go to step 2.                                    |
| 2    | <b>CHECK HARNESS.</b><br>Measure the resistance between TPMS & keyless entry control module and body integrated unit.<br><b>Connector &amp; terminal (R221) No. 11 — (i171) No. 11:</b> | Go to step 3.  | Repair the harness.                              |
| 3    | <b>CHECK CONNECTOR.</b><br>Check each connector.  | Repair the connector.                                | Replace the TPMS & keyless entry control module. |