

# ISX CM871

**Fault Code: 2637 | SPN: 5018 | FMI: 11**

## **Aftertreatment 1 Diesel Oxidation Catalyst Face Plugged - Root Cause Not Known**

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 **Printable Version**

### **Troubleshooting Summary**

- 1 Check for primary fault codes
- 2 Leaks in the intake air system
- 3 Aftertreatment fuel injector flow test
- 4 Aftertreatment diesel oxidation catalyst is malfunctioning
- 5 Stationary aftertreatment regeneration is needed

### **1 - Check for primary fault codes**

Solution: S00001696

#### **Verification**

##### **Conditions**

- Turn keyswitch ON.
- Connect the recommended Cummins® electronic service tool or equivalent.

##### **Action**

- Use the recommended Cummins® electronic service tool or equivalent to read the fault codes.

##### **Specification**

Before troubleshooting this fault code, troubleshoot any fault code that is active or has more than one inactive count within the last 25 engine operating hours from the following list:

- EGR: 1228, 1867, 1896, 1961, 2272, 2349, 2353, 2357, 2375, 2376, 2961, 2962, 3136, 3137, 3138, 3342, 3382, 3383, 3389

- EGR differential pressure: 1866, 2273, 2274
- Turbocharger: 1898, 1962, 2198, 2288, 2346, 2347, 2387, 2449, 2451, 2634, 2635, 2636, 3348, 3616

### Linked Solutions

- None

## Repair

- Perform a search on the appropriate fault codes.

## Validation

- None

Next Solution

## 2 - Leaks in the intake air system

Solution: S00008386

## Verification

### Conditions

- Turn keyswitch OFF.

### Action

- Inspect the intake plumbing for possible air leaks. Refer to Procedure 010-024 (/qs3/pubsys2/xml/en/procedures/10/10-010-024-tr.html)

### Specification

- If a leak is found, then proceed to the Repair section.

### Linked Solutions

- None

## Repair

- Repair or replace the leaking components. Refer to Procedure 010-024 (/qs3/pubsys2/xml/en/procedures/10/10-010-024-tr.html)

## Validation

- Connect all components
- Connect the recommended Cummins® electronic service tool or equivalent.

- Disable the fault code.
- Operate the engine within the "Conditions for Clearing the Fault Code" found in the Overview section of the troubleshooting procedure.
- Verify that the fault code is no longer active.
- Check ECM Calibration Revision History
- Use the recommended Cummins® electronic service tool or equivalent to find the current ECM code and revision number in the ECM.
- Compare the ECM code and revision number in the ECM to the calibration revisions listed in the ECM Calibration Revision History Database for applicable changes related to this fault code.
- Refer to ECM Calibration Revision History Database.

Next Solution

## 3 - Aftertreatment fuel injector flow test

Solution: S00003257

### Verification

#### Conditions

- Turn keyswitch ON.
- Connect the recommended Cummins® electronic service tool or equivalent.

#### Action

- Use the recommended Cummins® electronic service tool or equivalent.
- Perform the Aftertreatment Maintenance Reset All procedure found under the Aftertreatment Maintenance Section of Advanced ECM Data.

Performing the Aftertreatment Maintenance Reset All may cause the fault code to go inactive. This does **not** mean that the issue was resolved, **only** that the efficiencies were reset. Troubleshooting **must** be continued.

- Perform the Aftertreatment Fuel Injector Flow Test. Refer to Procedure 011-054 (/qs3/pubsys2/xml/en/procedures/101/101-011-054-tr.html)

#### Specification

- If the Aftertreatment Fuel Injector Flow Test does **not** meet specification, then a malfunctioning aftertreatment fuel injector has been detected. Refer to Procedure 011-054 (/qs3/pubsys2/xml/en/procedures/101/101-011-054-tr.html)

#### Linked Solutions

- None

## Repair

- Clean or replace the aftertreatment fuel injector. Refer to Procedure 011-042 (/qs3/pubsys2/xml/en/procedures/101/101-011-042-tr.html)
- Perform the Aftertreatment Stationary Regeneration procedure. Refer to Procedure 014-013 (/qs3/pubsys2/xml/en/procedures/101/101-014-013-tr.html)

## Validation

- Connect all components
- Connect the recommended Cummins® electronic service tool or equivalent.
- Disable the fault code.
- Operate the engine within the "Conditions for Clearing the Fault Code" found in the Overview section of the troubleshooting procedure.
- Verify that the fault code is no longer active.
- Check ECM Calibration Revision History
- Use the recommended Cummins® electronic service tool or equivalent to find the current ECM code and revision number in the ECM.
- Compare the ECM code and revision number in the ECM to the calibration revisions listed in the ECM Calibration Revision History Database for applicable changes related to this fault code.
- Refer to ECM Calibration Revision History Database.

Next Solution

## 4 - Aftertreatment diesel oxidation catalyst is malfunctioning

Solution: S00000761

### Verification

#### Conditions

- Turn keyswitch OFF.

#### Action

- Visually inspect for the presence of the aftertreatment diesel oxidation catalyst.

- Inspect the inlet face of the aftertreatment diesel oxidation catalyst for reuse. Refer to Procedure 011-049 (</qs3/pubsys2/xml/en/procedures/101/101-011-049-tr.html>)
- Inspect for cracks in the aftertreatment diesel oxidation catalyst cell walls. Refer to Procedure 011-049 (</qs3/pubsys2/xml/en/procedures/101/101-011-049-tr.html>)
- Inspect for soot or oil plugging the front face of the diesel oxidation catalyst. Refer to Procedure 011-049 (</qs3/pubsys2/xml/en/procedures/101/101-011-049-tr.html>)
- Service Bulletin is available.

Refer to Service Bulletin 4021600 (</qs3/pubsys2/xml/en/bulletin/4021600.html>)

## Specification

- If the component does **not** meet specification, then proceed to the Repair section.

## Linked Solutions

- None

## Repair

Repair or replace **only** the components that were found to be out of specification.

- If the face of the aftertreatment diesel oxidation catalyst is plugged, then clean the aftertreatment diesel oxidation catalyst. Refer to Procedure 011-049 (</qs3/pubsys2/xml/en/procedures/101/101-011-049-tr.html>)
- If the face of the aftertreatment diesel oxidation catalyst is cracked or damaged, then replace the aftertreatment diesel oxidation catalyst. Refer to Procedure 011-049 (</qs3/pubsys2/xml/en/procedures/101/101-011-049-tr.html>)

## Validation

- Connect all components.
- Connect the recommended Cummins® electronic service tool or equivalent.
- Disable the fault code.
- Operate the engine within the "Conditions for Clearing the Fault Code" found in the Overview section of the troubleshooting procedure.
- Verify that the fault code is no longer active.
- Check the engine control module Calibration Revision History.
- Use the recommended Cummins® electronic service tool or equivalent to find the current engine control module code and revision number in the engine control module.
- Compare the engine control module code and revision number in the engine control module to the calibration revisions listed in the engine control module Calibration Revision

History Database for applicable changes related to this fault code.

- Refer to the engine control module Calibration Revision History Database.

Next Solution

## 5 - Stationary aftertreatment regeneration is needed

Solution: S00003148

### Verification

#### Conditions

- Turn keyswitch ON.
- Connect the recommended Cummins® electronic service tool or equivalent.

#### Action

- Use the recommended Cummins® electronic service tool or equivalent to read the fault codes.
- Check to make sure no other fault codes are active.

#### Specification

- If other fault codes that inhibit the aftertreatment stationary regeneration are active or inactive with more than one count within the last 25 engine operating hours, then troubleshoot those fault codes before performing the aftertreatment stationary regeneration procedure.
- If there are no other fault codes active or inactive with more than one count within the last 25 engine operating hours that inhibit the aftertreatment stationary regeneration, then proceed directly to performing the aftertreatment stationary regeneration. Refer to Procedure 014-013 (/qs3/pubsys2/xml/en/procedures/101/101-014-013-tr.html)

#### Linked Solutions

- None

### Repair

- Inform the customer on the proper procedure for initiating a stationary regeneration.
- Some vehicles can be equipped with a stationary regeneration switch in the dash. This switch can also be used to perform the stationary regeneration procedure. Refer to the manufacturer's operating instructions.

### Validation

- Connect all components

- Connect the recommended Cummins® electronic service tool or equivalent.
- Disable the fault code.
- Operate the engine within the "Conditions for Clearing the Fault Code" found in the Overview section of the troubleshooting procedure.
- Verify that the fault code is no longer active.
- Check ECM Calibration Revision History
- Use the recommended Cummins® electronic service tool or equivalent to find the current ECM code and revision number in the ECM.
- Compare the ECM code and revision number in the ECM to the calibration revisions listed in the ECM Calibration Revision History Database for applicable changes related to this fault code.
- Refer to ECM Calibration Revision History Database.

If all steps have been completed and no root cause has been identified, then follow the technical escalation process.

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**Last Modified: 23-Feb-2025**

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