




Drivetrain Malfunction (CCM 794) with Isolation Faults

New information provided by this revision is preceded by this symbol .

This Service Information bulletin supersedes SI B61 38 14 **dated April 2015**.

MODEL

I01 (i3 and i3 REx)

SITUATION

The Drivetrain Malfunction check control message (CCM 794) is displayed, either while driving or when starting up.

The following faults are stored in the vehicle:

- EME: 22280F and/or 222814
- SME: 21F0E3 and/or 21F0E4

When the CCM is present, there are no apparent drivability concerns. After allowing the vehicle to rest and then restart, the CCM typically does not reappear.

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CAUSE

The cause of an isolation fault is generally a resistance between HV+ or HV- and the shield/chassis ground, which is below a predetermined threshold.

The following procedure addresses these faults when caused by a defect in the cable between the HV battery and the EME, as well as when excess moisture is present inside the REx eMachine.

This moisture condenses and triggers the above-mentioned faults after a long REx runtime followed by rapid cooling.



PROCEDURE

1. Perform ISTA test plan ABL_DIT_AT6100_HVISO.

Is the fault present?

YES -this test plan uses process of elimination to pinpoint the component at fault.

NO - the test plan will state that isolation resistance is okay and the test plan will end.

Continue with the following procedure.

2. Check the index number of the high voltage cable between the HV battery and the EME.

Does this cable have an index of 02 or higher? See [SI B61 38 14 Attachment.pdf](#) for details.

YES– work through the test plan ABL_DIT_AT6100_HVISO.

NO - replace and re-run the test plan.

Note for ISTA 3.56.10: With this ISTA update, the REx drying procedure (described in the attachment to previous versions of this bulletin) is no longer necessary

UPDATE! **PARTS INFORMATION**

Part number 12 31 8 628 772 is blocked from ordering and requires a TC PuMA Case.

Part number	Description	Quantity
61 12 9 346 573	HV cable	1
12 31 8 628 772	REx eMachine	1 (only if required)

NOTE: If the REx eMachine must be replaced, refer to SI B00 03 06 to determine if a TC PuMA case is required prior to replacement.

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle/SAV Limited Warranty.

Defect Code:	12 31 90 82 00
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UPDATE! **Main Work**

Labor Operation:	Labor Allowance:	Description:
00 62 222	Refer to KSD2	Check and replace the HV cable
Or:		
00 62 223	Refer to KSD2	Check the HV cable; check and replace the REx eMachine (includes wheel alignment check and adjustment)

UPDATE! **Plus Work**

Labor Operation:	Labor Allowance:	Description:
00 62 896	Refer to KSD2	Check and replace the HV cable

Or:		
00 62 897	Refer to KSD2	Check the HV cable; check and replace the REx eMachine (includes wheel alignment check and adjustment)

ATTACHMENTS

View PDF attachment [SIB613814 Attachment](#).

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