



## SIB 12 27 16 DIAGNOSING NON FUNCTIONING eDRIVE

2020-04-08

This Service Information Bulletin (Revision 6) replaces SI B12 27 16 **dated October 2018**.

### What's New :

- Procedure: 12 Volt battery Energy Diagnosis test plan statement added.
- Warranty

### MODEL

E-Series	Model Description
F15 PHEV	X5 xDrive40e Sports Activity Vehicle
F30 PHEV	330e iPerformance Sedan
G12 PHEV	740e xDrive iPerformance Sedan
G30 PHEV	530e iPerformance and 530e xDrive iPerformance Sedans
I12	i8 Coupe
I15	i8 Roadster

### SITUATION

- Vehicle will not go into “eDrive”
- No pertinent electric drivetrain fault codes to assist with diagnosis
- “eDrive” may be greyed-out in the Central Information Display (CID) and is not selectable

### CAUSE

- MSA deactivation
- 12 Volt battery failure
- Intelligent Battery Sensor (IBS) failure

### CORRECTION

MSA Activation (brand new vehicles or vehicles with extremely low mileage).

In other cases, “eDrive” does not function because of a faulty 12 Volt battery or IBS, but the battery sensor does not set any faults to indicate the problem. The procedure steps below (starting at Step 2) provide a general diagnostic plan for these situations.

### PROCEDURE

**Important Warning:** Only properly trained personnel, who have passed all applicable technical training courses, should perform any maintenance or repairs on any Hybrid or Electric Vehicle. Work performed by unqualified persons may result in severe injury, or damage to the vehicle. Additional information may be found in REP 61 00... “Observe safety instructions when handling electric vehicles”.

Note: In extreme temperatures (both hot and cold) “Max eDrive” may not be available, and drive range may be displayed as “---”. In these situations, bringing the battery to a more nominal temperature will resolve the symptoms. This can be accomplished by pre-conditioning the battery or simply running the vehicle to allow it to regulate the battery temperature itself. This is normal operating strategy.

1. Check MSA activation.

**Is MSA activated on the vehicle?**

**YES** - go to Step 2.

**NO** - follow one of the two methods below to activate MSA, depending on which is more appropriate.

#### **MSA Activation - Service Module:**

- A. Select the service functions in ISTA NEXT.

**Path:**

- Drive
- Engine electrical system
- Automatic engine start-stop function
- Deactivating the MSA installation mode

B. Run the following test module:

ABL-DIT-AS1365\_MSAMOM: Deactivate installation mode.

**MSA Activation – Test Module:**

A. Access the test module via the function structure and call up the perceived symptom in ISTA NEXT.

**Path:**

- Drive
- Hybrid vehicle
- Current fault patterns
- Electric driving not possible

B. Run the following test module:

ABL-DIT-AW1365\_EDRV\_MSA\_DEAK – MSA or electric driving not possible.

2. Perform a Midtronic test on both 12 volt batteries and replace as indicated.

**Note: Prior to replacing 12 Volt batteries, remember to perform the Energy Diagnosis test plan (See SI [B61 13 05](#)) to diagnose and identify if there are any other underlining condition that also need to be addressed on the vehicle.**

3. Recheck eDrive.

**Is “eDrive” functioning correctly?**

**YES** - release the vehicle.

**NO** - go to next step.

4. Check the wiring, connections, pins etc. of the IBS on the main and auxiliary 12 Volt batteries.

**Were any wiring problems found?**

**YES** - repair any wiring issues found. Go to next step.

**NO** - replace the IBS on the auxiliary battery. Go to next step.

5. Recheck eDrive.

**Is “eDrive” functioning correctly?**

**YES** - release the vehicle.

**NO** - go to next step.

6. Replace the IBS on the main 12 Volt battery.

7. Recheck eDrive.

**Is “eDrive” functioning correctly?**

**YES** - release the vehicle.

**NO** - submit a PuMA case for further assistance.

**WARRANTY INFORMATION**

This Service Information bulletin provides technical, diagnostic and repair-related information.

**Eligible and Covered Work/Repairs**

When used to repair a verified defect in materials or workmanship, the repair procedure information provided in this bulletin is covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

To submit a claim, please following the established and applicable warranty policy and procedures (Labor/Part/Sublet – bulk materials) that apply to the repair being performed.

Refer to AIR for the corresponding defect code, flat rate labor operations (including diagnosis) and the flat rate unit (FRU) allowances.

Only one Main labor operation code can be claimed per repair visit.

Work time (WT) labor operation codes require individual punch times and explanations on the repair order and in the claim comments section.