



SIB 12 03 19

2019-12-30

ENGINE DOES NOT START BELOW FREEZING TEMPERATURES

This Service Information Bulletin (Revision 1) replaces SI B12 03 19 **dated February 2019**.

What's New (Specific text highlighted):

- Engine designation correction
- Parts availability
- Warranty

MODEL

F22 (2 Series Coupe) with B46O, B58M	F23 (2 Series Convertible) with B46O, B58M	F30 (3 Series Sedan) with B46O, B58M	F31 (3 Series Sports Wagon) with B46O
F32 (4 Series Coupe) with B46O, B58M	F33 (4 Series Convertible) with B46O, B58M	F34 (3 Series Gran Turismo) with B46O, B58M	F36 (4 Series Gran Coupe) with B46O, B58M
G01 (X3 Sports Activity Vehicle)	G02 (X4 Sports Activity Coupe)	G12 (7 Series Sedan) with the B58M	G20 (3 Series Sedan) with the B46D
G29 (Z4 Roadster) with the B46D	G30 (5 Series Sedan) with the B46D, B46O, B58M	G32 (640i xDrive Gran Turismo) with the B58M	

Produced through the end of February 2019.

SITUATION

The engine will not start at temperatures below freezing. The starter does not turn and engage.

This Check Control (CC) message is displayed: "Not possible to start engine."

Once the entire vehicle has warmed up either in the workshop or outside (temperatures above freezing), the engine can be started again. At that point, the fault can no longer be reproduced in the workshop.

Any of the following fault memory entries are possible:

Fault code:	Control module:	Fault code text:
930730	CAS	KL50L driver: Current overload
804095	FEM20	KL50L driver: Current overload
804095	BDC	Engine does not start while starter motor is operating: Current overload in KL50L driver
33AE00	DME (G20, G29 only)	Starter solenoid, overload protection: Current interruption for starter engagement

CAUSE

Condensation may form inside the starter motor after a drive while the powertrain is cooling off. If the ambient outside temperature falls below freezing, a layer of ice may form on the starter's internal electrical contacts. The ice acts as an insulator, preventing electrical current flow through the contacts.

Once the temperature rises above freezing, the ice layer melts and the starter motor works normally. As a result, it is often not possible to detect the source of the fault.

High fluctuations of the ambient temperature increase the risk of moisture formation.

Application table:

Engine:	Body:	Brand:
B46O	G01, G02, G30	Bosch or SEG
B46D	G20, G29	Valeo
B58M	G01, G02, G12, G30, G32	Bosch or SEG

Note: There are no problems with the vehicle battery or other start-inhibiting causes, such as fuel system or EWS; etc. faults.

CORRECTION

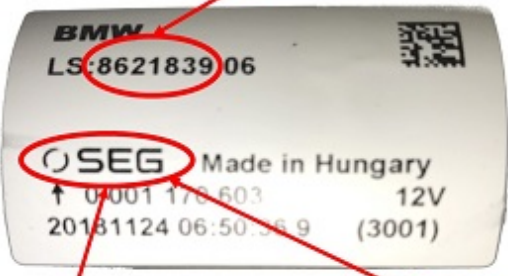
Revised starters are being phased into production between December 2018 and February 2019 depending on the engine and vehicle plant.

1. Identify the starter brand and change index per the manufacturer's label on the starter housing.
2. Replace the starter motor per the Procedure.

PROCEDURE

B46O, B58M engines:

1. Perform vehicle diagnosis with ISTA.

<p style="text-align: center;">Part Number</p> 	<ol style="list-style-type: none"> 2. Check which starter motor is installed: <ul style="list-style-type: none"> • SEG label shown, the BOSCH label follows the same layout. • If a Bosch or SEG starter motor is installed, replace it with a Denso unit Part Number 12 41 8 577 010 (confirm the P/N in ETK). <p>Refer to Repair Instructions 12 41 020 "Removing and installing/replacing the starter motor".</p> <p>Original starter P/N for reference:</p> <p>B46O:</p> <ul style="list-style-type: none"> • 12 41 8 621 838 or • 12 41 8 621 839 <p>B58M:</p> <ul style="list-style-type: none"> • 12 41 8 621 840
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3. Note: The noise damping plug P/N 12 41 8 571 350 must also be installed into the replacement Denso starter.

4. Clear the fault memory and reassess the vehicle.

- If possible, park vehicle outdoors overnight if the temperature forecast will be below freezing. Next day, confirm normal starter operation and engine starting.

B46D engine (Valeo starter):

1. Perform vehicle diagnosis with ISTA

	<ol style="list-style-type: none"> 2. Check which starter motor is installed: <ul style="list-style-type: none"> • Valeo label shown to the left.
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- If the original change index is as indicated below, replace the starter
- Refer to Repair Instructions 12 41 020 “Removing and installing/replacing the starter motor”

Engine:	Original starter P/N:	Affected original change index:
B46D	12 41 8 671 503	Thru and including AI03
B46D	12 41 8 671 504	Thru and including AI02
B46D	12 41 8 588 898	Thru and including AI07

Replacement starter P/N (confirm via ETK):	Change index with starter revisions:
12 41 8 693 976	As of AI04
12 41 8 693 977	As of AI03
12 41 8 588 902	As of AI08

3. Clear the fault memory and reassess the vehicle.

If possible, park vehicle outdoors overnight if the temperature forecast will be below freezing. Next day, confirm normal starter operation and engine starting.

PARTS INFORMATION

Obtain the part numbers for your specific vehicle by entering the chassis number in ETK which takes into account specific equipment and/or options.

The starter motor and noise dampening plug are now available for ordering.

Part Number	Description	Quantity
Refer to ETK	Exchange* starter motor	1
12 41 8 571 350	Noise damping plug (only in conjunction with Denso starter motor)	1

*Applies to vehicles with “in-service” dates (DCSnet Warranty Vehicle Inquiry).

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks or the BMW Certified Pre-Owned Program.

Defect Code:	1241001100	Starter motor temporary failure
Labor Operation	Description	Labor Allowance
00 00 006	Performing vehicle test (with vehicle diagnosis system – checking faults) (Main work)	Refer to AIR

Or:		
00 00 556	Performing vehicle test (with vehicle diagnosis system – checking faults) (Plus work)	Refer to AIR
And, as necessary:		
61 00 006	Performing vehicle diagnosis – test module	Work time (WT)
And/or:		
12 00 009	Troubleshooting	Work time (WT)
And:		
12 41 520	Replace starter motor (Plus work)	Refer to AIR

If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead of 00 00 006.

Refer to AIR for the corresponding flat rate unit (FRU) allowances.

Work time labor operation codes 61 00 006 and 12 00 009 are not considered Main labor operations; however, both do require individual punch times and explanations on the repair order and in the claim comments section.