

# Technical Service Bulletin

Mazda North American Operations  
Irvine, CA 92618-2922

**Subject:**

CHECK ENGINE LIGHT ON WITH DTC P0126:00

Bulletin No.: 01-013/22

Last Issued : 10/19/2022

**BULLETIN NOTES**

This bulletin supersedes the previously issued bulletin(s) listed below. The changes are noted below in Red.

| Previously Issued TSBs: | Date(s) Issued        |
|-------------------------|-----------------------|
| 01-011/21               | 09/27/21 and 04/22/21 |

**APPLICABLE MODEL(S)/VINS**

2019-2021 Mazda3 (A/T) with VINS produced before JM1BP\*\*\*\*\*349436 (produced before July 2, 2021)  
2021 Mazda3 (M/T) with VINS produced before JM1BP\*\*\*\*\*400821 (produced before July 3, 2021)  
2018-2021 Mazda6 (US spec) with VINS produced before JM1DK\*\*\*\*\*517045 (produced before June 19, 2021)  
2019-2020 Mazda6 (Mexico spec) with VINS produced before JM1GL\*\*\*\*\*524069 (produced before March 26, 2020)  
2019-2021 CX-3 with VINS produced before JM1FK\*\*\*\*\*517045 (produced before June 19, 2021)  
2018-2020 CX-5 (US/Mexico)  
2021 CX-5 (Canada/Mexico spec w/ 8" center display) with VINS produced before JM3KF\*\*\*\*\*133782 (produced before June 18, 2021)  
2021 CX-5 (US spec w/ 10.25" center display) with VINS produced before JM3KF\*\*\*\*\*441272 (produced before June 19, 2021)  
2020-2021 CX-30 with VINS produced before 3MVDM\*\*\*\*\*268716 (produced before June 4, 2021)

**NOTE:** Vehicles with SKYACTIV-G 2.5T (turbo) are not applicable.

**DESCRIPTION**

Some customers may experience the CHECK ENGINE light ON with DTC P0126:00 (Thermostat stuck open) and one or more of the following symptoms:

- The engine takes longer to warm up
- The engine temperature gauge fluctuates
- The low coolant temperature indicator (blue) light stays on longer or comes on while driving
- Poor heater performance, especially at idle

**NOTE:**

- Vehicles with SKYACTIV-G 2.5T are not applicable.
- If DTC P2B61:00 (Coolant control valve circuit range/performance) accompanies, this information is not applicable. Diagnose according to the instructions in MGSS.

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Due to production variety of the failsafe thermostat integrated in the coolant control valve, engine coolant may enter into a dry hollow in the failsafe thermostat, resulting in unintended opening of the failsafe thermostat at lower temperatures (104-176 °F (40-80 °C)). To eliminate this concern, the production process of the coolant control valve has been modified.

Customers having this concern should have their vehicle repaired using the following repair procedure.

## REPAIR PROCEDURE

1. Verify customer concerns and check the coolant temperature in the freeze frame data.

- If it is at around 104-176 °F (40-80 °C), proceed to step 2.
- If it is not at around 104-176 °F (40-80 °C), this TSB is not applicable. Diagnose according to the instruction on MGSS.

2. Replace the coolant control valve with a new one according to the instruction on MGSS (COOLANT CONTROL VALVE REMOVAL/INSTALLATION).

- Mazda3 (COOLANT CONTROL VALVE REMOVAL/INSTALLATION)
- Mazda6 (COOLANT CONTROL VALVE REMOVAL/INSTALLATION)
- CX-3 (COOLANT CONTROL VALVE REMOVAL/INSTALLATION)
- CX-5 (COOLANT CONTROL VALVE REMOVAL/INSTALLATION)
- CX-30 (COOLANT CONTROL VALVE REMOVAL/INSTALLATION)

3. Warm up the engine and confirm that the primary malfunction is resolved according to the instruction on MGSS (Repeatability verification procedure in the DTC P0126:00 [PCM]).

- Mazda3 (DTC P0126:00 [PCM (SKYACTIV-G)])
- Mazda6 (DTC P0126:00 [PCM (SKYACTIV-G)])
- CX-3 (DTC P0126:00 [PCM (SKYACTIV-G)])
- CX-5 (DTC P0126:00 [PCM (SKYACTIV-G)])
- CX-30 (DTC P0126:00 [PCM (SKYACTIV-G)])

4. Verify repair.

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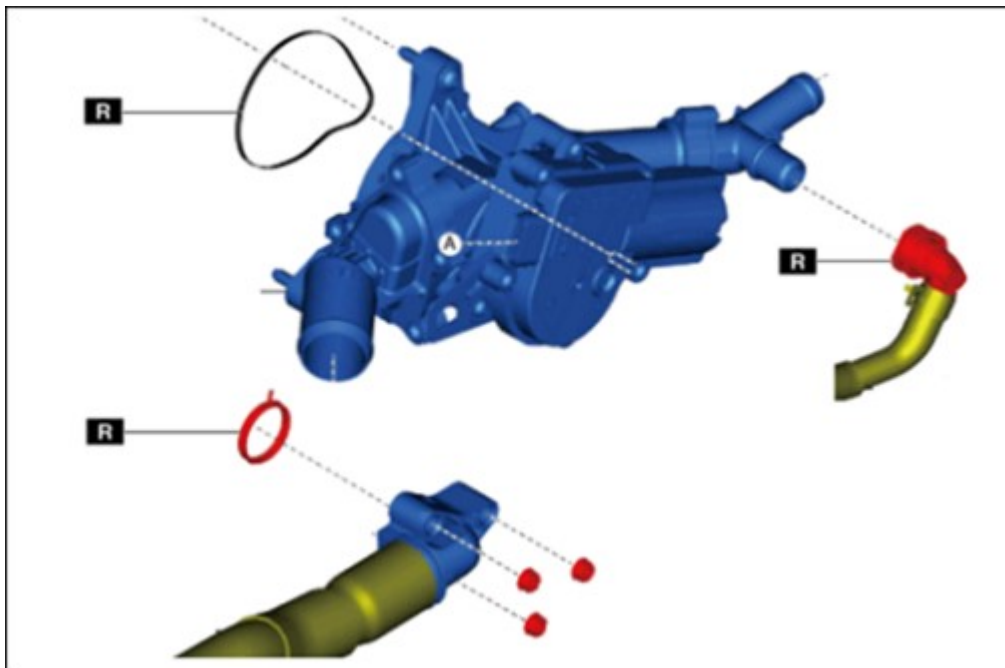
**PARTS INFORMATION**

| Parts Number    | Description           | Qty.      | Notes                                 |
|-----------------|-----------------------|-----------|---------------------------------------|
| PYFD-15-16Z     | Valve, Water Control  | 1         | For A/T, O-ring included              |
| PYFA-15-16ZB    | Valve, Water Control  | 1         | For M/T, O-ring included              |
| PYFB-15-169     | Gasket, Water Outlet  | 1         | [R] for Lower radiator hose component |
| PE13-15-296     | Connector             | 1         | [R] for water hose for A/T oil cooler |
| PYFA-15-592A    | O-Ring (Water Outlet) | 1         | [R] for ECT sensor No.2               |
| PYFB-15-113     | Washer                | 1         | [R] for ECT sensor No.2               |
| 0000-77-508E-20 | Coolant               | as needed | 7.8 US qt (7.4L, 6.5 Imp qt) maximum  |

[R]: Replacement parts

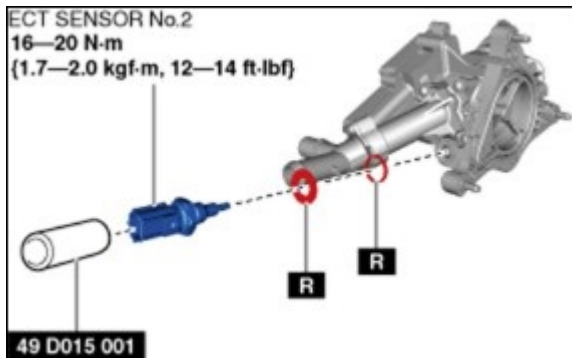
**Replacement Part Locations**

- O-ring
- Gasket
- Connector



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- O-ring and washer for ECT sensor No.2



**NOTE:** Since the modification has been implemented during the production of the part number without a suffix, it is necessary to check the suffix and the production date code of the obtained part.

- If available part is PYFD-15-16ZA or with later suffix, the following procedure is not necessary.

1. With a smart phone, scan the two dimensional code on the water control valve.
2. The code consists of three blocks of codes where the sample picture is read as PYFD1516Z 171115 0000063 and the second block of the code is the production date in YYMMDD format.

- If the second block of the code is 201116 or greater (meaning November 16, 2020 or later), the coolant control valve is modified.



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**WARRANTY INFORMATION****NOTE:**

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's Powertrain Warranty term, Calif. Emission Warranty (long term) [except 2018 Mazda6, 2019 CX-3 and 2018 CX-5], or Calif. Emission Warranty (short term) [2018 Mazda6, 2019 CX-3 and 2018 CX-5]
- Additional diagnostic time cannot be claimed for this repair.

|                                 |                             |
|---------------------------------|-----------------------------|
| Warranty Type                   | A                           |
| Symptom Code                    | 6X                          |
| Damage Code                     | 9K                          |
| Part Number Main Cause          | PYFD-15-16Z or PYFA-15-16ZB |
| Quantity                        | 1                           |
| Operation Number / Labor Hours: | See chart below.            |

| Model  | Spec                               | Operation No. | Labor Hours |
|--------|------------------------------------|---------------|-------------|
| Mazda3 | 2.0L                               | XXT2BARX      | 1.3 Hrs.    |
|        | 2.5L (A/T)                         | XXT2BBRX      |             |
|        | 2.5L (M/T)                         | XXT2BCRX      | 1.2 Hrs.    |
| CX-3   | 2.0L                               | XXT2BARX      | 1.2 Hrs.    |
| CX-30  | 2.0L                               | XXT2BARX      | 1.2 Hrs.    |
|        | 2.5L without cylinder deactivation | XXT2BDRX      |             |
|        | 2.5L with cylinder deactivation    | XXT2BERX      | 1.3 Hrs.    |
| Mazda6 | 2.5L                               | XXT2BFRX      | 1.3 Hrs.    |
| CX-5   | 2.0L (M/T)                         | XXT2BGRX      | 1.2 Hrs.    |
|        | 2.0L (A/T)                         | XXT2BHRX      | 1.3 Hrs.    |
|        | 2.5L                               | XXT2BFRX      |             |

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