

# Technical Service Bulletin

Mazda North American Operations  
Irvine, CA 92618-2922

**Subject:**

ACTIVE AIR SHUTTER IS WORKING/FROZEN AND DTC P05A0:00  
IS STORED

Bulletin No.: 09-048/22

Last Issued : 12/13/2022

**BULLETIN NOTES**

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

| Previous TSBs: | Date(s) Issued: |
|----------------|-----------------|
| 01-009/21      | 04/12/21        |

**APPLICABLE MODEL(S)/VINS**

2019-2020 Mazda3 (Japan built) US spec (2.5L w/cylinder deactivation) with VINS lower than JM1BP\*\*M\*\*\*176406 (produced before April 3, 2020)

2019-2021 Mazda3 (Mexico built) US spec (2.5L w/cylinder deactivation) with VINS lower than 3MZBP\*\*M\*\*\*210134 (produced before December 24, 2020)

2020-2021 CX-30 US spec (non-turbo w/cylinder deactivation) with VINS lower than 3MVDM\*\*M\*\*\*239820 (produced before December 24, 2020)

2022 MX-30 with VINS lower than JM1DR\*\*B\*\*\*101083 (produced before June 2, 2022)

**DESCRIPTION**

Some vehicles may exhibit the following symptoms with DTC P05A0:00 (Active air shutter and the opening angle abnormality (sticking)) stored in memory.

**Symptom 1 [Mazda3 and CX-30]:** The active air shutter is working, but DTC P05A0:00 is stored in memory.

**Cause 1:** This is caused by improper control software of the PCM detecting the DTC immediately without performing the failsafe operation. When the active air shutter detects unusual torque, it is designed to repeat the open/close cycles up to three times as a failsafe to try to remove the object(s) which temporarily disturbed the movement.

**Symptom 2 [Mazda3, CX-30 and MX-30]:** The active air shutter is frozen by snow and/or ice under freezing temperatures with DTC P05A0:00 stored in memory.

**Cause 2 [Mazda3 and CX-30]:** When a temporary blocking of the active air shutter is expected to be caused by snow and/or ice and the intake air temperature is above the freezing point, DTC P05A0:00 may be unintentionally detected.

**[MX-30]:** When a temporary blocking of the active air shutter is expected to be caused by snow and/or ice and the heater is turned on, DTC P05A0:00 may be unintentionally detected.

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To eliminate this concern:

- **[For Symptom 1]** The control software of the PCM has been modified.
- **[For Symptom 2]** The control software of the PCM has been modified to use the ambient temperature sensor instead of the intake air temperature sensor to detect freezing environment properly (Mazda3 and CX-30) and the control software of the PCM has been modified not to use the heater status (MX-30).

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

## REPAIR PROCEDURE

1. Verify the customer concern.

**NOTE:** If nothing is found disturbing the movement of the active air shutter, the DTC most likely was caused by an incoming object which temporally disturbed the movement. DO NOT replace the active air shutter.

2. Reprogram the PCM with the Mazda Modular Diagnostic System (M-MDS), using the Mazda Diagnostic And Repair Software (MDARS). Refer to MDARS ECU Reprogramming Procedure.

### NOTE:

- If the current calibration file name in the ECU FILENAME screen is the same as shown in the Calibration Files Information or with a later suffix, reprogramming is not necessary.
- **For Mazda3 and CX-30:**
  - After the reprogramming, pending DTC P2610:00 [PCM] may be stored without the CHECK ENGINE light ON. Since this DTC may turn to a current DTC depending on operations after the reprogramming, clear DTC after all repair work done.
  - If DTC U2120:00 or/and U2500:82 are stored and i-ACTIVSENSE warning light (amber) turns on after the reprogramming, refer to SA-043/20.
  - If the Welcome Lamp function is accidentally activated while using MDARS, it may also cause this concern. Check and correct as necessary. Refer to the SA-054/20 for details.

3. Clear the DTC, turn the ignition off, and get out of the vehicle.

4. Close and lock the door then wait for at least ten minutes.

5. **[Mazda3 and CX-30]:** Verify the repair by starting the engine and confirming there is no check engine light or abnormal warning lights present.

**[MX-30]:** Verify the repair by turning the power ON (READY on) and confirming there is no abnormal warning lights present.

### NOTE:

- If any DTC should remain after performing a DTC erase, diagnose the DTC according to the instructions on MGSS.
- **[MX-30]:** This reprogramming may change the electronic sound setting (ON/OFF). If it has changed, confirm the customer's preference and change the setting accordingly, refer to TSB 30-002/21 for details.

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**CALIBRATION****Mazda3 (Japan built)**

| Engine                            | Trans-<br>mission | Drive | File Name            | Note       |
|-----------------------------------|-------------------|-------|----------------------|------------|
| 2.5L<br>(w/cylinder deactivation) | AT                | 2WD   | PX05-188K2- <b>S</b> | Mitsubishi |
|                                   |                   |       | PX06-188K2- <b>S</b> | Denso      |
|                                   |                   | 4WD   | PX07-188K2- <b>U</b> | Mitsubishi |
|                                   |                   |       | PX08-188K2- <b>U</b> | Denso      |
|                                   | MT                | 2WD   | PX58-188K2- <b>R</b> | Mitsubishi |
|                                   |                   |       | PX59-188K2- <b>R</b> | Denso      |

**Mazda3 (Mexico built)**

| Engine                            | Trans-<br>mission | Drive | File Name            | Note       |
|-----------------------------------|-------------------|-------|----------------------|------------|
| 2.5L<br>(w/cylinder deactivation) | AT                | 2WD   | PX13-188K2- <b>L</b> | Mitsubishi |
|                                   |                   |       | PX14-188K2- <b>L</b> | Denso      |
|                                   |                   | 4WD   | PX15-188K2- <b>L</b> | Mitsubishi |
|                                   |                   |       | PX16-188K2- <b>L</b> | Denso      |

**CX-30**

| Engine                            | Trans-<br>mission | Drive | File Name            | Note       |
|-----------------------------------|-------------------|-------|----------------------|------------|
| 2.5L<br>(w/cylinder deactivation) | AT                | 2WD   | PXH7-188K2- <b>J</b> | Mitsubishi |
|                                   |                   |       | PXH8-188K2- <b>J</b> | Denso      |
|                                   |                   | 4WD   | PXJ9-188K2- <b>J</b> | Mitsubishi |
|                                   |                   |       | PXK1-188K2- <b>J</b> | Denso      |

**MX-30**

| Model | File Name    |
|-------|--------------|
| MX-30 | MH08-186K2-K |

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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 Federal Emissions Warranty.
- Additional diagnostic time cannot be claimed for this repair.

|                                 |                                                                    |
|---------------------------------|--------------------------------------------------------------------|
| Warranty Type                   | A                                                                  |
| Symptom Code                    | 64                                                                 |
| Damage Code                     | 9W                                                                 |
| Part Number Main Cause          | 5555-18-881                                                        |
| Quantity                        | 0                                                                  |
| Operation Number / Labor Hours: | XXS7AXFX / 0.3 Hrs. (Symptom 1)<br>XXW4GXFX / 0.3 Hrs. (Symptom 2) |

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