



QuickServe Online Service Training

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- Troubleshooting & Repair Manual** 
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- Fault Code Search Tab** 
- Engine Symptom Search** 
- Related Information** 

Click the Service tab to view the Service page.

The information on the Service page is organized into minor tabs for better accessibility. The Manuals Tab is the default tab on this page.

Owners Manual

This manual contains information for the correct operation and maintenance of Cummins engines.

Operation & Maintenance Manual

This manual contains information for the correct operation and maintenance of Cummins engines. It also includes important safety information, engine and systems specifications, troubleshooting guidelines, and listings of Cummins Authorized Repair Locations and component manufacturers.

Electronic Control System Troubleshooting & Repair Manual

This manual provides instructions for troubleshooting symptoms and Fault Codes.

Fault Code Troubleshooting Manual

This manual provides instructions for troubleshooting Fault Codes and repairing this engine in the chassis. These manuals are available for newer Cummins Engines.

Service Manual

This manual contains instructions for troubleshooting and repairing this engine in the chassis, complete rebuild procedures and specifications. Disassembly, cleaning, inspection, and assembly instructions are included.

Basic Manual Information

(3666251) Signature™ and ISX Operation and Maintenance Manual

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 - [\(99-204-001\) To the Owner and Operator](#)
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 - [\(99-204-003-om\) How to Use the Manual](#)
 - [\(99-204-004\) Symbols](#)
 - [\(99-204-005\) Illustrations](#)
 - [\(99-204-006-om-auto\) General Safety Instructions](#)
 - [\(99-204-007-om\) General Repair Instructions](#)
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QuickServe Online

204-006 General Safety Instructions

Table of Contents

[Important Safety Notice](#)

Important Safety Notice

WARNING

Improper practices, carelessness, or ignoring the warnings can cause burns, cuts, mutilation, asphyxiation or other personal injury or death.

Read and understand all of the safety precautions and warnings before performing any repair. This list contains the general safety precautions that **must** be followed to provide personal safety. Special safety precautions are included in the procedures when they apply.

- Work in an area surrounding the product that is dry, well lit, ventilated, free from clutter, loose tools, parts, ignition sources and hazardous substances. Be aware of hazardous conditions that can exist.
- Always** wear protective glasses and protective shoes when working.
- Rotating parts can cause cuts, mutilation or strangulation.
- Do **not** wear loose-fitting or torn clothing. Remove all jewelry when working.
- Disconnect the capacitor before working on the motor if the motor is operating.
- Use ON/OFF controls to stop the engine.
- Do not rotate the fan or pry on the fan blades or fan housing. This can cause personal injury, property damage, or equipment damage.
- If an engine is hot, allow the engine to cool before slowly loosening the filler cap to relieve the pressure from the cooling system.
- Always** use blocks or proper stands to support the product before

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Please review the General Safety Instructions before performing any Service events. These can be found in the Introduction Section of every manual.

Click on a section title to expand or collapse the section content.

Select the procedure you wish to view and it will open up in the right hand section of the page. If you right click on the link you can open the procedure in a new window or tab.

Click and drag here to adjust the size of the frame.

You can find troubleshooting steps for specific fault codes in Section TF of the Troubleshooting and Repair Manuals.

(4310637)	ISX15 CM2350 X101 Fault Code Troubleshooting Manual
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- [\(189-fc111\) Engine Control Module Critical Internal Failure - Bad Intelligent Device or Component](#)
 - [\(189-fc115\) Engine Magnetic Speed/Position Lost Both of Two Signals - Data Erratic, Intermittent, or Incorrect](#)
 - [\(189-fc122\) Intake Manifold 1 Pressure Sensor Circuit - Voltage Above Normal or Shorted to High Source](#)
 - [\(189-fc123\) Intake Manifold 1 Pressure Sensor Circuit - Voltage Below Normal or Shorted to Low Source](#)
 - [\(189-fc124\) Intake Manifold 1 Pressure - Data Valid But Above Normal Operating Range - Moderately Severe Level](#)
 - [\(189-fc125\) Intake Manifold 1 Pressure - Data Valid But Below Normal Operating Range - Moderately Severe Level](#)
 - [\(189-fc131\) Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Above Normal or Shorted to High Source](#)
 - [\(189-fc132\) Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Below Normal or Shorted to Low Source](#)
 - [\(189-fc133\) Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Above Normal or Shorted to High Source](#)
 - [\(189-fc134\) Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Below Normal or Shorted to Low Source](#)
 - [\(189-fc135\) Engine Oil Rifle Pressure 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source](#)
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 - [\(189-fc144\) Engine Coolant Temperature 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source](#)
 - [\(189-fc145\) Engine Coolant Temperature 1 Sensor Circuit - Voltage Below Normal or Shorted to Low Source](#)
 - [\(189-fc146\) Engine Coolant Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level](#)
 - [\(189-fc151\) Engine Coolant Temperature - Data Valid But Above Normal Operating Range - Most Severe Level](#)
 - [\(189-fc153\) Intake Manifold 1 Temperature Sensor Circuit - Voltage Above Normal or Shorted to High Source](#)
 - [\(189-fc154\) Intake Manifold 1 Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source](#)
 - [\(189-fc155\) Intake Manifold 1 Temperature - Data Valid But Above Normal Operating Range - Most Severe Level](#)
 - [\(189-fc175\) Electronic Throttle Control Actuator Driver Circuit - Voltage Above Normal or Shorted to High Source](#)

Troubleshooting & Repair Manual

(4021334) Signature and ISX CM870 Electronic Control System Troubleshooting and Repair Manual

Search Manual Search

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- ☐ Front
- ☐ Section I - Introduction
- ☐ Section E - Engine and System Identification
- ☐ Section F - Familiarization
- ☐ **Section TF - Troubleshooting Fault Codes**

- (70-fc-111) Electronic Control Module (ECM) Microprocessor
- (70-fc-122) Intake Manifold Pressure Sensor Circuit
- (70-fc-123) Intake Manifold Pressure Sensor Circuit
- (70-fc-131) Accelerator Pedal Position Sensor Circuit
- (70-fc-132) Accelerator Pedal Position Sensor Circuit
- (70-fc-133) Remote Accelerator Pedal or Lever Position
- (70-fc-134) Remote Accelerator Pedal or Lever Position
- (70-fc-135) Engine Oil Pressure Sensor Circuit
- (70-fc-141) Engine Oil Pressure Sensor Circuit
- (70-fc-143) Engine Oil Pressure Low - Warning
- (70-fc-144) Coolant Temperature Sensor Circuit - Voltage
- (70-fc-145) Coolant Temperature Sensor Circuit - Voltage
- (70-fc-151) Engine Coolant Temperature High - Critical
- (70-fc-153) Intake Manifold Air Temperature Sensor Circuit
- (70-fc-154) Intake Manifold Air Temperature Sensor Circuit
- (70-fc-155) Intake Manifold Air Temperature High - Critical
- (70-fc-187) Sensor Supply Voltage Number 2 Circuit
- (70-fc-195) Engine Coolant Level Sensor Circuit Choice
- (70-fc-195-2wire) Engine Coolant Level Sensor Circuit
- (70-fc-195-3wire) Engine Coolant Level Sensor Circuit
- (70-fc-196) Engine Coolant Level Sensor Circuit Choice
- (70-fc-196-2wire) Engine Coolant Level Sensor Circuit
- (70-fc-196-3wire) Engine Coolant Level Sensor Circuit
- (70-fc-197) Engine Coolant Level Low - Warning
- (70-fc-212) Oil Temperature Sensor Circuit - Voltage Abn
- (70-fc-213) Oil Temperature Sensor Circuit - Voltage Bel
- (70-fc-214) Engine Oil Temperature High - Critical
- (70-fc-259) Fuel Shutoff Valve
- (70-fc-263) Engine Fuel Temperature Sensor Circuit - Vo
- (70-fc-265) Engine Fuel Temperature Sensor Circuit - Vo
- (70-fc-284) Engine Speed Sensor Supply Voltage Circuit
- (70-fc-285) SAE J1939 Data Link Multiplexing
- (70-fc-286) SAE J1939 Data Link Multiplexing
- (70-fc-287) SAE J1939 Data Link Multiplexing Accelerator
- (70-fc-288) SAE J1939 Data Link Multiplexing Remote A
- (70-fc-295) Barometric Pressure Sensor Circuit
- (70-fc-319) Real Time Clock Power Circuit
- (70-fc-338) Idle Shutdown Vehicle Accessories Relay Ci
- (70-fc-339) Idle Shutdown Vehicle Accessories Relay Ci
- (70-fc-341) Unswitched Battery Supply Circuit
- (70-fc-343) ECM Power Supply Error
- (70-fc-352) Sensor Supply Voltage Number 1 Circuit
- (70-fc-386) Sensor Supply Voltage Number 1 Circuit



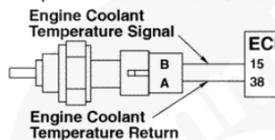
FAULT CODE 145
Coolant Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source

Printable Version

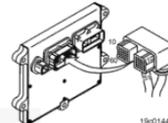
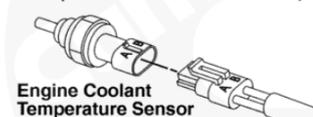
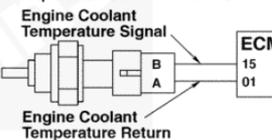
Overview

CODE	REASON	EFFECT
Fault Code: 145 PID: P110 SPN: 110 FMI: 4/4 LAMP: Amber SRT:	Coolant Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source. Low signal voltage detected at engine coolant temperature circuit.	Possible white smoke. Fan will stay ON if controlled by ECM. No engine protection for engine coolant temperature.

Common Pressure / Temperature Sensor Return Circuit



Separate Pressure / Temperature Sensor Return Circuit



Engine Coolant Temperature Sensor Circuit

Temperature (°C)	Temperature (°F)	Resistance (ohms)
0	32	30k to 37k
25	77	9.3k to 10.7k
50	122	3.2k to 3.8k
80	176	1.0k to 1.3k
95	203	700 to 800

[Refer to Troubleshooting Fault Code 105-145](#)

Last Modified: 02-Sep-2010

[Feedback / Help](#)

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After clicking on a specific fault code you will be taken to the Fault Code Overview Page which gives you a brief description of the fault code and provides general information including related components.

Click here to view the detailed troubleshooting steps for the fault code.

Troubleshooting & Repair Manual

Troubleshooting Steps

STEPS	SPECIFICATIONS
STEP 1. Check the fault codes.	
STEP 1A. Check for an inactive fault code.	Fault Code 145 inactive?
STEP 2. Check the engine coolant temperature sensor and circuit.	
STEP 2A. Inspect the engine coolant temperature sensor and connector pins.	Dirty or damaged pins?
STEP 2B. Check the circuit response.	Fault Code 144 active and Fault Code 145 inactive?
STEP 2C. Check the fault codes and verify sensor condition.	Fault Code 145 active?
STEP 3. Check the ECM and engine harness.	
STEP 3A. Inspect the ECM and engine harness connector pins.	Dirty or damaged pins?
STEP 3B. Check the ECM response.	Fault Code 144 active and Fault Code 145 inactive?
STEP 3C. Check for a pin-to-pin short circuit in the engine harness.	Greater than 100k ohms?
STEP 3D. Check for a pin short circuit to ground.	Greater than 100k ohms?
STEP 3E. Check for an inactive fault code.	Fault Code 145 inactive?
STEP 4. Clear the fault codes.	
STEP 4A. Disable the fault code.	Fault Code 145 inactive?
STEP 4B. Clear the inactive fault codes.	All fault codes cleared?

This section gives a brief outline of all the steps involved.

Click on the links to jump straight to the step detail.

Guided Step 1 - Check the fault codes.

Guided Step 1A - Check for an inactive fault code.	
<p>Conditions</p> <ul style="list-style-type: none"> • Turn keyswitch ON. • Connect INSITE™ electronic service tool. <p>Action</p> <p>Check for an inactive fault code.</p> <ul style="list-style-type: none"> • Use INSITE™ electronic service tool to read the fault codes. 	
<p>Fault Code 145 inactive?</p>	
YES	NO
<p>No Repair</p> <p>Use the following procedure for Inactive or Intermittent Fault Code Refer to Procedure 019-362 in Section 19</p>	<p>No Repair</p> <p style="text-align: right;">Go to 2A</p>

After following the guided steps, answer the question to determine the next step.

Click on these links to start the next step or open a related procedure. Continue this process until you have diagnosed the problem

(2883567) ISB6.7 CM2350 B101 Service Manual

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- Section E - Engine and System Identification
- Section F - Familiarization
- Section TS - Troubleshooting Symptoms
- Section TT - Troubleshooting Symptoms (New Format)
- Section DS - Engine Disassembly - Group 00
- Section AS - Engine Assembly - Group 00
- Section 0 - Product - Group 00
- Section 1 - Cylinder Block - Group 01
- Section 2 - Cylinder Head - Group 02
- Section 3 - Rocker Levers - Group 03
- Section 4 - Cam Followers/Tappets - Group 04
- Section 5 - Fuel System - Group 05
 - (155-022-001_05-tr-isb13) Service Tools
 - (155-005-008-tr-isb13) Engine Fuel Heater, Electric
 - (155-005-016-tr-isb13) Fuel Pump
 - (155-005-045-tr-isb13) Fuel Lift Pump
 - (155-005-236-tr-isb13) Fuel System Diagnostics
- Section 6 - Injectors and Fuel Lines - Group 06
- Section 7 - Lubricating Oil System - Group 07
- Section 8 - Cooling System - Group 08
- Section 9 - Drive Units - Group 09
- Section 10 - Air Intake System - Group 10
- Section 11 - Exhaust System - Group 11
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- Section 13 - Electrical Equipment - Group 13
- Section 14 - Engine Testing - Group 14
- Section 16 - Mounting Adaptations - Group 16
- Section 17 - Miscellaneous - Group 17
- Section 19 - Electronic Controls - Group 19
- Section L - Service Literature
- Section V - Specifications
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If a Troubleshooting Symptom Tree is available for an engine, it can be found in the Service Manual.



The procedures in the Service Manuals are organized by groups.



Click on the group title to see the procedures that pertain to that group.



Click here to view a procedure.



The procedures are broken up into sections and each section contains steps to follow.



005-016 Fuel Pump

Table of Contents

- General Information
- Preparatory Steps
- Remove
- Disassemble
- Clean and Inspect for Reuse
- Assemble
- Install
- Finishing Steps

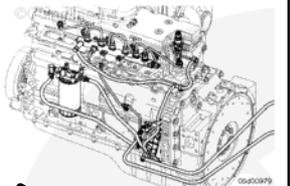
You can jump to a specific section by clicking on one of these links.

Click here to adjust the size of the illustration.

Click here to go to the next step.

General Information TOC

There are two different mounting locations available for high-pressure fuel pumps. The pump can be mounted in a high or low position.



SMALL | MEDIUM | LARGE

Next

If a Service Manual doesn't appear in the manuals list, be sure to check the base engine Troubleshooting and Repair Manual.

The Service Manual for some engines is included in the Troubleshooting and Repair Manual.

Engine Service Information (46231531 - ISC CM554)

Manuals	Dataplate	Campaigns	TRPs	Service Bulletins	TSBs	What's New	Service Tools
Maintenance	Fault Code Search	Symptom Search	Related Information				

Manuals
Troubleshooting and Repair Manuals
[UPDATED] (3666271) ISC, QSC8.3, and ISL Electronic Control System Troubleshooting and Repair Manual [Change History]
[UPDATED] (4021418) ISC, ISCe, QSC8.3, ISL, ISLe3, ISLe4 and QSL9 Troubleshooting and Repair Manual [Change History]
Wiring Diagrams
(3666267) ISC Wiring Diagram
Owners Manuals
[UPDATED] (4021427) ISC, ISCe, and ISL Owners Manual [Change History]
Operation and Maintenance Manuals
[UPDATED] (4021428) ISC, ISCe, and ISL Operation and Maintenance Manual [Change History]
Cummins Emission Solutions Manuals
(4021983) Diesel Particulate Filter Manual [Change History]
(4021984) Ultra-Compact Module Manual [Change History]
(4021986) Partial Filter Manual [Change History]
(4021988) CRTdm Manual [Change History]
(4021989) Datalogger Manual [Change History]
Installation Instructions
(4907970) High Oil Pressure Dump-to-Pump, Dump-to-Sump Modification

(4021418)	ISC, ISCe, QSC8.3, ISL, ISLe3, ISLe4 and QSL9 Troubleshooting and Repair Manual
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Search Manual

[Manual Change History](#)

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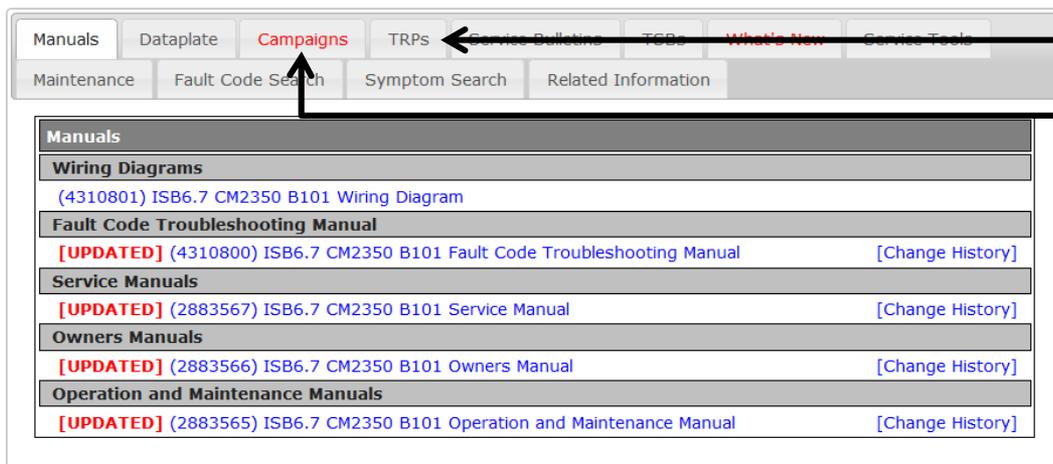
- Front
- Section i - Introduction
- Section E - Engine and System Identification
- Section F - Familiarization
- Section TS - Troubleshooting Symptoms
- Section TT - Troubleshooting Symptoms (New Format)
- Section 0 - Product - Group 00
- Section 1 - Cylinder Block - Group 01
- Section 2 - Cylinder Head - Group 02
- Section 3 - Rocker Levers - Group 03
- Section 4 - Cam Followers/Tappets - Group 04
- Section 5 - Fuel System - Group 05
- Section 6 - Injectors and Fuel Lines - Group 06
- Section 7 - Lubricating Oil System - Group 07
- Section 8 - Cooling System - Group 08
- Section 9 - Drive Units - Group 09
- Section 10 - Air Intake System - Group 10
- Section 11 - Exhaust System - Group 11
- Section 12 - Compressed Air System - Group 12
- Section 13 - Electrical Equipment - Group 13
- Section 14 - Engine Testing - Group 14
- Section 16 - Mounting Adaptations - Group 16
- Section 17 - Miscellaneous - Group 17
- Section 20 - Vehicle Braking - Group 20
- Section L - Service Literature
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Campaigns and TRPs

A **Cummins Field Campaign** is a set of proactive repair instructions to be followed on a specified population of engines. Engines identified in a Campaign are expected to be located so that modifications can be performed prior to a failure and within a specified period of time or limit of operation.

A **Cummins Temporary Repair Practice (TRP)** is a set of repair instructions to be followed on a specified population of engines, if those engines have failures or complaints consistent with the ones identified in the TRP document. TRPs are fix as fail, not proactive like Campaigns, and are typically approved to avoid the future product coverage or policy cost associated with multiple failures from the same cause.

Engine Service Information (73472878 - ISB6.7 CM2350 B101)



The screenshot shows the 'Engine Service Information' page for engine 73472878 (ISB6.7 CM2350 B101). The navigation tabs at the top include 'Manuals', 'Dataplate', 'Campaigns', 'TRPs', 'Service Bulletins', 'TCBs', 'What's New', and 'Service Tools'. The 'Campaigns' tab is highlighted in red, while the others are grey. Below the tabs, there are sections for 'Manuals', 'Wiring Diagrams', 'Fault Code Troubleshooting Manual', 'Service Manuals', 'Owners Manuals', and 'Operation and Maintenance Manuals'. Each section contains a list of documents with their respective part numbers and update status (e.g., '[UPDATED] (2883567) ISB6.7 CM2350 B101 Service Manual').

When the text of the Campaign and TRP tabs is red, this means that there are active Campaigns and TRPs for this engine. If it appears grey, there are no active Campaigns or TRPs.

Campaigns and TRPs

Parts Catalog	Dataplate	Campaigns	TRPs	Product Announcements	ReCon	Related Information
Warranty Campaigns						
Number	Description				Status	
C1319	ISB CM2350 AND ISL CM2350 CALIBRATION CAMPAIGN				OPEN	

Parts Catalog	Dataplate	Campaigns	TRPs	Product Announcements	ReCon	Related Information
Temporary Repair Practices						
Number	Description				Status	
T1332	ISB/L CM2350 INSITE IMAGE RETURN				OPEN	

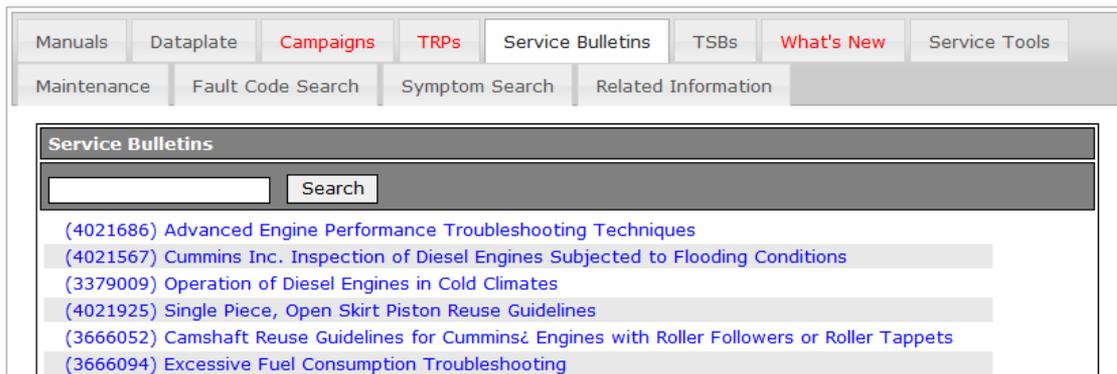
Click on the number to open a Campaign or TRP.

Once opened, the Campaigns and TRPs show details of the repair practices along with any pertinent information and a list of the ESNs that are covered.

Service Bulletins

Service Bulletins are documents that cover general topics such as Fuel for Cummins Engines, Oil for Cummins Engines, and Oil Analysis Recommendations. These documents are available for purchase by external customers and are also available in QSOL.

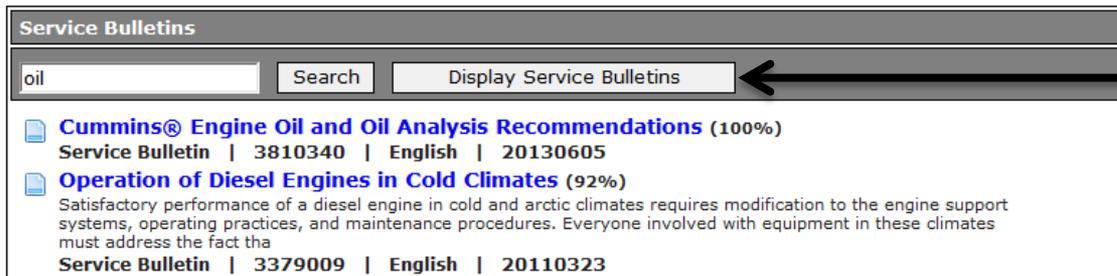
Engine Service Information (79538595 - ISX15 CM2250)



The screenshot shows a navigation menu with tabs for Manuals, Dataplate, Campaigns, TRPs, Service Bulletins, TSBs, What's New, and Service Tools. Below this is a search section for Service Bulletins with a search input field and a Search button. A list of search results is displayed, including:

- (4021686) Advanced Engine Performance Troubleshooting Techniques
- (4021567) Cummins Inc. Inspection of Diesel Engines Subjected to Flooding Conditions
- (3379009) Operation of Diesel Engines in Cold Climates
- (4021925) Single Piece, Open Skirt Piston Reuse Guidelines
- (3666052) Camshaft Reuse Guidelines for Cummins Engines with Roller Followers or Roller Tappets
- (3666094) Excessive Fuel Consumption Troubleshooting

Keyword searches can be used to find specific bulletins. After performing a search you can reset the search field by clicking here.



The screenshot shows search results for the keyword 'oil'. The search input field contains 'oil' and the Search button is visible. A callout arrow points to the 'Display Service Bulletins' button. The search results include:

- Cummins® Engine Oil and Oil Analysis Recommendations (100%)**
Service Bulletin | 3810340 | English | 20130605
- Operation of Diesel Engines in Cold Climates (92%)**
Satisfactory performance of a diesel engine in cold and arctic climates requires modification to the engine support systems, operating practices, and maintenance procedures. Everyone involved with equipment in these climates must address the fact that
Service Bulletin | 3379009 | English | 20110323

Technical Service Bulletins (TSBs)

Technical Service Bulletins (TSBs) are temporary documents that are used to inform users about product issues, new/obsolete parts or new product releases. These documents are not available to external customers and can only be found on QSOL.

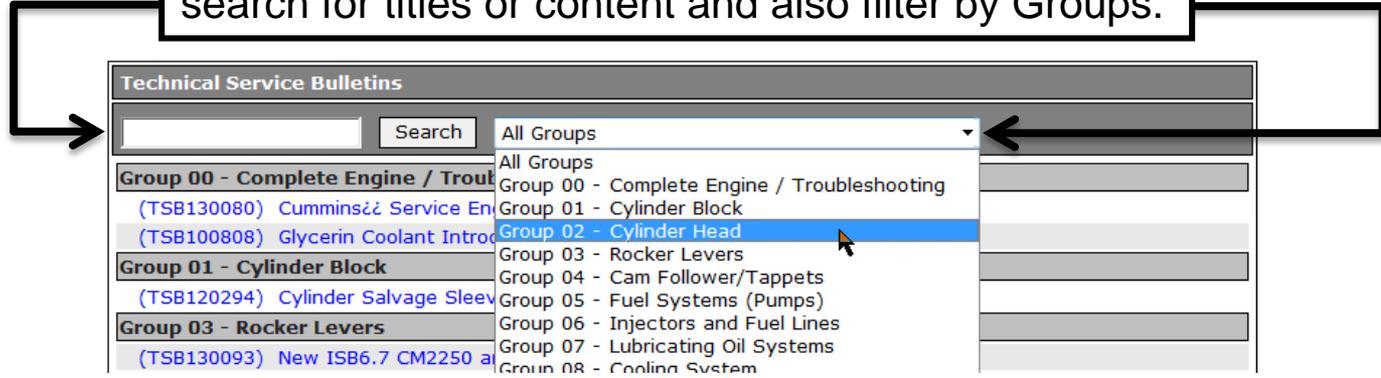
Engine Service Information (73472878 - ISB6.7 CM2350 B101)

Manuals	Dataplate	Campaigns	TRPs	Service Bulletins	TSBs	What's New	Service Tools
Maintenance	Fault Code Search	Symptom Search	Related Information				

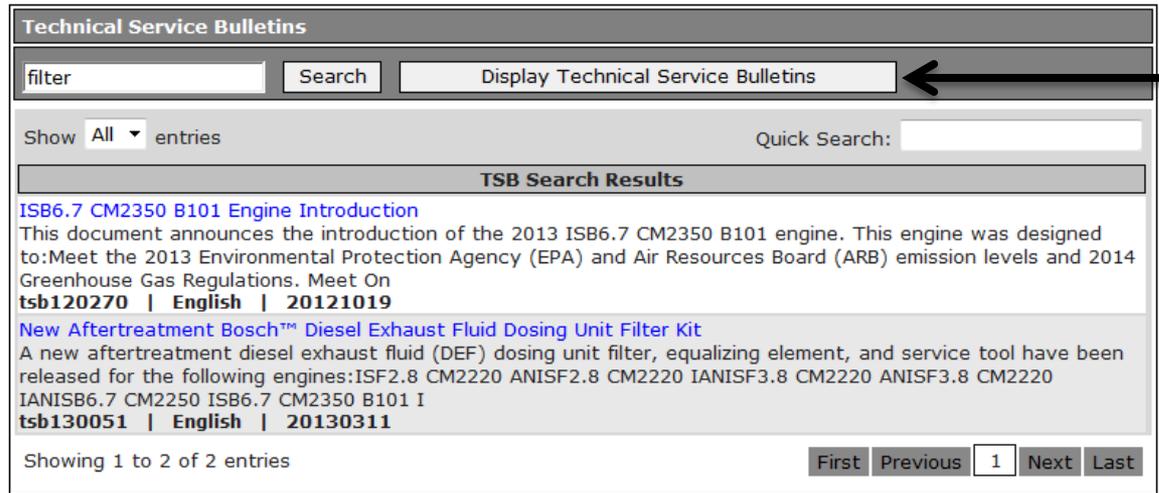
Technical Service Bulletins	
<input type="text"/>	Search <input type="text" value="All Groups"/>
Group 00 - Complete Engine / Troubleshooting	
(TSB130080) Cummins Service Engine Model Identification	
(TSB100808) Glycerin Coolant Introduction	
Group 01 - Cylinder Block	
(TSB120294) Cylinder Salvage Sleeve and Service Tools For 107 mm Bore	
Group 03 - Rocker Levers	
(TSB130093) New ISB6.7 CM2250 and ISB6.7 CM2350 B101 Engine Valve Cover	
Group 06 - Injectors and Fuel Lines	
(TSB130094) Injector Return Flow Specification Change for ISB CM2150, ISB6.7 CM2250, QSB6.7 CM2250, QSB6.7 CM2250 EC and ISB6.7 CM2350	

Technical Service Bulletins (TSBs)

TSBs are divided into groups similar to how Service Manuals are laid out. You can perform a keyword search for titles or content and also filter by Groups.



After performing a search you can reset the search field by clicking here.



The What's New mini tab lists recent changes to the publications that apply to the engine you have entered into QuickServe Online.

Click here to see the Change History for the manual listed.

Engine Service Information (73472878 - ISB6.7 CM2350 B101)

Manuals | Dataplat | **Campaigns** | TRPs | Service Bulletins | TSBs | **What's New** | Service Tools

Maintenance | Fault Code Search | Symptom Search | Related Information

What's New For All Engines: All

Document	History	Title	Date
2883565	[Change History]	(2883565) ISB6.7 CM2350 B101 Operation and Maintenance Manual	29-SEP-2012
4310800	[Change History]	(4310800) ISB6.7 CM2350 B101 Fault Code Troubleshooting Manual	25-JUL-2013
2883646	[Change History]	(2883646) Warranty Administration Manual	14-JUN-2013
4021290	[Change History]	(4021290) Warranty Administration Manual	14-JUN-2013
2883566	[Change History]	(2883566) ISB6.7 CM2350 B101 Owners Manual	13-SEP-2012
2883567	[Change History]	(2883567) ISB6.7 CM2350 B101 Service Manual	04-JUN-2013
3666255	[Change History]	(3666255) Warranty Failure Code Manual - Midrange Engines	02-AUG-2013

Choose "All" and click "Search" to see the recent publication changes to all engines.

This page shows all of the publication changes that have been made on QuickServe Online.

What's New Search

Documents

Doc Type	Filter by	
All	30 days	Search

Doc Num	Title
Date	Engines
C1280	(C1280) QSK38/50/60 MCERS Water Pump Weep Hole
14-AUG-2013	Engines: QSK38 CM850 MCERS, QSK50 CM850 MCERS, QSK60 CM850 MCERS
C1333	(C1333) QSK38/50/60 CM2150 Fuel System Warning Decal
14-AUG-2013	Engines: QSK19 CM2150 MCERS, QSK38 CM2150 MCERS, QSK50 CM2150 MCERS, QSK60 CM2150 MCERS
2883567	(2883567) ISB6.7 CM2350 B101 Service Manual
13-AUG-2013	Engines: ISB6.7 CM2350 B101
3666194	(3666194) ISB and QSB Electronic Control System Troubleshooting and Repair Manual
13-AUG-2013	Engines: ISB CM550, QSB3.9 30 CM550, QSB4.5 30 CM550, QSB5.9 30 CM550, QSB5.9 44 CM550
4021658	(4021658) ISL G CM2180 Fault Code Troubleshooting Manual
13-AUG-2013	Engines: ISL G CM2180
4310641	(4310641) ISX6.5 CM2350 X101 Service Manual

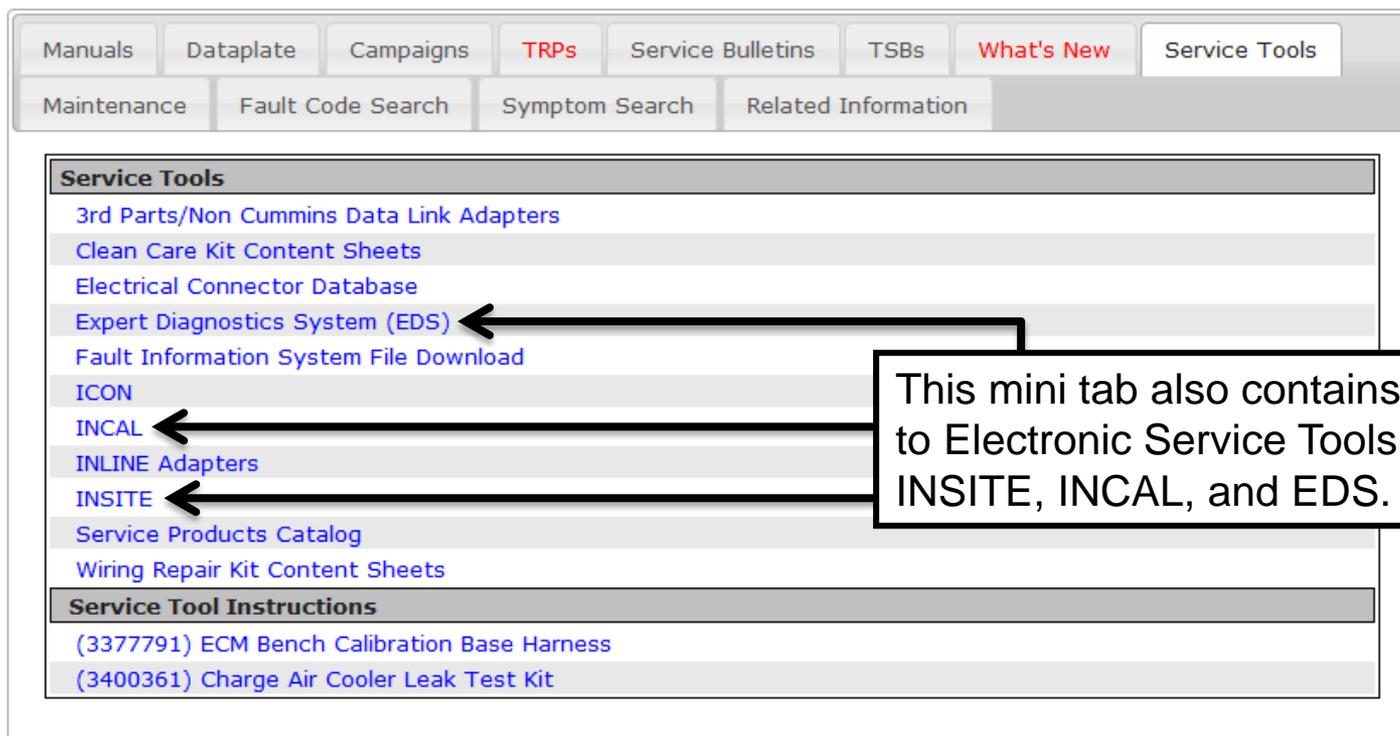
You can filter the list by Document Type and time period.

Click on the blue text to open a publication.

Service Tools

The Service Tools mini tab displays information about any Service Tools that may be required to carry out some service events for the ESN you are inquiring about.

Engine Service Information (79636796 - ISX15 CM2350 X101)



Manuals Dataplate Campaigns TRPs Service Bulletins TSBs What's New Service Tools

Maintenance Fault Code Search Symptom Search Related Information

Service Tools

- [3rd Parts/Non Cummins Data Link Adapters](#)
- [Clean Care Kit Content Sheets](#)
- [Electrical Connector Database](#)
- [Expert Diagnostics System \(EDS\)](#)
- [Fault Information System File Download](#)
- [ICON](#)
- [INCAL](#)
- [INLINE Adapters](#)
- [INSITE](#)
- [Service Products Catalog](#)
- [Wiring Repair Kit Content Sheets](#)

Service Tool Instructions

- [\(3377791\) ECM Bench Calibration Base Harness](#)
- [\(3400361\) Charge Air Cooler Leak Test Kit](#)

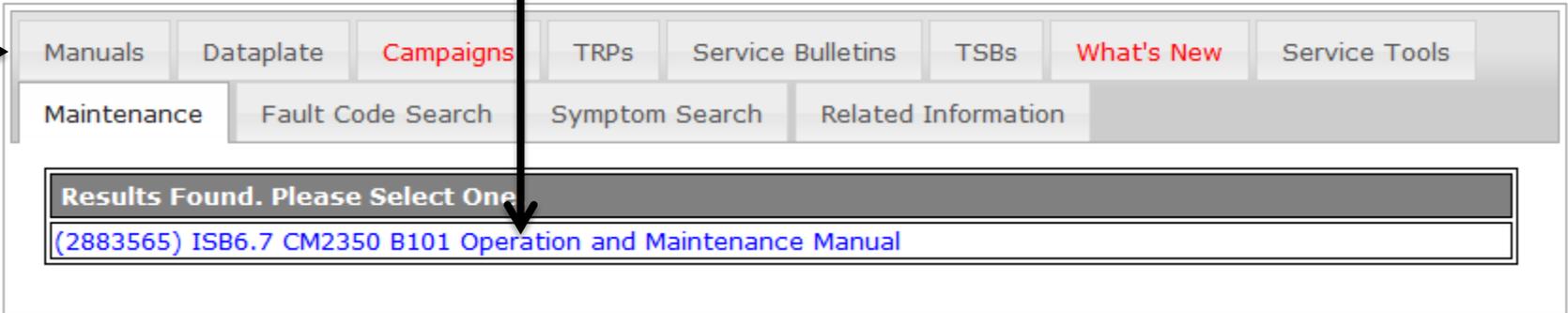
This mini tab also contains links to Electronic Service Tools like INSITE, INCAL, and EDS.

The Service Tools section displays the same links for all engines, while the Service Tool Instructions section shows tools that apply specifically to the ESN entered.

Maintenance Schedule

The Maintenance mini tab shows a link to the Maintenance Schedule located in the Operation and Maintenance Manual for the ESN that is entered in QSOL. Click the link to open the O & M Manual.

Engine Service Information (73472878 - ISB6.7 CM2350 B101)



The screenshot shows the 'Engine Service Information' page for ESN 73472878 - ISB6.7 CM2350 B101. The 'Maintenance' mini tab is selected, displaying search results for the Operation and Maintenance Manual. A red arrow points from the text box above to the 'Maintenance' tab, and another red arrow points from the text box below to the 'Manuals' tab.

Manuals	Dataplate	Campaigns	TRPs	Service Bulletins	TSBs	What's New	Service Tools
Maintenance	Fault Code Search	Symptom Search	Related Information				

Results Found. Please Select One

- [\(2883565\) ISB6.7 CM2350 B101 Operation and Maintenance Manual](#)

The complete manual can also be accessed by going to the Manuals mini tab.

If an engine has multiple active Fault Codes, the Engine Fault Code Analyzer can help you determine which one to troubleshoot first. Click on the Fault Code Search mini tab located under the main Service tab.

Engine Service Information (79637306 - ISX15 CM2350 X101)

Manuals | Dataplate | Campaigns | TRPs | Service Bulletins | TSBs | What's New | Service Tools

Maintenance | **Fault Code Search** | Symptom Search | Related Information

Engine Fault Code Analyzer | Engine Fault Code Search | SPN/FMI To Fault Codes

Enter all active and inactive fault codes logged in the last 25 engine hours. [Help ?](#)

	FAULT CODE	DESCRIPTION
Remove	1. <input type="text"/>	
Remove	2. <input type="text"/>	
Remove	3. <input type="text"/>	
Remove	4. <input type="text"/>	
Remove	5. <input type="text"/>	

Fault Code Search Tab

An ESN or Service Model Name has to be entered into QuickServe Online for the Fault Code Analyzer Tool to be used. Enter all active fault codes and any inactive fault codes that have been logged in the last 25 engine hours.

Once a fault code is entered, the Fault Code Analyzer Tool will display the fault code description.

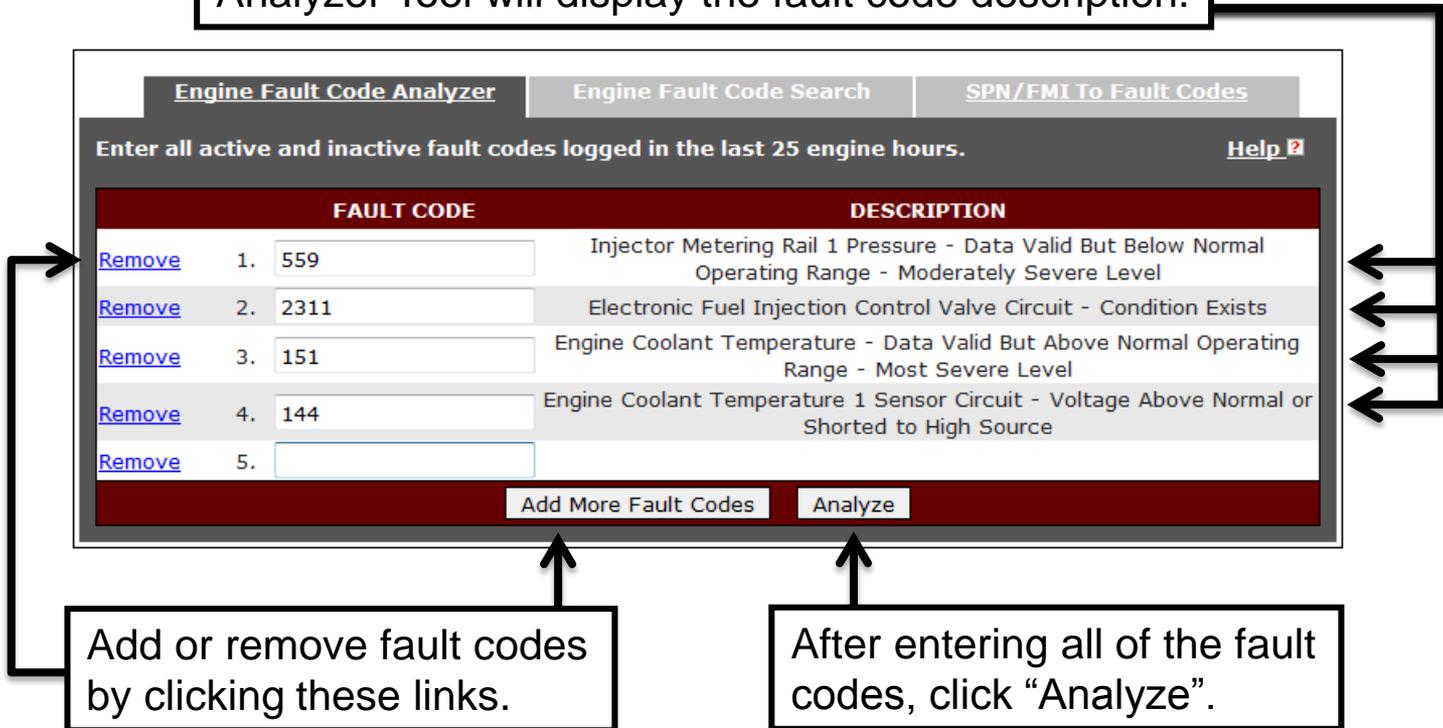
Engine Fault Code Analyzer Engine Fault Code Search SPN/FMI To Fault Codes

Enter all active and inactive fault codes logged in the last 25 engine hours. [Help ?](#)

FAULT CODE		DESCRIPTION
Remove	1. <input type="text" value="559"/>	Injector Metering Rail 1 Pressure - Data Valid But Below Normal Operating Range - Moderately Severe Level
Remove	2. <input type="text" value="2311"/>	Electronic Fuel Injection Control Valve Circuit - Condition Exists
Remove	3. <input type="text" value="151"/>	Engine Coolant Temperature - Data Valid But Above Normal Operating Range - Most Severe Level
Remove	4. <input type="text" value="144"/>	Engine Coolant Temperature 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source
Remove	5. <input type="text"/>	

Add or remove fault codes by clicking these links.

After entering all of the fault codes, click "Analyze".



Fault Code Search Tab

Fault Code Analyzer Tool will display the Root Fault Code and the Dependent Fault Codes. You should then troubleshoot each Root Fault Code one at a time in the order displayed.

ORDER	ROOT FAULT CODE	POSSIBLE DEPENDENT FAULT CODES
1	2311	559
2	144	151

Go Back Start Over

Click on the fault code to see the troubleshooting steps for that fault code.

To reset the search, click here.

The Dependant Fault Codes are codes that can be eliminated from the troubleshooting process by troubleshooting the Root Fault Codes.

Fault Code Search Tab

As you click on the fault codes, the links turn green to let you know which ones you've checked.

Engine Fault Code Analyzer Engine Fault Code Search SPN/FMI To Fault Codes

Enter all active and inactive fault codes logged in the last 25 engine hours. [Help ?](#)

ORDER	ROOT FAULT CODE	POSSIBLE DEPENDENT FAULT CODES
1	2311	559
2	144	151

Go Back Start Over

Click "Go Back" to jump back and add or remove fault codes.

Click here to clear the fault codes and analyze more.

Engine Fault Code Analyzer Engine Fault Code Search SPN/FMI To Fault Codes

Enter all active and inactive fault codes logged in the last 25 engine hours. [Help ?](#)

	FAULT CODE	DESCRIPTION
Remove	1. <input type="text" value="559"/>	Injector Metering Rail 1 Pressure - Data Valid But Below Normal Operating Range - Moderately Severe Level
Remove	2. <input type="text" value="2311"/>	Electronic Fuel Injection Control Valve Circuit - Condition Exists
Remove	3. <input type="text" value="151"/>	Engine Coolant Temperature - Data Valid But Above Normal Operating Range - Most Severe Level
Remove	4. <input type="text" value="144"/>	Engine Coolant Temperature 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source
Remove	5. <input type="text"/>	

Add More Fault Codes Analyze

You can use the Engine Fault Code Search tool to quickly find troubleshooting steps for a particular Fault Code.

Engine Service Information (79637306 - ISX15 CM2350 X101)

The screenshot displays the Cummins QuickServe Online interface. At the top, there is a navigation bar with tabs for Manuals, Dataplate, Campaigns, TRPs, Service Bulletins, TSBs, What's New, and Service Tools. Below this is a secondary navigation bar with tabs for Maintenance, Fault Code Search, Symptom Search, and Related Information. The main content area features three sub-tabs: Engine Fault Code Analyzer, Engine Fault Code Search (which is highlighted with a dashed border), and CPN/FMI To Fault Codes. Within the Engine Fault Code Search sub-tab, there is a search form with a text input field and a Search button. Two arrows point from the text box below to the input field and the Search button. Another arrow points from the text box above to the Engine Fault Code Search sub-tab.

When you enter the Fault Code and click "Search" you are automatically taken to the Fault Code overview page.

Fault Code Search Tab

You can use the SPN/FMI to Fault Code Tool to cross-reference SPN/FMI Codes with Cummins Fault Codes.

Enter a SPN and a FMI code and click "Search".

Engine Service Information (79637306 - ISX15 CM2350 X101)

Manuals Dataplate Campaigns TRPs Service Bulletins TSBs What's New Service Tools

Maintenance Fault Code Search Symptom Search Related Information

Engine Fault Code Analyzer Engine Fault Code Search **SPN/FMI To Fault Codes**

Enter an SPN and FMI combination to display the Cummins fault code number and description.

SPN Code: FMI Code:

Enter a Cummins fault code to display it's description.

Fault Code:

The equivalent fault code will appear here. Click "Search" to see a detailed summary of the fault code.

Fault Code Search Tab

After clicking “Search” you can see detailed information about the fault code including Description, reason that the fault code appears, possible effect it will have on the engine, and more.

Engine Fault Code Analyzer Engine Fault Code Search **SPN/FMI To Fault Codes**

Enter an SPN and FMI combination to display the Cummins fault code number and description.

SPN Code: FMI Code:

Enter a Cummins fault code to display it's description.

Fault Code:

Details for Cummins fault code: 2311

SPN	FMI	Lamp Color	Description
633	31	Amber	Electronic Fuel Injection Control Valve Circuit - Condition Exists

Reason

Electronic Fuel Injection Control Valve Circuit - Condition Exists. The fuel pump actuator circuit resistance is too high or too low, or an intermittent connection has been detected.

Effect

Possible reduced engine performance.

Component Location

The high-pressure fuel pump is mounted to the gear housing. The fuel pump actuator is mounted on the fuel pump. The fuel pressure sensor is mounted in the high pressure fuel rail. The fuel pressure relief valve is mounted on the high pressure fuel rail.

Circuit Description

The circuit is a pulse-width modulation (PWM) driver in the engine control module (ECM) that controls the fuel pump actuator. The actuator is grounded in the ECM. The actuator is normally open. The PWM duty cycle to the fuel pump actuator depends on the difference between desired rail pressure and sensed rail pressure.

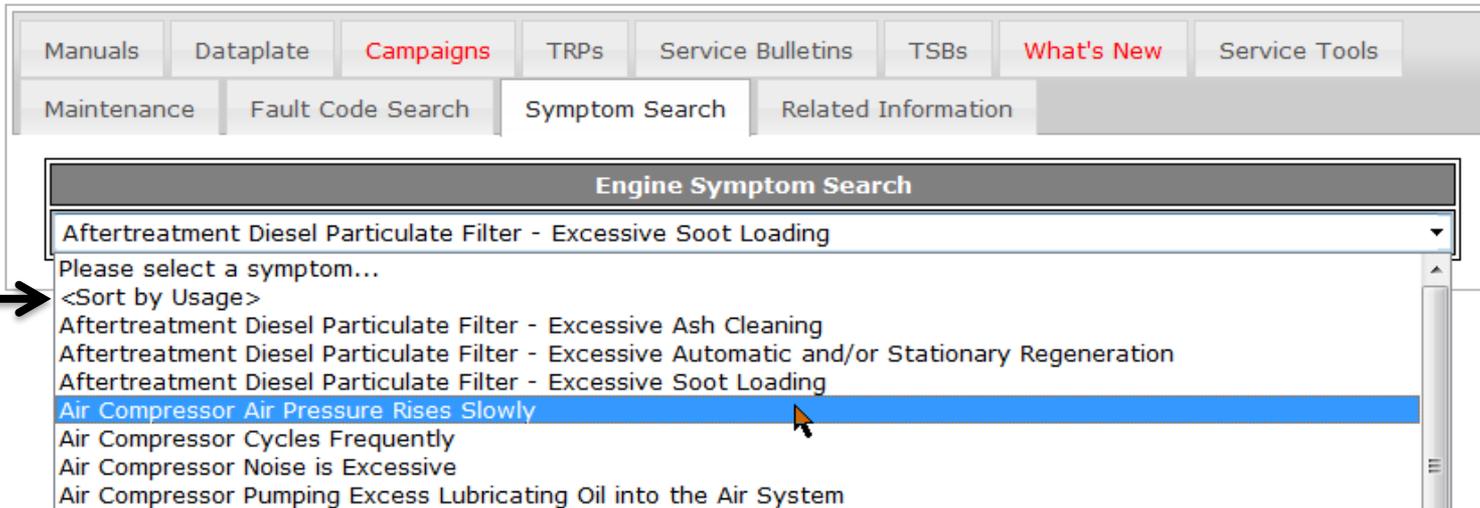
Troubleshooting Information

[Click Here To View The Complete Fault Code Information](#)

Click here to see the troubleshooting steps for this fault code.

You can use the Engine Symptom Search tool to find troubleshooting steps based on symptoms rather than Fault Codes.

Engine Service Information (73472878 - ISB6.7 CM2350 B101)



The screenshot shows the 'Engine Symptom Search' interface. At the top, there are navigation tabs: Manuals, Dataplate, Campaigns, TRPs, Service Bulletins, TSBs, What's New, and Service Tools. Below these are sub-tabs: Maintenance, Fault Code Search, Symptom Search, and Related Information. The 'Symptom Search' sub-tab is active. A dropdown menu is open, showing a list of symptoms. The selected symptom is 'Air Compressor Air Pressure Rises Slowly'. A mouse cursor is pointing at this option. An arrow from the text box below points to this selected option.

Engine Symptom Search
Aftertreatment Diesel Particulate Filter - Excessive Soot Loading
Please select a symptom...
<Sort by Usage>
Aftertreatment Diesel Particulate Filter - Excessive Ash Cleaning
Aftertreatment Diesel Particulate Filter - Excessive Automatic and/or Stationary Regeneration
Aftertreatment Diesel Particulate Filter - Excessive Soot Loading
Air Compressor Air Pressure Rises Slowly
Air Compressor Cycles Frequently
Air Compressor Noise is Excessive
Air Compressor Pumping Excess Lubricating Oil into the Air System

Select the symptom that you are looking for from the drop-down list and you will be automatically taken to the troubleshooting steps for that symptom. Alphabetical order is the default for the drop-down menu but you can sort by most used symptom trees by clicking here.

Related Information

The Related Information mini tab contains links to anything pertaining to Service content that doesn't fall under one of the categories of the other mini tabs. This includes things like Calibration Downloads, Service Work Order Information, and the Publications Catalog.

Engine Service Information (73472878 - ISB6.7 CM2350 B101)

Manuals	Dataplate	Campaigns	TRPs	Service Bulletins	TSBs	What's New	Service Tools
Maintenance	Fault Code Search	Symptom Search	Related Information				
Service Applications							
Calibration Downloads							
Cummins Westport Fuel Performance Specification							
DPF Restriction Test							
Gas Analysis Tool							
Marine Panel Firmware Updates							
Service Work Order Information							
SPN/FMI To Cummins Fault Code Cross-Reference							
World Wide Extended Coverage (WVEC)							
Service Documents							
Cummins Emission Solutions - Service Information							
Cummins OEM Account Service Support Contact List							
Cummins Global OEM Service Support Contact List							
Enhanced Parts Return Program							
ISX15 CM2250 CAL ID and CVN Data							
Policy Interface For Dealers							
Publications Catalog							
Regulatory Documents							
Service Advisor Complaint Prompt Sheets							
Technical Support Process - U.S./Canada Dealers							
Technical Support Process - U.S./Canada Distributors							
Warranty Pre-Authorization Guidelines							

