

SIB 61 15 22

RECALL 22V-541: HIGH-VOLTAGE BATTERY

This Service Information Bulletin (Revision 4) replaces SI B61 15 22 dated November 8, 2022.

What's New:

- Parts section quantities
- Parts section added note regarding "as required" hardware
- Some Claim Information content has been reformatted

MODEL

| E-Series | Model Description | Production Date |
|----------|----------------------------------|--------------------------------------|
| 120 | iX Sports Activity Vehicle (SAV) | November 10, 2021 – October 21, 2022 |

AFFECTED VEHICLES

Vehicles which require this Recall Campaign to be completed will show it as "Open" when checked either in AIR, the "Service Menu" of DCSnet (Dealer Communication System), ISPA Next or Warranty Vehicle Inquiry.

BMW AG is conducting a Voluntary Safety Recall (effective July 21, 2022) on a small number of Model Year 2022 - 2023 BMW iX SAV vehicles that were produced between November 10, 2021 and October 21, 2022.

Affected vehicles are not to be driven or charged and to be parked away from any buildings.

SITUATION

During supplier production, the high-voltage battery may not have been produced to specifications. A short-circuit could occur which could lead to a thermal event. The affected high-voltage battery cell module will be replaced.

We will be turning VINs green "Remedy Available" based on parts availability. The BMW Customer Relations department will contact the appropriate dealer to have them place a Recall IDS ticket for the parts for a specific vehicle. Then Customer Relations will assist in scheduling an appointment based on the arrival of the parts. It is essential that the allotted IDS part goes to the assigned vehicle.

CAUSE

Some high-voltage battery modules may not have been produced to specifications.

CORRECTION

Removal and replacement of affected high-voltage cell modules.

PROCEDURE

Important Warning for Working on the High-Voltage (HV) systems on BMW Group vehicles:

Only properly trained personnel, who passed all applicable HV Technical Training Courses, should perform repairs which require disconnecting, or removal of High Voltage battery components on any Hybrid or Electric Vehicle. Work performed on High Voltage systems by unqualified persons may result in severe injury or damage to the vehicle. Additional safety information is found in Repair Instruction 61 00... "Observe safety instructions when handling electric vehicles".

Additional Information:

Scheduled Maintenance, or Quality Certification 1 (Pre-Delivery Inspection) on Electric or Hybrid vehicles does not require HV technical training.

Prior to disconnecting, or the removal of any HV component, the HV system needs to be disabled and secured (by means of the HV Disconnect Switch) by a properly trained technician, who has a minimum HV Qualification level after completing the Technical Training Course ST1824 (Alternative Drive Part 1). Once the vehicle's HV system is disabled (the "Blitz" - lightning bolt icon displayed in instrument cluster, see below), a technician without HV Certification may remove a HV component (e.g., EH Heater, EKK Compressor, EME Control Unit, et.), except for the High Voltage Battery.



High Voltage Battery removal and rework can be performed <u>ONLY</u> by a HV Specialist Technician (certified by the Technical Training Course ST1825 – Alternative Drive Part 2), <u>AND</u> with a HV Battery Certification level corresponding to a specific Electric or Hybrid vehicle (e.g., to repair GEN4 battery of G05 PHEV, certification from Technical Training Course "ST2006 – SP44 HV Battery" is required).

Therefore, to perform this SIB 61 15 22 a GEN5 battery Certification is required from Technical Training Course "ST2205 Generation 5 High-voltage" class).

BMW recommends NOT to drive the vehicle NOR charge the high-voltage battery until all repair work below to remedy the fault has been completed.

The steps below must be followed precisely:

1. Please perform the **cell module read out** test plan in ISTA to determine the serial numbers and locations of the high-voltage cell modules installed in the vehicle.

Diagnostic path:

Vehicle management > Service function > Electric drive > High-voltage battery unit > High-voltage battery unit: Read out stored serial numbers ABL

The "High-voltage battery unit: Read out stored serial numbers" test plan has been updated to identify the high-voltage cell modules affected by this campaign and their location in the high-voltage battery. The update will be included in ISTA version 4.38.1x, available as of October 21, 2022.

Note:

If the test plan is not yet available at the time of the repair Or the test plan was inconclusive in identifying the affected modules, please submit a TSARA case titled "Gen 5 HV Battery cell module ID process" for assistance.

Please do not start the recall or submit a TSARA case if the status of the campaign is NOT Green, as there is not yet a "Remedy Available" for this vehicle.

2. The high-voltage battery must be discharged prior to removal to an average **cell voltage** of 3.51V using the ISTA test plan below, **before** the high-voltage battery is opened and the defective modules are removed.

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Diagnostic path:

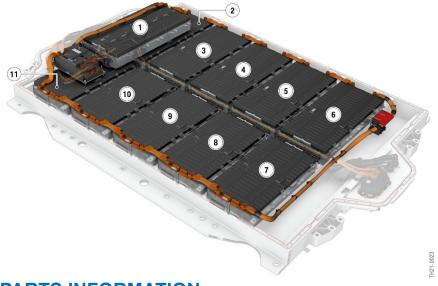
Vehicle management > Service function > Electric drive > High-voltage battery unit > High-voltage battery unit discharged to a defined state of charge (SOC) ABL.

Note:

The High-voltage battery unit discharged to a defined state of charge (ABL) service function is ONLY available if the high-voltage battery temperature is between 15°C and 35°C (59 to 95 F).

3. Replace the defective high-voltage cell modules using repair instructions **61 27 703** to **61 27 877** depending on the affected cell module location.

I20 xDrive50/xDrive60 - SE10 HV Battery module locations shown below-



PARTS INFORMATION

Note: Please order the "as required" hardware based on the module you are replacing.

| Part Number | Description | Quantity |
|---------------|------------------------------------|----------------------|
| 07 14 9487466 | Screw (12x1.5x50 10.9) | 18 |
| 61 27 9487465 | Screw (12x1.5x100 10.9) | 10 |
| 31 11 6899302 | Multi-purpose bolt (10x45 ZNS3) | 14 |
| 61 27 9487464 | Screw | 8 |
| 51 16 1881149 | Expanding rivet | 6 |
| 61 27 9468425 | Screw | 94 |
| 07 14 8838288 | Sealing screw (M8x28) | Order as required |
| 61 27 9468423 | Housing seal | 1 |
| 61 27 9454855 | Screw | Order as required |
| 33 32 6775040 | Hex bolt with washer (M14x1.5x148) | 2 |
| 61 27 9893951 | Screw (M8GFX46-10.9) | Order as required |
| 61 27 9454854 | Screw | Order as required |
| 61 27 9893948 | ASA combination bolt (M8x84-10.9) | Order as required |

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| Depending on the availability | | |
|-------------------------------|---------------------------------------------|---------|
| 61 27 8846469 | Double cell module for high-voltage battery | Up to 5 |
| 61 27 8846470 | Double cell module for high-voltage battery | Up to 6 |
| Or: | | |
| 61 27 8838260 | Double cell module for high-voltage battery | Up to 5 |
| 61 27 8838259 | Double cell module for high-voltage battery | Up to 6 |

Recalled Part Retention

Recalled parts that are removed from BMW vehicles cannot be used for resale! The recalled parts are the property of BMW NA.

Your center is responsible for the proper identification, storage, and documentation of these parts. They must be held in a secure retention area until notification of claim payment is made by BMW NA through DCSnet.

Please DO NOT return these recalled High Voltage (HV) battery modules directly to the WPRC or through the current HV Battery return process.

Please refer to the following document for the procedure that applies to returning these Recalled HV Battery Modules:

• Bulletin #: C-2-0407-0603_HV-Battery_Recall_Return_Process

And, for the latest related training, refer to:

• Bulletin #: B-2-0322-0301_HV-Battery_Recall_Training

For more information refer to CenterNet: "Menu>BMW>Aftersales>Business Development & Marketing Portal>Batteries>HV Training Module".

CLAIM INFORMATION

Reimbursement for this Recall will be via normal claim entry utilizing the relevant work package, the additional work labor operation for the applicable FRU allowance and the part numbers listed above that apply.

| Plus work (+) | Completion before the first vehicle delivery to a customer or the vehicle is already in the workshop |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Main work | The vehicle arrives at your center and this Recall shows open (No other Main work will be performed or claimed during this workshop visit) |

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

| Work Pkg | Labor Operation | Description | Labor Allowance |
|----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| # 1 | 00 72 878 | Removing and installing high-voltage battery unit, and removing/installing lid for high-voltage battery unit (Includes 61 27 900 - High-voltage battery unit final test, draining and topping up the coolant circuit) (Plus work) | 75 FRU |

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| Or: | | | |
|-----|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| # 2 | 00 72 297 | Removing and installing high-voltage battery unit, and removing/installing lid for high-voltage battery unit (Includes 61 27 900 - High-voltage battery unit final test, draining and topping up the coolant circuit) (Main work) | 76 FRU |

Only one of the flat rate labor operation codes listed above can be used for claim submission and reimbursement. Also, only one Main work flat rate labor operation code can be claimed per workshop visit.

Additional Work with Labor Operation 00 72 878 (WP 1) or 00 72 297 (WP 2)

Note: Claim labor operation 00 72 298 one-time only for the applicable total FRU allowance that applies. Itemize the total work time (WT) FRU allowanced claimed on the RO and in the claim comments.

| Labor Operation | Labor Description | Labor Allowance |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 00 72 298 | Only when the test module "High-voltage battery unit: Read out stored serial numbers" is not available: Please submit a TSARA case titled "Gen 5 HV Battery cell module ID process" for assistance. Perform Vehicle Test (Includes 00 00 556/61 21 528) and run the HV battery discharge procedure | 7 FRU |

Then, after the test module becomes available for the vehicle being repaired:

| Labor Operation | Labor Description | Labor Allowance |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 00 72 298 | Perform the cell module read out test plan in ISTA to determine the serial numbers and locations of the high-voltage cell modules affected by this Recall (Includes 00 00 556/61 21 528) and run the HV battery discharge procedure | 7 FRU |

And, as instructed above, and as applicable with the repair below that applies:

| A. 00 72 298 – Cell Module 1 Only | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|
| Labor Description | Labor Allowance | |
| Replacing cell module 1 | 11 FRU | |
| And: | | |
| Additional work with pressure test cooling system high-voltage battery unit Associated work (coolant drained) (to high-voltage battery unit) (One-time) | 4 FRU | |
| Total labor allowance (A) | 15 FRU | |

Or:

| B. 00 72 298 – Cell Modules Cell Modules 1, 2, 11, 3, 10 | | |
|----------------------------------------------------------|-----------------|--|
| Labor Description | Labor Allowance | |
| Replacing cell module 1 | 11 FRU | |
| Or: | | |
| Removing and installing cell module 1 10 FRU | | |

And:

| Labor Description (Additional work) | Labor Allowance |
|-------------------------------------------------------------------------|-----------------|
| Preliminary work of removing and installing the retaining frame for cel | Il module 9 FRU |
| 1 and SME (Associated work) (Cell modules 2, 3 10 and 11) (One-ti | ime) |

And:

| Labor Description - Replace | Labor Allowance | Labor Description - Replace | Labor Allowance | Both |
|--------------------------------|-----------------|-----------------------------|--------------------|--------|
| Cell module 2 | 7 FRU | Cell module 11 | 7 FRU | 14 FRU |
| And/or: | | | | |
| Cell module 3 | 9 FRU | Cell module 10 | 9 FRU | 18 FRU |

And:

| Labor Description (Additional after work) | Labor Allowance |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Additional work with pressure test cooling system high-voltage battery unit Associated work (coolant drained) (to high-voltage battery unit) (One-time) | 4 FRU |
| Total labor allowance range (B) | 30 FRU to 58 FRU |

Or:

| A. 00 72 298 – Cell Modules Cell Modules 4, 9, 5, 8, 6, 7 | | | | |
|-----------------------------------------------------------|-----------------|-----------------------------|--------------------|--------|
| Labor Description - Replace | Labor Allowance | Labor Description - Replace | Labor Allowance | Both |
| Cell module 4 | 14 FRU | Cell module 9 | 14 FRU | 28 FRU |
| And/or: | | | | |
| Cell module 5 | 15 FRU | Cell module 8 | 14 FRU | 29 FRU |
| And/or: | | | | |
| Cell module 6 | 14 FRU | Cell module 7 | 14 FRU | 28 FRU |

And:

| Labor Description (Additional after work) | Labor Allowance |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Additional work with pressure test cooling system high-voltage battery unit Associated work (coolant drained) (to high-voltage battery unit) (One-time) | 4 FRU |
| Total labor allowance range (C) | 18 FRU to 89 FRU |

Or:

| D. 00 72 298 – B and C, up to 10 Cell Modules as applicable | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|
| Labor Description | Labor Allowance | |
| Claim the sum of the FRU amounts that apply to the cell modules replaced along with the required additional after work (4 FRU for the Pressure Test, one-time). | As noted (D) | |

Or:

| E. 00 72 298 – All Cell Modules (11) | |
|-----------------------------------------------------------------------------|-----------------|
| Labor Description | Labor Allowance |
| Replacing all cell modules | 104 FRU |
| And: | |
| Additional work with pressure test cooling system high-voltage battery unit | 4 FRU |
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| Associated work (coolant drained) (to high-voltage battery unit) | |
|------------------------------------------------------------------|---------|
| Total labor allowance (E) | 108 FRU |

Claim Repair Comments

Only reference this SIB number, the work package (Pkg) number performed, and cell modules replaced by their reference number in the RO technician notes and the claim comments (For example: B61 15 22 WP 1, Cell modules 2, 4, 5), unless otherwise required by State law.

Sublet – Bulk Materials (RO and Claim Comments Required)

| Sublet Code 4 | Up to \$100.00 | Reimbursement for the repair-related bulk materials (Do not use the BMW part numbers for claim submission) |
|------------------|----------------|------------------------------------------------------------------------------------------------------------|
|------------------|----------------|------------------------------------------------------------------------------------------------------------|

Sublet reimbursement calculation for claiming the applicable repair-related bulk materials (BMW part numbers) is at the dealer net price amount for the quantities used plus your center's handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section

Alternative Mobility Solution (AMS) for Vehicle Owners (RO and Claim Comments Required)

This Recall repair qualifies for Alternative Mobility Solution (AMS) expense reimbursement, claim this item under the Defect Code noted above as follows:

Sublet Code 2 - Itemize the AMS sublet amount on the repair order and in the claim comment section.

Please refer to <u>SI B01 29 16</u> for additional information.

Reimbursement of Prior Customer-Pay Repairs (TREAD Act)

Based on the issue and the age of the Affected Vehicles being addressed by this Safety Recall Campaign, a reimbursement request for a qualifying prior customer-pay repair is not likely.

However, if you do receive a reimbursement request from a customer for a prior repair that may qualify, please contact the Warranty department (include a legible copy of the invoice) through IDS by selecting Coverage, Policy, Coding Questions and Mileage Corrections. The Warranty department will review and respond to your inquiry accordingly.

FEEDBACK REGARDING THIS BULLETIN

| Technical Feedback To submit feedback for the technical topics of this bulletin: Submit your feedback in the rating box at the top of this bulletin | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Warranty Feedback | To submit feedback for the CLAIMS section of this bulletin: Submit an IDS ticket to the Warranty Department, or use the chat available in the Warranty Documentation Portal | |
| Parts Feedback | To submit feedback for the PARTS section of this bulletin: Submit an IDS ticket to the Parts Department | |

Supporting Materials

<u>picture_as_pdf</u> B611522 Recall Notice.pdf <u>picture_as_pdf</u> C_2_0322_0301_HV_Battery_Recall_Training.pdf <u>picture_as_pdf</u> B611522_2022-MY2022-2023-G26BEV-i20-HV-Battery-FAQ-(21Jul2022).pdf

SAFETY RECALL NOTICE

To: All Center Operators, Sales Managers, Service Manager, Parts Manager and Warranty Processor

RE: Recall 22V-541: High-Voltage Battery – B61 15 22

BMW AG is conducting a Voluntary Safety Recall (effective July 21, 2022) on a small number of Model Year 2022 - 2023 BMW iX SAV vehicles that were produced between December 2, 2021 and June 30, 2022.

Affected vehicles are not to be driven or charged and to be parked away from any buildings.

Please be reminded that it is a violation of federal law (The Safety Act) for you to sell, lease or deliver any new motor vehicle covered by this notification until the recall repair has been performed. This means that centers may not legally deliver new motor vehicles to consumers until they are fixed or use/sell replacement equipment/parts subject to this recall. Note also that substantial civil penalties apply to violations of the Safety Act.

Also, you should not sell, lease or deliver any Certified Pre-Owned or used vehicles subject to a safety recall until the repair is completed.

Please follow any special instructions that we provide to you for the return or disposition of recall parts.

We appreciate all your assistance with this Recall.

| Bulletin #: C-2-0322-0301 | | 🛛 Take Note 🛛 🖾 Tak | e Action |
|--------------------------------------------------------------|-----------------|----------------------------------------------------------------|---------------------|
| Retail Operator | Sales Pre-Owned | Business Manager | Parts & Accessories |
| 🗆 General Manager | Sales New Car | ⊠ Service | Administration |
| Name: Cesar Ortiz | | Phone Number: 201-571-5143 | |
| Title: Hazardous Materials Training for HV Battery Recall | | Source: Aftersales Business Development & Technical Service | |
| Date: 03.8.2022 | | Supersedes: B-2-0321-0301 | |



HAZARDOUS MATERIALS TRAINING FOR HV BATTERY RECALLS

TAKE NOTE

- RECALL 20V-601, (B61 23 20) & (B61 21 20) and RECALL 20V-490 (B61 17 20); HIGH-VOLTAGE BATTERY RECALL will be referred to in this document as HV Battery Recalls. HV Battery Recalls require Centers to ship dangerous goods/hazardous materials (DG/HM).
- Center employees preparing shipments of recalled battery modules must be trained in accordance with US DOT Hazardous Materials Regulations (HMR).
- Training materials are attached to DCS Message & will be hosted in CenterNet after DCS expires. For DGIS subscribers, the materials can also be accessed on the DGIS Homepage. Training content includes general, safety and security awareness as well as function-specific material that references battery modules and packaging applicable to HV Battery Recalls.
- A training acknowledgement letter will be used to communicate to BMW the names of the employee(s) who complete this training. **ITAP**, the HV recall battery recovery services provider, will request a copy of this letter before arranging Center shipments.
- Recalled parts that are removed from BMW vehicles cannot be used for resale! The recalled parts are the property of BMW NA. Your Center is responsible for the proper identification, storage, and documentation of these parts. They must be held in a secure retention area until notification of claim payment is made by BMW NA through DCSnet.

TAKE ACTION

- Have designated DG/HM employee(s) review training materials and complete included test.
- Using included answer key, grade test(s) to confirm employee understands how to perform the functions outlined in training materials.
- Complete one training acknowledgement letter with the names of each employee who successfully completed training and return to the BMW Dealer Services Group via IDS Parts Logistics US>Returns/Claims/Quality>Other prior to initiating recall shipments.

DETAILS

RECALL:

High voltage battery modules are classified as damaged, defective, or recalled (DDR) lithiumion batteries. Shipments of recalled batteries require special packaging, and employees preparing packages must have applicable regulatory compliance training.

KEY REMINDERS:

Acknowledgement letter must be returned to BMW before battery shipments can be initiated.

LEGAL REQUIREMENTS:

Certain legal requirements must be fulfilled to tender hazardous materials for transportation. These requirements include, but are not limited to:

- Centers must have *at least* one hazmat employee trained according to US DOT regulations (<u>49</u> <u>CFR, Part 172, Subpart H</u>) to prepare recalled battery shipments.
- Lithium ion batteries must be packaged, marked, labeled, and documented in accordance with applicable requirements of <u>49CFR, Parts 100-185, the Hazardous Materials Regulations</u>. This information can be found in above referenced training and supplemented by instructional documents provided by ITAP.
- A separate communication will provide packaging and reverse logistics details. ITAP will provide module packaging kits and guidance for assembling and closing the packages. ITAP will also coordinate reverse logistics to their recovery location.
- ITAP will provide hazmat shipping papers to Centers once modules are packaged and prepared for shipment.
 - **DO NOT USE DGIS** to create hazmat shipping papers.
 - US DOT regulations require all **hazmat shipping papers** (e.g. bills of lading/BOLs) to be **retained** and accessible **for two years** after the date of shipment (49 CFR 172.201(e)).
- Emergency response phone number and information will also be provided by ITAP for module shipments.
- The Center is exclusively responsible for ensuring compliance with all current US DOT hazardous materials transportation regulations (49CFR, Parts 100-185).
- The Center will be responsible for all fines or penalties resulting from improper shipment of hazardous material to ITAP.

PREREQUISITE FOR HV BATTERY RECALL SHIPMENTS:

- Centers are required to submit acknowledgement of completion of DDR lithium battery training to BMW before shipping any recalled modules.
- Acknowledgement letter must be scanned and sent to the Dealer Services Group via IDS Parts Logistics US>Returns/Claims/Quality>Other
- Centers are required to submit their training acknowledgement form to ITAP when scheduling their first pickup.

MORE QUESTIONS?

Training files are hosted in CenterNet Via:

Menu>BMW>Aftersales>Business Development & Marketing Portal>Batteries>HV Training Module

Aftersales Business Development Contacts:

| Name | Phone | Email | Title |
|---------------|--------------|-------------------------|-----------------------------------------------|
| Cesar Ortiz | 201-571-5143 | Cesar.S.Ortiz@bmwna.com | Chemical & Battery Program Manager |
| Jimmy Cox | 201-307-4324 | James.JC.Cox@bmwna.com | Chemical, Battery & Oil Program Sales Manager |
| Joachim Pusch | | Joachim.Pusch@bmwna.com | Aftersales Business Development Manager – |
| | 201-540-4055 | | Service and Parts |

Safety Recall 22V-541 High-Voltage Battery Model Year 2022-2023 BMW iX, i4 Issue Date: 07/21/2022

Q1. Which BMW Group models in the US are potentially affected by this Safety Recall? A small number of Model Year 2022-2023 BMW iX and i4 models in the US, produced between November 2021 and June 2022, are potentially affected.

Q2. What is the specific issue?

The high-voltage battery manufacturer may not have produced the battery to specifications. As a result, a short-circuit could occur and lead to a thermal event.

Q3. Why are other models / vehicles not included in this Safety Recall? Other models have been manufactured with a high-voltage battery that has been produced to specifications.

Q4. How did BMW Group become aware of the issue? BMW Group became aware of the issue through our quality control procedures.

Q5. <u>Can I continue to drive my vehicle</u>?

No, please do not drive your vehicle until it is repaired.

Q6. <u>Can I charge my vehicle</u>? No, please do not charge your vehicle until it is repaired.

Q7. Should I park my vehicle outside and away from structures? Yes, please park your vehicle outside and away from structures.

Q8. How will I be informed of this Safety Recall?

Potentially affected customers are being contacted by phone and email, and arrangements are being made for the Safety Recall to be performed. Alternate transportation will be accommodated. You can locate your nearest authorized BMW center at <u>www.bmwusa.com/dealer</u>

To ensure BMW has the most up-to-date contact and vehicle information, owners should register their vehicle at <u>www.bmwusa.com/myBMW</u>. Registration is free and will give them access to other information specific for their BMW vehicle.

Q9. How and when will my vehicle be repaired?

The affected battery cell modules will be replaced. Owners will be notified again as soon as the remedy is available.