

ATTENTION:
 GENERAL MANAGER
 PARTS MANAGER
 CLAIMS PERSONNEL
 SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: All Models Equipped with CVT Transmissions

NUMBER: 16-102-16

SUBJECT: DTC P0841 Diagnostics

DATE: 07/11/16

INTRODUCTION:

This Service Information bulletin provides a new flow chart and additional diagnostic tools to assist Technicians with troubleshooting DTC P0841- SECONDARY OIL PRESSURE SENSOR PERFORMANCE.

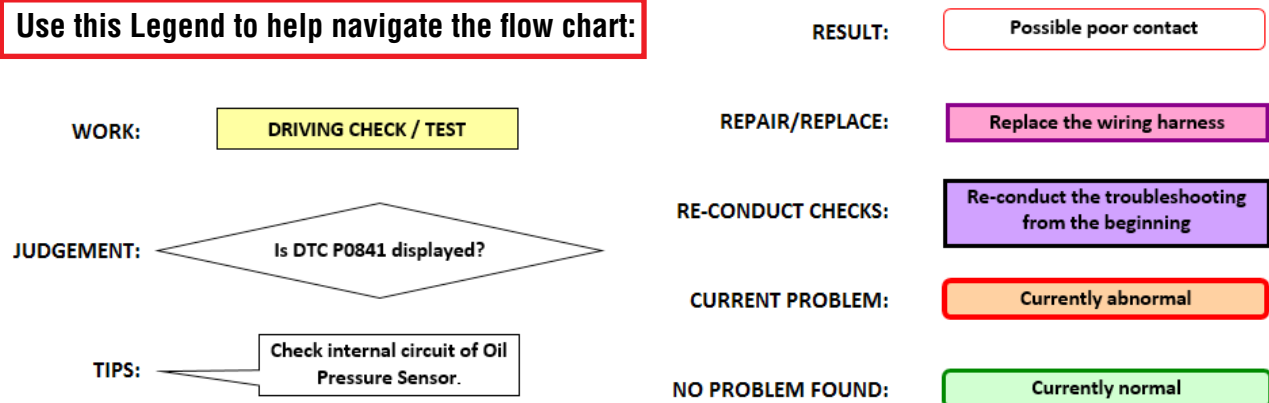
SERVICE PROCEDURE / INFORMATION:

The Diagnostic Flow Chart provided in this bulletin is quite extensive. To help make the chart more user-friendly, it has been broken down into 7 basic “Steps”.

IMPORTANT NOTE: In some cases, it may not necessary to follow this flow chart in the specified order. For example: in a case where a whining sound concern is identified along with the DTC P0841, a Technician may feel performing pressure checks before beginning the electrical checks may be a way to expedite diagnosis of an internal hard part failure requiring transmission assembly replacement.

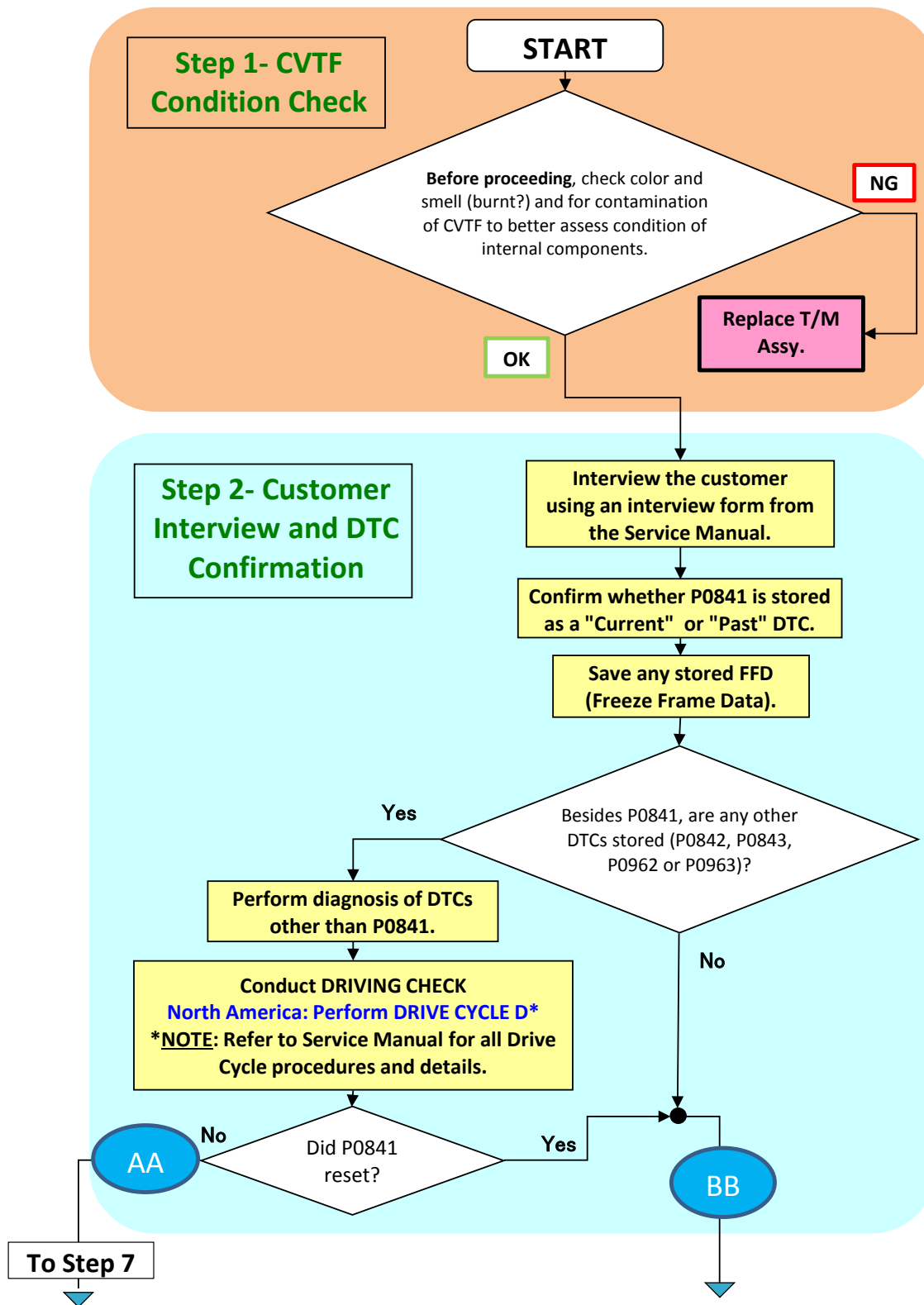
- **STEP 1-** CVTF Fluid Condition Check
- **STEP 2-** Customer Interview and DTC Confirmation
- **STEPS 3A and 3B-** Check for Failure Caused by Electrical Wiring / Connection Issues
- **STEP 4-** Check for Abnormal (Stuck) Sensor Output (Cannot Be Detected by Simply Switching Power ON)
- **STEP 5-** Check the T/M Pressures Stored in the FFD
- **STEP 6-** Determination of Appropriate Repair
- **STEP 7-** Confirmation of Repair

Use this Legend to help navigate the flow chart:



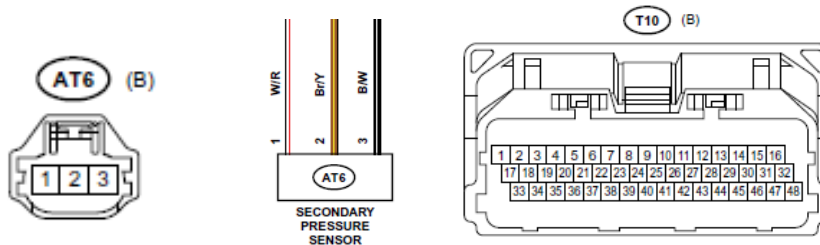
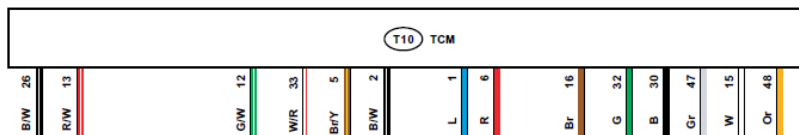
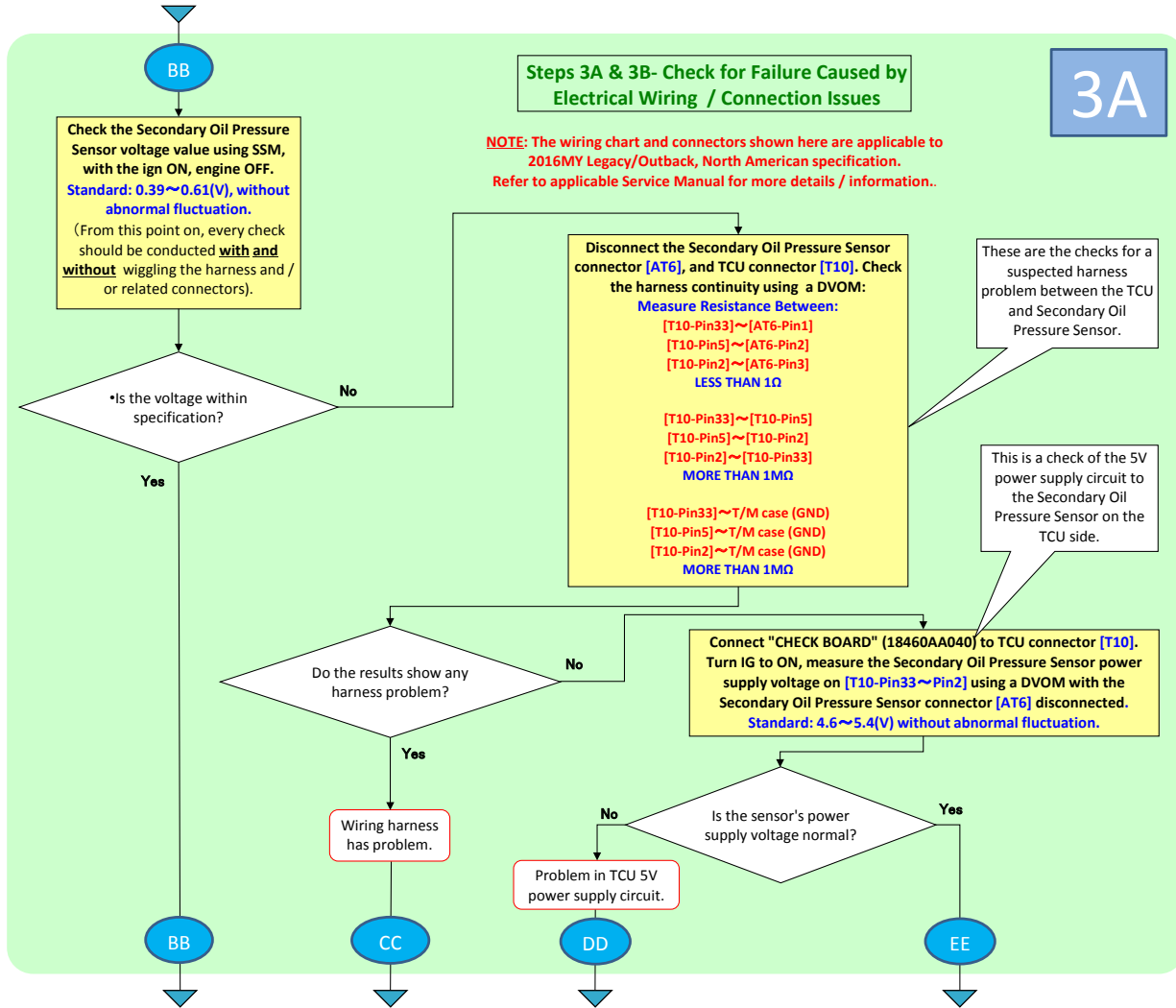
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DTC P0841- SECONDARY OIL PRESSURE SENSOR PERFORMANCE DIAGNOSTIC FLOW CHART STEPS 1 & 2:



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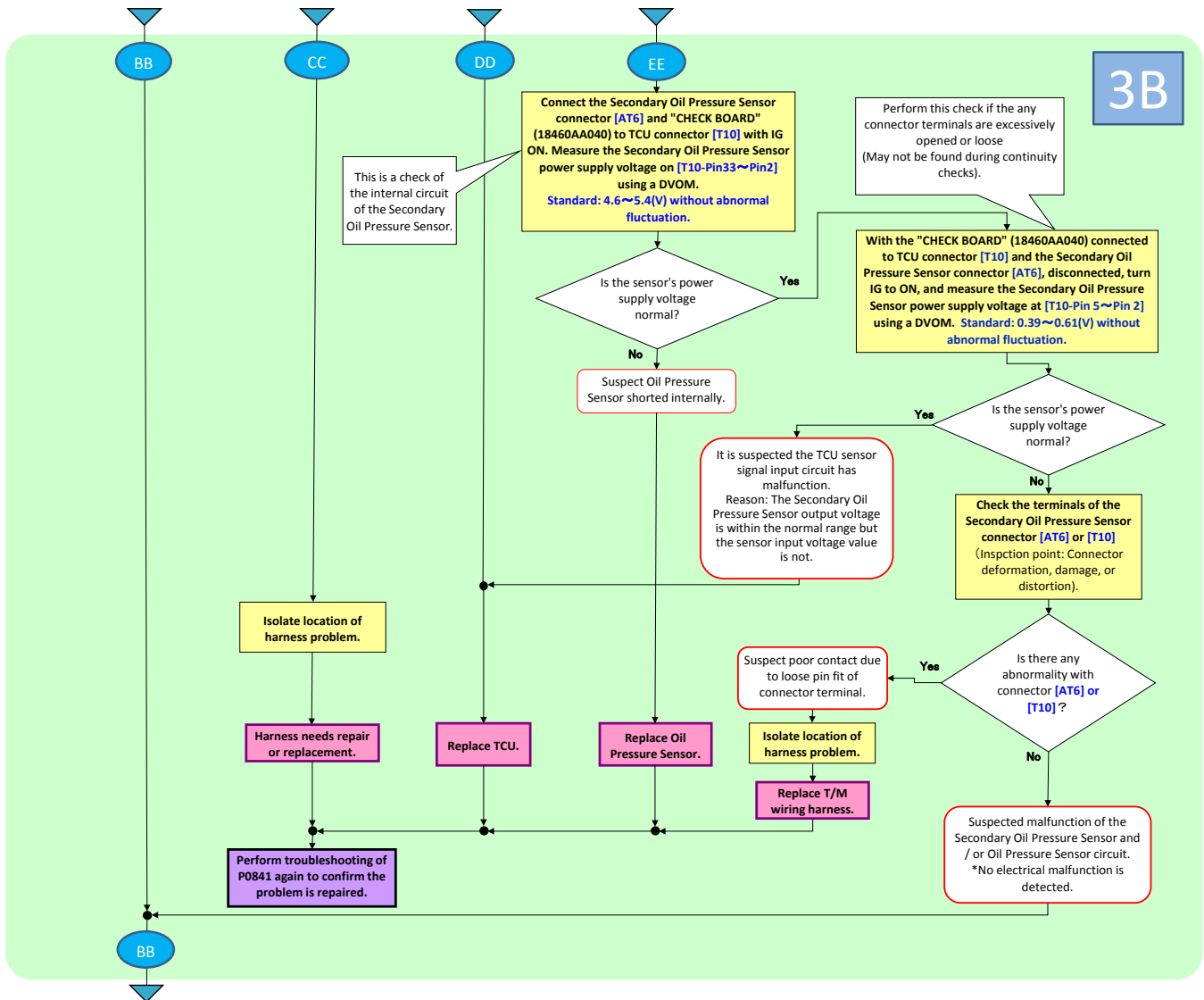
STEP 3A:



<p style="font-size: 0.8em;">ST18460AA040</p>	18460AA040	CHECK BOARD	Used for measuring the TCM terminal voltage.
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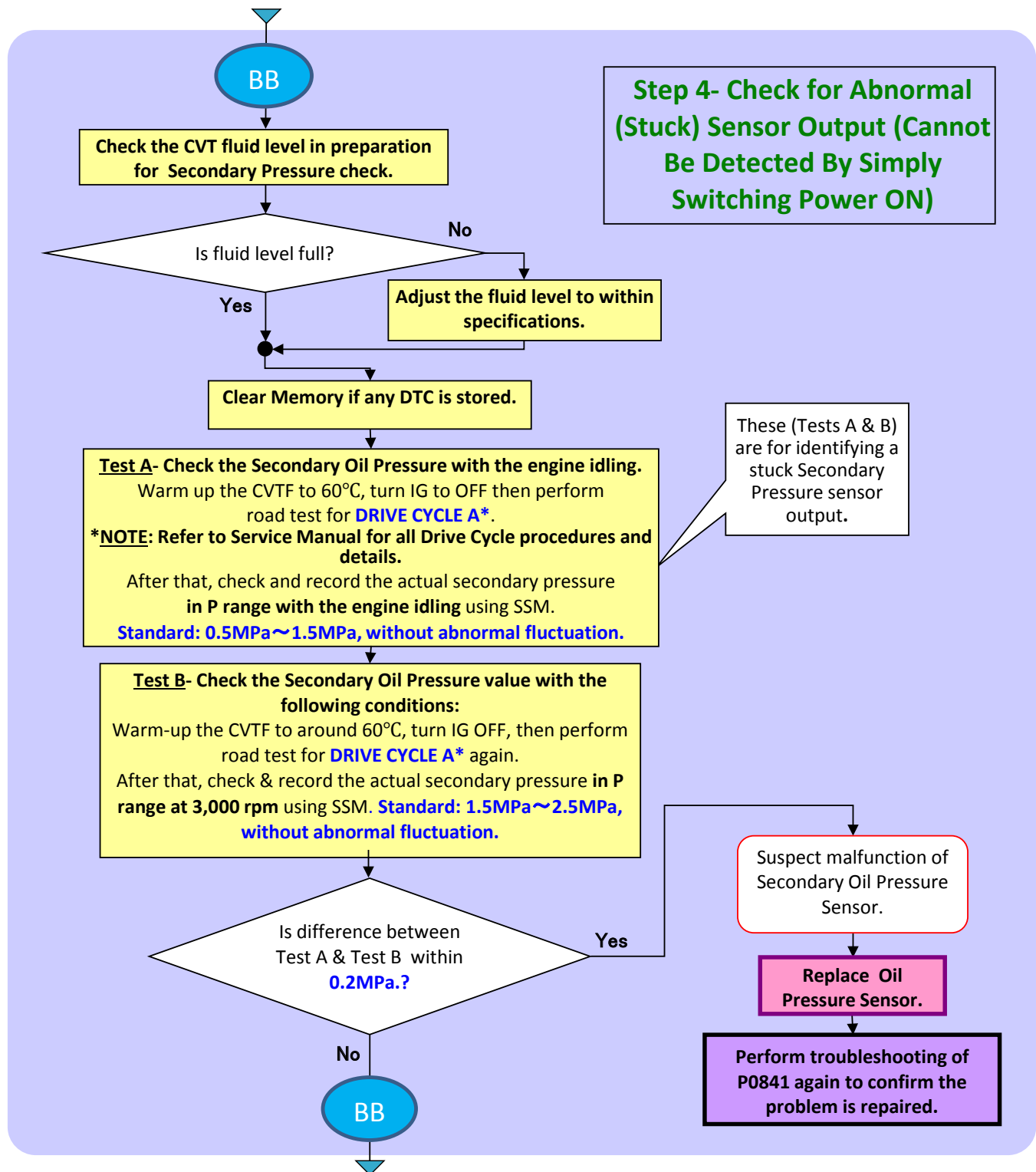
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STEP 3B:



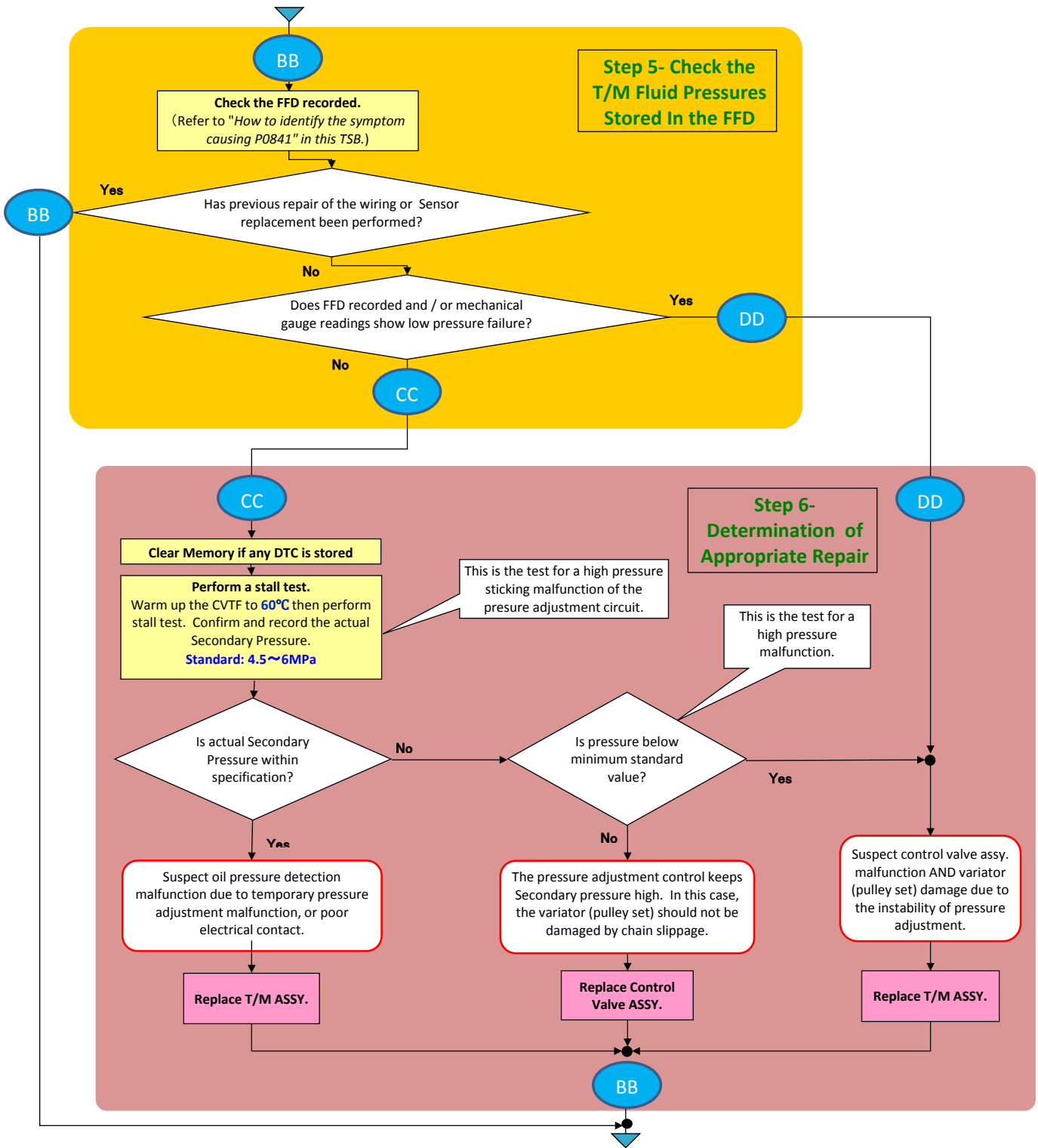
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STEP 4:



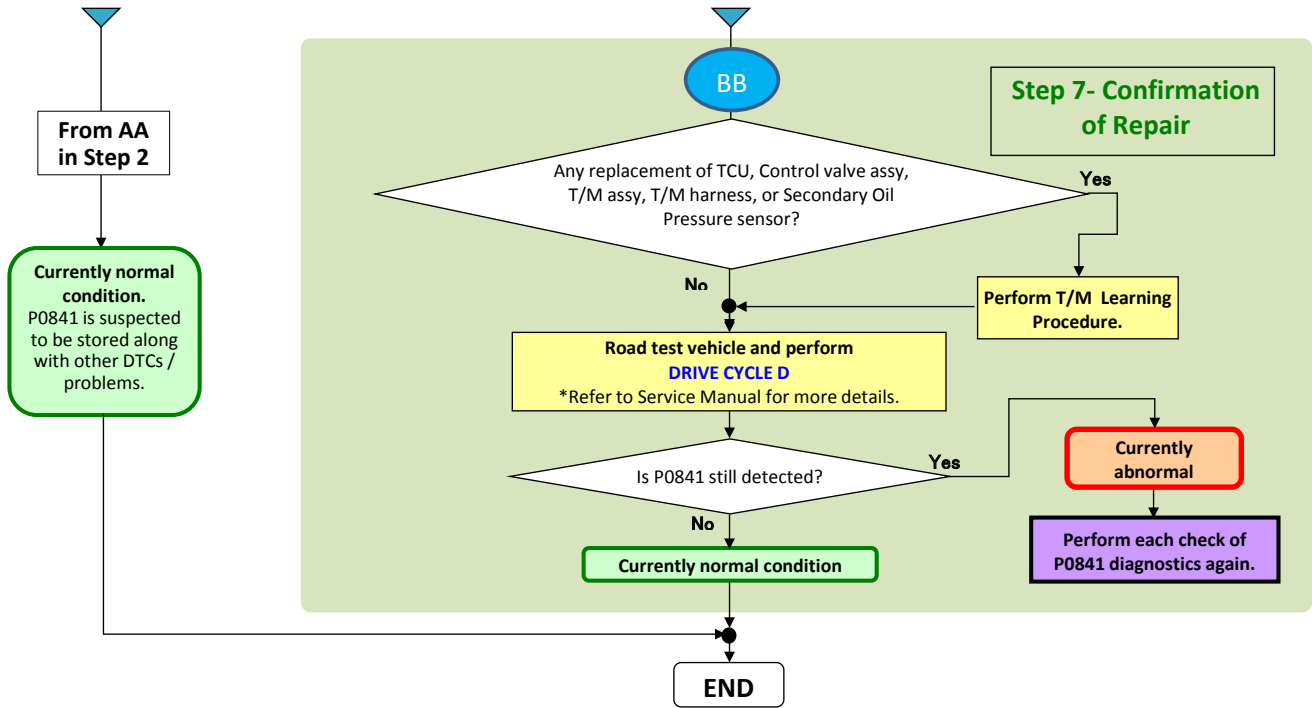
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STEPS 5 & 6:



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STEP 7:

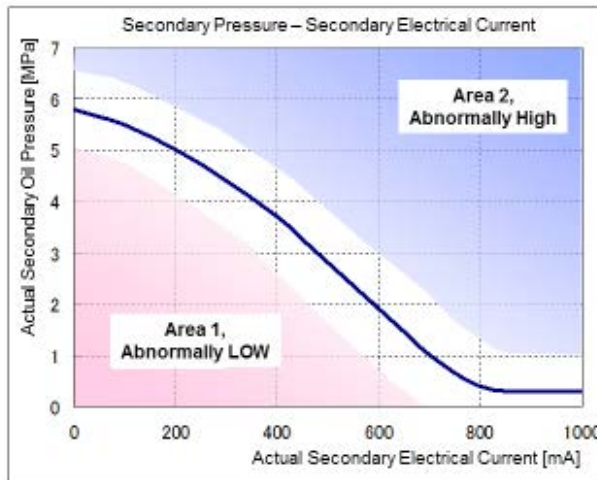


- In addition to the flow chart, use the following slides and information for additional help with accurately diagnosing a P0841:

How To Identify the Condition Causing DTC P0841 to Set by Reviewing the Stored FFD

The condition causing P0841 is either:

- The Secondary Oil Pressure is abnormally low (lack of necessary pressure)
- The Secondary Oil Pressure is abnormally high (excess pressure occurs as compared to necessary pressure).



Check the Actual Secondary electrical current [mA] and Actual Secondary oil pressure [MPa] stored in the FFD then determine if P0841 has set because of:

- abnormally low
- abnormally high Secondary Oil pressure.

TIP: Consider performing the pressure testing using a mechanical pressure gauge **BEFORE** electrical testing and compare the test results (between the gauge and SM4 displayed values). Both test results should be very close. If there is a significant discrepancy between them (e.g. the (known good) gauge results are significantly higher than the SM4-supplied values), the pressure sensor would be suspect.

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Additional Electrical Testing Information:

- The following slides provide some additional pressure sensor and related wiring testing techniques, illustrations and photos. This information is intended to help Technicians make a more informed diagnosis of the root cause and required repairs. It will also help determine whether or not a terminal /pin connection is damaged and in need of repair or replacement:

Precautions for Checking Transmission / Sensor Wiring:

- Do not allow any water or foreign material to get into the connectors while disconnected.
- Do not bend the pins in the connectors when they are connected.
- Subaru Special Tool (Check Board: 18460AA040) MUST be used when checking electrical flow at the TCU connectors.

P0841 Wiring Check Points:

1. Short circuits to ground

(1) Contacts between broken wiring and the transmission case are the most common. However, small scrapes or abrasions to the wiring insulation can also cause short circuits to ground.

(2) The wiring and pins are bound inside the connector. If the binding is too tight, it can cause small scrapes or abrasions to the wiring insulation resulting in a short circuit between wires. Please check wiring inside the connectors also.

2. Open circuits

(1) The pin for the secondary oil pressure sensor is located at the end of connector and can be affected by ambient temperature. The sensor wiring can develop an open circuit when cold caused by freezing but be normal at normal temperatures. Keep temperature conditions in mind when testing. Always wiggle test the wiring and connections when testing and watch for any fluctuations.

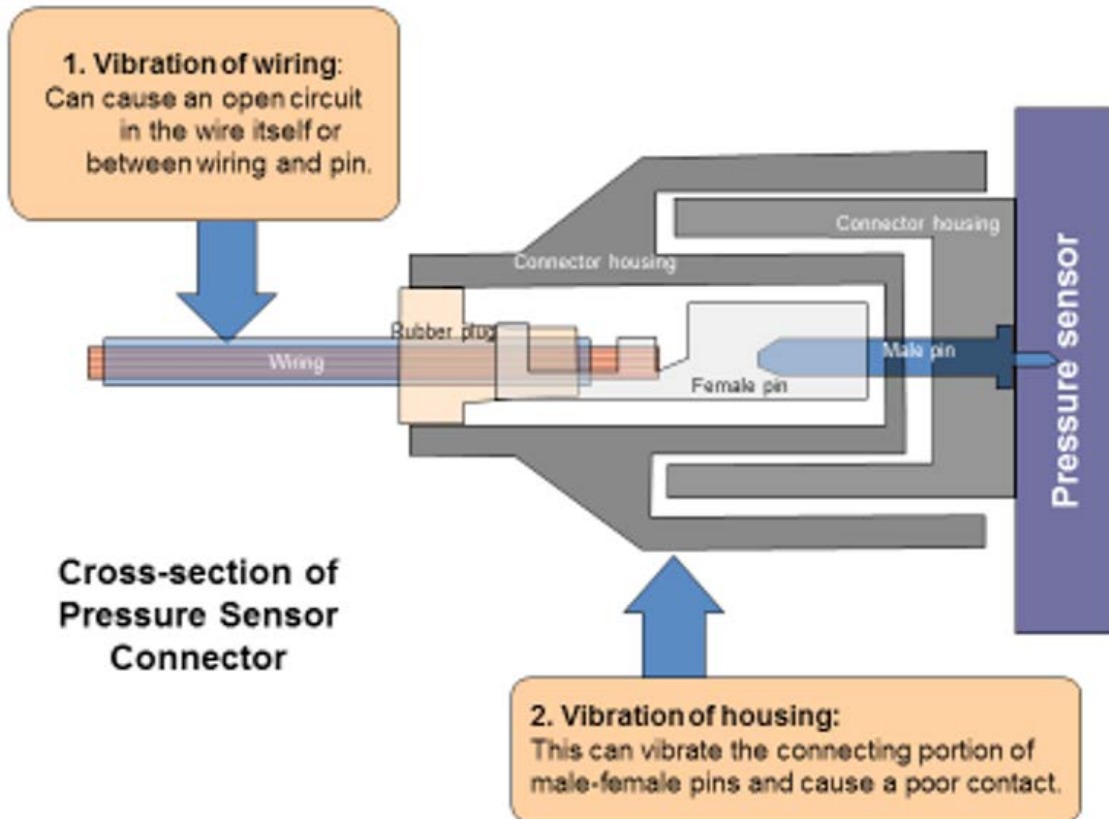
3. Insufficient (poor) contact

(1) Inspect for any abnormalities with the pins like: deformation, scratches, discoloration or evidence of any foreign materials inside them or the connectors.

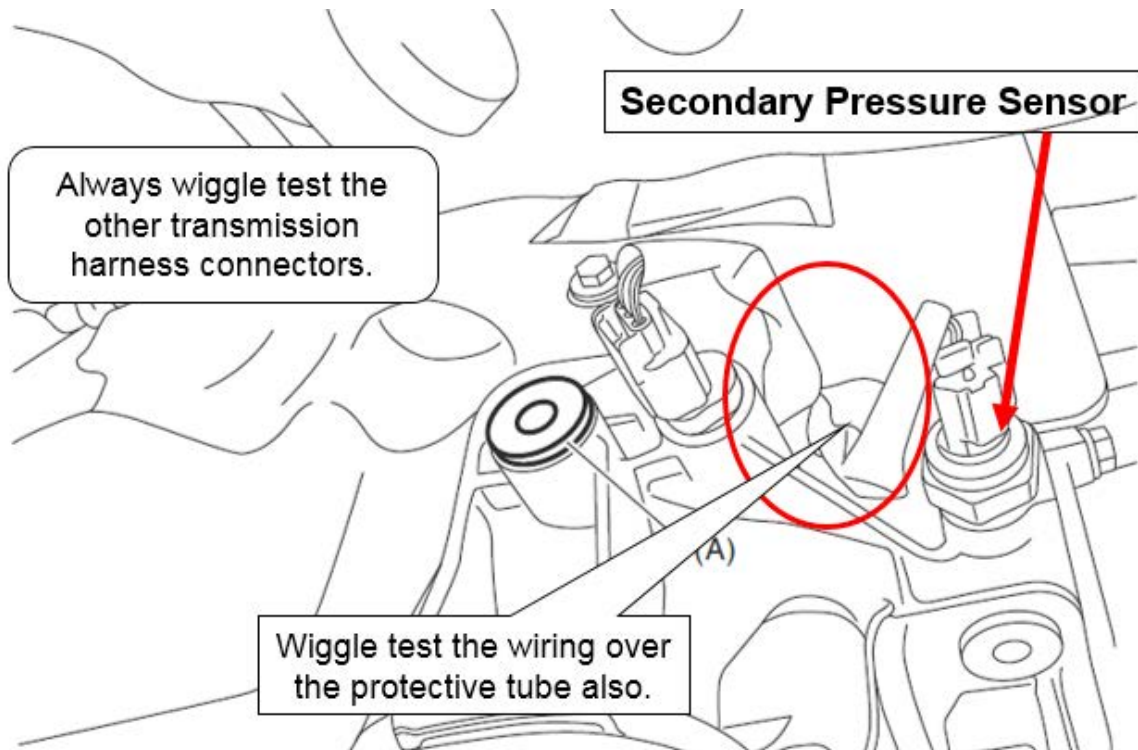
(2) Check, record and confirm the "Secondary Oil Pressure A/D Value" is correct with SSM while wiggling the T/M wiring, TCM connectors and the Secondary Oil Pressure sensor harness connector.

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Effects of Vibration on Connectors / Terminals:

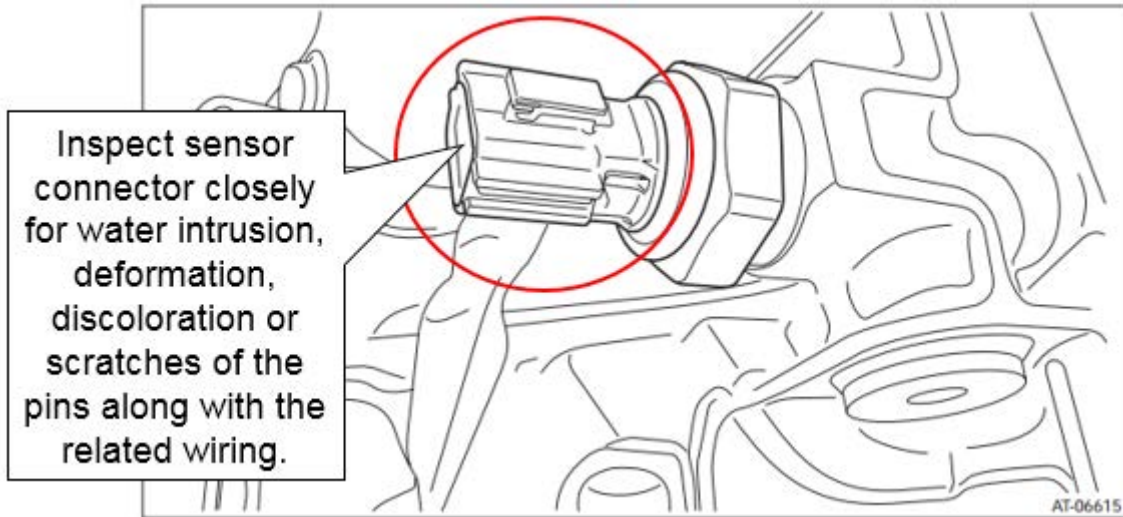


“Wiggle-Testing” Wiring:

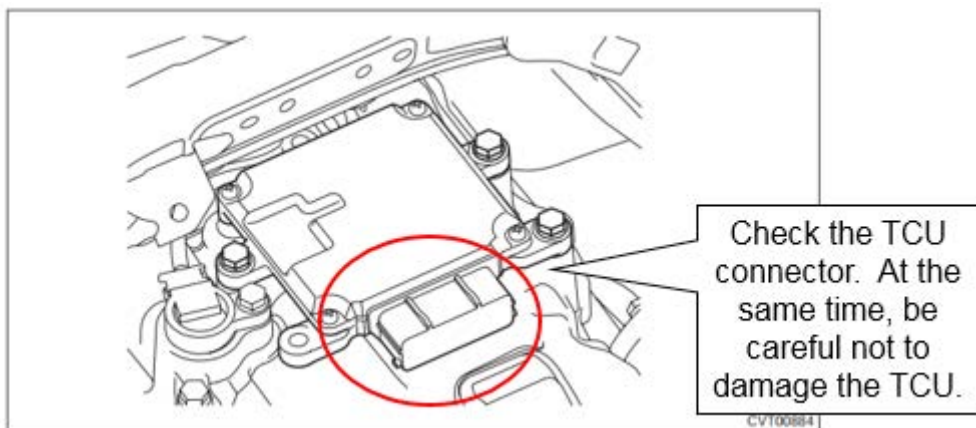
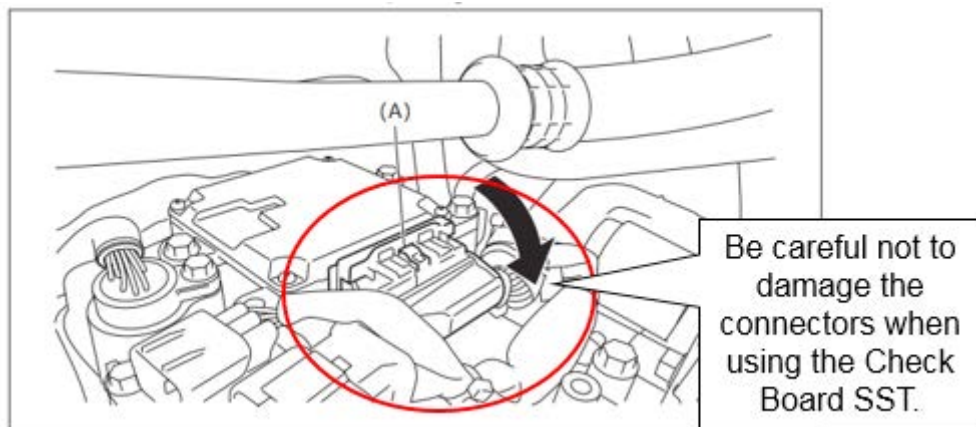


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Check the Secondary Oil Pressure Sensor:

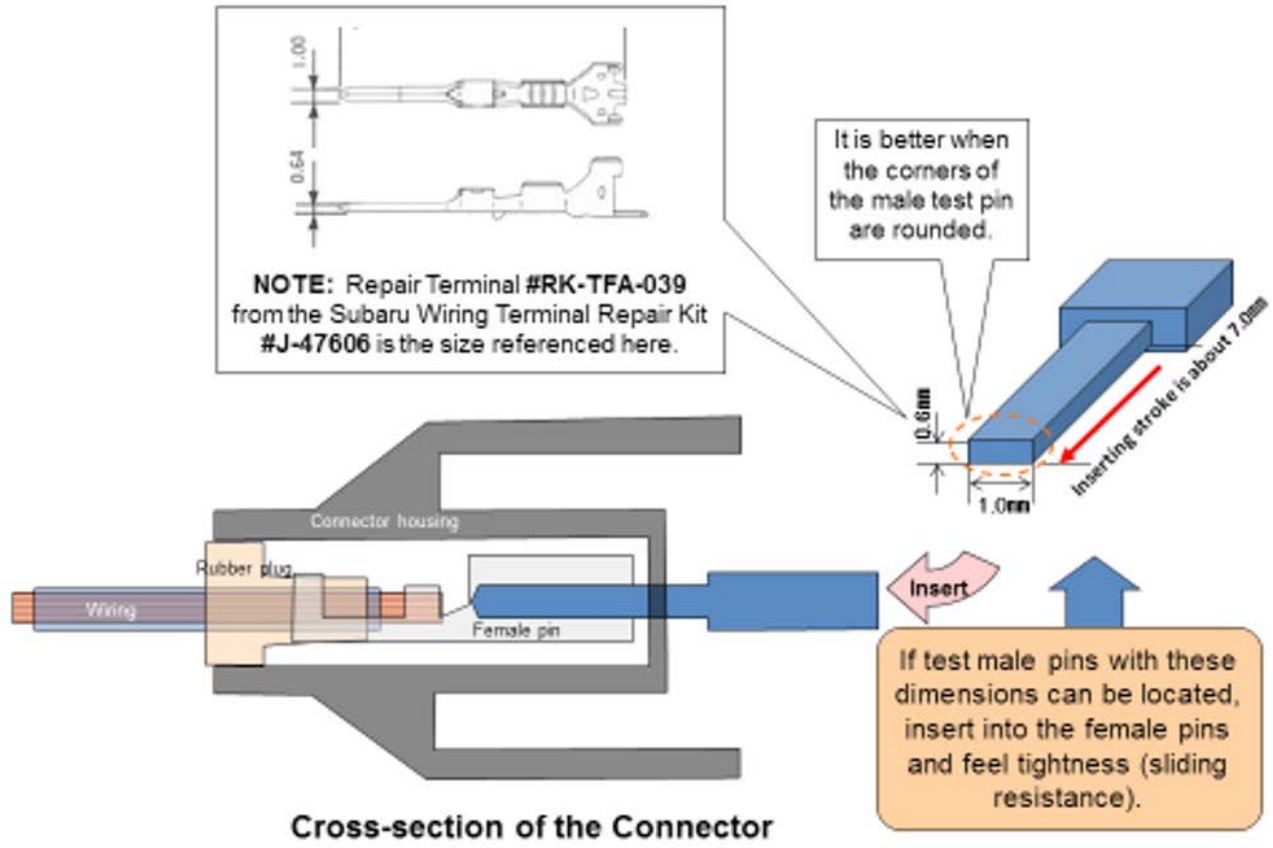


Other Points to Inspect:

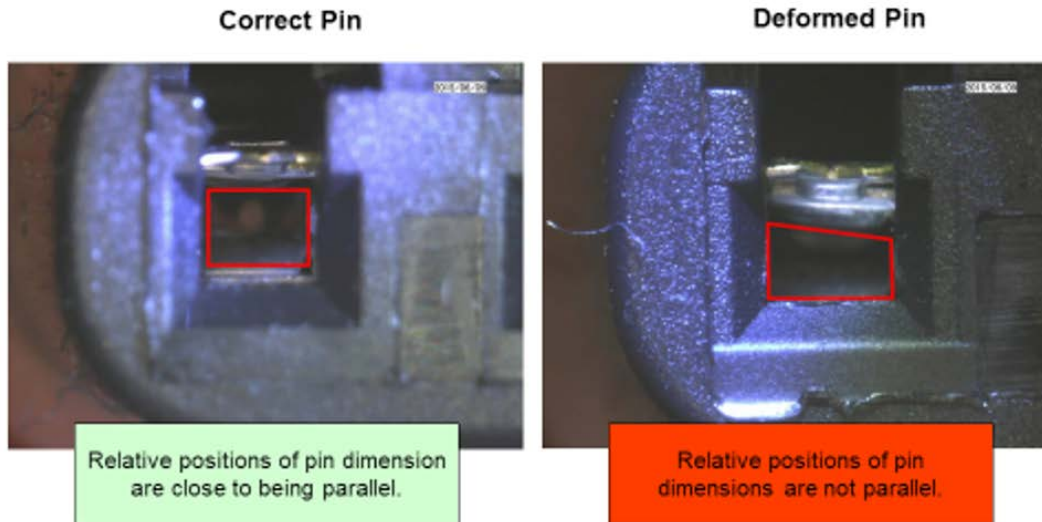


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Sliding Resistance Testing:

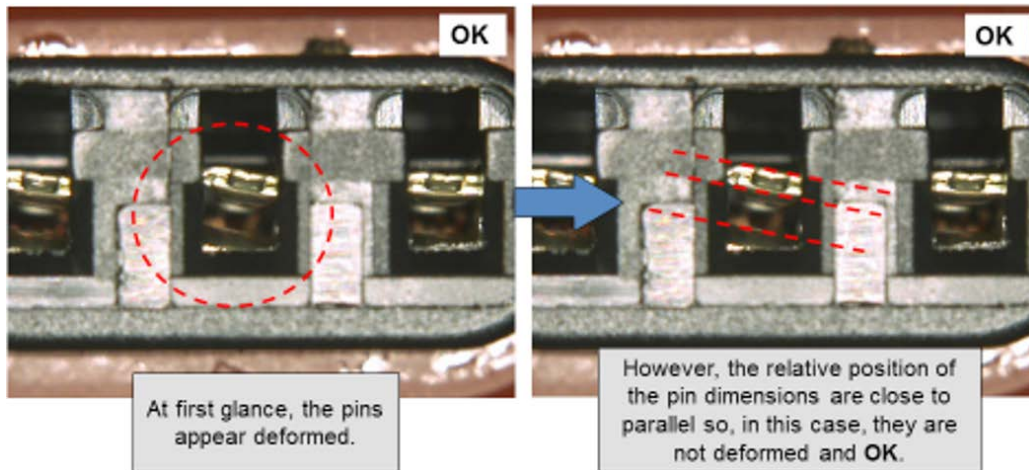


Example of a Deformed Pin Terminal:



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Example of Incorrect Judgement of a Damaged or Deformed Pin Terminal:



IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

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