

Technical Service Bulletin Number
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TSB150105



Technical Service Bulletin

Subject

New Aftertreatment Selective Catalyst Reduction (SCR) Catalyst Part Numbers

Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

This document announces new aftertreatment Selective Catalyst Reduction (SCR) catalyst part numbers and supporting parts.

Product Affected

- ISB4.5 CM2350 B104
- ISB6.7 CM2350 B101
- ISB6.7 CM2350 B103
- ISL9 CM2350 L101

Aftertreatment SCR Catalyst Part Number Identification

- For information on identifying the aftertreatment SCR catalyst, see the corresponding Service Manual. Reference Procedure 100-001 in Section E.
- The aftertreatment SCR catalyst has three part numbers on the canister. The correct aftertreatment SCR catalyst part number taken from the third (or last) position **must** be used when referencing Table 1 below. See Figure 1 below.



Figure 1, Part Number Location on Aftertreatment SCR Catalyst Canister.

Description of Change

- Visually, the new aftertreatment SCR catalyst is the same as the obsolete aftertreatment SCR catalyst with the exception of a missing bung for the aftertreatment (SCR) intermediate NH₃ sensor that is no longer required.
- Notice in Figure 2 below that there are **only** two bungs on the new style aftertreatment SCR catalyst (right), rather than three bungs (left), which will account for the deletion of the aftertreatment SCR intermediate NH₃ sensor. This is the **only** physical difference between the obsolete and new versions of the aftertreatment SCR catalyst.
- See the cross reference below in Table 1 below to identify the correct aftertreatment SCR catalyst.

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Figure 2, Obsolete SCR Catalyst (left) and New SCR Catalyst (right)

- Notice in Figure 3 below, the obsolete aftertreatment SCR catalyst will have an aftertreatment SCR intermediate NH₃ sensor attached to the sensor table with a three-sensor wiring harness (left); whereas with a new aftertreatment SCR catalyst (right), there will be no aftertreatment SCR intermediate NH₃ sensor and a two-sensor wiring harness.
- When installing a new aftertreatment SCR catalyst, see the cross reference below in Table 2 to identify the correct replacement wiring harness.

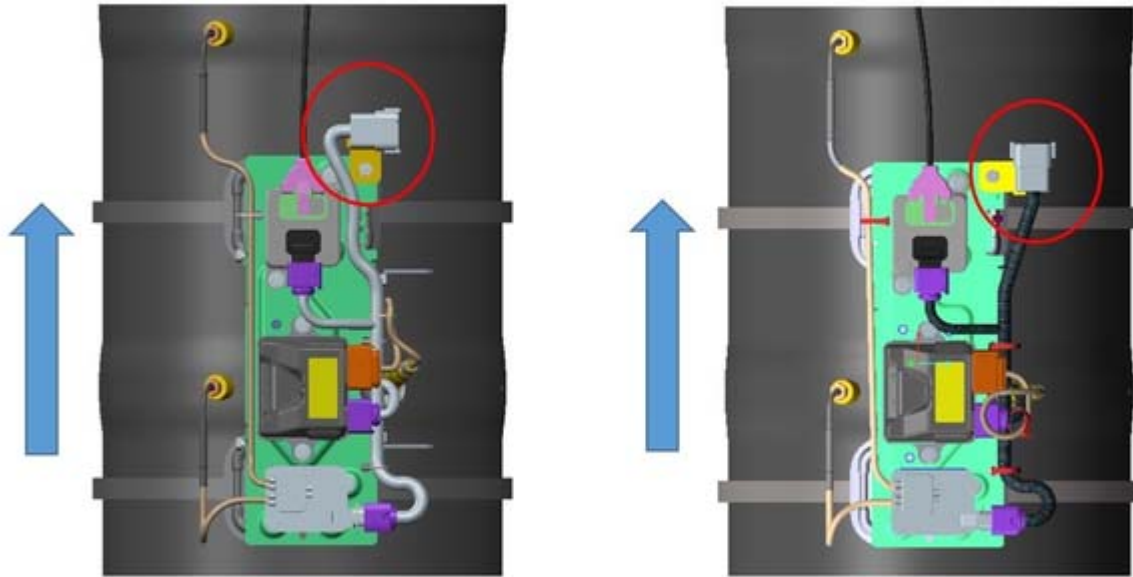
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Figure 3, Three Sensor Aftertreatment SCR Wiring Harness (left) and Two Sensor Aftertreatment SCR Wiring Harness(right)

- Figures 4 and 5 provide images to differentiate between the different SCR configurations when determining what engine harness to use.
- The horizontal and vertical nomenclature describes the orientation of how the SCR is installed in the equipment. The OEM wiring harness connectors are circled in the images; direction of exhaust flow is shown by the arrows.

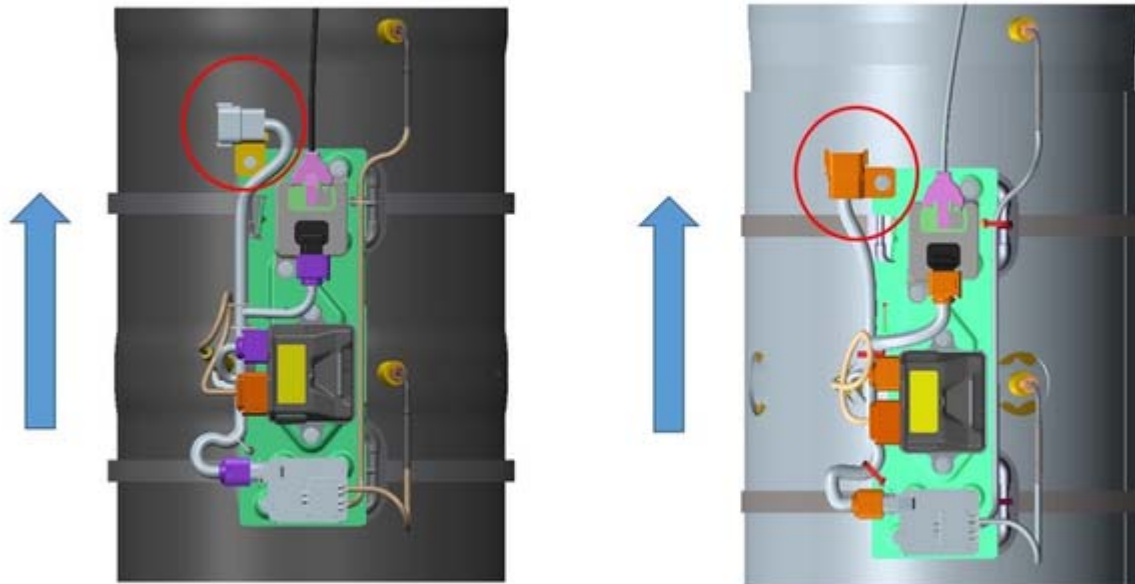
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Figure 4, Right-hand Vertical SCR (left) / Right-hand Horizontal SCR (right)

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Figure 5, Left-hand Vertical SCR (left) / Left-hand Horizontal SCR (right)

- When installing a new aftertreatment SCR catalyst, the Engine Control Module (ECM) calibration **must** be updated as well. Please see the cross reference table below in Table 3 (ISB) and Table 4 (ISL) below to identify the correct ECM base calibration.
- Prior to the ECM calibration installation, the new aftertreatment SCR catalyst **must** be verified, as per Figure 2.
- When calibrating the ECM, the new control parts list (CPL) and new ECM calibration base code **must** be recorded on an authorized change label, Part Number 5297400, and installed on the engine near the engine dataplate. Please see the cross reference in Table 3 (ISB) and Table 4 (ISL) below to identify the correct CPL.

Reason for Change

Product improvement.

Service Instructions

In the event of an aftertreatment SCR catalyst failure:

- Replace aftertreatment SCR Catalysts with appropriate part number, see Table 1 below.
 - Reference the Service Manual for the product affected. See Procedure 011-036 Aftertreatment Selective Catalytic Reduction (SCR) Catalyst in Section 11.
- Remove and discard NH3 sensor.
 - Reference the Service Manual for the product affected. See Procedure 019-479

Aftertreatment Selective Catalytic Reduction (SCR) Intermediate NH3 Sensor in Section 19.

- Replace three-sensor wiring harness with two-sensor wiring harness, see Table 2 below.
- Update ECM calibration to the latest ECM calibration revision, see Table 3 (ISB) and Table 4 (ISL).
 - Reference the Service Manual for the product affected. See Procedure 019-032 Engine Control Module Calibration Code in Section 19.
- Order new authorized change label, Part Number 5297400. Fill out authorized change labor sticker with new CPL, new ECM base code, distributor or dealer code, and the date. Campaign number section is to be left blank. Place completed new authorized change label near the engine dataplate. The ISB engine dataplate is located on the valve cover. The ISL engine dataplate is located on the front gear housing.

NOTE: When performing this action, there are instances where fault codes will become active.

Fault Code 3911: If this fault code occurs, the ECM calibration has **not** been updated, but the aftertreatment SCR catalyst has been changed. Please verify the ECM calibration is updated, as per Table 3 (ISB) and Table 4 (ISL).

NOTE: If the unit already contains a two-bung ECM calibration, the ECM calibration does not need to be updated.

Service Parts Availability

Table 1, Aftertreatment SCR Catalyst Part Numbers		
Part Description	Obsolete Part Number	New Part Number
Aftertreatment SCR Catalyst	4328751	4353085
Aftertreatment SCR Catalyst	4328811	4353844
Aftertreatment SCR Catalyst	4328959	4353842
Aftertreatment SCR Catalyst	4329056	4376615
Aftertreatment SCR Catalyst	4329456	4377741
Aftertreatment SCR Catalyst	4329536	4353854
Aftertreatment SCR Catalyst	4329546	4353841
Aftertreatment SCR Catalyst	4329710	4354071
Aftertreatment SCR Catalyst	4329722	4377448
Aftertreatment SCR Catalyst	4330177	4354073
Aftertreatment SCR Catalyst	4330178	4354075
Aftertreatment SCR Catalyst	4352850	4376633
Aftertreatment SCR Catalyst	4352852	4376631
Aftertreatment SCR Catalyst	4353003	4354077

Aftertreatment SCR Catalyst	4353064	4330159
Aftertreatment SCR Catalyst	4353066	4353840
Aftertreatment SCR Catalyst	4353068	4353843
Aftertreatment SCR Catalyst	4353070	4354052
Aftertreatment SCR Catalyst	4353072	4354062
Aftertreatment SCR Catalyst	4353814	4354069
Aftertreatment SCR Catalyst	4354267	4376731
Aftertreatment SCR Catalyst	4377176	4377454
Aftertreatment SCR Catalyst	5303809	4352984
Aftertreatment SCR Catalyst	5303869	4330154
Aftertreatment SCR Catalyst	5303871	4330155
Aftertreatment SCR Catalyst	5303873	4330156
Aftertreatment SCR Catalyst	5303889	4352986
Aftertreatment SCR Catalyst	5303891	4330157
Aftertreatment SCR Catalyst	5303921	4330158
Aftertreatment SCR Catalyst	5306223	4377737
Aftertreatment SCR Catalyst	5308311	4377017
Aftertreatment SCR Catalyst	5308316	4377013
Aftertreatment SCR Catalyst	5308318	4377009
Aftertreatment SCR Catalyst	5308320	4377011
Aftertreatment SCR Catalyst	5308323	4376930
Aftertreatment SCR Catalyst	5308324	4377747
Aftertreatment SCR Catalyst	5308361	4353819
Aftertreatment SCR Catalyst	5308363	4377007
Aftertreatment SCR Catalyst	5308365	4354130
Aftertreatment SCR Catalyst	5308367	4354134
Aftertreatment SCR Catalyst	5308389	4354138
Aftertreatment SCR Catalyst	5308391	4376603
Aftertreatment SCR Catalyst	5308393	4376593
Aftertreatment SCR Catalyst	5308397	4376625
Aftertreatment SCR Catalyst	5308399	4376645
Aftertreatment SCR Catalyst	5308403	4376641

	5308407	4376637
Aftertreatment SCR Catalyst	5308410	4376635
Aftertreatment SCR Catalyst	5308411	4376639
Aftertreatment SCR Catalyst	5308415	4354067
Aftertreatment SCR Catalyst	5308441	4354054
Aftertreatment SCR Catalyst	5308445	4376658
Aftertreatment SCR Catalyst	5308456	4376676
Aftertreatment SCR Catalyst	5308458	4376678
Aftertreatment SCR Catalyst	5308458	4376678
Aftertreatment SCR Catalyst	5308462	4354311
Aftertreatment SCR Catalyst	5308464	4354042
Aftertreatment SCR Catalyst	5308470	4354044
Aftertreatment SCR Catalyst	5308472	4354040
Aftertreatment SCR Catalyst	5308474	4376666
Aftertreatment SCR Catalyst	5308476	4376664
Aftertreatment SCR Catalyst	5308695	4377745
Aftertreatment SCR Catalyst	5308697	4377743
Aftertreatment SCR Catalyst	5308701	4377440
Aftertreatment SCR Catalyst	5308710	4353839
Aftertreatment SCR Catalyst	5308711	4393714
Aftertreatment SCR Catalyst	5308758	4376670
Aftertreatment SCR Catalyst	5308761	4376660
Aftertreatment SCR Catalyst	5309245	4354321
Aftertreatment SCR Catalyst	5309328	4376660
Aftertreatment SCR Catalyst	5309342	4376619
Aftertreatment SCR Catalyst	5309550	4376599
Aftertreatment SCR Catalyst	5309899	4377021
Aftertreatment SCR Catalyst	5309908	4376609
Aftertreatment SCR Catalyst	5309980	4377023
Aftertreatment SCR Catalyst	5310300	4354313
Aftertreatment SCR Catalyst	5310476	4354319
Aftertreatment SCR Catalyst	5310493	4377019

	5311256	4377015
Aftertreatment SCR Catalyst	5311480	4376605
Aftertreatment SCR Catalyst	5311709	4376575
Aftertreatment SCR Catalyst	5311860	4354315
Aftertreatment SCR Catalyst	5311936	4376623
Aftertreatment SCR Catalyst	5311940	4376577
Aftertreatment SCR Catalyst	5312117	4377749
Aftertreatment SCR Catalyst	5312177	4377751
Aftertreatment SCR Catalyst	5313092	4377739
Aftertreatment SCR Catalyst	5313571	4376597

Table 2, Wiring Harness Part Numbers		
Part Description	Previous 3-Sensor Wiring Harness	New 2-Sensor Wiring Harness
12V Right Hand Horizontal Harness	5301897 or 4377399	4377407
12V Left Hand Horizontal Harness	5301985 or 4377400	4377408
24V Right Hand Horizontal Harness	5301987 or 4377401	4377411
24V Left Hand Horizontal Harness	5301899 or 4377402	4377412
12V Right Hand Vertical Harness	5304060 or 4377403	4377409
12V Left Hand Vertical Harness	5304062 or 4377404	4377410
24V Right Hand Vertical Harness	5304061 or 4377405	4377413
24V Left Hand Vertical Harness	5304331 or 4377406	4377414

Table 3, ISB (All Displacements) CM2350 (B101, B103, and B104) ECM Base Calibrations and CPLs		
Existing ECM Base Code	New ECM Base Code	New CPL
DT90082	DT90443	CPL4784
DT90083	DT90447	CPL4786

DT90084	DT90445	CPL4784
DT90085	DT90355	CPL4782
DT90086	DT90352	CPL4782
DT90087	DT90353	CPL4782
DT90008	DT90357	CPL4783
DT90015	DT90358	CPL4783
DT90043	DT90359	CPL4783
DT90044	DT90360	CPL4783
DT90059	DT90361	CPL4783
DT90009	DT90364	CPL4784
DT90016	DT90365	CPL4784
DT90001	DT90366	CPL4783
DT90017	DT90367	CPL4783
DT90045	DT90368	CPL4783
DT90046	DT90369	CPL4783
DT90060	DT90370	CPL4783
DT90002	DT90373	CPL4784
DT90018	DT90374	CPL4784
DT90019	DT90384	CPL4783
DT90020	DT90385	CPL4783
DT90047	DT90386	CPL4783
DT90048	DT90387	CPL4783
DT90061	DT90388	CPL4783
DT90021	DT90391	CPL4784
DT90022	DT90392	CPL4784
DT90023	DT90393	CPL4783
DT90024	DT90394	CPL4783
DT90049	DT90395	CPL4783
DT90050	DT90396	CPL4783
DT90062	DT90397	CPL4783
DT90025	DT90400	CPL4784
DT90026	DT90401	CPL4784
DT90000		

	DT90402	CPL4783
DT90011	DT90403	CPL4783
DT90027	DT90404	CPL4783
DT90051	DT90405	CPL4783
DT90052	DT90406	CPL4783
DT90063	DT90407	CPL4783
DT90075	DT90408	CPL4783
DT90004	DT90411	CPL4784
DT90028	DT90412	CPL4784
DT90005	DT90413	CPL4785
DT90012	DT90414	CPL4785
DT90029	DT90415	CPL4785
DT90053	DT90416	CPL4785
DT90054	DT90417	CPL4785
DT90064	DT90418	CPL4785
DT90006	DT90419	CPL4786
DT90030	DT90420	CPL4786
DT90031	DT90421	CPL4785
DT90032	DT90422	CPL4785
DT90033	DT90423	CPL4785
DT90055	DT90424	CPL4785
DT90056	DT90425	CPL4785
DT90065	DT90426	CPL4785
DT90034	DT90427	CPL4786
DT90035	DT90428	CPL4786
DT90036	DT90429	CPL4785
DT90037	DT90430	CPL4785
DT90038	DT90431	CPL4785
DT90057	DT90432	CPL4785
DT90058	DT90433	CPL4785
DT90066	DT90434	CPL4785
DT90039	DT90435	CPL4785
DT90040		

	DT90436	CPL4785
DT90041	DT90437	CPL4786
DT90076	DT90438	CPL4786
DT90007	DT90439	CPL4785
DT90042	DT90440	CPL4785
DT90013	DT90441	CPL4786
DT90077	DT90442	CPL4786
DT90164	DT90362	CPL4783
DT90174	DT90363	CPL4783
DT90161	DT90371	CPL4783
DT90175	DT90372	CPL4783
DT90162	DT90389	CPL4783
DT90176	DT90390	CPL4783
DT90163	DT90398	CPL4783
DT90177	DT90399	CPL4783
DT90165	DT90409	CPL4783
DT90178	DT90410	CPL4783
DT90166	DT90375	CPL4783
DT90167	DT90376	CPL4783
DT90168	DT90377	CPL4783
DT90169	DT90378	CPL4783
DT90170	DT90379	CPL4783
DT90171	DT90380	CPL4783
DT90172	DT90382	CPL4784
DT90173	DT90383	CPL4784
DT90014	DT90354	CPL4782
DT90081	DT90356	CPL4782
DT90078	DT90444	CPL4784
DT90079	DT90448	CPL4786
DT90080	DT90446	CPL4784

Table 4, ISL9 CM2350 L101 ECM Base Calibrations and CPLs

Existing ECM Base Code	New ECM Base Code	New CPL
EB90001	EB90192	CPL4779
EB90002	EB90193	CPL4779
EB90031	EB90194	CPL4779
EB90042	EB90195	CPL4779
EB90023	EB90196	CPL4779
EB90024	EB90197	CPL4779
EB90032	EB90198	CPL4779
EB90043	EB90199	CPL4779
EB90051	EB90207	CPL4779
EB90005	EB90203	CPL4779
EB90006	EB90204	CPL4779
EB90033	EB90205	CPL4779
EB90044	EB90206	CPL4779
EB90007	EB90213	CPL4780
EB90008	EB90214	CPL4780
EB90034	EB90215	CPL4780
EB90045	EB90216	CPL4780
EB90010	EB90221	CPL4781
EB90009	EB90220	CPL4781
EB90052	EB90218	CPL4781
EB90014	EB90232	CPL4781
EB90013	EB90231	CPL4781
EB90025	EB90200	CPL4779
EB90026	EB90201	CPL4779
EB90035	EB90239	CPL4779
EB90046	EB90240	CPL4779
EB90015	EB90209	CPL4780
EB90016	EB90210	CPL4780
EB90036	EB90211	CPL4780
EB90047	EB90212	CPL4780
EB90027	EB90222	CPL4780
EB90000		

	EB90223	CPL4780
EB90037	EB90224	CPL4780
EB90050	EB90225	CPL4780
EB90017	EB90227	CPL4780
EB90018	EB90228	CPL4780
EB90038	EB90229	CPL4780
EB90048	EB90230	CPL4780
EB90019	EB90233	CPL4780
EB90020	EB90234	CPL4780
EB90039	EB90235	CPL4780
EB90021	EB90237	CPL4780
EB90022	EB90238	CPL4780
EB90029	EB90241	CPL4779
EB90030	EB90242	CPL4779
EB90041	EB90243	CPL4779
EB90049	EB90202	CPL4779
EB90149	EB90217	CPL4780
EB90150	EB90226	CPL4780
EB90003	EB90208	CPL4779
EB90012	EB90219	CPL4781

Part Structure

- The new aftertreatment SCR catalyst is **not** backward compatible.
- The existing aftertreatment SCR catalyst part numbers have been obsoleted and superseded by the new aftertreatment SCR catalyst part numbers.

Part Disposition

Obsolete part numbers in stock should **not** be used. Obsolete part numbers in stock should be returned for reimbursement.

Document History

Date	Details
2015-6-26	Module Created
2015-7-9	Non-Product Problem Solving (PPS)

2015-10-7	Removed statement, "The proper two-sensor wiring harness, see Table 2 below, must also be installed to prevent Fault Code 3911 from setting." as it does not apply. Also inserted EB90232 and EB90231 in the correct rows.
2016-3-8	Added Aftertreatment SCR Catalyst Obsolete Part Number 5308711 and New Part Number 4393714 to Table 1. Switched EB90220 and EB90221 in Table 4.
2016-5-9	Added Figures 3 and 4.
2016-6-13	Added part numbers starting with 4377* in Table 2 column labeled "Previous 3-Sensor Wiring Harness".
2016-7-5	Added note. Updated existing ECM base codes in Table 4.
2016-8-15	Added Aftertreatment SCR Catalyst Part Number Identification section.

Last Modified: 19-Aug-2016

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