

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

2009 ACCESSORIES AND EQUIPMENT**Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey****DIAGNOSTIC CODE INDEX****DIAGNOSTIC CODE INDEX**

DTC	Description
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<u>B1A09</u>	RKE FOB 2 PERFORMANCE (WIN)
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<u>B2224</u>	(SKREEM) SENTRY KEY REMOTE ENTRY MODULE INTERNAL

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B2229	SKREEM INTERNAL - SKIM IMMOBILIZER
B223C	INTRUSION TRANSCEIVER MODULE INTERNAL
C0077	LOW TIRE PRESSURE
C1501	TIRE PRESSURE SENSOR 1 INTERNAL
C1502	TIRE PRESSURE SENSOR 2 INTERNAL
C1503	TIRE PRESSURE SENSOR 3 INTERNAL
C1504	TIRE PRESSURE SENSOR 4 INTERNAL
C151C	TIRE PRESSURE MONITORING (TPM) SENSORS MISSING
P0928	BTSI CONTROL CIRCUIT
U0100	LOST COMMUNICATION WITH ECM/PCM
U0121	LOST COMMUNICATION WITH ANTI-LOCK BRAKE MODULE
U0141	LOST COMMUNICATION WITH FRONT CONTROL MODULE
U0236	LOST COMMUNICATION WITH COLUMN LOCK MODULE
U110D	LOST COMMUNICATION WITH SECURITY SIREN
U1197	SECURITY SEED RESPONSE NOT RECEIVED FROM ECM/PCM
U1416	IMPLAUSIBLE SECURITY SIREN SIGNAL RECEIVED

DIAGNOSIS AND TESTING

B1A08-RKE FOB 1 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Whenever a FOB1K button is pressed.

- **Set Condition:**

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOB1K in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes
EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE
RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A09-RKE FOB 2 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Whenever a FOB/K button is pressed.

- **Set Condition:**

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOB/K in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes
EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE
RKE TRANSMITTER

Diagnostic Test**1. TEST FOR INTERMITTENT CONDITION**

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0A-RKE FOB 3 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Whenever a FOBIK button is pressed.

- **Set Condition:**

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOBIK in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes
EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE
RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0B-RKE FOB 4 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• When Monitored:

Whenever a FOBIK button is pressed.

• Set Condition:

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOBIK in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes

EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE

RKE TRANSMITTER**Diagnostic Test****1. TEST FOR INTERMITTENT CONDITION**

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0C-RKE FOB 5 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• When Monitored:

Whenever a FOB/K button is pressed.

• Set Condition:

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOB/K in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes

EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE
RKE TRANSMITTER

Diagnostic Test**1. TEST FOR INTERMITTENT CONDITION**

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0D-RKE FOB 6 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Whenever a FOB/IK button is pressed.

- **Set Condition:**

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOB/IK in the ignition and turn to the on position to synchronize the rolling

code.

Possible Causes
EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0E-RKE FOB 7 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• When Monitored:

Whenever a FOB/K button is pressed.

• Set Condition:

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and

it loses synchronization with the rolling code of the WIN. To correct, insert the FOB/K in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes

EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE
RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A0F-RKE FOB 8 PERFORMANCE (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• When Monitored:

Whenever a FOB/K button is pressed.

• Set Condition:

Scrambled messages to the wireless ignition node from the transmitter.

NOTE: The most probable cause that sets this code is the RKE transmitter being pressed over 150 times when it is out of range of the Wireless Ignition Node and it loses synchronization with the rolling code of the WIN. To correct, insert the FOBIK in the ignition and turn to the on position to synchronize the rolling code.

Possible Causes
EXCESSIVE PRESSES FROM TRANSMITTER WHEN OUT OF RANGE RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Put the key in the ignition and turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter and program in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time. Inform the owner of the most probable cause for this code to set and therefore cause the RKE system to be inoperative.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A10-RKE FOB 1 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

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If the battery in the FOB/K is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A11-RKE FOB 2 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOB/K is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A12-RKE FOB 3 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• When Monitored:

Instantaneously during key interrogation.

• Set Condition:

If the battery in the FOB is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's

3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A13-RKE FOB 4 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOB4 is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A14-RKE FOB 5 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOB1K is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test**1. TEST FOR INTERMITTENT CONDITION**

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based**

Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**No**

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A15-RKE FOB 6 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOBIK is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test**1. TEST FOR INTERMITTENT CONDITION**

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.

- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A16-RKE FOB 7 BATTERY LOW (WIN)

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOB 7 is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test**1. TEST FOR INTERMITTENT CONDITION**

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A17-RKE FOB 8 BATTERY LOW (WIN)

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- **When Monitored:**

Instantaneously during key interrogation.

- **Set Condition:**

If the battery in the FOB/IK is low during key interrogation with a valid key this code will set.

Possible Causes
LOW BATTERY RKE TRANSMITTER

Diagnostic Test

1. TEST FOR INTERMITTENT CONDITION

1. Turn the ignition on.
2. With the scan tool, record and erase DTC's
3. Operate the RKE transmitter in all positions several times.
4. With the scan tool, read DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the RKE transmitter battery and retry the system. If the DTC returns, replace and program the RKE transmitter in accordance with service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- The conditions that caused this code to set are not present at this time.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A20-PRE-ARM TIMEOUT

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

During the VTSS pre-arm process.

• **Set Condition:**

If the VTSS pre-arm sequence is interrupted within sixteen seconds after securing the vehicle.

Possible Causes
INTERMITTENT PROBLEM WITH FUSED (B+) TO CLUSTER
INTERMITTENT PROBLEM WITH CAN INTERIOR BUS CIRCUITS TO CLUSTER

Diagnostic Test

1. DETERMINING IF DTC IS CURRENT

NOTE: Diagnose any related Communication DTC(s) before continuing.

1. With a scan tool, read and record DTC(s).
2. With the scan tool, clear DTC(s).
3. Turn the ignition off and remove the key from the ignition.
4. Lock and close all doors to allow the VTSS to go from pre-arm to armed status and wait one minute.
5. Disarm the VTSS.
6. Using the scan tool, read DTC(s).

Does the DTC reset?

Yes

- Remove the Cluster and inspect the Fused B (+) and both CAN Interior Bus circuits for spread terminals or intermittent opens.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- DTC is not active at this time. Test complete.

B1A24-KEY NOT PROGRAMMED

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Whenever a Fob-Integrated-Key (FOBIK) is inserted in the Wireless Ignition Node (WIN) base station, the WIN performs a self test and resynchronization routine. During the routine, the WIN interrogates the FOBIK, performing various validity and performance tests. The repair of this fault condition relies on the programmed

status of the FOBIK.

• **When Monitored:**

During interrogation, the FOBIK sends an LF signal to the WIN that includes the FOBIK programmed status.

• **Set Condition:**

This DTC sets if the WIN receives the default, blank key status from a FOBIK. Once set, this DTC will remain active until a valid, programmed FOBIK is inserted in the base station and rotated through the ON position.

Possible Causes
FOBIK
WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. VERIFY THAT THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

1. Turn the ignition on.

NOTE: Before continuing, review and check for the following:

- Review the repair history of the vehicle.
- Make sure that the vehicle has the correct PCM and WIN installed by verifying the part numbers.
- With the scan tool, ensure that the PCM and WIN are programmed correctly. Compare the PCM VIN to the WIN VIN and ensure the two VINs match.

2. With the scan tool, record and erase the DTCs.
3. Perform 2 ignition cycles, leaving the ignition switch on for a minimum of one minute per cycle.
4. With the scan tool, read the active DTCs.

Does the scan tool display; B1A24-KEY NOT PROGRAMMED

Yes

- Go to step 2

No

- Perform the WIN INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. ENGINE WILL NOT CRANK

NOTE: When diagnosing any WIN system concern, all the FOBIKS should be present

1. If this vehicle does not crank, use the table below to determine if the key is functional or not. With the scan tool under Data Display, Bussed Outputs, put the key in each position and check the "Ignition Status". Then with the key in the Run position, check "Valid Skim Key" and "SCREEM Status" reported by the WIN (or WCM). Compare all six readings with the "Good Key" column. If the engine does crank, answer "Yes" to the question below.

BUSSED OUTPUTS	-	-	-	-
Ignition Status	Good Key	Bad Key (Failed)	Wrong Key	New Key (Blank)
Ignition Position = Lock	----- --- or Lock	----- --	----- ----	----- or Lock
Ignition Position = Acc.	Off/Acc.	----- --	----- ----	Off/Acc.
Ignition Position = Run Or ON	Run	Lock	Lock	Run
Ignition Position = Start Engine Off - Trans. in Gear	Start or Run	Lock	Lock	Run
SKREEM Status	Normal Status	Service SKREEM	Invalid Key	Key Not Programmed
Valid Skim Key	Yes/True	No/False	No/False	No/False
-	-	-	-	-
Trouble Code (DTC)	-	B2229, B1A35	B1A6C, B1A25	B1A24

3. CHECK OPERATION OF THE FOBIK IN USE

NOTE: Verify the FOBIK in use is the FOBIK causing the DTC to set.

1. Using the scan tool, program the FOBIK to the WIN.
2. Use the scan tool and erase all codes in the WIN.
3. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
4. Wait one minute, and read active codes.

Does the scan tool display: B1A24-KEY NOT PROGRAMMED?

Yes

- Replace the key (FOBIK) and program using the scan tool.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Repair is complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B1A25-INVALID KEY

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Whenever a Fob-Integrated-Key (FOBIK) is inserted in the Wireless Ignition Node (WIN) base station, the WIN performs a self test and resynchronization routine. During the routine, the WIN interrogates the FOBIK, performing various validity and performance tests. The repair of this fault condition relies on whether the ID of the FOBIK is recognized as valid in the WIN.

• When Monitored:

During interrogation, the FOBIK sends an LF signal to the WIN that includes the programmed FOBIK ID.

• Set Condition:

This DTC sets if the WIN receives an ID from the FOBIK that does not match any of the eight possible FOBIK IDs programmed in the WIN. This DTC will remain active until a valid, programmed FOBIK is inserted in the base station and rotated through the ON position.

Possible Causes

FOBIK

WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. VERIFY THAT THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

NOTE: An external Radio-Frequency Identification (RFID) key (and/or pass/radio key), such as one used to gain access to a 24 hour gym, can cause this DTC to set and create a no start condition. Inspect the customer's key chain for any type of RFID key. If one is not found, question the customer to see if a spare key chain has this RFID key on it or if it was removed from the original key chain before the vehicle was released for service. If a RFID key is present, remove the ignition key from the vehicle and remove the RFID key from the key chain. For GPEC equipped vehicles, disconnect the battery and wait a minimum of 5 minutes, reconnect and attempt to start the vehicle. For NGC equipped vehicles, turn the ignition on a minimum for one hour, and then attempt to start the vehicle. If the vehicle does not start, continue with the diagnostic test.

1. Turn the ignition on.

NOTE: Before continuing, review and check for the following:

- Review the repair history of the vehicle.
- Make sure that the vehicle has the correct PCM and WIN installed by verifying the part numbers.
- With the scan tool, ensure that the PCM and WIN are programmed correctly. Compare the PCM VIN to the WIN VIN and ensure the two VINs match.

2. With the scan tool, record and erase the DTCs.
3. Perform 2 ignition cycles, leaving the ignition switch on for a minimum of one minute per cycle.
4. With the scan tool, read the active DTCs.

Does the scan tool display; B1A25-INVALID KEY as active?

Yes

- If the engine does not crank, Go To step 2
- If the engine does crank, Go To 2 and answer "Yes" to the question in step 2.

No

- Perform the WIN INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. ENGINE DOES NOT CRANK

NOTE: When diagnosing any WIN system concern, all the FOBKS should be present

1. If this vehicle does not crank, use the table below to determine if the key is functional or not. With the scan tool under Data Display, Bussed Outputs, put the key in each position and check the "Ignition Status". Then with the key in the Run position, check "Valid Skim Key" and "SCREEM Status" reported by the WIN (or WCM). Compare all six readings with the "Good Key" column.

BUSSED OUTPUTS	-	-	-	-
Ignition Status	Good Key	Bad Key (Failed)	Wrong Key	New Key (Blank)
Ignition Position = Lock	--- or Lock	--	----	or Lock
Ignition Position = Acc.	Off/Acc.	--	----	Off/Acc.
Ignition Position = Run Or ON	Run	Lock	Lock	Run
Ignition Position = Start Engine Off - Trans. in Gear	Start or Run	Lock	Lock	Run
SKREEM Status	Normal Status	Service SKREEM	Invalid Key	Key Not Programmed
Valid Skim Key	Yes/True	No/False	No/False	No/False
-	-	-	-	-
Trouble Code (DTC)	-	B2229, B1A35	B1A6C, B1A25	B1A24

B1A26-MAXIMUM NUMBER OF KEYS PROGRAMMED

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Theory of Operation

The Wireless Ignition Node (WIN) is preprogrammed from the factory with 2 FOBIS, with the capability to have a maximum of 8 FOBIS programmed in total. Additional programmed FOBIS are automatically learned to the next available FOBIS position in the Wireless Ignition Node (WIN) software and do not overwrite any previous positions. The repair of this fault condition relies on the current number of FOBIS programmed into the WIN and the number of available positions in the WIN software.

- **When Monitored:**

When the WIN is placed into FOBIS programming mode, the module references the number of unique FOBIS identifications stored in its memory.

- **Set Condition:**

In the event the WIN detects the user is attempting to program a 9th FOBIS, this DTC will be set as active.

Possible Causes
MAXIMUM NUMBER OF FOBIS (8) HAVE BEEN PROGRAMMED WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DTC

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS INTERMITTENT TEST. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

2. CLEAR FOBIS PROGRAMMED INTO WIRELESS IGNITION NODE (WIN) AND REPROGRAM FOBIS

NOTE: The below procedure clears all FOBIS currently programmed in the WIN software. It is important to obtain all the customer FOBIS so they may be reprogrammed to the module. Any FOBIS not present for the following procedure will be inoperable and require additional programming to

function.

1. With the scan tool, use the Erase All Ignition Keys feature under Miscellaneous Functions.
2. With the scan tool, use the Program Ignition Keys or Key Fobs feature under Miscellaneous Functions.
3. Program all the customer key(s) into the WIN (up to eight)
4. Use the scan tool and erase all codes in the WIN.
5. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
6. Wait one minute, and read active codes.

Does the scan tool display this DTC as active?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

B1A27-SKREEM PROGRAMMING PERFORMANCE

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Sentry Key Remote Entry Module (SKREEM) is one of the many functions that is a subset of the Wireless Ignition Node (WIN). SKREEM programming takes place during the FOBIC programming procedure. The repair of this fault condition is dependent on the programmed status of the FOBIC attempting to be programmed.

• **When Monitored:**

When in FOBIC programming mode and programming is in process, the WIN receives the programmed

status of the FOBIK.

• **Set Condition:**

In the event the user attempts to program a FOBIK that is not valid or has already been programmed to a different vehicle, this DTC will be set as active.

Possible Causes
FOBIK WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

Diagnostic Test

1. ENTER PROGRAMMING MODE AND DETERMINE ACTIVE OR STORED DTC

1. With the scan tool, use the Program Ignition Keys or Key Fobs feature under Miscellaneous Functions.
2. Attempt to program the suspect FOBIK.
3. Wait one minute, and read active codes.

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS INTERMITTENT TEST. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

2. VERIFY THE WIRELESS IGNITION NODE (WIN) HAS BEEN PROPERLY INITIALIZED

NOTE: When diagnosing any Theft or Security system concern, all FOBKS must be present

1. With the scan tool, read the Number of Key/Fobs Programmed under Data Display.

Does the scan tool show 2 or more Key/Fobs Programmed?

Yes

- Go to step 3

No

- Program 2 FOBIKS, then perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

3. CHECK OPERATION OF THE FOBIK IN USE

NOTE: Verify the FOBIK in use is the FOBIK causing the DTC to set.

1. Replace the FOBIK currently in use.
2. Using the scan tool, program a new FOBIK to the WIN.
3. Use the scan tool and erase all codes in the WIN.
4. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
5. Wait one minute, and read active codes.

Does the scan tool display this DTC as active?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

B1A28-ECM MISMATCH WITH SKIM

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

For the engine to start, the Sentry Key Immobilizer (SKIM) feature of the Wireless Ignition Node (WIN) and the Powertrain Control Module (PCM) must successfully communicate data over the data bus. Once the WIN sends the message that a valid Fob-Integrated-Key (FOBIK) is being used, the PCM and WIN perform a

"handshake" routine to validate this information, and a match allows the engine to run when the ignition state transitions to START. The repair of this fault is determined by the ability of the WIN and PCM/ECM to complete a successful handshake routine over the bus.

- **When Monitored:**

Whenever a valid FOB/K is inserted in the base station and turned to the ON position, the WIN/PCM handshake takes place. The WIN validates that the message is sent to, and received by the PCM.

- **Set Condition:**

When a valid FOB/K is used and the WIN receives a mismatching VIN from the PCM as part of the routine, the WIN will send the command to flash the Security warning lamp and set this DTC as active. The engine will not start and the DTC will remain active until the WIN and PCM complete a successful handshake.

Possible Causes
WIRELESS IGNITION NODE (WIN)
POWERTRAIN CONTROL MODULE (PCM)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DIAGNOSTIC TROUBLE CODE (DTC)

NOTE: An external Radio-Frequency Identification (RFID) key (and/or pass/radio key), such as one used to gain access to a 24 hour gym, can cause this DTC to set and create a no start condition. Inspect the customer's key chain for any type of RFID key. If one is not found, question the customer to see if a spare key chain has this RFID key on it or if it was removed from the original key chain before the vehicle was released for service. If a RFID key is present, remove the ignition key from the vehicle and remove the RFID key from the key chain. For GPEC equipped vehicles, disconnect the battery and wait a minimum of 5 minutes, reconnect and attempt to start the vehicle. For NGC equipped vehicles, turn the ignition on a minimum for one hour, and then attempt to start the vehicle. If the vehicle does not start, continue with the diagnostic test.

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. VERIFY THE VIN STORED IN THE POWERTRAIN CONTROL MODULE (PCM).

NOTE: Make sure that a VIN has been programmed into the PCM. If a VIN is not displayed, attempt to program the PCM with the correct VIN before continuing.

1. Using the scan tool, access the VIN number stored in the PCM.
2. Compare the VIN displayed, with the VIN of the vehicle.

Does the VIN recorded in the PCM match the VIN of the vehicle?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

NOTE: Prior to replacing the WIN, the RUN circuits must be checked at the PCM. A missing run circuit at the PCM can cause this fault to set.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Using the scan tool, perform the PCM Replaced Procedure to update the VIN in the PCM. Then, Go To 3

3. VERIFY PCM PROGRAMMING

1. Use the scan tool and erase all codes in the WIN and PCM.
2. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
3. Wait one minute, and read active WIN codes.

Does the scan tool display this DTC as active?

Yes

- Replace and program the Powertrain Control Module in accordance with the Service

Information.

- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

B1A29-SKIM BASE STATION MISMATCH

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

For the engine to start, the Sentry Key Immobilizer (SKIM) feature of the Wireless Ignition Node (WIN) must successfully receive a message that a valid Fob-Integrated-Key (FOBIK) is being used, the FOBIK and WIN perform a "handshake" routine to validate this information, and a match allows the engine to run when the ignition state transitions to START.

- **When Monitored:**

Whenever a FOBIK is inserted in the base station, the WIN determines its validity status.

- **Set Condition:**

When an invalid FOBIK is used and the WIN receives mismatching data from the SKIM, the WIN will send the command to illuminate the Security warning lamp and set this DTC as active. The engine will not start and the DTC will remain active until a valid FOBIK is used.

Possible Causes
WIRELESS IGNITION NODE

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DIAGNOSTIC TROUBLE CODE (DTC)

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. VERIFY THE WIN HAS BEEN PROPERLY INITIALIZED

NOTE: When diagnosing any Theft or Security system concern, all FOBKS must be present

1. Using the scan tool, read the Number of Key/Fobs Programmed under Data Display.

Does the scan tool show 2 or more Key/Fobs Programmed?

Yes

- Go to step 3

No

- Program 2 FOBKS.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

3. VERIFY THE VIN STORED IN THE POWERTRAIN CONTROL MODULE (PCM).

NOTE: Make sure that a VIN has been programmed into the PCM. If a VIN is not displayed, attempt to program the PCM with the correct VIN before continuing.

1. With the scan tool, access the VIN number stored in the PCM.
2. Compare the VIN displayed, with the VIN of the vehicle.

Does the VIN recorded in the PCM match the VIN of the vehicle?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the WIN in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Using the scan tool, perform the PCM Replaced Procedure to update the VIN in the PCM. Then, Go To 4

4. VERIFY PCM PROGRAMMING

1. Use the scan tool and erase all codes in the WIN and PCM.
2. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
3. Wait one minute, and read active WIN codes.

Does the scan tool display this DTC as active?

Yes

- Replace and program the Powertrain Control Module in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

B1A35-UNIDENTIFIED KEY COMMUNICATION ERROR

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Whenever a Fob-Integrated-Key (FOBIK) is inserted in the Wireless Ignition Node (WIN) base station, the WIN performs a self test and resynchronization routine. During the routine, the WIN interrogates the FOBIK, performing various validity and performance tests. The repair of this fault condition relies on whether the FOBIK ID is received by the WIN.

- **When Monitored:**

During interrogation, the FOBIK sends an LRF signal to the WIN that includes the programmed FOBIK ID.

- **Set Condition:**

This Diagnostic Trouble Code (DTC) sets if a FOBIK is inserted in the WIN base station but the WIN does not receive or is unable to read an ID from the FOBIK. This DTC will remain active until a valid, programmed FOBIK is inserted in the base station and rotated through the ON position.

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

Possible Causes

FOBIK

WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. CHECK FOR AN INTERMITTENT CONDITION

NOTE: An external Radio-Frequency Identification (RFID) key (and/or pass/radio key), such as one used to gain access to a 24 hour gym, can cause this DTC to set and create a no start condition. Inspect the customer's key chain for any type of RFID key. If one is not found, question the customer to see if a spare key chain has this RFID key on it or if it was removed from the original key chain before the vehicle was released for service. If a RFID key is present, remove the ignition key from the vehicle and remove the RFID key from the key chain. For GPEC equipped vehicles, disconnect the battery and wait a minimum of 5 minutes, reconnect and attempt to start the vehicle. For NGC equipped vehicles, turn the ignition on a minimum for one hour, and then attempt to start the vehicle. If the vehicle does not start, continue with the diagnostic test.

1. Turn the ignition on.
2. With the scan tool, record and erase the WIN DTCs.
3. Cycle the ignition switch from on to off, wait five seconds and then back to on.
4. With the scan tool, read the active WIN DTCs.

Does the scan tool display active: B1A35-UNIDENTIFIED KEY COMMUNICATION ERROR

Yes

- If the engine does not crank, Go To 2
- If the engine does crank, Go To 3

No

- Perform the WIN INTERMITTENT TEST. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

2. ENGINE DOES NOT CRANK

NOTE: When diagnosing any WIN system concern, all FOBKS should be present

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1. If this vehicle does not crank, use the table below to determine if the key is functional or not. With the scan tool under Data Display, Bussed Outputs, put the key in each position and check the "Ignition Status". Then with the key in the Run position, check "Valid Skim Key" and "SCREEM Status" reported by the WIN (or WCM). Compare all six readings with the "Good Key" column.

BUSSED OUTPUTS	-	-	-	-
Ignition Status	Good Key	Bad Key (Failed)	Wrong Key	New Key (Blank)
Ignition Position = Lock	----- --- or Lock	----- --	----- ----	----- or Lock
Ignition Position = Acc.	Off/Acc.	----- --	----- ----	Off/Acc.
Ignition Position = Run Or ON	Run	Lock	Lock	Run
Ignition Position = Start Engine Off - Trans. in Gear	Start or Run	Lock	Lock	Run
SKREEM Status	Normal Status	Service SKREEM	Invalid Key	Key Not Programmed
Valid Skim Key	Yes/True	No/False	No/False	No/False
-	-	-	-	-
Trouble Code (DTC)	-	B2229, B1A35	B1A6C, B1A25	B1A24

3. VERIFY THE WIN HAS BEEN PROPERLY INITIALIZED

1. Using the scan tool, read the Number of Key/Fobs Programmed under Data Display.

Does the scan tool show 2 or more Key/Fobs Programmed?

Yes

- Go to step 4

No

- With the scan tool, program 2 FOBIKS. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

4. CHECK OPERATION OF THE FOBIK IN USE

NOTE: **Verify the FOBIK in use is the FOBIK causing the DTC to set.**

1. Replace the FOBIK currently in use.
2. Using the scan tool, program the new FOBIK to the WIN.
3. Use the scan tool and erase all codes in the WIN.
4. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
5. Wait one minute, and read the active codes.

Does the scan tool display: B1A35-UNIDENTIFIED KEY COMMUNICATION ERROR as active?

Yes

- Replace the Wireless Ignition Node in accordance with the Service Information. Refer to **Electrical/Electronic Control Modules/RECEIVER, Wireless Ignition Node - Removal** .

NOTE: **Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.**

- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B1A3C-INTERNAL SIREN BATTERY

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously with the engine over 600 RPM.

- **Set Condition:**

When the internal battery within the siren does not charge as expected, the intrusion Transceiver Module (ITM) sets this code.

Possible Causes
VEHICLE STORED WITH NO BATTERY VOLTAGE FOR EXTENDED PERIOD OF TIME SIREN

Diagnostic Test

1. DETERMINING IF DIAGNOSTIC TROUBLE CODE (DTC) IS CURRENT

1. With a scan tool, read and record DTCs.
2. With the scan tool, clear DTCs.
3. Start the engine and allow it to idle for two minutes then turn the engine off.
4. Using the scan tool, read DTCs.

Does the DTC reset?

Yes

- Go to step 2

No

- DTC is not active at this time. Test complete.

2. VEHICLE STORED WITH NO BATTERY VOLTAGE FOR EXTENDED PERIOD OF TIME

NOTE: If the vehicle was allowed to sit with no battery voltage for an extended period of time the back up battery located in the siren may discharge and need to be recharged.

Was the vehicle battery power just restored after the vehicle was stored with no power for an extended period of time?

Yes

- Allow the vehicle to sit with a fully charged battery for two hours then restart this procedure.

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

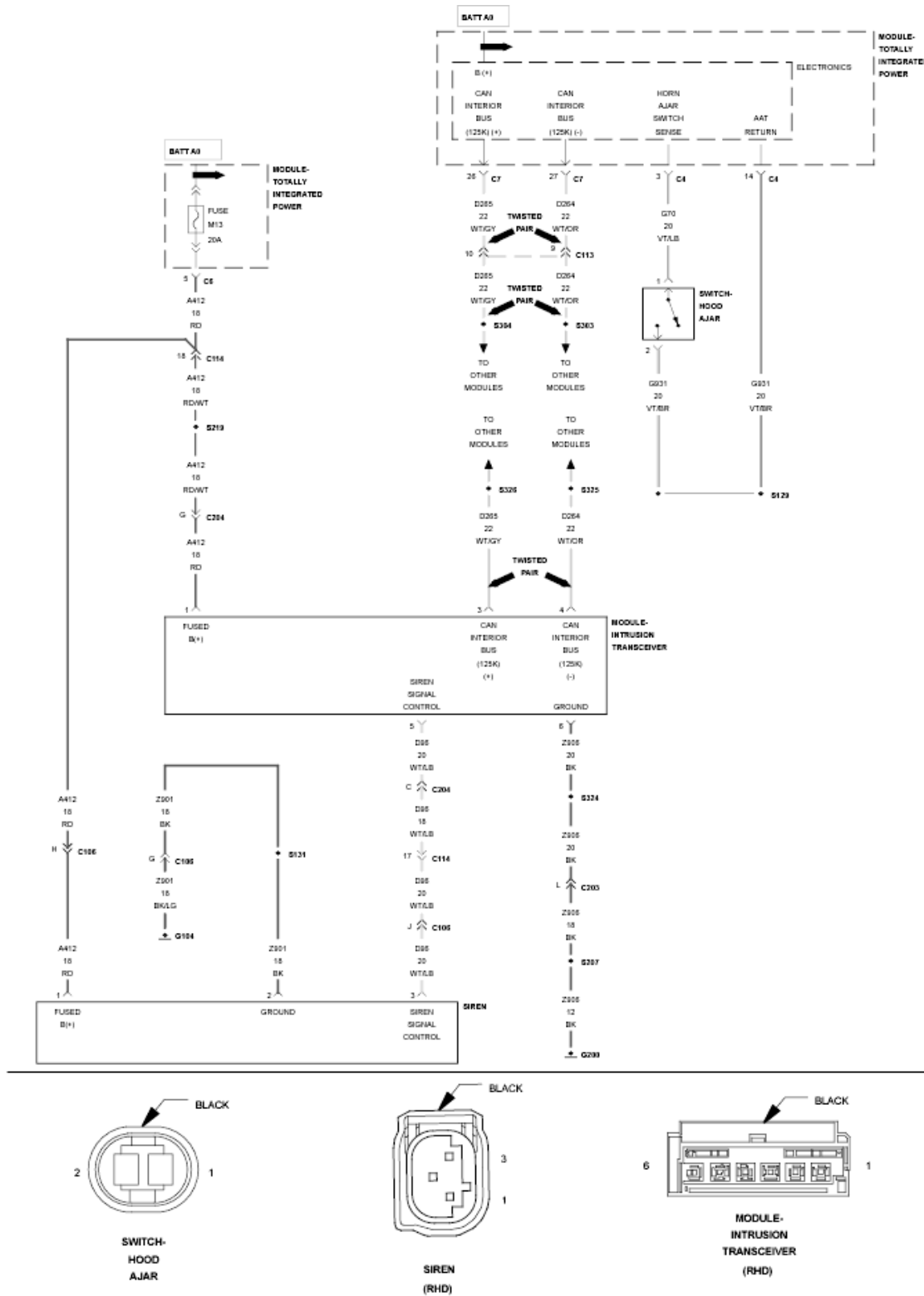
No

- Replace the Siren in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B1A3D-SIREN BATTERY TAMPER / LOSS OF POWER SUPPLY

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey



For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously with the VTSS armed.

- **Set Condition:**

If the Intrusion Transceiver Module (ITM) detects incorrect voltage at the siren this code will set.

Possible Causes
HARNESS TAMPERING/INTERMITTENT CONDITION
SIREN (Z901) GROUND OPEN
SIREN

Diagnostic Test

1. INSPECT SIREN HARNESS

1. Inspect the wiring harness to the siren for any signs of tampering or intermittent condition.

Were there any problems found?

Yes

- Repair wiring as necessary.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 2

2. DETERMINING IF DIAGNOSTIC TROUBLE CODE (DTC) IS CURRENT

1. With a scan tool, read and record DTCs.
2. With the scan tool, clear DTCs.
3. Turn the ignition off and remove the key from the ignition.
4. Lock and close all doors to allow the VTSS to go from pre-arm to armed status and wait one minute.
5. Disarm the VTSS.
6. Using the scan tool, read DTCs.

Does the DTC reset?

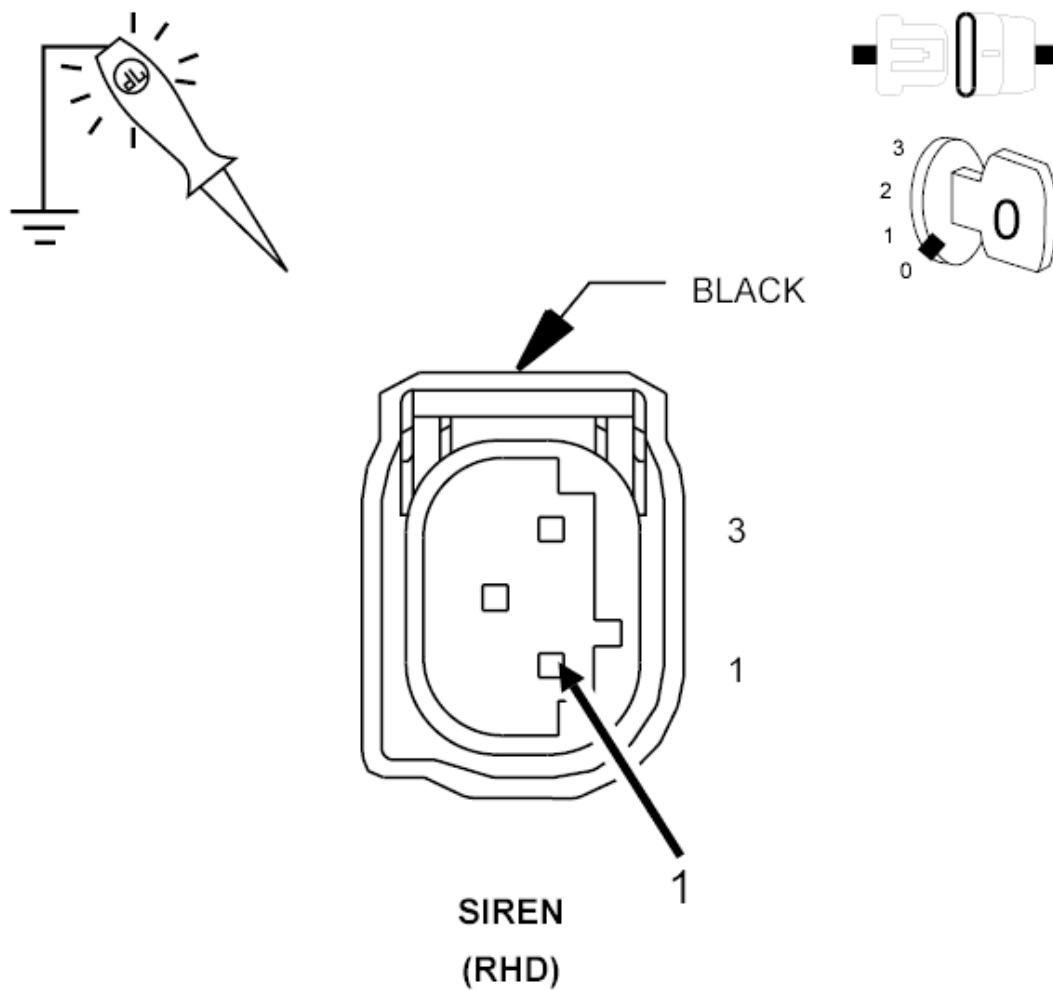
Yes

- Go to step 3

No

- DTC is not active at this time. Test complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

3. CHECK THE (A412) FUSED B(+) CIRCUIT AT THE SIREN



107295

Fig. 3: Checking Fused B(+) Circuit At Siren
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Siren connector.

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

3. Using a 12-volt test light connected to ground, check the (A412) Fused B(+) circuit at the siren connector.

Does the test light illuminate brightly?

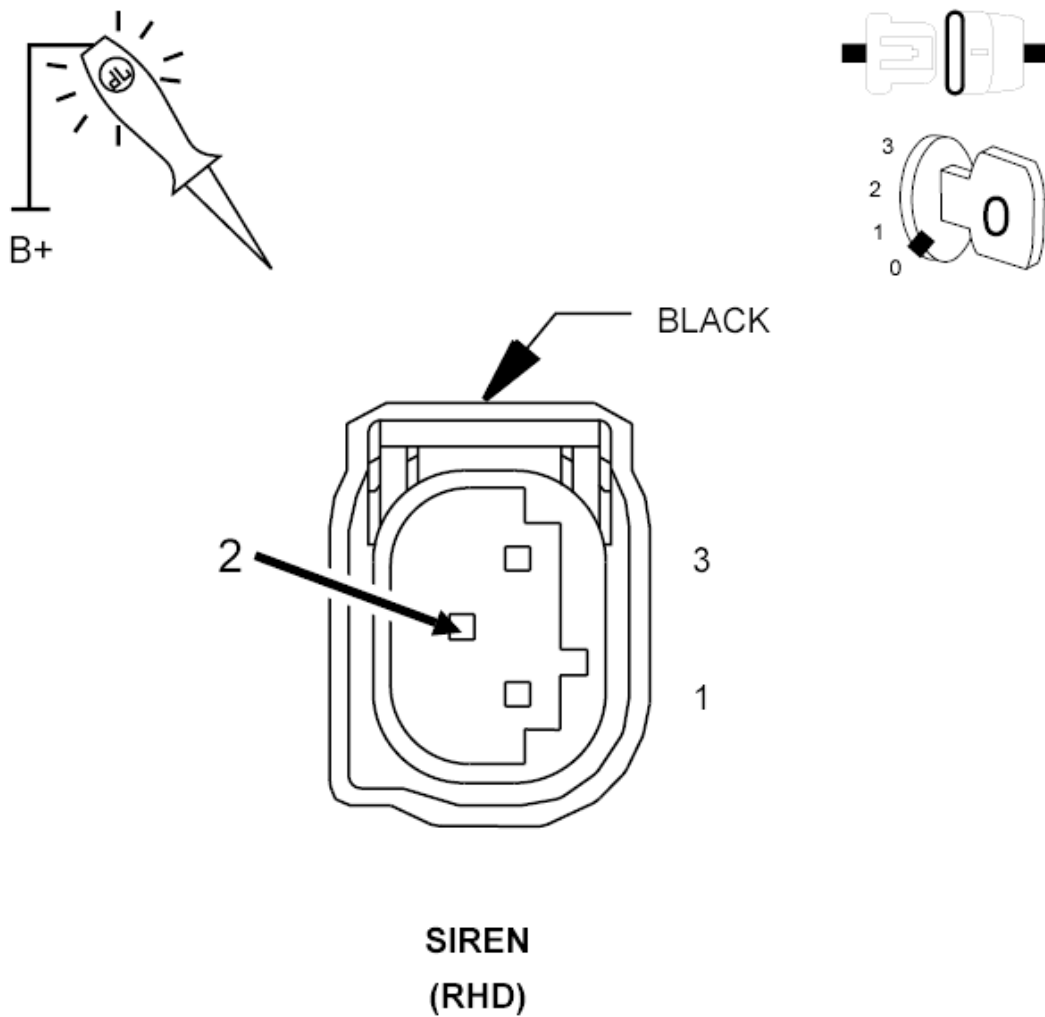
Yes

- Go to step 4

No

- Repair the (A412) Fused B(+) circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

4. **CHECK THE (Z901) GROUND CIRCUIT AT THE SIREN**



107297

Fig. 4: Checking Ground Circuit At Siren

Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z901) Ground circuit at the siren connector.

Does the test light illuminate brightly?

Yes

- Replace the Siren in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

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No

- Repair the (Z901) Ground circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B1A3E-SIREN / ITM MISMATCH

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Fig. 5: CAN Interior Bus & Siren Signal Control Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

While the VTSS is armed.

- **Set Condition:**

ITM loses battery voltage.

Possible Causes
CAN INTERIOR BUS COMMUNICATION PROBLEMS
INTERMITTENT LOSS OF FUSED B(+) TO THE ITM WITH THE VTSS ARMED

Diagnostic Test

1. DETERMINING IF DIAGNOSTIC TROUBLE CODE (DTC) IS CURRENT

NOTE: Diagnose any related Communication DTCs before continuing.

1. With a scan tool, read and record DTCs.
2. With the scan tool, clear DTCs.
3. Turn the ignition off and remove the key from the ignition.
4. Lock and close all doors to allow the VTSS to go from pre-arm to armed status and wait one minute.
5. Disarm the VTSS.
6. Using the scan tool, read DTCs.

Does the DTC reset?

Yes

- Check for and correct any CAN Interior Bus DTCs set in the ITM or other modules. Also check for intermittent loss Fused B(+) to the ITM.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

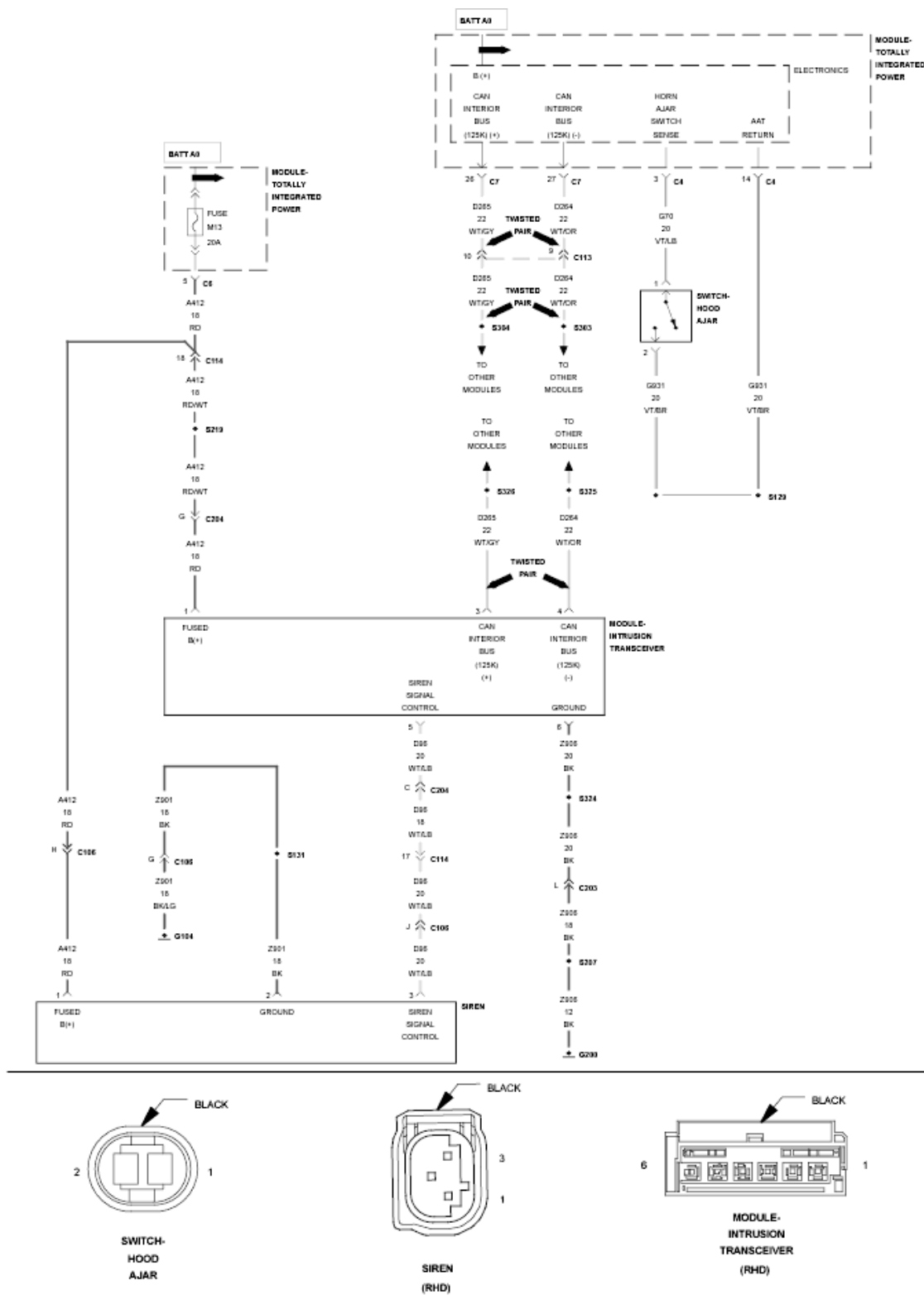
No

- DTC is not active at this time. Test complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B1A3F-ITM ARMING SEQUENCE PERFORMANCE

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey



For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

• **When Monitored:**

During the VTSS pre-arm process.

• **Set Condition:**

Intrusion Transceiver Module (ITM) loses battery voltage.

Possible Causes

CAN INTERIOR BUS COMMUNICATION PROBLEMS

INTERMITTENT LOSS OF FUSED B(+) TO THE ITM DURING THE VTSS PRE-ARM PROCESS

Diagnostic Test

1. DETERMINING IF DIAGNOSTIC TROUBLE CODE (DTC) IS CURRENT

NOTE: **Diagnose any related Communication DTCs before continuing.**

1. With a scan tool, read and record DTCs.
2. With the scan tool, clear DTCs.
3. Turn the ignition off and remove the key from the ignition.
4. Lock and close all doors to allow the VTSS to go from pre-arm to armed status and wait one minute.
5. Disarm the VTSS.
6. Using the scan tool, read DTCs.

Does the DTC reset?

Yes

- Check for and correct any CAN Interior Bus DTCs set in the ITM or other modules. Also check for intermittent loss Fused B(+) to the ITM.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- DTC is not active at this time. Test complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B1A6B STEERING COLUMN LOCK MODULE NOT INITIALIZED

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously.

- **Set Condition:**

The Wireless Ignition Node detects that the Steering Column Lock Module has not initialized.

Possible Causes
STEERING COLUMN LOCK MODULE

Diagnostic Test

1. REPLACE THE STEERING COLUMN LOCK MODULE IF DTC IS ACTIVE

1. With the scan tool, read the active DTC's.

Does the scan tool display this DTC as active?

Yes

- Replace the Steering Column Lock Module in accordance with the service information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- If the DTC is stored, check for an intermittent condition. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

B1A6C-SECRET KEY MISMATCH

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Whenever a Fob-Integrated-Key (FOBIK) is inserted in the Wireless Ignition Node (WIN) base station, the WIN performs a self test and resynchronization routine. During the routine, the WIN interrogates the FOBIK for the secret key information and start the vehicle. The repair of this fault condition relies on whether the current secret key in the FOBIK is recognized by the WIN.

- **When Monitored:**

During interrogation, the FOBIK sends an LF signal to the WIN that includes the current secret key.

• **Set Condition:**

This Diagnostic Trouble Code (DTC) sets if the WIN receives a secret key ID from the FOBIK that is not the correct secret key value stored in the WIN. This DTC will remain active until a valid, programmed FOBIK, with the correct secret key is inserted in the base station and rotated through the ON position.

Possible Causes
FOBIK WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. VERIFY THAT THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

NOTE: When diagnosing any WIN system concern, all the FOBIKS should be present.

1. Turn the ignition on.

NOTE: Before continuing, review and check for the following:

- Review the repair history of the vehicle.
- Make sure that the vehicle has the correct PCM and WIN installed by verifying the part numbers.
- With the scan tool, ensure that the PCM and WIN are programmed correctly. Compare the PCM VIN to the WIN VIN and ensure the two VINs match.

2. With the scan tool, record and erase the DTCs.
3. Perform 5 ignition cycles, leaving the ignition switch on for a minimum of one minute per cycle.
4. With the scan tool, read the active DTCs.

Does the scan tool display; B1A6C-SECRET KEY MISMATCH as active?

Yes

- If the engine does not crank, Go To step 2
- If the engine does crank, Go To 3

No

- Perform the WIN INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. ENGINE DOES NOT CRANK

1. If this vehicle does not crank, use the table below to determine if the key is functional or not. With the scan tool under Data Display, Bussed Outputs, put the key in each position and check the "Ignition Status". Then with the key in the Run position, check "Valid Skim Key" and "SCREEM Status" reported by the WIN (or WCM). Compare all six readings with the "Good Key" column.

BUSSED OUTPUTS	-	-	-	-
Ignition Status	Good Key	Bad Key (Failed)	Wrong Key	New Key (Blank)
Ignition Position = Lock	----- --- or Lock	----- --	----- ----	----- or Lock
Ignition Position = Acc.	Off/Acc.	----- --	----- ----	Off/Acc.
Ignition Position = Run Or ON	Run	Lock	Lock	Run
Ignition Position = Start Engine Off - Trans. in Gear	Start or Run	Lock	Lock	Run
SKREEM Status	Normal Status	Service SKREEM	Invalid Key	Key Not Programmed
Valid Skim Key	Yes/True	No/False	No/False	No/False
-	-	-	-	-
Trouble Code (DTC)	-	B2229, B1A35	B1A6C, B1A25	B1A24

3. VERIFY THE WIN HAS BEEN PROPERLY INITIALIZED

1. Using the scan tool, read the Number of Key/Fobs Programmed under Data Display.

Does the scan tool show 2 or more Key/Fobs Programmed?

Yes

- Go to step 4

No

- Using the scan tool, program 2 FOBIKS.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

4. CHECK OPERATION OF THE FOBIK IN USE

NOTE: **Verify the FOBIK in use is the FOBIK causing the DTC to set.**

1. Replace the FOBIK currently in use.
2. Using the scan tool, program the new FOBIK to the WIN.
3. Use the scan tool and erase all codes in the WIN.
4. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.
5. Wait one minute, and read active codes.

Does the scan tool display this DTC as active?

Yes

- Replace the Wireless Ignition Node in accordance with the Service Information. Refer to **Electrical/Electronic Control Modules/RECEIVER, Wireless Ignition Node - Removal** .

NOTE: **Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.**

- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B210D-BATTERY VOLTAGE LOW

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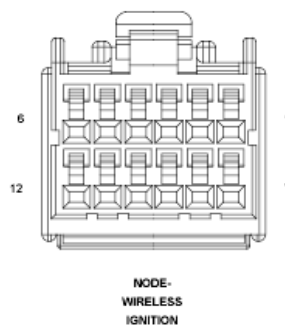
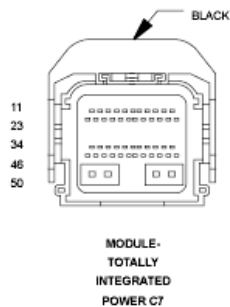
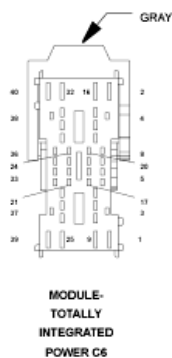
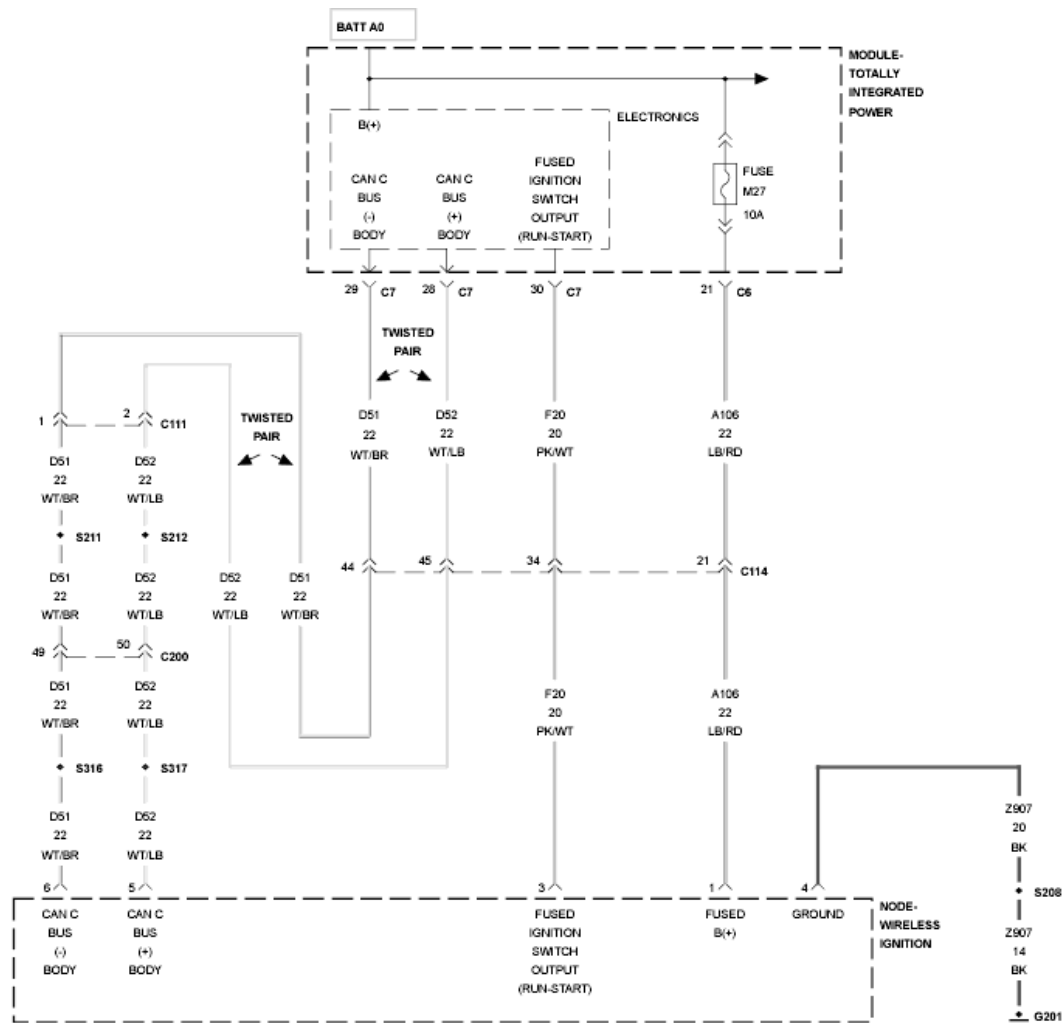


Fig. 7: Generator Field Control Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

With the ignition switch on.

• **Set Condition:**

The Wireless Ignition Node (WIN) has detected the Fused (B+) input voltage below a calibrated value.

Possible Causes
RESISTANCE IN THE BATTERY POSITIVE CIRCUIT
RESISTANCE IN THE GENERATOR CASE GROUND
GENERATOR OPERATION
(K20) GENERATOR FIELD CONTROL CIRCUIT OPEN
(K20) GENERATOR FIELD CONTROL CIRCUIT SHORTED TO GROUND
GROUND CIRCUIT OPEN
PCM or ECM
(A106) FUSED (B+) CIRCUIT OPEN
WIRELESS IGNITION NODE (WIN)

Diagnostic Test

1. DETERMINING IF DTC IS CURRENT

NOTE: Diagnose any charging or battery system DTCs set in the Powertrain Control Module (PCM) or Engine Control Module (ECM) DTC(s) before continuing.

1. With a scan tool, read and record WIN DTC(s).
2. With the scan tool, clear DTC(s).
3. Perform five ignition cycles, leaving the ignition switch on for a minimum of 90 seconds per cycle.
4. Using the scan tool, read DTC(s).

Does the DTC reset?

Yes

- Go to step 3

No

- Go to step 2

2. INTERMITTENT CONDITION

NOTE: Check for any of the follow conditions:

- Poor wire to terminal connection

- **Corroded terminals**
- **Backed out or loose terminals**
- **Broken wire internal to the insulation**
- **Dirty (partial) module ground**
- **Dirty (partial) module ground**

1. With the ignition on, wiggle the related wires.
2. Using a scan tool, read DTC(s).

Does the DTC reset?

Yes

- Repair the wiring as necessary.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

DTC is not active at this time. Test complete.

3. (A106) FUSED (B+) CIRCUIT OPEN

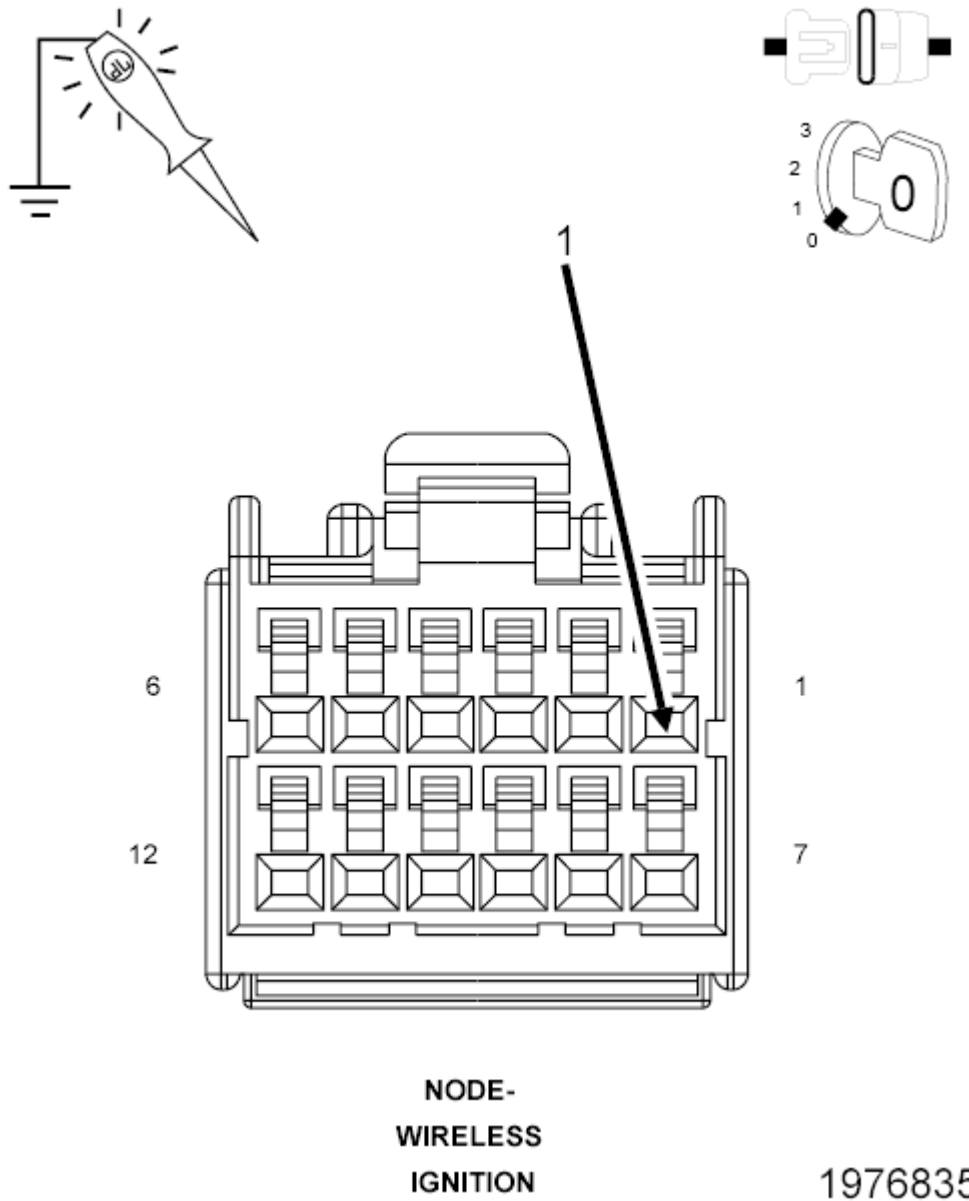


Fig. 8: Using 12-Volt Test Light Connected To Ground To Probe Fused (B+) Circuit In WIN Harness Connector
 Courtesy of CHRYSLER LLC

NOTE: Check the related fuses to the Fused (B+) circuit. If the fuse is found to be open repair the circuit for a shorted condition.

1. Turn the ignition off.
2. Disconnect the WIN harness connector.
3. Turn the ignition on.
4. Using a 12-volt test light connected to ground, probe the Fused (B+) circuit in the WIN harness

connector.

Does the test light illuminate brightly?

Yes

- Go To 4

No

- Repair the Fused (B+) circuit for an open.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

4. CHECK FOR MULTIPLE BATTERY VOLTAGE LOW DTCS

1. With a scan tool, read and record DTC(s).
2. With the scan tool, clear DTC(s).
3. Perform five ignition cycles, leaving the ignition switch on for a minimum of 90 seconds per cycle.
4. Using the scan tool, read DTC(s).

Are multiple other modules reporting this DTC?

Yes

- Check the possible causes table above for conditions that can cause a system low voltage condition. Repair as necessary.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 5

5. CHECK SYSTEM VOLTAGE AT THE WIN

NOTE: **A dirty (partial) ground can cause abnormal conditions within a system. Make sure the module has a good ground before continuing.**

1. Turn the ignition off.
2. Reconnect the WIN connector
3. Start the engine.
4. Back probe the Fused (B+) circuit.
5. Using the scan tool, view battery voltage under Data Display in appropriate Engine SERVICE INFORMATION article.
6. Compare the voltage on the scan tool to the voltage reading on the voltmeter.

NOTE: If charging system voltage readings are acceptable on both the scan tool and at the (A106) Fused (B+) circuit at the Wireless Ignition Node and no other modules are reporting this DTC then replacing the Wireless Ignition Node is the most likely course of action.

Is the voltage on the scan tool equal to the voltmeter reading +/- .5 of a volt?

Yes

- Replace and program the Wireless Ignition Node in accordance with the Service Information.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair the Fused (B+) circuit for high resistances.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

B210E-BATTERY VOLTAGE HIGH (WIN)

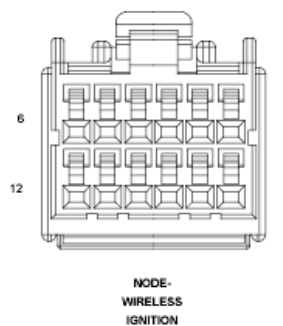
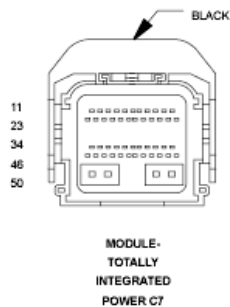
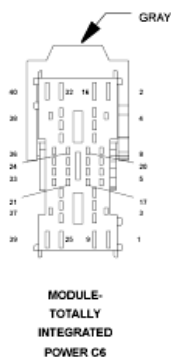
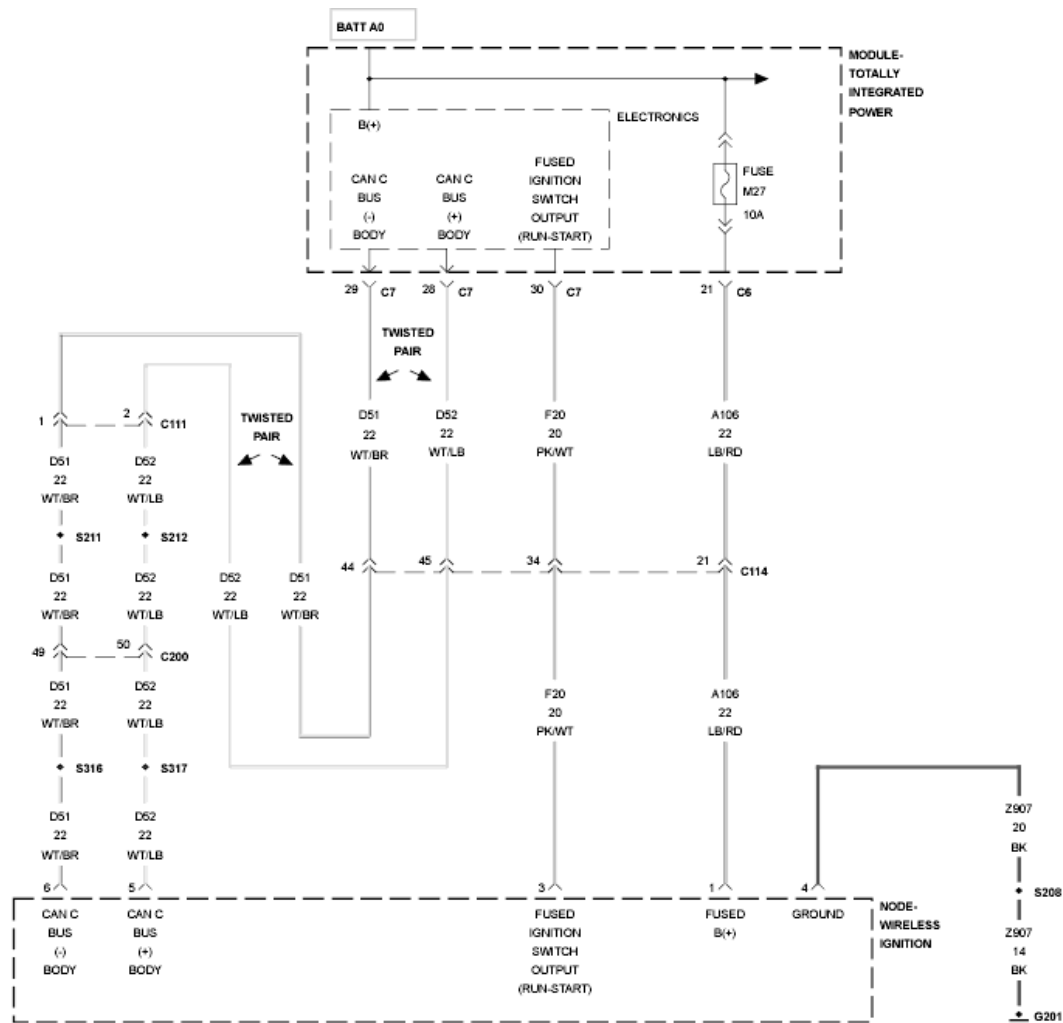


Fig. 9: Generator Field Control Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

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With the ignition switch on.

- **Set Condition:**

The Wireless Ignition Node (WIN) has detected the Fused (B+) input voltage above a calibrated value.

Possible Causes
(K20) GENERATOR FIELD CONTROL CIRCUIT SHORTED TO BATTERY VOLTAGE
GENERATOR
PCM
WIRELESS IGNITION NODE

Diagnostic Test

1. DETERMINING IF DTC IS CURRENT

NOTE: Make sure the Battery is in good condition. Using the Midtronics Battery Tester, test the Battery before continuing.

NOTE: Inspect the vehicle for after market accessories that may exceed the Generator System output.

NOTE: Make sure the generator drive belt is in good operating condition.

NOTE: Inspect the fuses in the TIPM. If an open fuse is found, use the wire diagram/schematic as a guide, inspect the wiring and connectors for damage.

NOTE: Diagnose any related Powertrain DTC(s) before continuing.

1. With a scan tool, read and record DTC(s).
2. With the scan tool, clear DTC(s).
3. Perform 5 ignition cycles, leaving the ignition switch on for a minimum of 90 seconds per cycle.
4. Using the scan tool, read DTC(s).

Does the DTC reset?

Yes

- Go to step 3

No

- Go to step 2

2. INTERMITTENT CONDITION

NOTE: Check for any of the follow conditions:

- Poor wire to terminal connection
- Corroded terminals
- Backed out or loose terminals
- Broken wire internal to the insulation
- Dirty (partial) module ground
- Dirty (partial) module ground

1. With the ignition on, wiggle the related wires.
2. Using a scan tool, read DTC(s).

Does the DTC reset?

Yes

- Repair the wiring as necessary.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

DTC is not active at this time. Test complete.

3. CHECK FOR MULTIPLE BATTERY VOLTAGE HIGH DTCS

1. With a scan tool, read and record DTC(s).
2. With the scan tool, clear DTC(s).
3. Perform 5 ignition cycles, leaving the ignition switch on for a minimum of 90 seconds per cycle.
4. Using the scan tool, read DTC(s).

Are multiple other modules reporting this DTC?

Yes

- Check the possible causes table above for conditions that can cause a system high voltage condition. Repair as necessary.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Go to step 4

4. CHECK SYSTEM VOLTAGE AT THE WIN

NOTE: A dirty (partial) ground can cause abnormal conditions within a system. Ensure the module has a good ground before continuing.

1. Turn the ignition off.
2. Reconnect the WIN connector
3. Start the engine.
4. Back probe the Fused (B+) circuit.
5. Using the scan tool, view battery voltage under Data Display in appropriate Engine SERVICE INFORMATION article.
6. Compare the voltage on the scan tool to the voltage reading on the voltmeter.

NOTE: If charging system voltage readings are acceptable on both the scan tool and at the (A106) Fused (B+) circuit at the Wireless Ignition Node and no other modules are reporting this DTC then replacing the Wireless Ignition Node is the most likely course of action.

Is the voltage on the scan tool equal to the voltmeter reading +/- .5 volt?

Yes

- Replace and program the Wireless Ignition Node in accordance with the Service Information.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Repair the Fused (B+) circuit for high resistances.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

B2204-ECU CONFIGURATION MISMATCH

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

The Wireless Ignition Node (WIN) must be configured for various parameters such as model year and vehicle

line, after a service replacement. The WIN checks for the proper configuration by comparing the values stored to those sent out on the serial data bus. The repair of this fault does not involve any external circuitry and centers on verifying the module is configured correctly.

- **When Monitored:**

The WIN checks the feature configuration at power up during the initialization process, and continuously through the ignition cycle.

- **Set Condition:**

This DTC sets when the WIN detects a mismatch between the current configuration of the module and information sent out on the serial data bus. Once set, this DTC is latched for the entire ignition cycle.

Possible Causes
WIRELESS IGNITION NODE

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DTC

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. RESET/RECONFIGURE THE FRONT CONTROL MODULE (FCM)

1. Turn the ignition on.
2. Using the scan tool, select ECU View. This will list the modules on the vehicle. Read and record the listed modules.

NOTE: A Scan Report will list all the modules on the vehicle.

3. Using the scan tool, select the FCM and then press Miscellaneous Functions.
4. Press Reset ECU.
5. Cycle the ignition from on to off three times and read the active WIN DTCs.

Does the scan tool display this DTC as active?

Yes

- Go to step 3
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

3. RESET/RECONFIGURE THE WIN

1. Using the scan tool, select the WIN and then press Miscellaneous Functions.
2. Press Reset ECU.
3. Cycle the ignition from on to off three times and read the active WIN DTCs.

Does the scan tool display this DTC as active?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

B2205-ORIGINAL VIN MISSING/MISMATCH

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

When a valid FOB/K is used and the ignition rotated to the RUN position, the WIN "listens" to the CAN C bus for the broadcast of the Vehicle Identification Number (VIN) by the Powertrain Control Module (PCM).

• **When Monitored:**

The WIN monitors the VIN broadcast on the CAN C bus three times, when the ignition is turned to the RUN position. When the full VIN has been received by the WIN, all further broadcasts of the VIN are ignored for that ignition cycle.

• **Set Condition:**

When the VIN received from the CAN C bus does not match the VIN stored in the memory of the Wireless Ignition Node, the WIN will send the command to flash the Security warning lamp and set this DTC as active and the vehicle will immobilize. The DTC will remain active until a VIN matching the one stored in WIN memory is received by the module from the bus.

Possible Causes
WIRELESS IGNITION NODE (WIN)
POWERTRAIN CONTROL MODULE (PCM)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DTC

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

2. CHECK THE VIN STORED IN THE PCM

1. With the scan tool, compare the VIN that is stored in the PCM to the VIN of the vehicle's VIN plate.

Does the VIN stored in the PCM match the vehicle's VIN?

Yes

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Replace and Configure the Powertrain Control Module in accordance with the service information.
- Perform the PCM Verification Test. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure**

B2224-(SKREEM) SENTRY KEY REMOTE ENTRY MODULE INTERNAL

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

The Wireless Ignition Node (WIN) base station communicates with the Steering Column Lock module (ELV) following successful authentication with the FOB/K. The ELV then unlocks, allowing the steering wheel to rotate.

- **When Monitored:**

The WIN checks for confirmation from the ELV that a lock or unlock command was successfully executed.

- **Set Condition:**

This DTC sets when the WIN detects three consecutive failures to lock or unlock the ELV.

Possible Causes
WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure

Diagnostic Test

1. DETERMINE ACTIVE OR STORED DTC

Is the DTC active or stored?

WIN - ACTIVE DTC

- Go to step 2

WIN - STORED DTC

- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

2. REPLACE THE WIN

NOTE: Ensure the part number of the replacement module is the correct part number for the vehicle.

View Repair

Repair

NOTE: Technicians must use the scan tool to perform the WIN Programming procedure after a module replacement.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Replace the Wireless Ignition Node in accordance with the Service Information.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

B2229-SKREEM INTERNAL - SKIM IMMOBILIZER

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Antenna diagnostic test fails.

Possible Causes
KEY (FOBIK)
WIRELESS IGNITION NODE (WIN)

Diagnostic Test**1. VERIFY THAT THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE**

1. Turn the ignition on.

NOTE: Before continuing, review and check for the following:

- Review the repair history of the vehicle.
 - Make sure that the vehicle has the correct PCM and WIN installed by verifying the part numbers.
 - With the scan tool, ensure that the PCM and WIN are programmed correctly. Compare the PCM VIN to the WIN VIN and ensure the two VINs match.
2. With the scan tool, record and erase the DTCs.
 3. Perform 3 ignition cycles, leaving the ignition switch on for a minimum of one minute per cycle.
 4. With the scan tool, read the active DTCs.

Does the scan tool display; B2229-SKREEM INTERNAL - SKIM IMMOBILIZER as active?

Yes

- If the engine does not crank, Go To 2
- If the engine does crank, Go To 2 and answer "Yes" to the question in step 2.

No

- Perform the WIRELESS IGNITION NODE (WIN) INTERMITTENT TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

2. ENGINE DOES NOT CRANK

NOTE: When diagnosing any WIN system concern, all FOBKS should be present

1. If this vehicle does not crank, use the table below to determine if the key is functional or not. With the scan tool under Data Display, Bussed Outputs, put the key in each position and check the "Ignition Status". Then with the key in the Run position, check "Valid Skim Key" and "SCREEM Status" reported by the WIN (or WCM). Compare all six readings with the "Good Key" column.

BUSSED OUTPUTS	-	-	-	-
Ignition Status	Good Key	Bad Key (Failed)	Wrong Key	New Key (Blank)
Ignition Position =	----- --- or	-----	-----	-----

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

Lock	Lock	--	----	or Lock
Ignition Position = Acc.	Off/Acc.	----- --	----- ----	Off/Acc.
Ignition Position = Run Or ON	Run	Lock	Lock	Run
Ignition Position = Start Engine Off - Trans. in Gear	Start or Run	Lock	Lock	Run
SKREEM Status	Normal Status	Service SKREEM	Invalid Key	Key Not Programmed
Valid Skim Key	Yes/True	No/False	No/False	No/False
-	-	-	-	-
Trouble Code (DTC)	-	B2229, B1A35	B1A6C, B1A25	B1A24

B223C-INTRUSION TRANSCIEVER MODULE INTERNALFor complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

Ignition on.

- **Set Condition:**

Internal Intrusion Transceiver Module test failed.

Possible Causes

INTRUSION TRANSCIEVER MODULE

Diagnostic Test**1. DETERMINING IF DTC IS CURRENT**

1. With a scan tool, read and record DTC(s).
2. With the scan tool, clear DTC(s).
3. Turn the ignition off and remove the key from the ignition.

4. Lock and close all doors to allow the VTSS to go from pre-arm to armed status and wait one minute.
5. Disarm the VTSS.
6. Using the scan tool, read DTC(s).

Does the DTC reset?

Yes

- Replace the Intrusion Transceiver Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

No

- DTC is not active at this time. Test complete.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

B2254-COLUMN LOCK MODULE INTERNAL

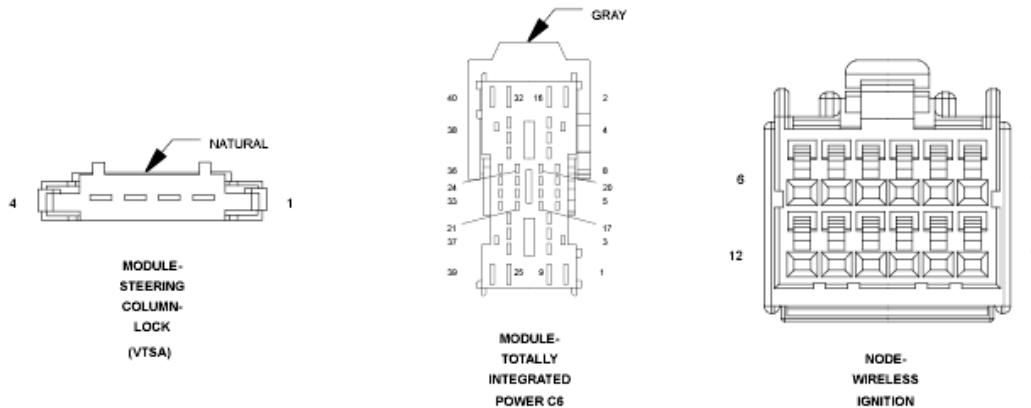
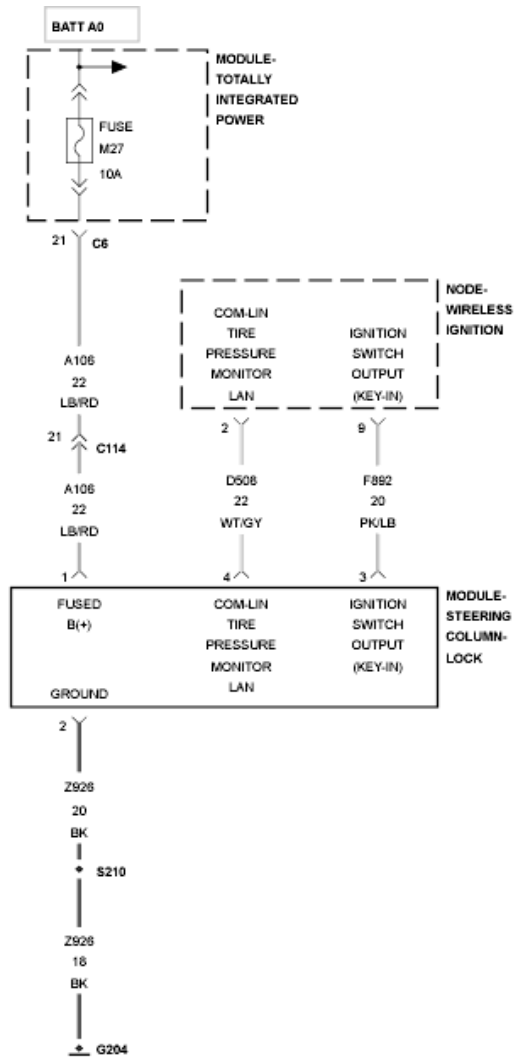


Fig. 10: COM-LIN Tire Pressure Monitor LAN Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

- **When Monitored:**

Continuously.

- **Set Condition:**

If the WIN does not receive the correct response message back from the Steering Column Lock Module.

Possible Causes
INTERMITTENT CONDITION (A106) FUSED B+ CIRCUIT OPEN (Z926) GROUND CIRCUIT OPEN (D508) COM-LIN TIRE PRESSURE MONITOR LAN CIRCUIT OPEN STEERING COLUMN LOCK MODULE

Diagnostic Test

1. INTERMITTENT DTC

1. With the scan tool, erase the current WIN DTC's.
2. Turn the ignition off.
3. Arm the VTSS and wait one minute.
4. Disarm the VTSS and turn the ignition on.

Does the scan tool display the same DTC?

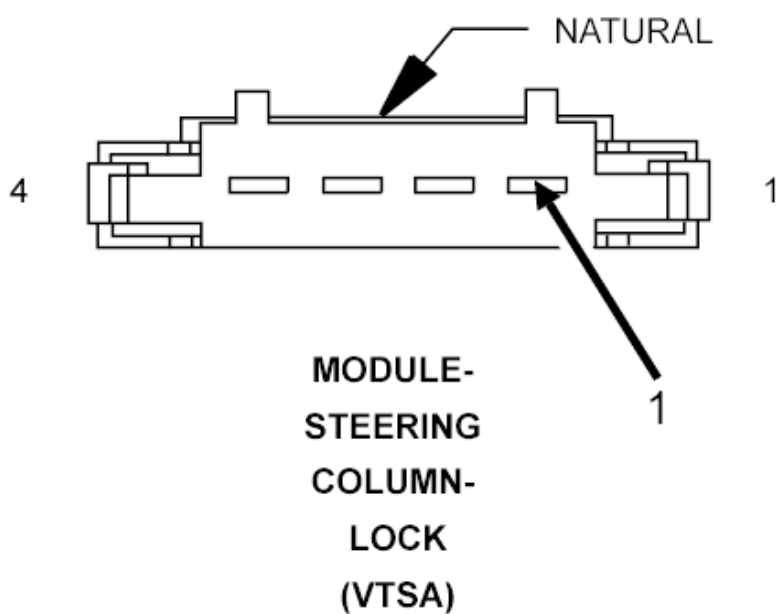
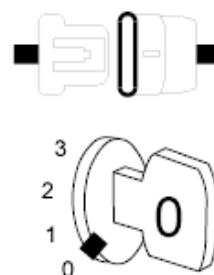
Yes

- Go To step 2

No

- The condition that caused this symptom is currently not present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

2. (A106) FUSED B+ CIRCUIT OPEN



107333

Fig. 11: Checking Fused B+ Circuit Open
Courtesy of CHRYSLER LLC

1. Gain access to the Steering Column Lock Module.
2. Disconnect the Steering Column Lock Module connector.
3. Using a 12-volt test light connected to ground, check the (A106) Fused B(+) circuits in the Steering Column Lock Module connector.

Does the test light illuminate brightly?

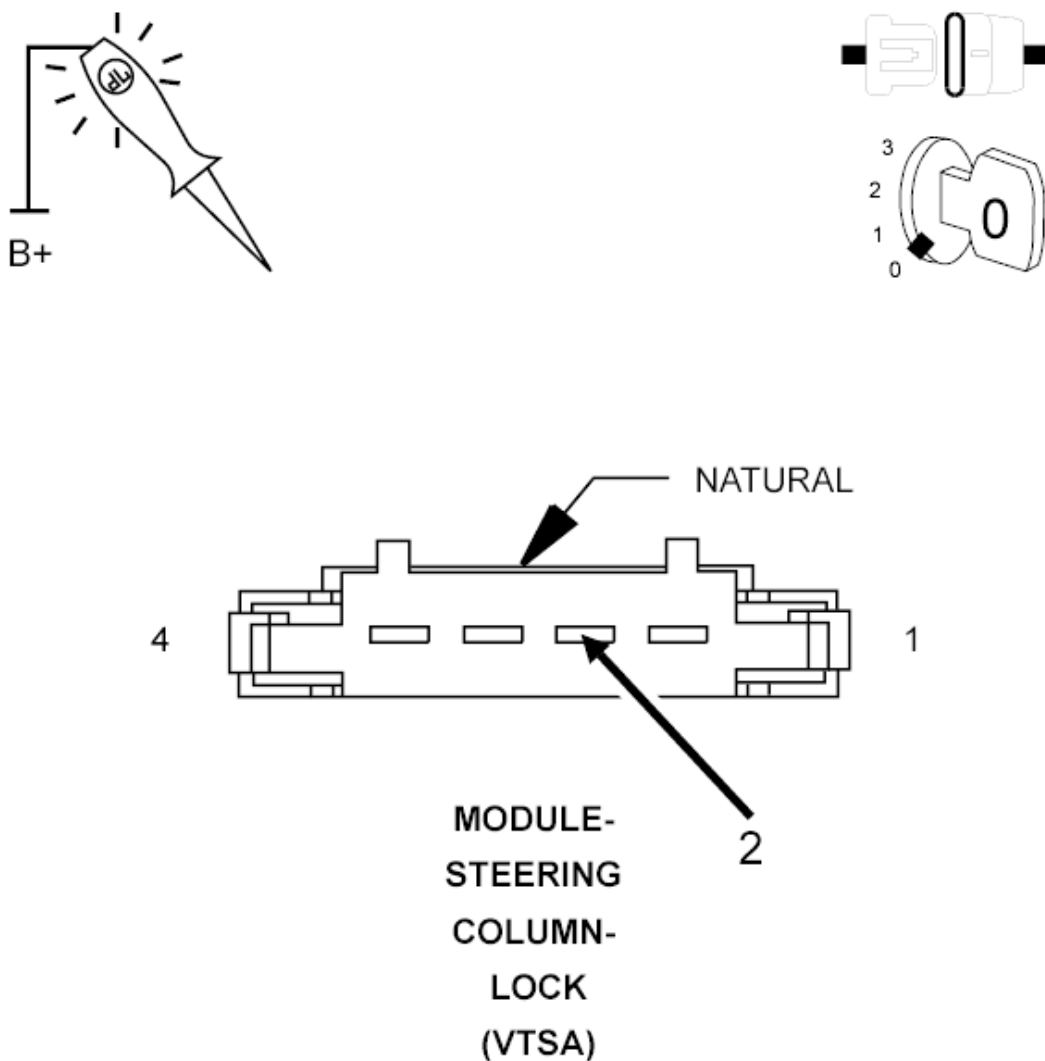
Yes

- Go To step 3

No

- Repair the Fused B+ circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

3. (Z926) GROUND CIRCUIT OPEN



107335

Fig. 12: Checking Ground Circuit Open

Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z926) Ground circuit at the Steering Column Lock Module connector.

Does the test light illuminate brightly?

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Yes

- Go To step 4

No

- Repair the (Z926) Ground circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

4. (D508) COM-LIN TIRE PRESSURE MONITOR LAN CIRCUIT OPEN



107337

- Is the resistance below 1.0 ohms?

Yes

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

- Replace the Steering Column Lock Module in accordance with the Service Information.
- Perform WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

No

- Repair the (D508) COM-LIN Tire Pressure Monitor LAN circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

C0077-LOW TIRE PRESSURE

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously.

- **Set Condition:**

A low pressure condition will exist when the tire pressure falls below or is equal to the low pressure threshold value as specified for the vehicle.

Possible Causes
INTERMITTENT PERFORMANCE DTC
INCORRECT TIRE PRESSURE
INCORRECT PLACARD VALUES
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test

1. DTC STATUS

NOTE: If the incorrect Placard Values were programmed into the WIN, a DTC could be set. Before continuing with any TPM diagnostic test, using the scan tool, check that the correct Placard Values have been programmed in to the module.

NOTE: If any the following conditions are present repair them first before continuing with this test.

- Low Tire Pressure DTCs
- Tire Pressure Monitoring (TPM) Sensor Internal fault

- **Spare Tire is not equipped with a TPM Sensor and is currently on the vehicle**

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. With the scan tool, record and erase DTCs.
4. Test drive the vehicle at speeds greater than 15 mph (24 km/h) for minimum of 10 minutes.
5. With the scan tool, read DTCs.

Is the DTC status at this time?

Yes

- Go to step 2

No

- Go to step 8

2. LOW TIRE PRESSURE

NOTE: This DTC can be caused by many different factors and might not be a TPM Sensor or a WIN fault. Interference from other elements can overpower the sensor/transmitter RF frequency to the WIN making erratic operation to the TPM system. Check the vehicle for aftermarket accessories that could compromise the RF frequency signal before diagnosing the TPM system.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait Two minutes for the system to update.
2. With the scan tool, erase DTCs.
3. With the scan tool, read DTCs.

Does the DTC reset or is the status Active for this DTC?

Yes

- Go to step 3

No

- Go to step 8

3. TIRE PRESSURE MONITORING (TPM) SENSOR

NOTE: The following tests are used to locate the Tire Pressure Sensor/Transmitter that is setting the low pressure fault. If the tires have been rotated, the Tire Pressure Sensor/Transmitter is no longer in sequence from the factory. Faults are linked to the sensor/transmitter IDs. You **MUST** locate the correct Tire Pressure Sensor/Transmitter that set the fault before.

NOTE: Before continuing with any TPM diagnostic test, using the scan tool and read first set of the Tire Placard Pressure Front and Tire Placard Pressure Rear under Data Display in the WIN. (under the Left Rear Transponder Status) Confirm that the values match the Tire Inflation Pressure (Placard) label located on the Drivers Side B-Pillar. If the incorrect Placard Values have been programmed in the WIN, go to Update Pressure Thresholds under Miscellaneous Functions for the WIN and follow the procedure. If the vehicle is equipped with a WIN Module, go into the Totally Integrated Power Module (TIPM), select Data Display and read "Tire Placard Pressure - Front" and "Tire Placard Pressure - Rear" to confirm the values were programmed correctly. If the Placard values are incorrect in the TIPM, select the Totally Integrated Power Module (TIPM) then under "Miscellaneous" select "Update Pressure Threshold" and enter the placard pressure value as seen on the Tire Inflation Pressure (Placard) label. Repeat step #2 for Diagnostics.

1. With the scan tool, select View Data Display in the WIN and find the compensated tire pressure values located under each of the Sensor Identification locations.

Are any of the compensated tire pressure values are below the Placard Value?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the service information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 4

4. TPM/RKE ANALYZER

Is there a TPM/RKE Analyzer (9936) available?

Yes

- Go to step 5

No

- Go to step 7

5. TIRE PRESSURE MONITORING (TPM) SENSOR NON-RESPONSIVE

1. With the TPM-RKE Analyzer 9936, check to see if any of the TPM Sensors do not respond after repeated attempts or display the following:
 - "Damaged Accel"
 - "Damaged Temp"
 - "Damaged Temp"
 - "Damaged Press"

Are any of the TPM Sensors not responding or displaying the information listed above?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 6

6. TPM SENSOR INTERNAL FAULT SET USING TPM/RKE ANALYZER

NOTE: The following procedure is used to locate the TPM Sensor that is setting the sensor internal fault. If the tires have been rotated, the Tire Pressure Sensor is no longer in sequence from the factory. Faults are linked to the sensor/transmitter IDs. You **MUST** locate the correct Tire Pressure Sensor that set the fault before continuing. Use the following method below at every tire location.

NOTE: If the sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM sensors and repeat this step.

1. With the scan tool, select Data Display for the WIN.
2. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the Tire Pressure Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

7. TIRE PRESSURE SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 15 mph (24 km/h) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values
2. Look for a tire location whose sensor ID that is not responding.
3. Repeat this test on each wheel on the vehicle until the sensor in question has been identified

Has the Tire Pressure Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Perform any Technical Service Bulletins that may apply to this condition.
3. With the scan tool, erase DTCs.

4. Test drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 15 m.p.h. (24 km/h).
5. With the scan tool, read DTCs.

Does the DTC reset or is the status Active for this DTC?

Yes

- Repair as necessary.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.

C1501-TIRE PRESSURE SENSOR 1 INTERNAL

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

The tire pressure sensor actively monitors the air pressure and air temperature inside the tire, the sensor internal battery status, and the radial acceleration of the wheel. Each sensor has a unique ID code. The sensor transmits the data at regular intervals via an encoded signal to a receiver circuit located in the Wireless Ignition Node (WIN).

- **When Monitored:**

With vehicle speed greater than 24 km/h (15 mph).

- **Set Condition:**

The Wireless Ignition Node (WIN) will monitor the signals from the four active road tire sensors. A loss of signal error is detected when eight consecutive blocks of data are not received or cannot be accurately decoded. An internal sensor hardware error condition will be set when an error in the accelerometer, pressure sensor, or temperature sensor is detected.

Possible Causes
INTERMITTENT TIRE PRESSURE SENSOR INTERNAL DTC
INCORRECT SENSORS
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test

1. DTC STATUS IS ACTIVE

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. With the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for a minimum of 10 minutes in order to receive TPM Sensor data and allow for the system to update.
5. With the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to step 2

No

- Go to step 8

2. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT ACTIVE

1. Turn the ignition on.
2. With the scan tool, select Data Display for the WIN and locate the following:
 - Tire 1 Pressure Sensor HW Fault
 - Tire 1 Pressure Sensor Missing ID
 - Tire 1 Temperature Sensor HW Fault
 - Tire 1 Temperature Sensor SW O/U
 - Tire 1 Acceleration Sensor HW Fault
 - Tire 1 Loss of Signal from Pressure Sensor

Do any of the above faults read "Set"?

Yes

- Go to step 3

No

- Go to step 7

3. TPM-RKE ANALYZER 9936

Is there a TPM-RKE Analyzer 9936 available?

Yes

- Go to step 4

No

- Go to step 7

4. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL DTC

NOTE: This fault can be set if the incorrect or no TPM Sensor is installed on the vehicle. If the spare tire is currently installed on the vehicle, and it is not equipped with a TPM Sensor, this DTC can be set. Replace the spare with a TPM Sensor equipped wheel and tire assembly. Test drive the vehicle. If the DTC resets, continue with the diagnostic procedure.

1. Perform a visual inspection to verify that all road wheels are equipped with a TPM Sensor.
2. With the TPM-RKE Analyzer 9936 verify the correct TPM Sensor is on the vehicle.

Is the correct TPM Sensor installed on the vehicle?

Yes

- Go to step 5

No

- Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

5. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET USING TPM-RKE ANALYZER

NOTE: The following procedure is used to locate the TPM Sensor that is setting the internal fault. If the tires have been rotated, the TPM Sensor is no longer in sequence from the factory. Faults are linked to the TPM Sensor IDs. You **MUST** locate the TPM Sensor that set the fault before continuing. Use the following method below at every tire location.

1. Use a TPM-RKE Analyzer 9936 to scan each TPM Sensor for a response, and store in the proper

location in the TPM-RKE Analyzer 9936 tool. If you receive no response from any of the TPM Sensors, check to make sure that the TPM-RKE Analyzer is set correctly and repeat the process on each non-responsive wheel.

2. Replace the TPM Sensor if the results show a "Damaged Accel", "Damaged Temp", "Damaged Press", "H/W fail", "S/W fail" or the TPM Sensor does not respond after repeated attempts. Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information. Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.
3. With the scan tool, select Data Display for the WIN.
4. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the TPM Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 6

6. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT - MISMATCHED ID

NOTE: **If the TPM Sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM Sensors and repeat this step.**

1. Use a TPM-RKE Analyzer 9936 to verify the TPM Sensor IDs match what is programmed into the WIN. The TPM Sensor Identifications are located under "Data Display" for the WIN.

Do the TPM Sensor IDs match what is stored in the WIN?

Yes

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

7. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive the TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 24 km/h (15 mph) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values.
2. Look for a tire location with a non-responsive TPM Sensor ID.
3. Repeat this test on each wheel on the vehicle until the TPM Sensor in question has been identified.

Has the TPM Sensor been located?

Yes

- Install the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any Technical Service Bulletins that may apply to this condition.
3. With the scan tool, clear DTCs in the Tire Pressure Monitoring (TPM) Module.
4. Test Drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 24 km/h (15 mph).
5. With the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C1502-TIRE PRESSURE SENSOR 2 INTERNAL

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Theory of Operation

The tire pressure sensor actively monitors the air pressure and air temperature inside the tire, the sensor internal battery status, and the radial acceleration of the wheel. Each sensor has a unique ID code. The sensor transmits the data at regular intervals via an encoded signal to a receiver circuit located in the Wireless Ignition Node (WIN).

- **When Monitored:**

With vehicle speed greater than 24 km/h (15 mph).

- **Set Condition:**

The Wireless Ignition Node (WIN) will monitor the signals from the four active road tire sensors. A loss of signal error is detected when eight consecutive blocks of data are not received or cannot be accurately decoded. An internal sensor hardware error condition will be set when an error in the accelerometer, pressure sensor, or temperature sensor is detected.

Possible Causes
INTERMITTENT TIRE PRESSURE SENSOR INTERNAL DTC
INCORRECT SENSORS
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test

1. DTC STATUS IS ACTIVE

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. With the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for a minimum of 10 minutes in order to receive TPM Sensor data and allow for the system to update.
5. With the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to step 2

No

- Go to step 8

2. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT ACTIVE

1. Turn the ignition on.
2. With the scan tool, select Data Display for the WIN and locate the following:
 - Tire 2 Pressure Sensor HW Fault
 - Tire 2 Pressure Sensor Missing ID
 - Tire 2 Temperature Sensor HW Fault
 - Tire 2 Temperature Sensor SW O/U
 - Tire 2 Acceleration Sensor HW Fault
 - Tire 2 Loss of Signal from Pressure Sensor

Do any of the above faults read "Set"?

Yes

- Go to step 3

No

- Go to step 7

3. TPM-RKE ANALYZER 9936

Is there a TPM-RKE Analyzer 9936 available?

Yes

- Go to step 4

No

- Go to step 7

4. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL DTC

NOTE: This fault can be set if the incorrect or no TPM Sensor is installed on the vehicle. If the spare tire is currently installed on the vehicle, and it is not equipped with a TPM Sensor, this DTC can be set. Replace the spare with a TPM Sensor equipped wheel and tire assembly. Test drive the vehicle. If

the DTC resets, continue with the diagnostic procedure.

1. Perform a visual inspection to verify that all road wheels are equipped with a TPM Sensor.
2. With the TPM-RKE Analyzer 9936 verify the correct TPM Sensor is on the vehicle.

Is the correct TPM Sensor installed on the vehicle?

Yes

- Go to step 5

No

- Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

5. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET USING TPM-RKE ANALYZER

NOTE: **The following procedure is used to locate the TPM Sensor that is setting the internal fault. If the tires have been rotated, the TPM Sensor is no longer in sequence from the factory. Faults are linked to the TPM Sensor IDs. You MUST locate the TPM Sensor that set the fault before continuing. Use the following method below at every tire location.**

1. Use a TPM-RKE Analyzer 9936 to scan each TPM Sensor for a response, and store in the proper location in the TPM-RKE Analyzer 9936. If you receive no response from any of the TPM Sensors, check to make sure that the TPM-RKE Analyzer is set correctly and repeat the process on each non-responsive wheel.
2. Replace the TPM Sensor if the results show a "Damaged Accel", "Damaged Temp", "Damaged Press", "H/W fail", "S/W fail" or the TPM Sensor does not respond after repeated attempts. Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information. Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.
3. With the scan tool, select Data Display for the WIN.
4. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the TPM Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.

- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 6

6. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT - MISMATCHED ID

NOTE: If the TPM Sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM Sensors and repeat this step.

1. Use a TPM-RKE Analyzer 9936 to verify the TPM Sensor IDs match what is programmed into the WIN. The TPM Sensor Identifications are located under "Data Display" for the WIN.

Do the TPM Sensor IDs match what is stored in the WIN?

Yes

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

7. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive the TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 24 km/h (15 mph) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values.
2. Look for a tire location with a non-responsive TPM Sensor ID.
3. Repeat this test on each wheel on the vehicle until the TPM Sensor in question has been identified.

Has the TPM Sensor been located?

Yes

- Install the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.

- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any Technical Service Bulletins that may apply to this condition.
3. With the scan tool, clear DTCs in the Tire Pressure Monitoring (TPM) Module.
4. Test Drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 24 km/h (15 mph).
5. With the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C1503-TIRE PRESSURE SENSOR 3 INTERNAL

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

The tire pressure sensor actively monitors the air pressure and air temperature inside the tire, the sensor internal battery status, and the radial acceleration of the wheel. Each sensor has a unique ID code. The sensor transmits the data at regular intervals via an encoded signal to a receiver circuit located in the Wireless Ignition Node (WIN).

- **When Monitored:**

With vehicle speed greater than 24 km/h (15 mph).

- **Set Condition:**

The Wireless Ignition Node (WIN) will monitor the signals from the four active road tire sensors. A loss of signal error is detected when eight consecutive blocks of data are not received or cannot be accurately

decoded. An internal sensor hardware error condition will be set when an error in the accelerometer, pressure sensor, or temperature sensor is detected.

Possible Causes

INTERMITTENT TIRE PRESSURE SENSOR INTERNAL DTC
INCORRECT SENSORS
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test**1. DTC STATUS IS ACTIVE**

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. Using the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for a minimum of 10 minutes in order to receive TPM Sensor data and allow for the system to update.
5. Using the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to step 2

No

- Go to step 8

2. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT ACTIVE

1. Turn the ignition on.
2. Using the scan tool, select Data Display for the WIN and locate the following:
 - Tire 3 Pressure Sensor HW Fault
 - Tire 3 Pressure Sensor Missing ID
 - Tire 3 Temperature Sensor HW Fault
 - Tire 3 Temperature Sensor SW O/U

- Tire 3 Acceleration Sensor HW Fault
- Tire 3 Loss of Signal from Pressure Sensor

Do any of the above faults read "Set"?

Yes

- Go to step 3

No

- Go to step 7

3. TPM-RKE ANALYZER 9936

Is there a TPM-RKE Analyzer 9936 available?

Yes

- Go to step 4

No

- Go to step 7

4. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL DTC

NOTE: This fault can be set if the incorrect or no TPM Sensor is installed on the vehicle. If the spare tire is currently installed on the vehicle, and it is not equipped with a TPM Sensor, this DTC can be set. Replace the spare with a TPM Sensor equipped wheel and tire assembly. Test drive the vehicle. If the DTC resets, continue with the diagnostic procedure.

1. Perform a visual inspection to verify that all road wheels are equipped with a TPM Sensor.
2. With the TPM-RKE Analyzer 9936 verify the correct TPM Sensor is on the vehicle.

Is the correct TPM Sensor installed on the vehicle?

Yes

- Go to step 5

No

- Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless**

Ignition (WIN) - Standard Procedure.**5. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET USING TPM-RKE ANALYZER**

NOTE: The following procedure is used to locate the TPM Sensor that is setting the internal fault. If the tires have been rotated, the TPM Sensor is no longer in sequence from the factory. Faults are linked to the TPM Sensor IDs. You **MUST** locate the TPM Sensor that set the fault before continuing. Use the following method below at every tire location.

1. Use a TPM-RKE Analyzer 9936 to scan each TPM Sensor for a response, and store in the proper location in the TPM-RKE Analyzer 9936. If you receive no response from any of the TPM Sensors, check to make sure that the TPM-RKE Analyzer is set correctly and repeat the process on each non-responsive wheel.
2. Replace the TPM Sensor if the results show a "Damaged Accel", "Damaged Temp", "Damaged Press", "H/W fail", "S/W fail" or the TPM Sensor does not respond after repeated attempts. Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information. Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.**
3. Using the scan tool, select Data Display for the WIN.
4. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the TPM Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.**

No

- Go to step 6

6. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT - MISMATCHED ID

NOTE: If the TPM Sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM Sensors and repeat this step.

1. Use a TPM-RKE Analyzer 9936 to verify the TPM Sensor IDs match what is programmed into the WIN. The TPM Sensor Identifications are located under "Data Display" for the WIN.

Do the TPM Sensor IDs match what is stored in the WIN?

Yes

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

7. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive the TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 24 km/h (15 mph) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values.
2. Look for a tire location with a non-responsive TPM Sensor ID.
3. Repeat this test on each wheel on the vehicle until the TPM Sensor in question has been identified.

Has the TPM Sensor been located?

Yes

- Install the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any Technical Service Bulletins that may apply to this condition.
3. Using the scan tool, clear DTCs in the Tire Pressure Monitoring (TPM) Module.
4. Test Drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 24 km/h (15 mph).
5. Using the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C1504-TIRE PRESSURE SENSOR 4 INTERNAL

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

The tire pressure sensor actively monitors the air pressure and air temperature inside the tire, the sensor internal battery status, and the radial acceleration of the wheel. Each sensor has a unique ID code. The sensor transmits the data at regular intervals via an encoded signal to a receiver circuit located in the Wireless Ignition Node (WIN).

- **When Monitored:**

With vehicle speed greater than 15 m.p.h. (24 km/h).

- **Set Condition:**

The Wireless Ignition Node (WIN) will monitor the signals from the four active road tire sensors. A loss of signal error is detected when eight consecutive blocks of data are not received or cannot be accurately decoded. An internal sensor hardware error condition will be set when an error in the accelerometer, pressure sensor, or temperature sensor is detected.

Possible Causes
INTERMITTENT TIRE PRESSURE SENSOR INTERNAL DTC
INCORRECT SENSORS
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test**1. DTC STATUS IS ACTIVE**

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. Using the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for a minimum of 10 minutes in order to receive TPM Sensor data and allow for the system to update.
5. Using the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to step 2

No

- Go to step 8

2. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT ACTIVE

1. Turn the ignition on.
2. Using the scan tool, select Data Display for the WIN and locate the following:
 - Tire 4 Pressure Sensor HW Fault
 - Tire 4 Pressure Sensor Missing ID
 - Tire 4 Temperature Sensor HW Fault
 - Tire 4 Temperature Sensor SW O/U
 - Tire 4 Acceleration Sensor HW Fault
 - Tire 4 Loss of Signal from Pressure Sensor

Do any of the above faults read "Set"?

Yes

- Go to step 3

No

- Go to step 7

3. TPM-RKE ANALYZER 9936

Is there a TPM-RKE Analyzer 9936 available?

Yes

- Go to step 4

No

- Go to step 7

4. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL DTC

NOTE: This fault can be set if the incorrect or no TPM Sensor is installed on the vehicle. If the spare tire is currently installed on the vehicle, and it is not equipped with a TPM Sensor, this DTC can be set. Replace the spare with a TPM Sensor equipped wheel and tire assembly. Test drive the vehicle. If the DTC resets, continue with the diagnostic procedure.

1. Perform a visual inspection to verify that all road wheels are equipped with a TPM Sensor.
2. With the TPM-RKE Analyzer 9936 verify the correct TPM Sensor is on the vehicle.

Is the correct TPM Sensor installed on the vehicle?

Yes

- Go to step 5

No

- Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

5. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET USING TPM-RKE ANALYZER

NOTE: The following procedure is used to locate the TPM Sensor that is setting the internal fault. If the tires have been rotated, the TPM Sensor is no longer in sequence from the factory. Faults are linked to the TPM Sensor IDs. You **MUST** locate the TPM Sensor that set the fault before continuing. Use the following method below at every tire location.

1. Use a TPM-RKE Analyzer 9936 to scan each TPM Sensor for a response, and store in the proper location in the TPM-RKE Analyzer 9936. If you receive no response from any of the TPM Sensors, check to make sure that the TPM-RKE Analyzer is set correctly and repeat the process on each non-responsive wheel.
2. Replace the TPM Sensor if the results show a "Damaged Accel", "Damaged Temp", "Damaged Press", "H/W fail", "S/W fail" or the TPM Sensor does not respond after repeated attempts. Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information. Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.
3. Using the scan tool, select Data Display for the WIN.

4. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the TPM Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 6

6. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT - MISMATCHED ID

NOTE: If the TPM Sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM Sensors and repeat this step.

1. Use a TPM-RKE Analyzer 9936 to verify the TPM Sensor IDs match what is programmed into the WIN. The TPM Sensor Identifications are located under "Data Display" for the WIN.

Do the TPM Sensor IDs match what is stored in the WIN?

Yes

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

7. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive the TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 24 km/h (15 mph) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values.
2. Look for a tire location with a non-responsive TPM Sensor ID.

3. Repeat this test on each wheel on the vehicle until the TPM Sensor in question has been identified.

Has the TPM Sensor been located?

Yes

- Install the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any Technical Service Bulletins that may apply to this condition.
3. Using the scan tool, clear DTCs in the Tire Pressure Monitoring (TPM) Module.
4. Test Drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 24 km/h (15 mph).
5. Using the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C151C-TIRE PRESSURE MONITORING (TPM) SENSORS MISSING

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

When installing a new Wireless Ignition Node (WIN), the module is programmed with universal IDs for the Tire Pressure Monitoring (TPM) Sensors. The WIN must be programmed with the correct TPM Sensor IDs.

- **When Monitored:**

During vehicle TPM Sensor ID locate process.

• **Set Condition:**

When installing a new Wireless Ignition Node (WIN).

Possible Causes
INCORRECT TIRE PRESSURE MONITORING (TPM) SENSOR ID(S) TIRE PRESSURE MONITORING (TPM) SENSOR WIRELESS IGNITION NODE (WIN)

Diagnostic Test

1. VERIFY DTC IS ACTIVE

NOTE: The DTC can be caused by many different factors and might not be a sensor/transmitter or a WIN fault. Interference from other elements over power the sensor/transmitter RF frequency making erratic operation to the TPM system. Check the vehicle for aftermarket accessories that could compromise the RF frequency signal before diagnosing the TPM system.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on, engine not running.
3. With the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for 10 minutes, in order to receive TPM data and allow for the system to update.
5. With the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to step 2

No

- Go to step 5

2. TPM-RKE ANALYZER 9936 TOOL

Is there a TPM-RKE Analyzer tool available?

Yes

Go to step 3

No

- Go to step 4

3. WITH TPM-RKE TOOL CHECK TIRE PRESSURE MONITORING (TPM) SENSOR ID(S)

NOTE: Always be certain to select the proper vehicle line and model year when using this tool, as the tool will automatically use the correct protocol to attempt to read the TPM Sensor. If the incorrect vehicle line and/or model year is selected, the TPM Sensor will not respond to the tool.

NOTE: If you receive no response from any of the tire pressure sensors, check to make sure that the TPM-RKE Analyzer is set correctly, and repeat the process on each of the non-responsive wheel(s)

1. Use a TPM-RKE Analyzer tool to scan each TPM Sensor for an ID. Store in the proper location in the TPM-RKE Analyzer tool.
2. Use a TPM-RKE Analyzer tool, to upload the correct IDs and proper locations in the scan tool.
3. With the scan tool, select the TIPM, under "Miscellaneous Functions", follow the procedure for uploading TPM Sensor IDs.
4. With the scan tool, erase DTCs.
5. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for 10 minutes in order to receive the TPM data and allow for the system to update.
6. With the scan tool, check to see if the TPM Sensor IDs match what is programmed into the WIN.

Do the TPM IDs match?

Yes

- Test complete.
- Perform TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Install a new Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

4. WITHOUT TPM-RKE TOOL CHECK TIRE PRESSURE MONITORING (TPM) SENSOR ID(S)

1. Starting with the left front wheel, deflate the tire to 20 psi, wait two minutes and check the scan tool for changes to any compensated tire pressure values.
2. Repeat the above step on each wheel of the vehicle.
3. With the scan tool, erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for 10 minutes in order to receive

the TPM data and allow for the system to update.

5. With the scan tool, check to see if the TPM Sensor IDs are programmed into the WIN.

Are the TPM Sensor IDs in the WIN?

Yes

- Test complete.
- Perform TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Install a new Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform TPM VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

5. INTERMITTENT TIRE PRESSURE SENSOR DTC

NOTE: The DTC can be caused by many different factors and might not be a sensor/transmitter or a WIN fault. Interference from other elements over power the sensor/transmitter RF frequency making erratic operation to the TPM system. Check the vehicle for aftermarket accessories that could compromise the RF frequency signal before diagnosing the TPM system.

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any TSBs that may apply to this condition.
3. With the scan tool, erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for 10 minutes in order to receive TPM data and allow for the system to update.
5. With the scan tool, read DTCs.

Does the DTC reset or is the status Active for this DTC?

Yes

- Go to step 2

No

- Test complete.

P0928-BTSI CONTROL CIRCUIT



Theory of Operation

The Brake Transmission Safety Interlock (BTSI) is a safety feature that prohibits movement of the shift lever out of park unless certain conditions are met. The Wireless Ignition Node (WIN) controls the BTSI solenoid

The WIN module will engage the BTSI solenoid when the module detects the depression of the brake pedal thus allowing the transmission shift lever to move from the park position to any other position. Failure of the control circuit may inhibit the movement of the shift lever and cause this DTC to set.

- **When Monitored:**

When the ignition is in accessory, run or start position.

- **Set Condition:**

This DTC will set if the Wireless Ignition Node (WIN) module detects a problem with the BTSI solenoid control circuit. The DTC will remain active until the WIN module no longer detects a failure of the BTSI control circuit.

Possible Causes
(K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT SHORT TO GROUND
(K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT OPEN
(K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT SHORT TO VOLTAGE
SHIFTER LEVER ASSEMBLY
WIRELESS IGNITION NODE (WIN)

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

Diagnostic Test

1. DETERMINE IF THE DTC IS ACTIVE OR STORED

1. With the scan tool, read WIN DTCs.

Is the DTC active or stored?

Active

- Go To 2

Stored

- Perform the THEFT AND SECURITY SYSTEMS INTERMITTENT TEST. See DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure.

2. CHECK THE (K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT FOR A SHORT TO GROUND

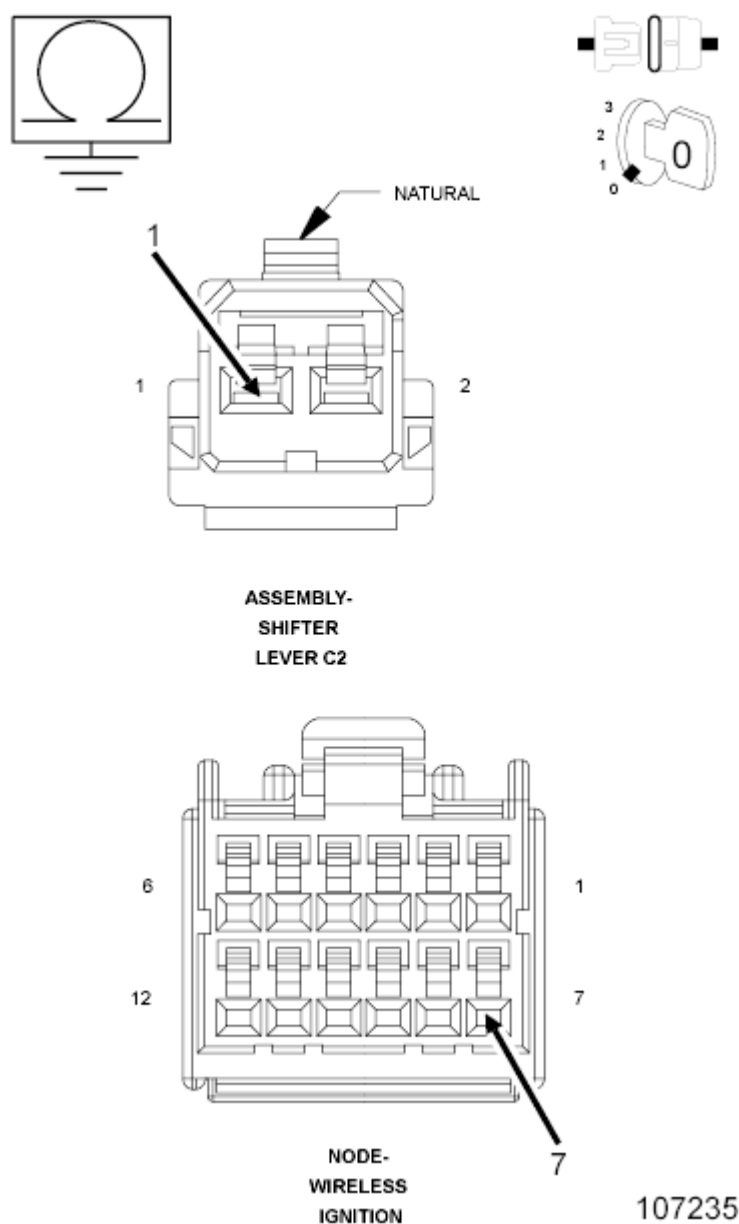


Fig. 15: Checking Brake Transmission Shift Interlock Solenoid Unlock Circuit For A Short To Ground

Courtesy of CHRYSLER LLC

1. Turn the ignition off to the lock position.
2. Disconnect the Wireless Ignition Node (WIN) harness connector.
3. Disconnect the Shifter Lever Assembly harness connector.
4. Measure the resistance between ground and the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit.

Is the resistance below 100k Ohms?

Yes

- Repair the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit for a short to ground.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 3

3. **CHECK THE (K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT FOR A SHORT TO VOLTAGE**

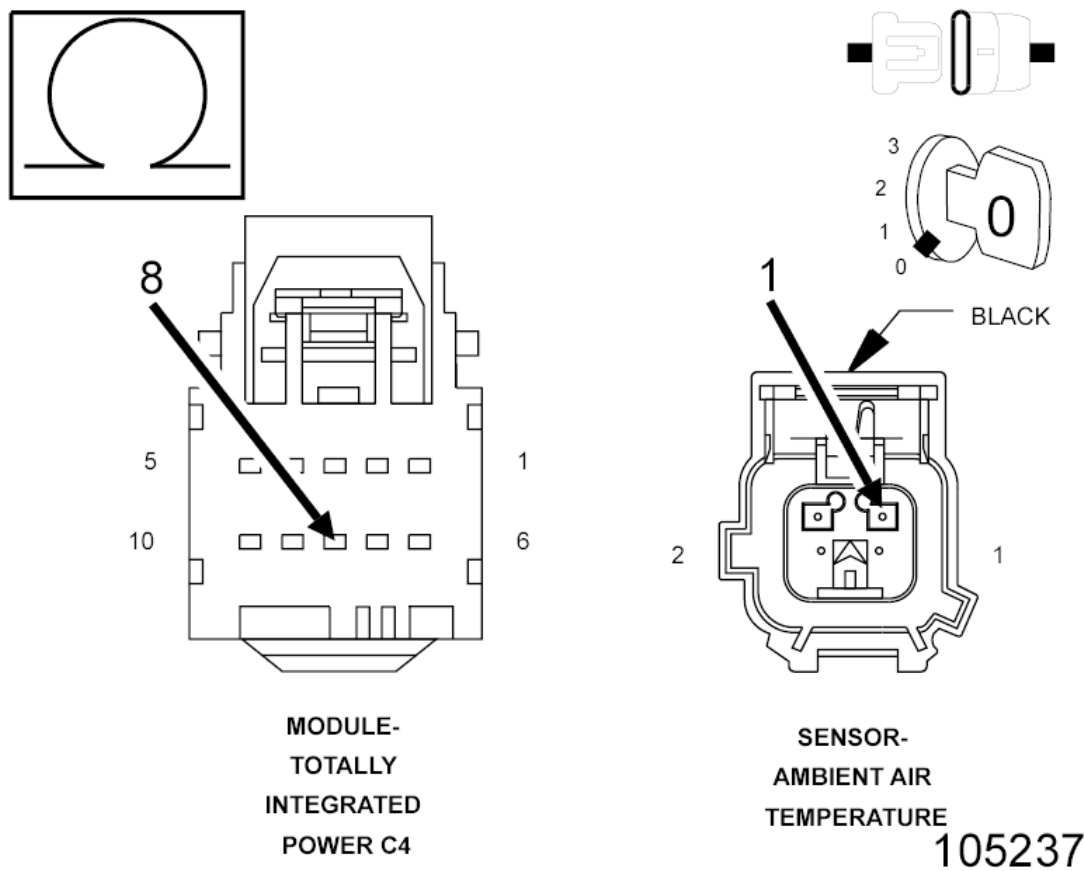


Fig. 16: Checking Brake Transmission Shift Interlock Solenoid Unlock Circuit For A Short To Voltage

Courtesy of CHRYSLER LLC

1. Ignition on, engine not running.
2. Measure the voltage of the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit.

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

Is the voltage above 0.5 of a volt?

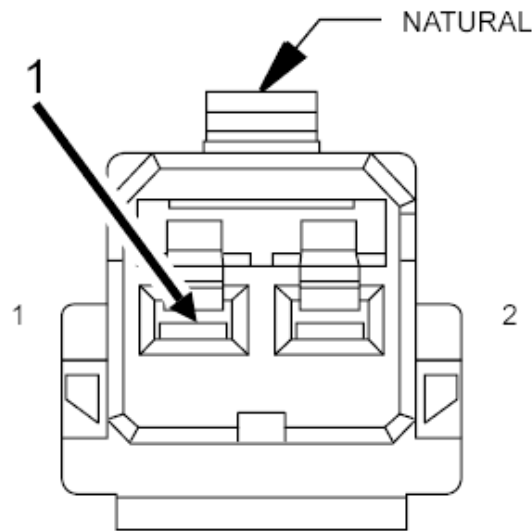
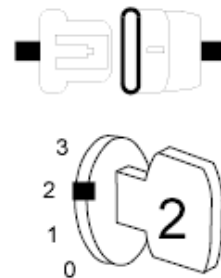
Yes

- Repair the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit for a short to voltage.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Go to step 4

4. CHECK THE (K321) BRAKE TRANSMISSION SHIFT INTERLOCK SOLENOID UNLOCK CIRCUIT FOR AN OPEN



ASSEMBLY-
SHIFTER
LEVER C2

107239

Fig. 17: Checking Brake Transmission Shift Interlock Solenoid Unlock Circuit For An Open
Courtesy of CHRYSLER LLC

1. Turn the ignition off to the lock position.
2. Reconnect the WIN harness connector.
3. Ignition on, engine not running

NOTE: It may be necessary to erase WIN DTCs to actuate the BTSI solenoid.

4. With the scan tool under WIN, actuate the BTSI solenoid.
5. Using a 12-volt test light connected to ground, check the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit in the Shifter Lever Assembly harness connector.

NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

- Go to step 5

No

- Repair the (K321) Brake Transmission Shift Interlock Solenoid Unlock circuit for an open.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

5. CHECK THE SHIFT LEVER ASSEMBLY BTSI SOLENOID

1. Turn the ignition off to the lock position.
2. Replace the Shift Lever Assembly in accordance with the Service Information.
3. Reconnect all previously disconnected connectors.
4. Use the scan tool and erase WIN DTCs.
5. Turn the ignition off to the lock position, wait a minimum of 15 seconds, then turn the ignition on.
6. Wait a minimum of one minute, then read WIN DTCs.

Does the DTC P0928-BTSI CONTROL CIRCUIT reset?

Yes

- Replace and program the Wireless Ignition Node in accordance with the Service Information.

NOTE: The WIN module requires a specific programming procedure.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it **MUST** be replaced along with the Wireless Ignition Node.

- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

No

- Repair is complete.
- Perform the THEFT AND SECURITY SYSTEMS VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**.

U0100-LOST COMMUNICATION WITH ECM/PCM

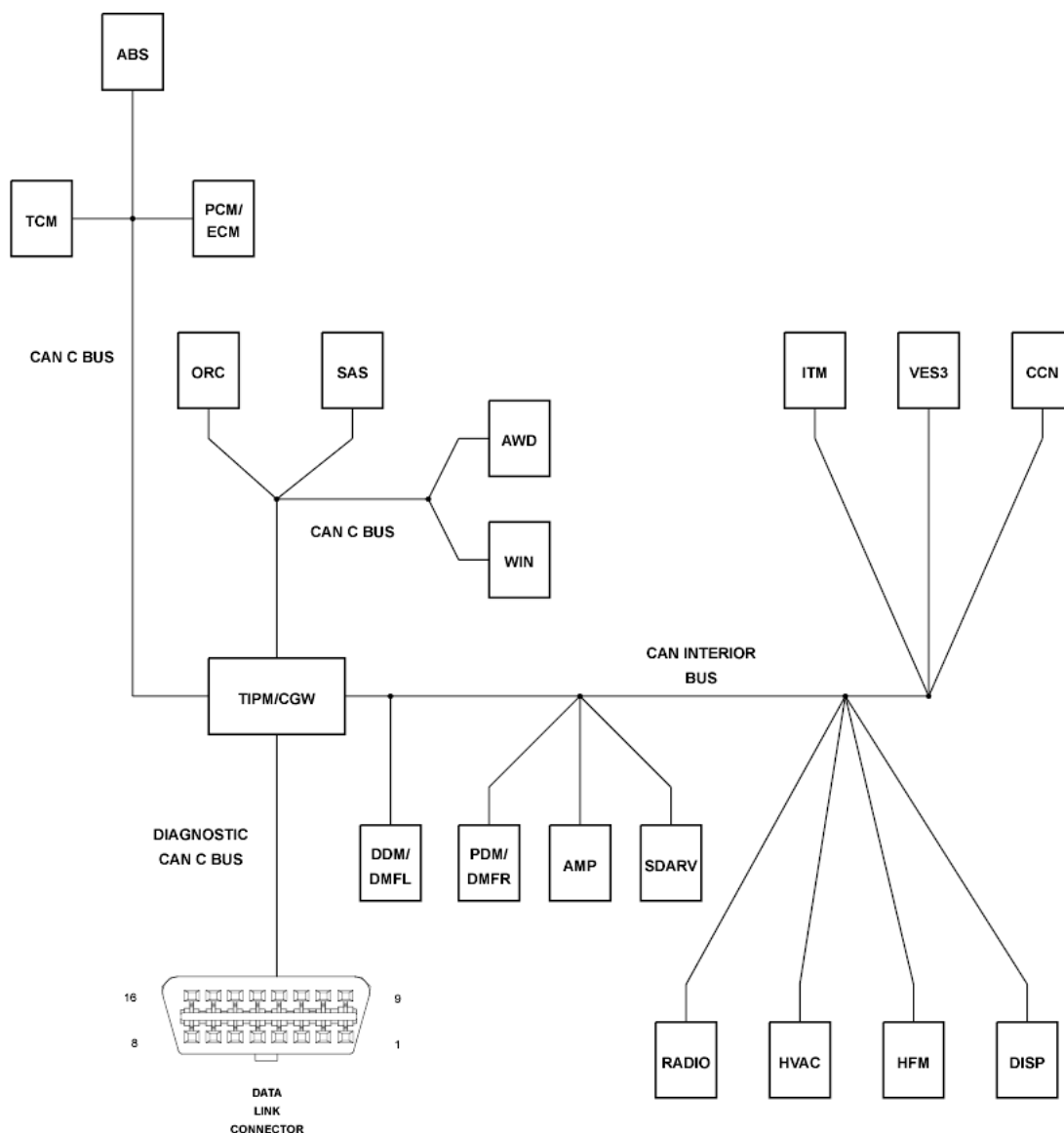


Fig. 18: CAN Interior Bus Circuit Schematic
 Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

• **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

Totally Integrated Power Module (TIPM) is configured correctly.

• **Set Condition:**

Bus messages not received from the ECM/PCM for approximately 2 to 5 seconds.

Possible Causes
CAN B OR CAN C BUS CIRCUITS OPEN OR SHORTED
DTCs RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
TIPM NOT CONFIGURED CORRECTLY
ECM/PCM
ECM/PCM POWER AND GROUND
MODULE THAT SET THIS DTC

Diagnostic Test

1. VERIFY THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

NOTE: Ensure the IOD fuse is installed and battery voltage is between 10 and 16 volts before proceeding.

- With the scan tool, read active Wireless Ignition Node (WIN) DTCs.

Is this DTC active?

Yes

- Go to and perform the diagnostic procedure for this DTC in **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing**

No

- Go to and perform the Stored Lost Communication DTC diagnostic test procedure. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing**

U0121-LOST COMMUNICATION WITH ANTI-LOCK BRAKE MODULE

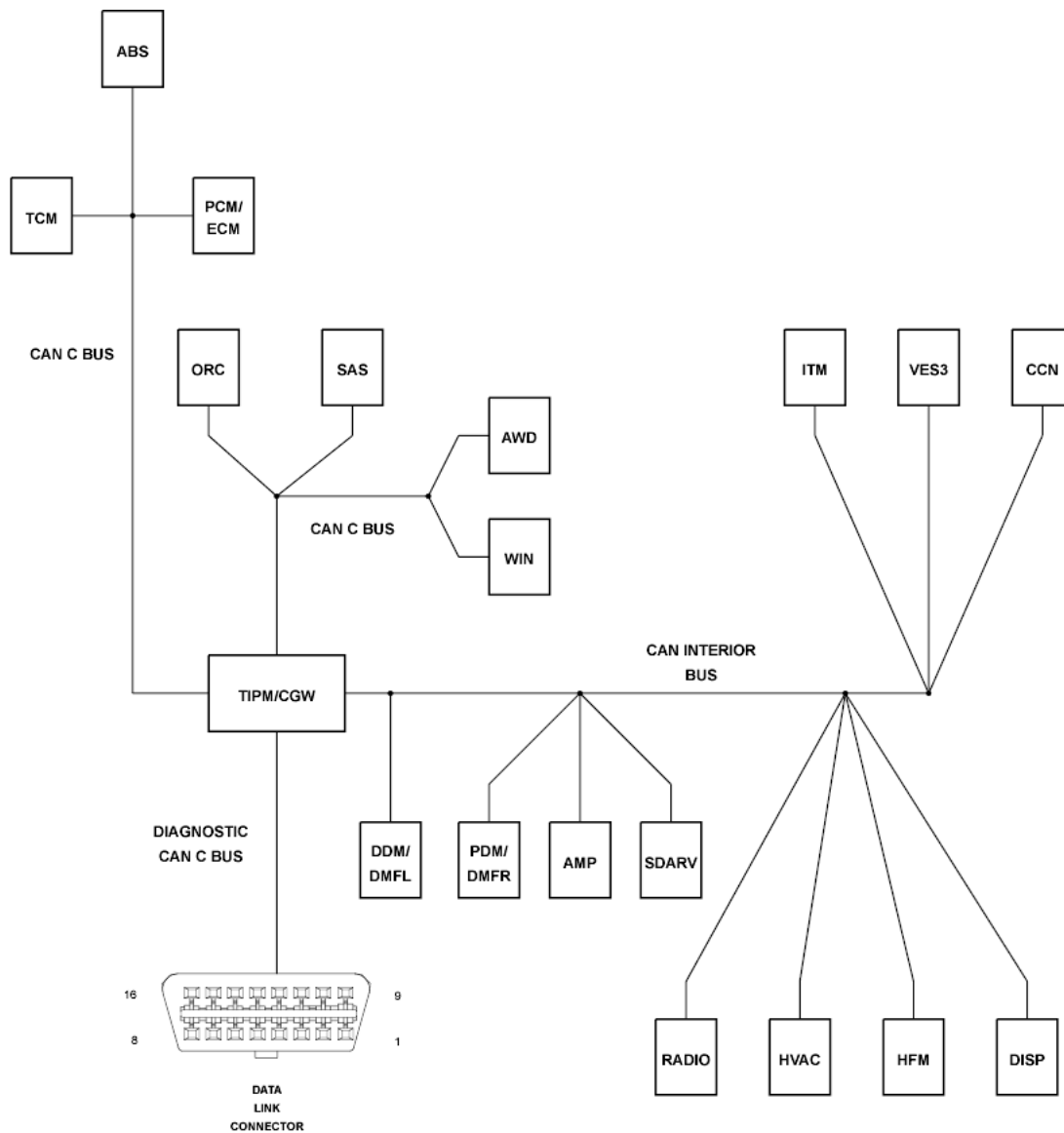


Fig. 19: CAN Interior Bus Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

• **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

Totally Integrated Power Module (TIPM) is configured correctly.

• **Set Condition:**

Bus messages not received from the ABS module for approximately 2 to 5 seconds.

Possible Causes
CAN B OR CAN C BUS CIRCUITS OPEN OR SHORTED
DTCs RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
TIPM NOT CONFIGURED CORRECTLY
ABS
ABS POWER AND GROUND
MODULE THAT SET THIS DTC

Diagnostic Test

1. VERIFY THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

NOTE: Ensure the IOD fuse is installed and battery voltage is between 10 and 16 volts before proceeding.

- With the scan tool, read active Wireless Ignition Node (WIN) DTCs.

Is this DTC active?

Yes

- Go to and perform the diagnostic procedure for this DTC in **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing**

No

- Go to and perform the Stored Lost Communication DTC diagnostic test procedure. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing**

U0141-LOST COMMUNICATION WITH FRONT CONTROL MODULE

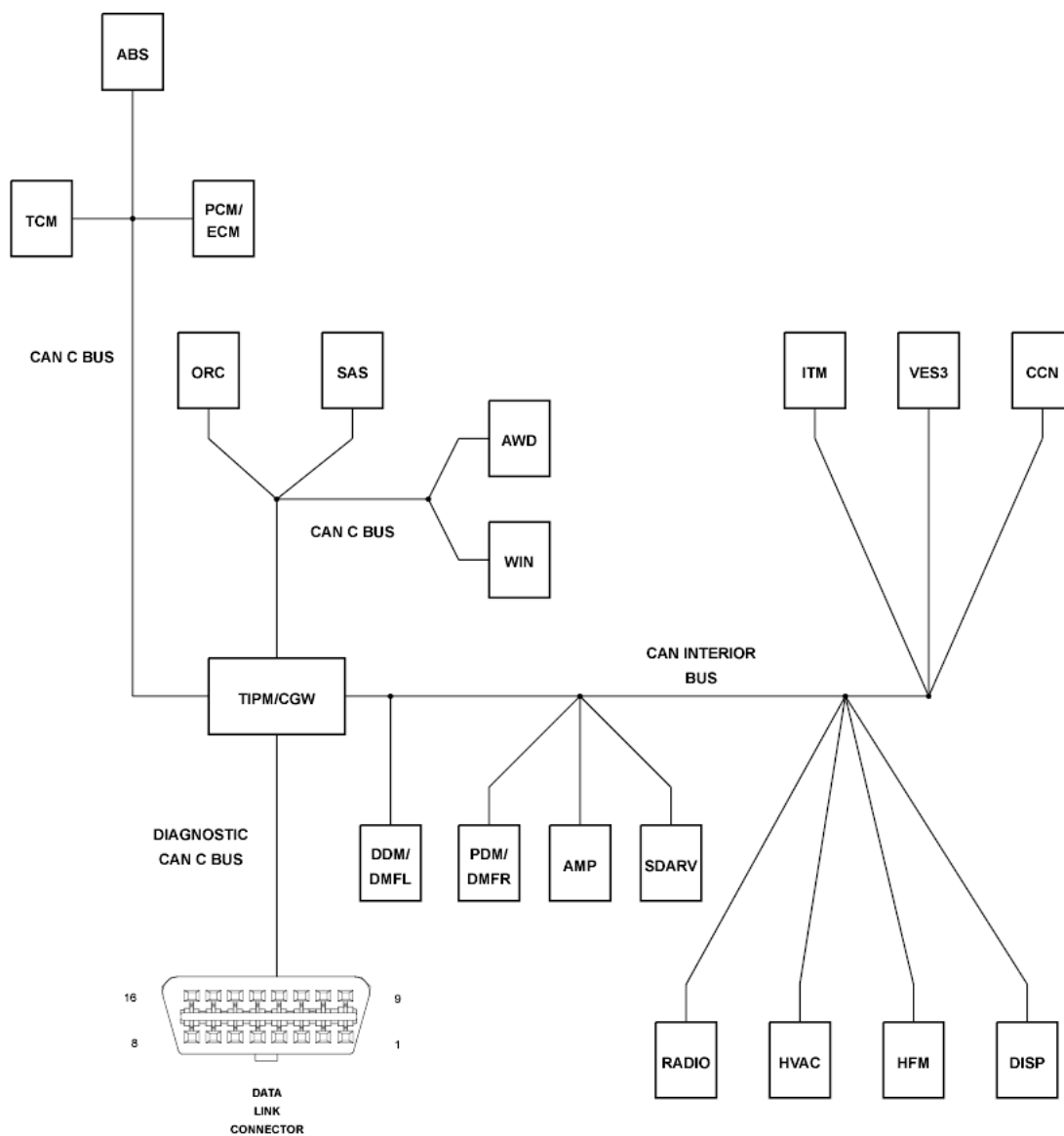


Fig. 20: CAN Interior Bus Circuit Schematic
 Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

Totally Integrated Power Module (TIPM) is configured correctly.

• **Set Condition:**

Bus messages not received from the TIPM for approximately 2 to 5 seconds.

Possible Causes
CAN B OR CAN C BUS CIRCUITS OPEN OR SHORTED
DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
TIPM NOT CONFIGURED CORRECTLY
TOTALLY INTEGRATED POWER MODULE
TIPM POWER AND GROUND
MODULE THAT SET THIS DTC

Diagnostic Test

1. VERIFY THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

NOTE: Ensure the IOD fuse is installed and battery voltage is between 10 and 16 volts before proceeding.

- With the scan tool, read active Wireless Ignition Node (WIN) DTCs.

Is this DTC active?

Yes

- Go to and perform the diagnostic procedure for this DTC in **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing**

No

- Go to and perform the Stored Lost Communication DTC diagnostic test procedure. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing**

U0236-LOST COMMUNICATION WITH COLUMN LOCK MODULE

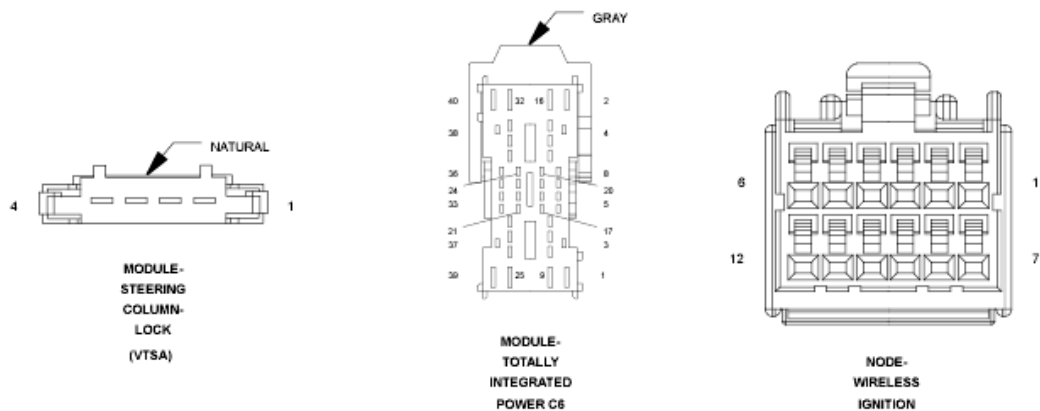
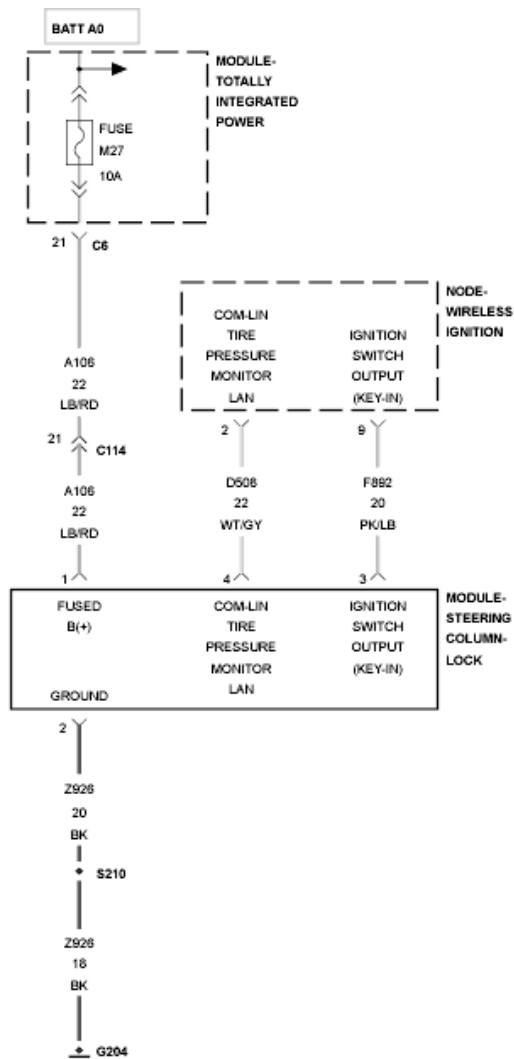


Fig. 21: COM-LIN Tire Pressure Monitor LAN Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

- **When Monitored:**

Continuously.

- **Set Condition:**

If the WIN does not receive the correct response message back from the Steering Column Lock Module.

Possible Causes
INTERMITTENT CONDITION (A106) FUSED B+ CIRCUIT OPEN (Z926) GROUND CIRCUIT OPEN (D508) COM-LIN TIRE PRESSURE MONITOR LAN CIRCUIT OPEN STEERING COLUMN LOCK MODULE

Diagnostic Test

1. INTERMITTENT DTC

1. With the scan tool, erase the current WIN DTC's.
2. Turn the ignition off.
3. Arm the VTSS and wait one minute.
4. Disarm the VTSS and turn the ignition on.

Does the scan tool display the same DTC?

Yes

- Go To step 2

No

- The condition that caused this symptom is currently not present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

2. (A106) FUSED B+ CIRCUIT OPEN

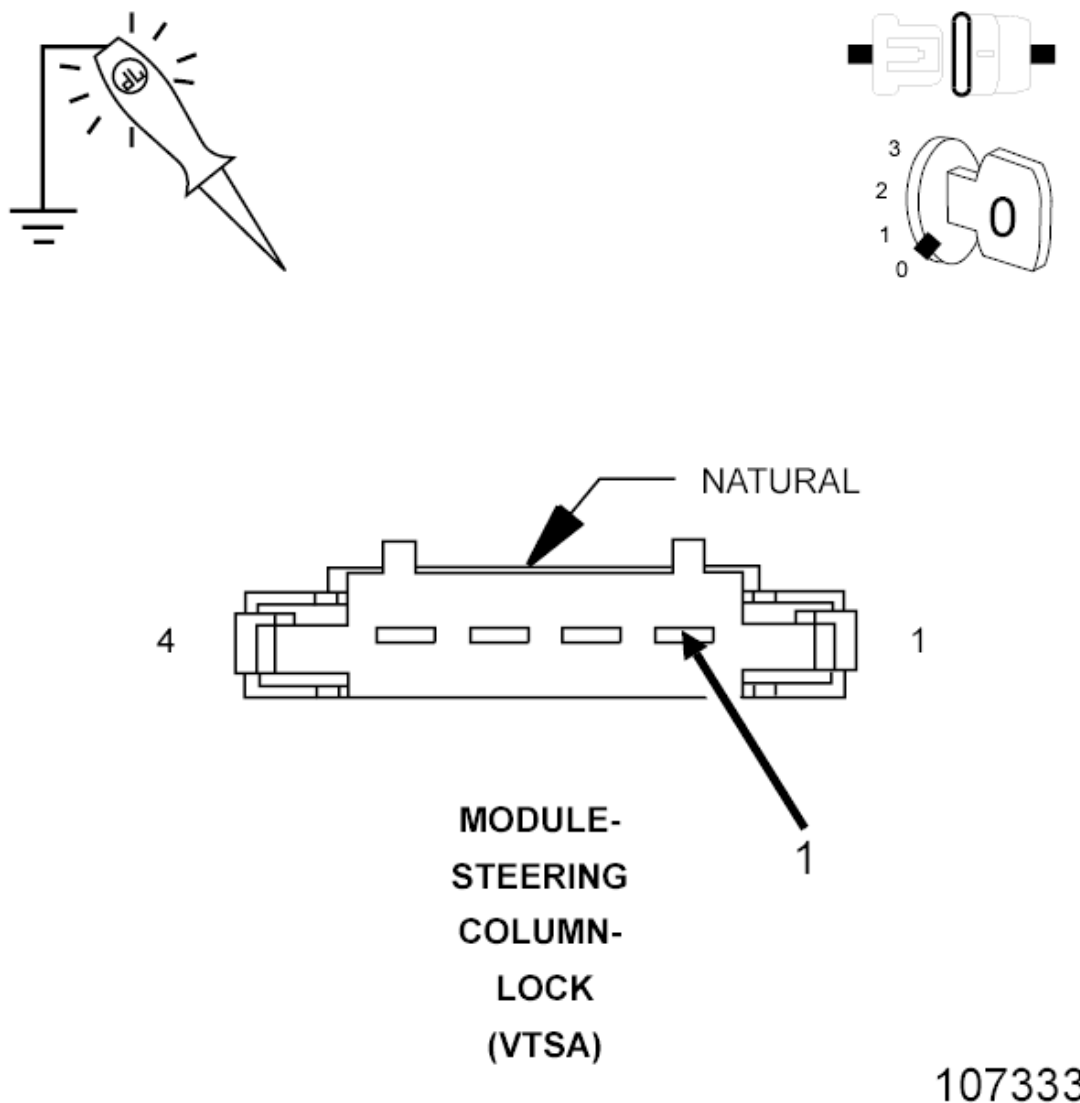


Fig. 22: Checking Fused B+ Circuit Open
Courtesy of CHRYSLER LLC

1. Gain access to the Steering Column Lock Module.
2. Disconnect the Steering Column Lock Module connector.
3. Using a 12-volt test light connected to ground, check the (A106) Fused B(+) circuits in the Steering Column Lock Module connector.

Does the test light illuminate brightly?

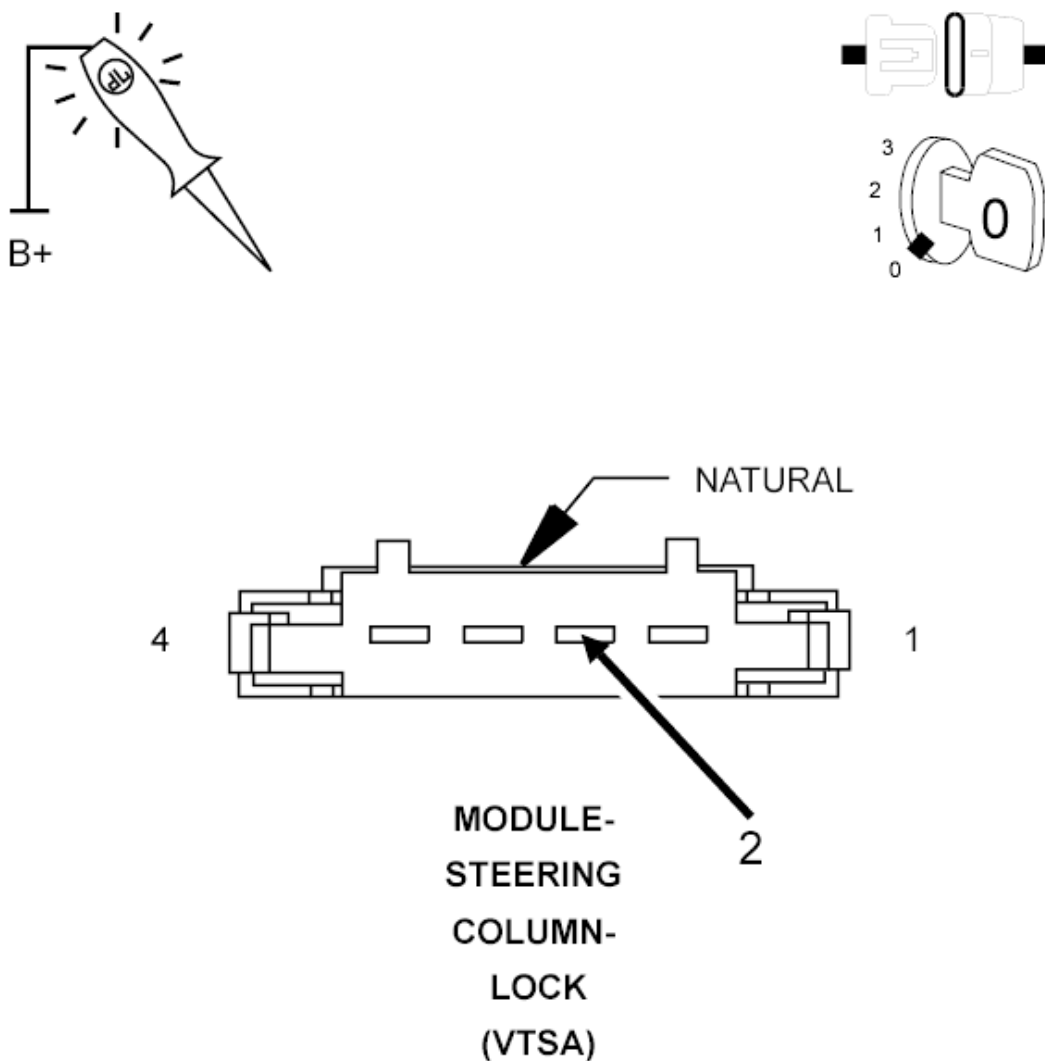
Yes

- Go To step 3

No

- Repair the Fused B+ circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

3. (Z926) GROUND CIRCUIT OPEN



107335

Fig. 23: Checking Ground Circuit Open

Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z926) Ground circuit at the Steering Column Lock Module connector.

Does the test light illuminate brightly?

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

Yes

- Go To step 4

No

- Repair the (Z926) Ground circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

4. (D508) COM-LIN TIRE PRESSURE MONITOR LAN CIRCUIT OPEN



107337

- Is the resistance below 1.0 ohms?

Yes

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

- Replace the Steering Column Lock Module in accordance with the Service Information.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

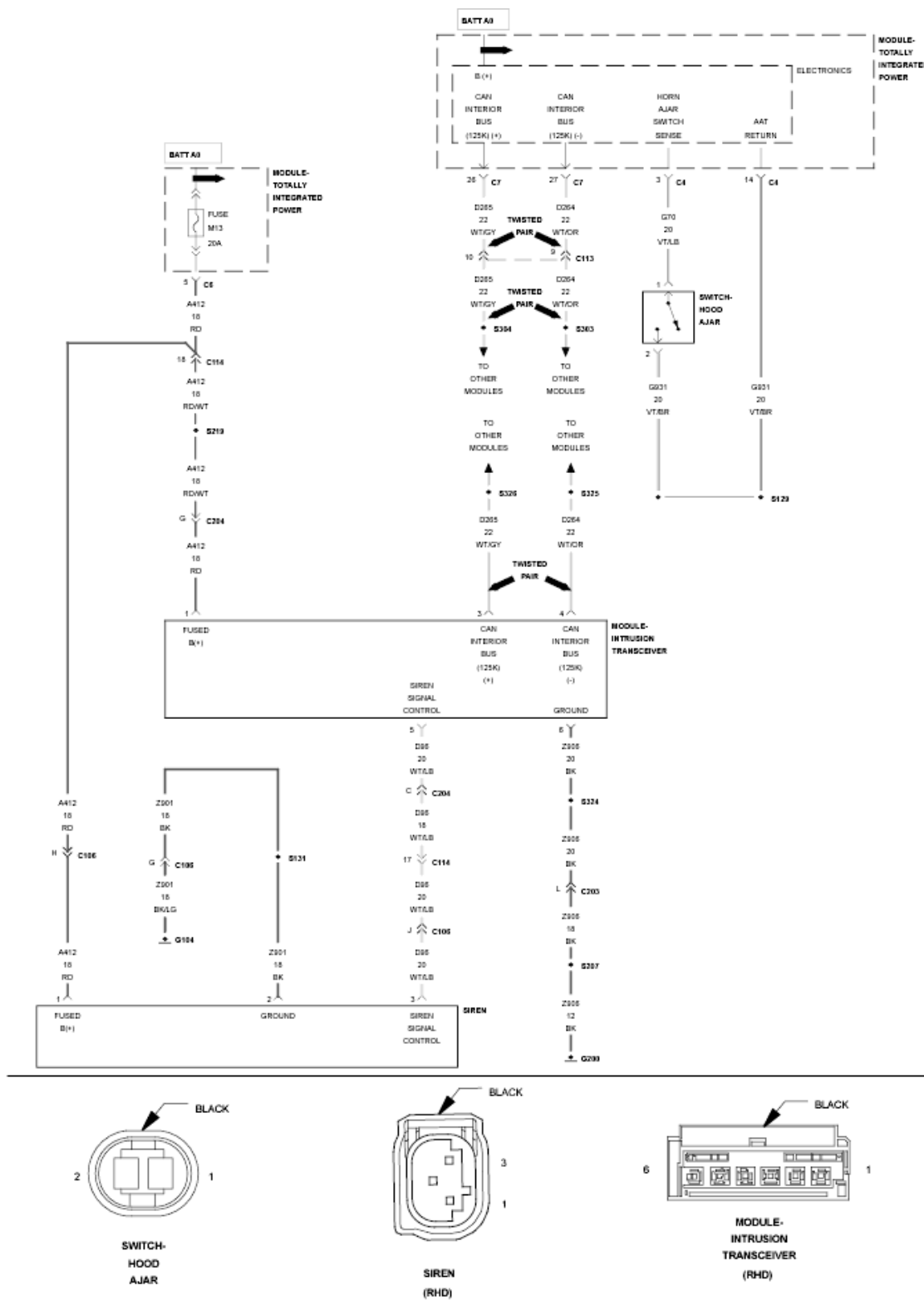
No

- Repair the (D508) COM-LIN Tire Pressure Monitor LAN circuit for an open.
- Perform the BODY VERIFICATION TEST - VER 1. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**

U110D-LOST COMMUNICATION WITH SECURITY SIREN

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey



For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously while the Vehicle Theft and Security System (VTSS) is armed.

- **Set Condition:**

If the Intrusion Transceiver Module (ITM) does not receive messages from the Siren.

Possible Causes
(A412) FUSED B+ CIRCUIT OPEN
(Z901) GROUND CIRCUIT OPEN
(D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO BATTERY
(D96) SIREN SIGNAL CONTROL CIRCUIT OPEN
(D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO GROUND
SIREN
INTRUSION TRANSCIVER MODULE

Diagnostic Test

1. INTERMITTENT DIAGNOSTIC TROUBLE CODE (DTC)

1. Using the scan tool, erase the current ITM DTCs.
2. Turn the ignition off.
3. Arm the VTSS and wait 1 minute.
4. Disarm the VTSS and turn the ignition on.

Does the scan tool display the same DTC?

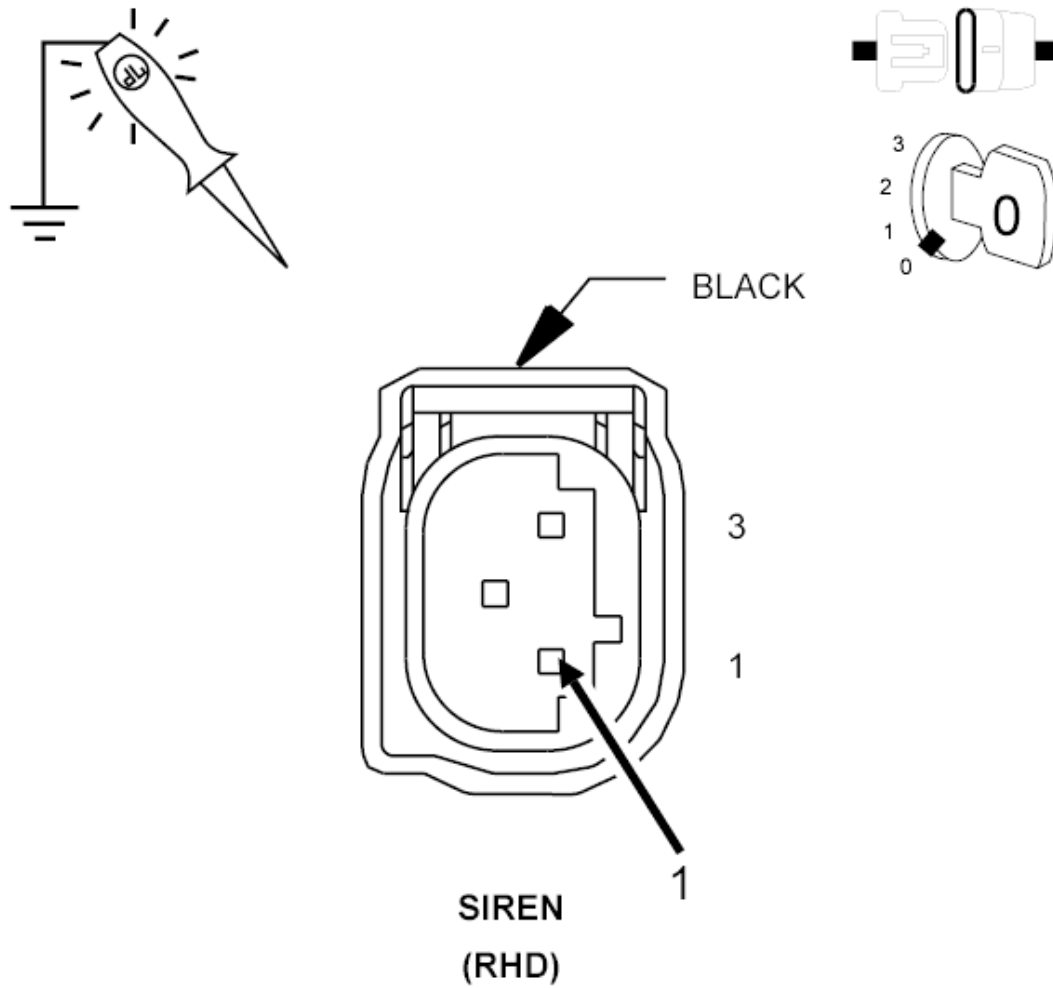
Yes

- Go to step 2

No

- The condition that caused this symptom is currently not present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

2. (A412) FUSED B+



107295

Fig. 26: Checking Fused B(+) Circuit At Siren
 Courtesy of CHRYSLER LLC

1. Gain access to the VTSS Siren.
2. Disconnect the Siren connector.
3. Using a 12-volt test light connected to ground, check the (A412) Fused B(+) circuit in the Siren connector.

Does the test light illuminate brightly?

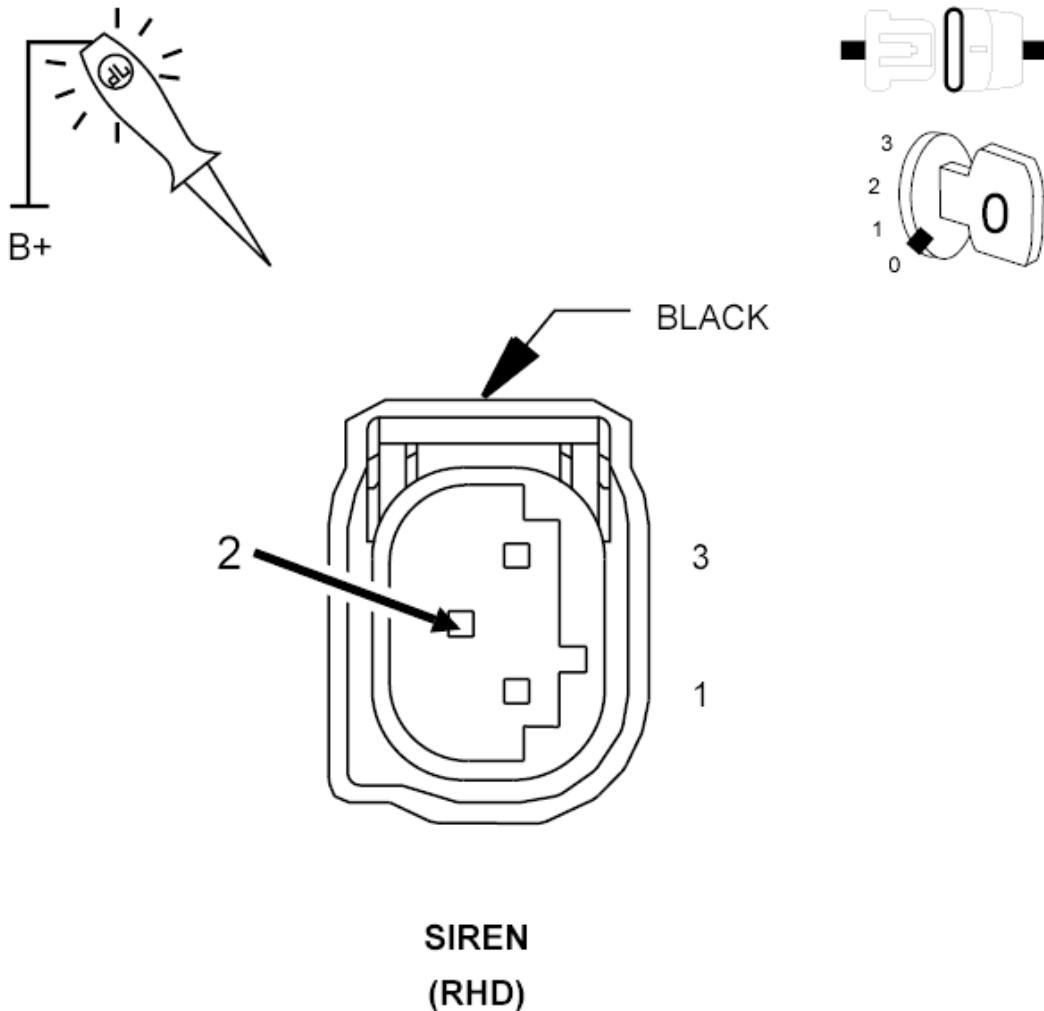
Yes

- Go to step 3

No

- Repair the (A412) Fused B+ circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

3. (Z901) GROUND CIRCUIT



107297

Fig. 27: Checking Ground Circuit At Siren
Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z901) Ground circuit at the siren connector.

Does the test light illuminate brightly?

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

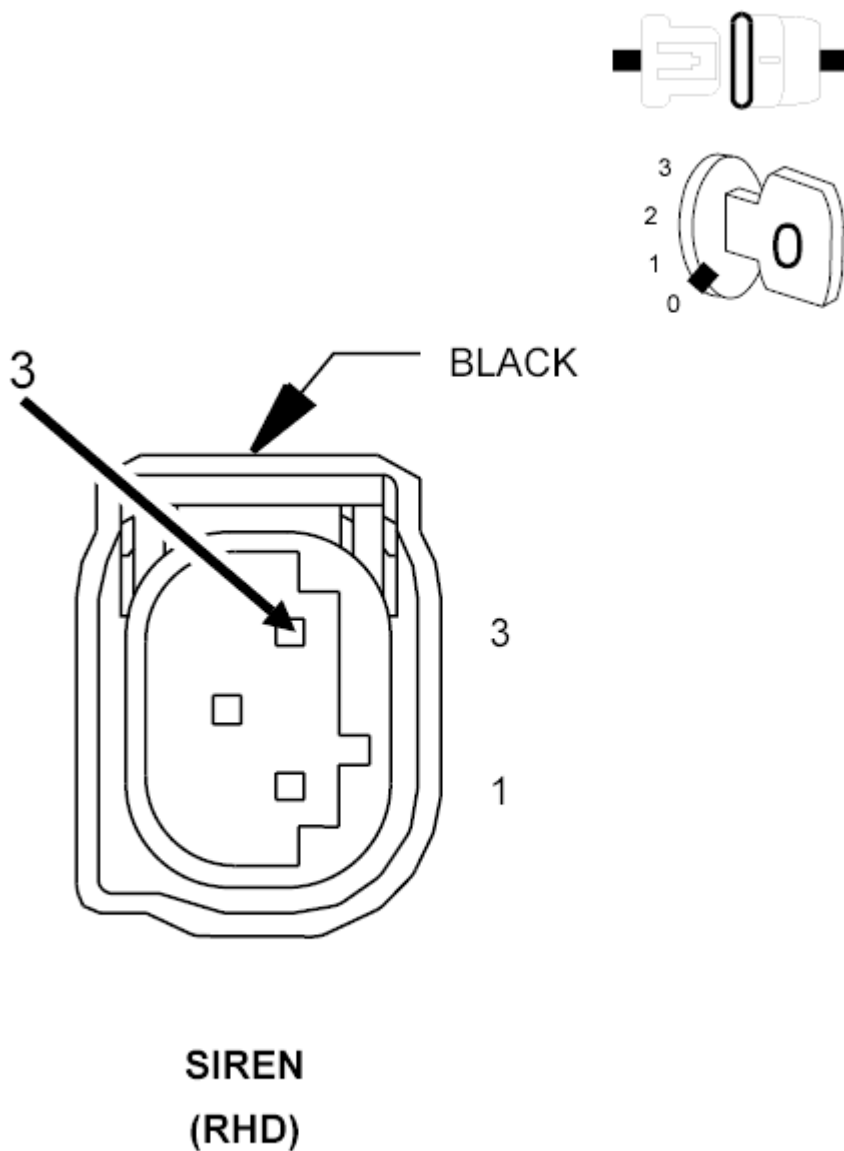
Yes

- Go to step 4

No

- Repair the (Z901) Ground circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

4. FAULTY SIREN



107349

Fig. 28: Checking Faulty Siren
Courtesy of CHRYSLER LLC

1. Use the DRBIII® and set up as follows:
2. Use the Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.
3. Connect the scope input cable to the channel one connector on the DRBIII®. Attach the red and black leads and the cable to the probe adapter to the scope input cable.
4. Select DRBIII® Stand-alone.

5. Select lab scope.
6. Select Live.
7. Select 12 volt square wave.
8. Press F2 for Scope.
9. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete.
10. Disconnect the Siren connector.
11. Connect the black lead to the chassis ground. Connect the red lead to the (D96) Siren Signal Control circuit in the Siren connector.
12. Close all doors and arm the VTSS.
13. Observe the voltage displayed on the DRBIII® Lab Scope.

Is there a voltage square wave present one to two seconds?

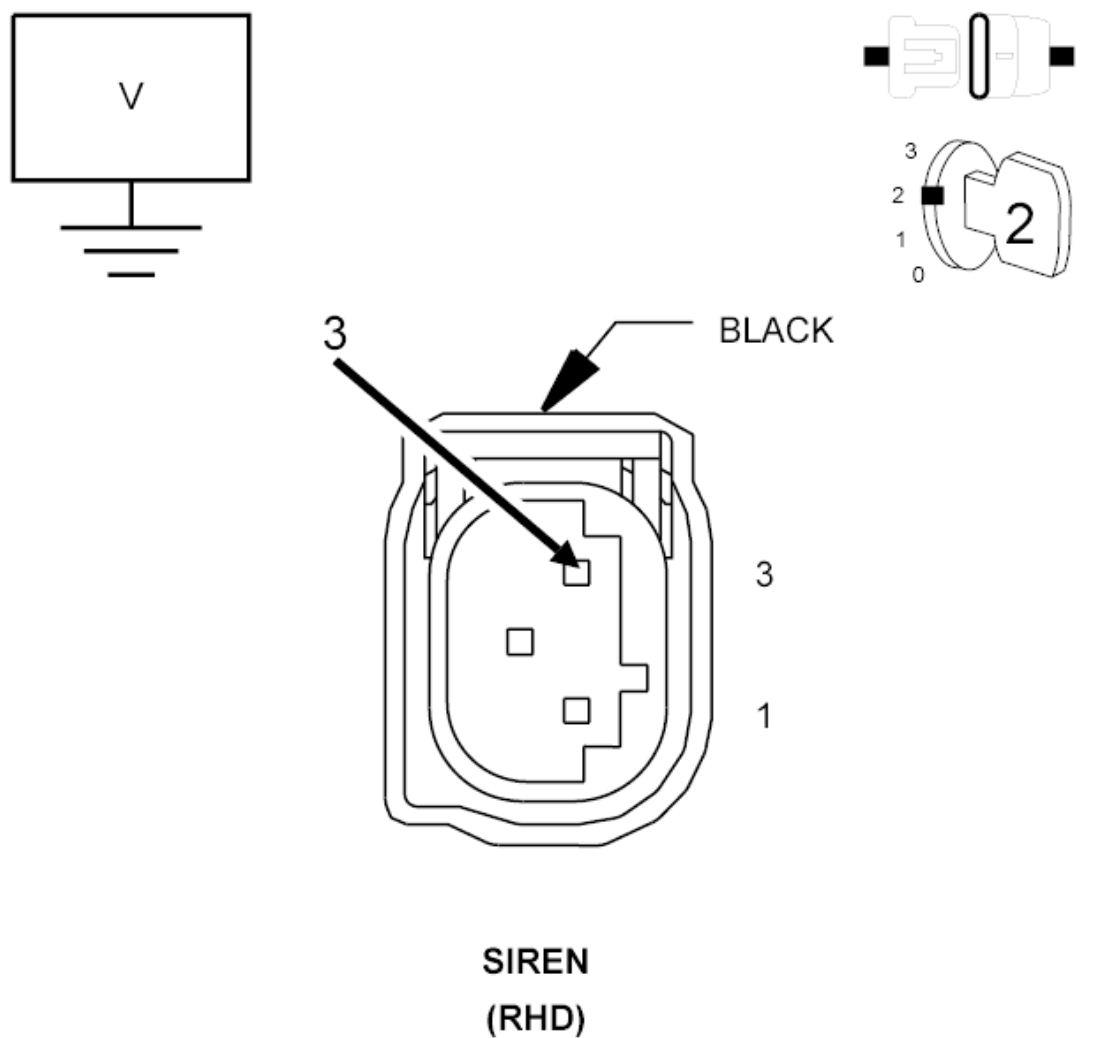
Yes

- Connect a known good siren and try to reset the DTC. If the DTC does not reset the original siren needs to be replaced. If the DTC does reset replace the ITM.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 5

5. (D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO BATTERY



107351

Fig. 29: Checking Siren Signal Control Circuit Short To Battery
Courtesy of CHRYSLER LLC

1. Disconnect the Siren harness connector.
2. Measure the voltage of the (D96) Siren Signal Control circuit.

Is there any voltage present?

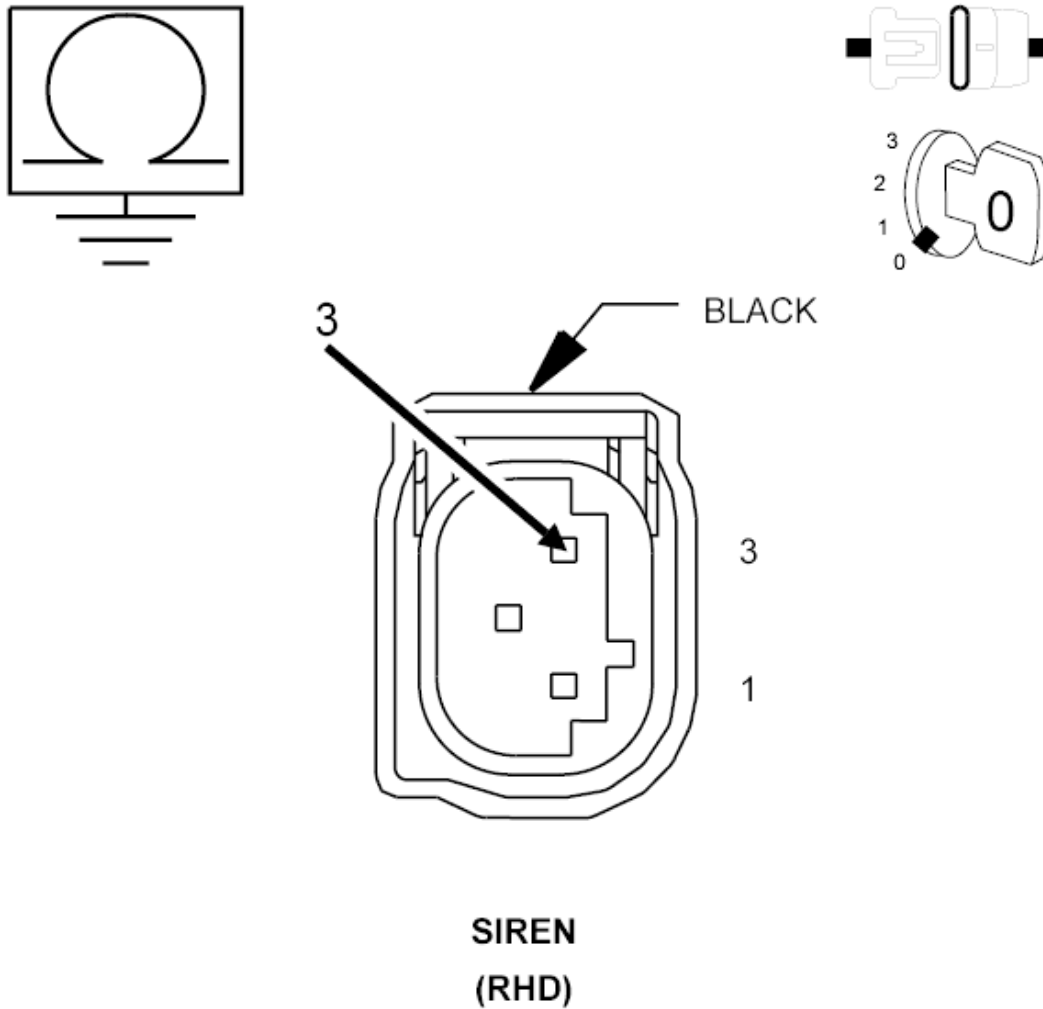
Yes

- Repair the (D96) Siren Signal Control circuit for a short to voltage.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 6

6. (D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO GROUND



107353

Fig. 30: Checking Siren Signal Control Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Disconnect the Siren harness connector.
2. Disconnect the ITM harness connector.
3. Measure the resistance between ground and the (D96) Siren Signal Control circuit.

Is the resistance above 5.0 Ohms?

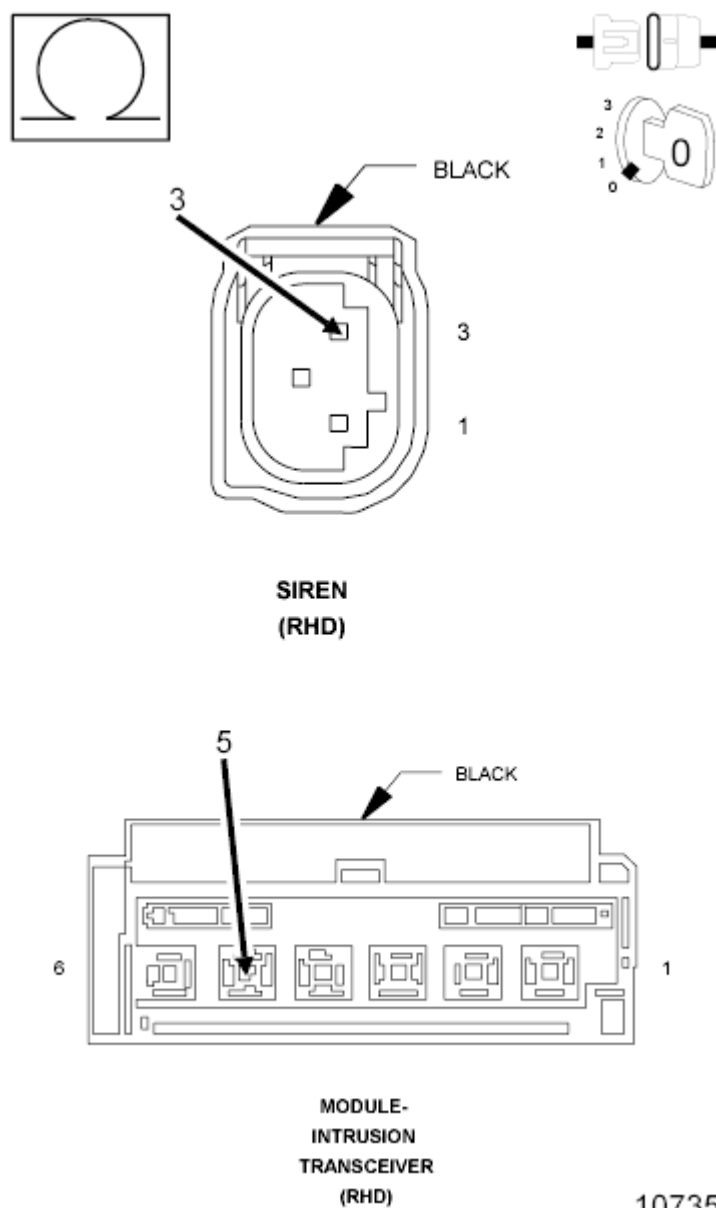
Yes

- Go To step 7

No

- Repair the (D96) Siren Signal Control circuit for a short to ground.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

7. (D96) SIREN SIGNAL CONTROL CIRCUIT OPEN



107355

Fig. 31: Checking Siren Signal Control Circuit Open

Courtesy of CHRYSLER LLC

1. Disconnect the ITM harness connector.
2. Measure the resistance of the (D96) Siren Signal Control circuit between the Intrusion Transceiver Module and the Siren connector.

Is the resistance below 5.0 Ohms?

Yes

- Replace the Intrusion Transceiver Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Repair the (D96) Siren Signal Control circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

U1197-SECURITY SEED RESPONSE NOT RECEIVED FROM ECM/PCM

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

Theory of Operation

Whenever a Fob Integrated Key (FOBIK) is inserted in the Wireless Ignition Node (WIN), the WIN performs a self test and resynchronization routine. During the routine, the WIN interrogates the FOBIK for the secret key information and performs a CAN Bus message handshake with the PCM to start the vehicle. The PCM must reply to the WIN that the secret key information matches to initiate the start sequence or this code will set on the 20th attempt.

- **When Monitored:**

Whenever a FOBIK is rotated to the Run position.

- **Set Condition:**

This DTC sets if the WIN does not receive a CAN Bus message from the ECM/PCM. This code will set on the 20th start attempt.

Possible Causes
PCM PROGRAMMING

NOTE: One of the most probable causes for this code to set is a blown fuse or bent

pins on the PCM RUN/START circuits. The result is the PCM does not know the ignition has been turned to the RUN position and does not know to respond to the seed request. Check the PCM RUN/START circuits to the PCM before proceeding with this procedure.

Diagnostic Test**1. VERIFY PCM PROGRAMMING**

1. Using the scan tool, erase all codes in the ECM/PCM.
2. Turn the Ignition Off, and wait fifteen seconds before turning the Ignition On.
3. Wait one minute, and read active ECM/PCM codes.

Does the scan tool display this DTC as active?

Yes

- Program the Powertrain Control Module in accordance with the Service Information.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

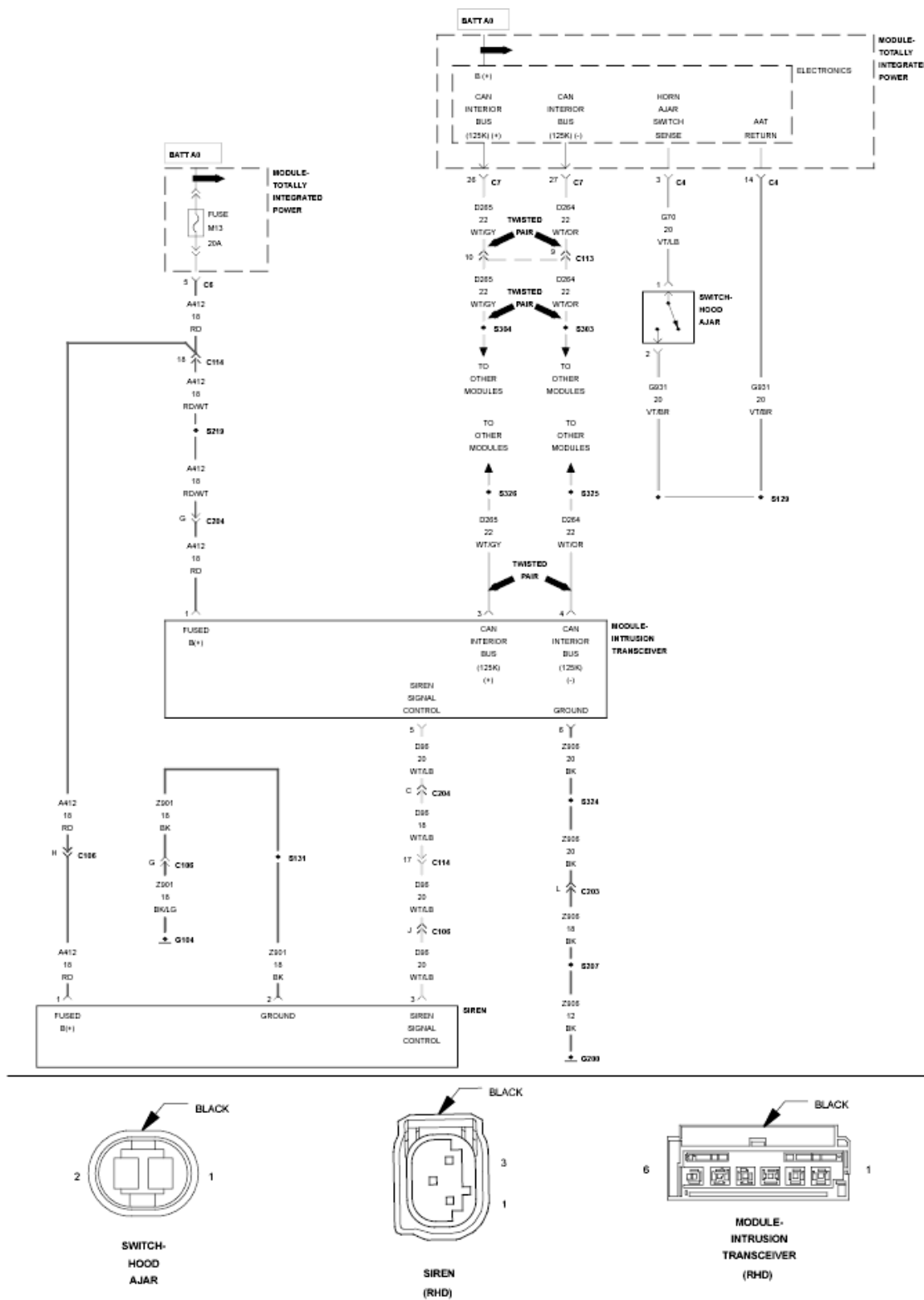
No

- Repair is complete.
- Perform the WIN VERIFICATION TEST. See **DTC-Based Diagnostics/NODE, Wireless Ignition (WIN) - Standard Procedure**

U1416-IMPLAUSIBLE SECURITY SIREN SIGNAL RECEIVED

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey



For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

Continuously while the Vehicle Theft and Security System (VTSS) is armed.

- **Set Condition:**

If the Intrusion Transceiver Module (ITM) does not receive messages from the Siren.

Possible Causes
(A412) FUSED B+ CIRCUIT OPEN
(Z901) GROUND CIRCUIT OPEN
(D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO BATTERY
(D96) SIREN SIGNAL CONTROL CIRCUIT OPEN
(D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO GROUND
SIREN
INTRUSION TRANSCIVER MODULE

Diagnostic Test

1. INTERMITTENT DIAGNOSTIC TROUBLE CODE (DTC)

1. Using the scan tool, erase the current ITM DTCs.
2. Turn the ignition off.
3. Arm the VTSS and wait one minute.
4. Disarm the VTSS and turn the ignition on.

Does the scan tool display the same DTC?

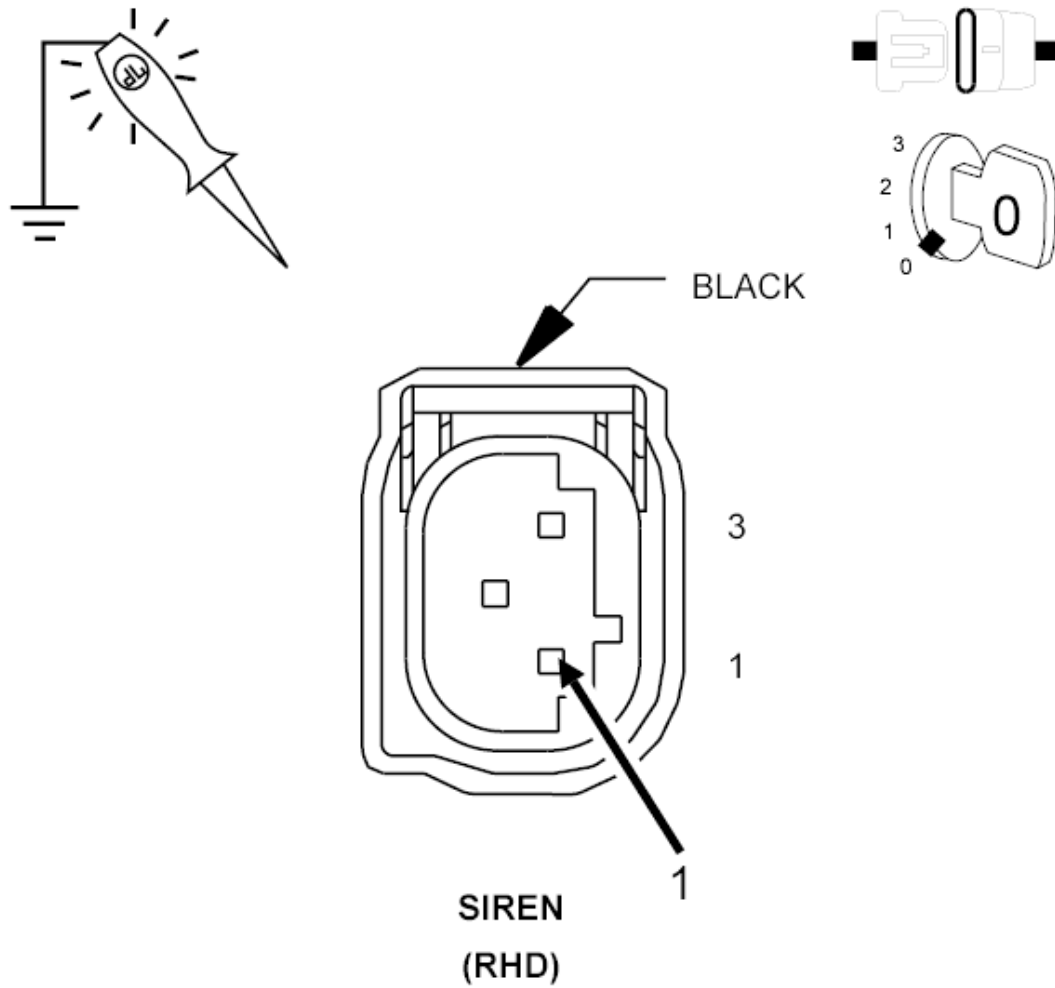
Yes

- Go to step 2

No

- The condition that caused this symptom is currently not present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

2. (A412) FUSED B+



107295

Fig. 33: Checking Fused B(+) Circuit At Siren
Courtesy of CHRYSLER LLC

1. Gain access to the VTSS Siren
2. Disconnect the Siren harness connector.
3. Using a 12-volt test light connected to ground, check the (A412) Fused B(+) circuit in the Siren harness connector.

Does the test light illuminate brightly?

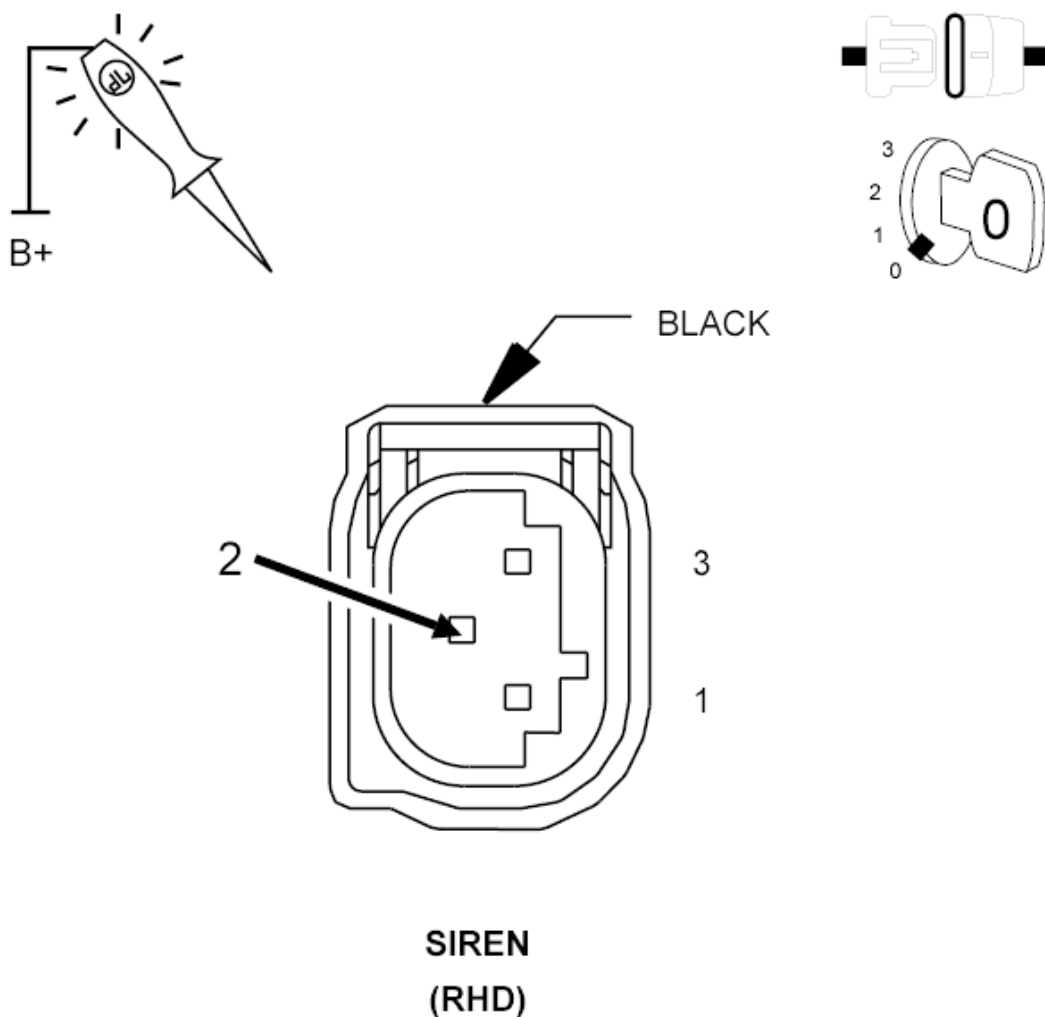
Yes

- Go to step 3

No

- Repair the (A412) Fused B+ circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

3. (Z901) GROUND CIRCUIT



107297

Fig. 34: Checking Ground Circuit At Siren
Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z901) Ground circuit at the siren connector.

Does the test light illuminate brightly?

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2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Journey

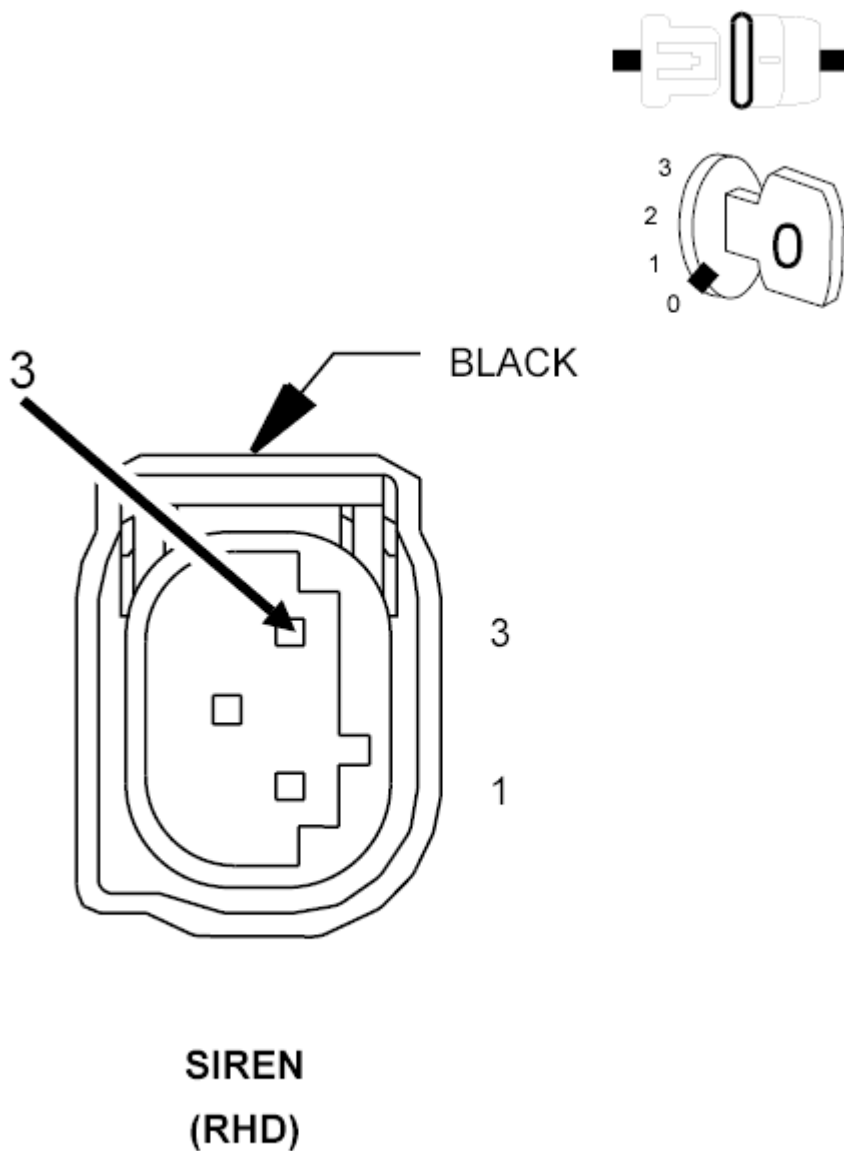
Yes

- Go To step 4

No

- Repair the (Z901) Ground circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

4. FAULTY SIREN



107349

Fig. 35: Checking Faulty Siren
Courtesy of CHRYSLER LLC

1. Use the DRBIII® and set up as follows:
2. Use the Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.
3. Connect the scope input cable to the channel one connector on the DRBIII®. Attach the red and black leads and the cable to the probe adapter to the scope input cable.
4. Select DRBIII® Stand-alone.

5. Select lab scope.
6. Select Live.
7. Select 12 volt square wave.
8. Press F2 for Scope.
9. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete.
10. Disconnect the Siren connector.
11. Connect the black lead to the chassis ground. Connect the red lead to the (D96) Siren Signal Control circuit in the Siren connector.
12. Close all doors and arm the VTSS.
13. Observe the voltage displayed on the DRBIII® Lab Scope.

Is there a voltage square wave present one to two seconds?

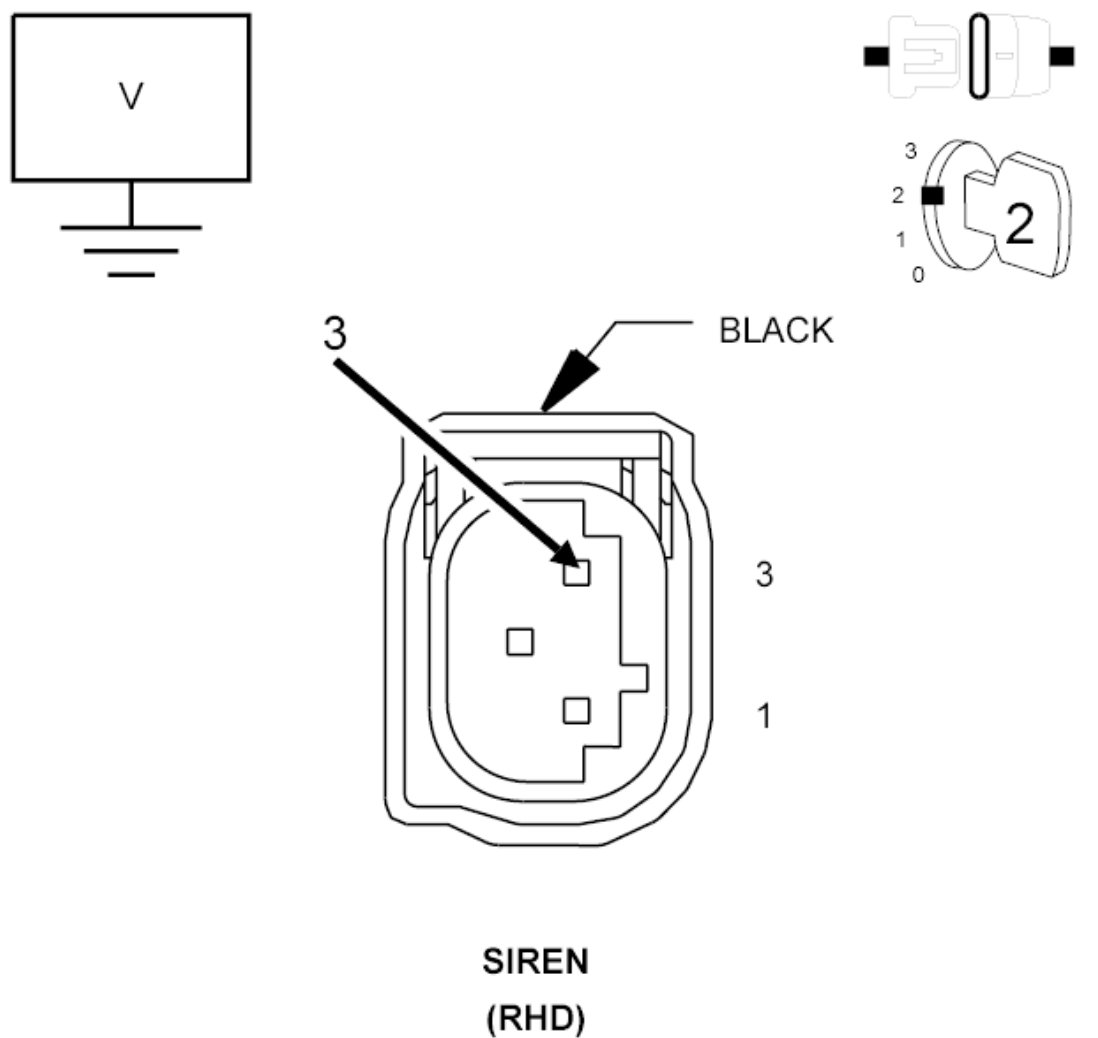
Yes

- Connect a known good siren and try to reset the DTC. If the DTC does not reset the original siren needs to be replaced. If the DTC does reset replace the Intrusion Transceiver Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 5

5. (D96) SIREN SIGNAL CONTROL CIRCUIT SHORTED TO BATTERY



107351

Fig. 36: Checking Siren Signal Control Circuit Short To Battery
Courtesy of CHRYSLER LLC

1. Disconnect the Siren harness connector.
2. Measure the voltage of the (D96) Siren Signal Control circuit.

Is there any voltage present?

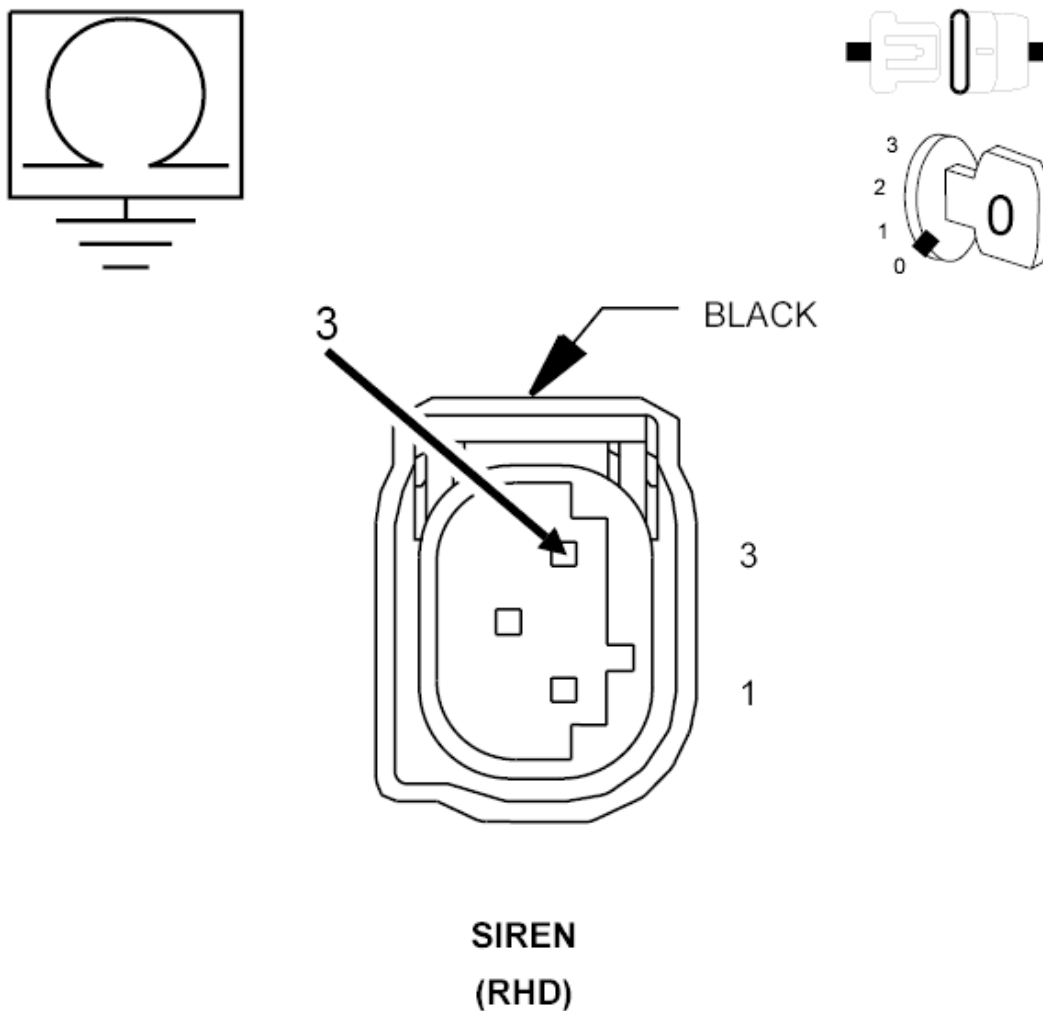
Yes

- Repair the (D96) Siren Signal Control circuit for a short to voltage.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 6

6. (D96) SIREN SIGNAL CONTROL CIRCUIT SHORT TO GROUND



107353

Fig. 37: Checking Siren Signal Control Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Disconnect the Siren harness connector.
2. Disconnect the ITM harness connector.
3. Measure the resistance between ground and the (D96) Siren Signal Control circuit.

Is the resistance above 5.0 Ohms?

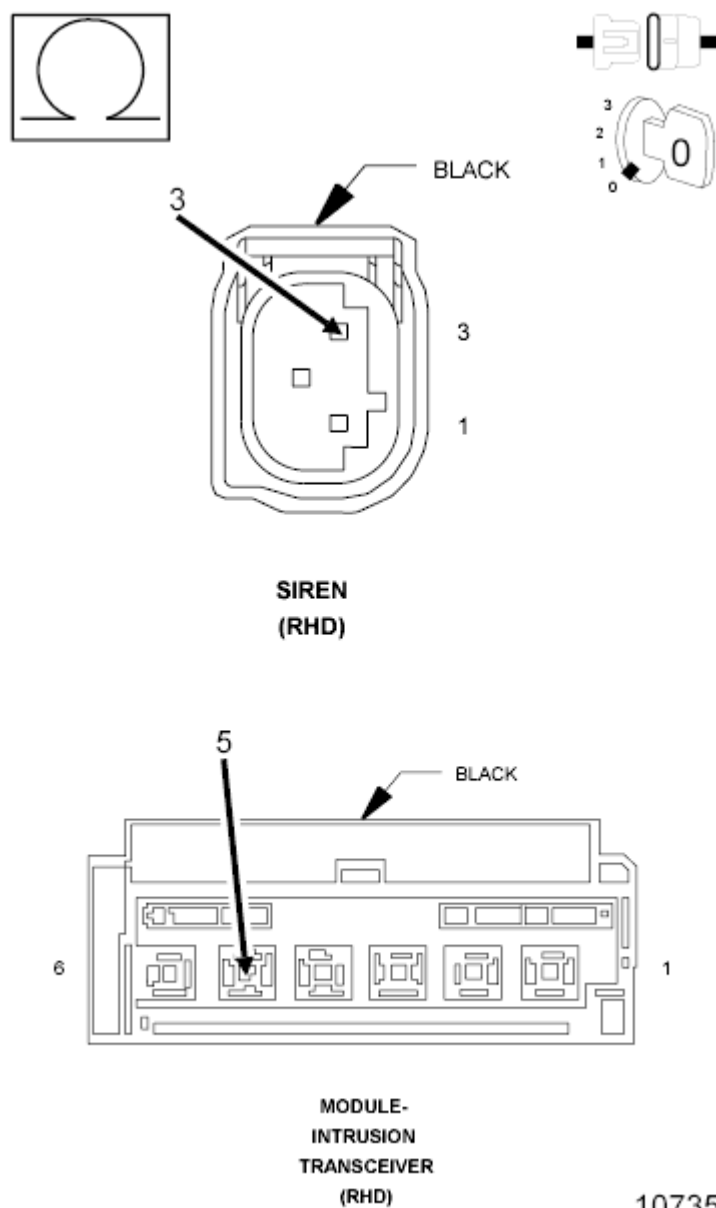
Yes

- Go To step 7

No

- Repair the (D96) Siren Signal Control circuit for a short to ground.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

7. (D96) SIREN SIGNAL CONTROL CIRCUIT OPEN



107355

Fig. 38: Checking Siren Signal Control Circuit Open

Courtesy of CHRYSLER LLC

1. Disconnect the ITM harness connector.
2. Measure the resistance of the (D96) Siren Signal Control circuit between the ITM and the Siren harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Replace the Intrusion Transceiver Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Repair the (D96) Siren Signal Control circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

STANDARD PROCEDURE**THEFT AND SECURITY SYSTEMS PRE-DIAGNOSTIC PROCEDURE**

Before attempting to repair any theft or security system, technicians should be familiar with and fully understand the system operation. The following should be used as a checklist to be completed in its entirety prior to referencing specific Theft and Security Diagnostic Procedures.

1. FOLLOW THE BASIC OUTLINE SET FORTH IN THE SIX-STEP TROUBLESHOOTING PROCEDURE

1. Verification of complaint.
2. Verification of any related symptoms.
3. Symptom analysis.
4. Problem isolation.
5. Repair of isolated problem.
6. Verification of proper operation.

2. TAKE INTO ACCOUNT CURRENT VEHICLE CONDITION, REPAIR HISTORY, AND TECHNICAL SERVICE BULLETINS (TSB's)

- Verify there are no outward signs of vehicle damage that could impact the proper operation of the theft or security system. Check for aftermarket vehicle accessories that may have been installed improperly or could interfere with the system
- Check the vehicle repair history for repairs that may relate to the current condition.
- Perform a check of current Technical Service Bulletins (TSB) for the Theft/Security system related

to the customer concern. If a TSB applies, follow the procedure outlined in the TSB.

3. DIAGNOSE ONLY THOSE FAILURES THAT ARE ACTIVE AND CAN BE REPRODUCED

- Check the control module central to the subsystem that is exhibiting the condition for active DTCs
- For an intermittent failure that is not current at the time of vehicle inspection, refer to the **THEFT AND SECURITY SYSTEM INTERMITTENT TEST** and document the event on the repair order.

4. ADDRESS ACTIVE DIAGNOSTIC TROUBLE CODES (DTCs) IN THE CORRECT ORDER

As a general rule, for any theft/security system control module that exhibits more than one active DTC, address the codes in the order indicated:

1. Low/High Voltage and Serial Data Loss of Communication Codes
2. Module Internal Failure and Configuration Mismatch Codes
3. Circuit specific DTC failures

Should the malfunction still be present after conducting this Pre-diagnostic Procedure, technicians should continue to the appropriate DTC procedure or symptom diagnostic. Refer to **VEHICLE THEFT SECURITY - SERVICE INFORMATION** for symptoms.

THEFT AND SECURITY SYSTEM INTERMITTENT TEST

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Diagnostic Test

1. RECORD AND ERASE ALL THEFT AND SECURITY SYSTEM DTC'S

With the scan tool, record and erase all DTCs from all theft/security system modules. Monitor for any active codes as you work through the following steps.

- Review the code monitor and set conditions for any DTCs that are stored and attempt to reproduce the conditions listed
- Wiggle the wiring harness and connectors of the related circuit, sensor or component
- Turn the ignition off. Refer to any Technical Service Bulletins (TSBs) that may apply

Was the source of the customer complaint found or did any DTCs appear and stay active?

Yes

- Make the appropriate repairs and perform the THEFT AND SECURITY SYSTEM VERIFICATION TEST or select the correct DTC procedure from the **DIAGNOSTIC CODE INDEX**.

No

- Go to step 2

2. ATTEMPT TO REPRODUCE THE CONDITION

In the event the customer complaint cannot be duplicated due to an intermittent condition in the theft/security system, the following may aid in attempting to reproduce the condition.

- Using the **SYSTEM WIRING DIAGRAMS** as a guide, inspect the wiring and connectors related to the stored code or component in question.
- Look for chafed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals.
- If the customer concern was related to a specific FOB/IK, ensure the FOB/IK in question is used while attempting reproduce the condition.
- Reconnect any disconnected components and harness connectors and ensure they are properly seated.
- If numerous trouble codes were set, use a schematic and inspect any common ground or supply circuits

Was the source of the intermittent condition located?

Yes

- Make the appropriate repairs and perform the THEFT AND SECURITY SYSTEM VERIFICATION PROCEDURE.

No

- The problem cannot be found at this time. If repeated intermittent failures are encountered that cannot be reproduced and the condition has prompted multiple customer visits to the dealership, document any findings on the repair order.

THEFT AND SECURITY SYSTEM VERIFICATION TEST

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Diagnostic Test

1. DETERMINE REQUIRED PROGRAMMING AND SET UP

NOTE: Due the numerous functions performed by the Wireless Ignition Node (WIN) it is essential to follow all instructions carefully and be aware of the effects this module has on the Theft and Security, Tire Pressure Monitoring (TPM) and Remote Keyless Entry (RKE) subsystems. Service replacement will also affect a customers personalization settings.

Was the Wireless Ignition Node (WIN) replaced?

Yes

- Go to step 2

No

- Go to step 3.

2. REPLACEMENT WIN PROGRAMMING

NOTE: If 3 consecutive incorrect PIN's are entered the WIN will Lock Out the scan tool. To exit Lock Mode, the ignition key must remain in the Run position for 1 hour. All accessories must be off and a battery charger should be connected to the battery during this time, if required.

1. Reconnect the previously disconnected components and connectors.
2. Obtain the vehicle's unique Personal Identification Number (PIN) assigned to it's original WIN. This number can be obtained from the original vehicle invoice or through your Service Manager or Parts Manager.
3. With the scan tool, select Miscellaneous Functions, then select the desired procedure and follow the display on the scan tool.
4. If the vehicle is equipped with Tire Pressure Monitoring System program the Placard Pressure Values into the WIN.
5. Ensure all the customer's key have been programmed into the new module if necessary.
6. With the scan tool, ease all DTCs. Perform 5 ignition key cycles, leaving the key on for at least 90 seconds per cycle.
7. With the scan tool, read WIN DTC(s).

Are there any DTC(s) present?

Yes

- Refer to the appropriate DTC procedure or symptom diagnostic. Refer to **VEHICLE THEFT SECURITY - SERVICE INFORMATION** for symptoms.

No

- Repair is complete.

3. WIN REPAIR VERIFICATION

1. Reconnect the previously disconnected components and connectors.
2. Connect the scan tool to the Data Link Connector - use the most current software available.
3. With the scan tool, erase stored DTCs in the WIN.
4. Turn the ignition off, and wait 15 seconds, then turn the ignition on. If the customer complaint was due to a specific FOB/K, use the suspect FOB/K.

5. Exercise the Theft and Security System to duplicate the appropriate monitor conditions for any DTCs that were set
6. Wait one minute, and read active codes, if there are none present, read the stored codes.
7. If the scan tool shows any active or stored codes, return to **DIAGNOSTIC CODE INDEX** and follow the path specified for that trouble code. If no active or stored codes are present, the repair is complete.

Are any DTC's present or, is the original condition still present?

Yes

- Refer to the appropriate DTC procedure or symptom diagnostic. Refer to **VEHICLE THEFT SECURITY - SERVICE INFORMATION** for symptoms.

No

- Repair is complete.

WIRELESS IGNITION NODE (WIN) VERIFICATION

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Perform the following after completion of a diagnostic repair:

NOTE: When entering the PIN, care should be taken because the WIN will only allow 3 consecutive attempts to enter the correct PIN. If 3 consecutive incorrect PIN's are entered the WIN will Lock Out the scan tool. To exit Lock Mode, the ignition key must remain in the Run position for one hour. All accessories must be off. A battery charger connected to the battery during this time period is recommended.

NOTE: On vehicles equipped with a premium Tire Pressure Monitoring (TPM) system, when the WIN and/or the spare tire pressure sensor is replaced with a new unit, a diagnostic scan tool **MUST** be used to run a routine that allows the WIN to be programmed with the ID number and location of the spare tire pressure sensor mounted in the wheel of the spare tire. Follow the programming steps outlined in the diagnostic scan tool for "Learn Spare Tire Sensor ID" under "Miscellaneous Functions" for the "WIN/Wireless Ignition Node" menu item as appropriate. In addition, if the WIN is replaced, the spare tire must be dismounted from its wheel to access and note the ID number on the spare tire pressure sensor so that the ID code for that sensor can be programmed into the new WIN.

1. Reconnect the previously disconnected components and connectors.
2. Obtain the vehicle's unique Personal Identification Number (PIN) assigned to it's original WIN. This

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number can be obtained from the original vehicle invoice or from your Service Manager or Parts Manager.

NOTE: If the PCM and the WIN are replaced at the same time, program the PCM VIN into the PCM first.

NOTE: The PCM stores the secret key information. If the WIN ever needs to be replaced, the secret key information can be retrieved from the PCM and then transferred to the WIN for security use.

During PCM/ECM replacement, use the following steps to ensure transfer of the secret key information from the WIN to the new PCM:

1. First replace the PCM/ECM with the original WIN still connected to the vehicle.
2. Using the appropriate Service Information program the new PCM/ECM. (This will ensure the Secret Key Transfer from the original WIN into the new PCM/ECM).
3. Now replace and program the WIN (if necessary). This will retain the Secret Key from the PCM/ECM back into the new WIN.

NOTE: If this vehicle is equipped with a Steering Column Lock Module, it must be replaced along with the WIN.

4. With the scan tool, select Miscellaneous Functions, WIN/Wireless Ignition Node. Then select the desired procedure and follow the display on the scan tool.
5. If the vehicle is equipped with Tire Pressure Monitoring System program the Placard Pressure Values into the WIN.
6. Ensure all the customer's keys have been programmed into the new module if necessary.
7. With the scan tool, erase all DTCs. Perform 5 ignition key cycles, leaving the key on for at least 90 seconds per cycle.
8. With the scan tool, read WIN DTCs.

Are there any WIN DTCs present?

Yes

- Repair not complete, go to and perform the appropriate diagnostic procedure.

No

- Repair is complete.

TPM VERIFICATION

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Diagnostic Test**1. TIRE PRESSURE MONITORING (TPM)**

Was the WIN replaced during the test procedure?

Yes

- Go to step 2

No

- Go to step 3

2. WIRELESS IGNITION NODE (WIN)

NOTE: When entering the Personal Identification Number (PIN), care should be taken because the WIN will only allow three consecutive attempts to enter the correct PIN. If three consecutive incorrect PIN's are entered the WIN will Lock Out the scan tool. To exit Lock Mode, the ignition key must remain in the Run position for one hour. All accessories must be off. A battery charger connected to the battery during this time period is recommended.

1. Reconnect the previously removed and/or disconnected components and connectors.
2. Obtain the vehicle's unique Personal Identification Number (PIN) assigned to its original WIN. This number can be obtained from the vehicle invoice or from the Chrysler Customer Center (Phone 1-800-992-1997).
3. With the scan tool, select Miscellaneous Functions, WIN/Wireless Ignition Node. Then select the desired procedure and follow the display on the scan tool.
4. Program the Placard Pressure Values into the WIN.
5. If the WIN was replaced, all the customer's keys must be programmed to the new module. Use the scan tool and the Program Key procedure
6. If the vehicle is equipped with a WIN module. Go To "Wireless Ignition Node (WIN)", select "Data Display", read "'Tire Placard Pressure - Front" and "'Tire Placard Pressure -Rear" and confirm the values match the Tire Inflation Pressure (Placard) label. Also, go into the Totally Integrated Power Module (TIPM), select Data Display and read "'Tire Placard Pressure - Front" and "'Tire Placard Pressure -Rear" to confirm the values were programmed correctly. If the Placard values are incorrect in the TIPM or WIN, select the Totally Integrated Power Module (TIPM) then under "Miscellaneous ", select "Update Pressure Threshold" and enter the placard pressure value as seen on the Tire Inflation Pressure (Placard) label.
7. With the scan tool, erase all DTCs. Perform 5 ignition key cycles, leaving the key on for at least 90 seconds per cycle.
8. With the scan tool, read WIN DTCs.

Are there any DTCs present?

Yes

- Repair not complete, perform the appropriate diagnostic procedure.

No

- Go to step 3

3. TIRE PRESSURE MONITORING (TPM) SENSOR REPLACEMENT

NOTE: If a TPM-RKE Analyzer 9936 is not available, let the vehicle sit stationary for more then 20 minutes, and then proceed to step 4 below.

1. Using an updated TPM-RKE Analyzer 9936, select TPM Functions, then enter the Model Year and the Body Style of the vehicle, and for the Trigger Selection select PARK SENSOR.
2. Scan each TPM sensor at each road wheel, and store each Sensor ID in the correct location. (LEFT FRONT, LEFT REAR, RIGHT FRONT, RIGHT REAR, and SPARE TIRE (if equipped).
3. Connect the TPM-RKE Analyzer 9936 to the scan tool, and then follow the programming steps outlined in the diagnostic scan tool for "Program Tire Pressure Monitoring (TPM) Sensor ID w/ TPM Tool" under "MISC" for the WIN.
4. Drive the vehicle for a minimum of 20 minutes while maintaining a continuous speed above 24 km/h (15 mph).
5. With the scan tool, read WIN DTCs.

Are there any DTCs present?

Yes

- Repair not complete, perform the appropriate diagnostic procedure.

No

- Repair complete.