

# SIB 32 01 24

## SERVICE ACTION: i20 STEERING GEAR REPLACEMENT

2024-03-28

Please perform the procedure outlined in this Service Information on all affected vehicles before customer delivery. In the event the customer has already taken delivery of the vehicle, please perform the procedure the next time the vehicle is in the shop if the campaigns have a status of remedy available. Otherwise, please release the vehicle.

│ □ │ THIS REPAIR IS MOBILE FRIENDLY
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### **MODEL**

<b>E-Series</b>	Model Description	Production Date
i20	iX Sports Activity Vehicle	November 23, 2021 to October 21, 2022

## **AFFECTED VEHICLES**

- Vehicles which require this campaign to be completed will show it as "Open" when checked either in AIR, AWP, Campaign Summary, or Warranty Vehicle Inquiry.
- Please make sure you check your dealer inventory as soon as possible. You can see a list of affected vehicles in Inventory Campaign Details (ICD) under ROSS.

## **SITUATION**

When starting, a Check Control message will be displayed ("Steering behavior. Drive slowly and have this checked by the nearest Service Provider") with a noticeable reduction in power steering support when maneuvering.

## **CAUSE**

A faulty capacitor installed in the Electric Power Steering (EPS) gear.

# **CORRECTION**

Replace the EPS.

## PROCEDURE

Replace the EPS as per REP32 13 572 "Replace electrical steering box".

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".

Prior to disconnecting, or the removal of any HV component, the HV system needs to be disabled and secured (by means of the HV Service Disconnect Switch and lock out) by a properly trained HV technician, who has a minimum HV Qualification level after completing the Technical Training Course "ST2324 High Voltage Drivetrain Systems" which as of 1/2023\* includes ST1824 Alternative Drive Part 1.

\* Note: As of January 2023, the HV component portion of the "ST2205 Generation 5 High-voltage class" (<u>except for the High Voltage Battery</u>) has been merged into "ST2324 High Voltage Drivetrain Systems".

Up to Generation 4 Vehicles- Once the vehicle's HV system is disabled (the "Blitz" - lightning bolt icon is 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.), <u>except for the High</u> <u>Voltage Battery</u>.

For Generation 5 Vehicles however, the specific vehicle training is required to diagnose, remove and service any HV component and it is NOT allowed for non HV certified technicians to work on the high voltage system.

High Voltage Battery removal and rework can <u>ONLY</u> be performed by a High-Voltage Certified Technician with a HV Battery Certification level corresponding to a specific Electric or Hybrid vehicle, for example:

To repair GEN4 HV battery of G05 PHEV a certification from Technical Training Course "ST2006 – SP44 HV Battery" or equivalent ST1825 – Alternative Drive Part 2 is required (or as of 1/2023 the equivalent "ST 2325 for High Voltage Battery Systems"). And

To repair A GEN5 HV battery the Technical Training Course "ST2205 Generation 5 High-voltage class" is required or as of 1/2023\* the equivalent "ST 2325 for High Voltage Battery Systems".

\*Note: As of January 2023, the "ST2205 Generation 5 High-voltage stand-alone class" has been merged into "ST2324 for High Voltage Drivetrain Systems" and "ST2325 for High Voltage Battery Systems."

# PARTS INFORMATION

Use and invoice the part numbers listed below.

Part Number	Description	Quantity
32 10 5 B35 7F4	Steering gear, electric EPS	1
07 11 9 905 400	Hexagon bolt with washer (M6x25-ZNNIV SI)	1
07 14 6 898 283	Hex bolt (12x1.5x70 ZNS3)	4
32 30 6 778 609	Torx bolt (M8X33)	1
31 30 6 865 951	Torx screw with collar (M12x1.75x50)	4
32 13 6 751 292	Hose clamp (D= 67.8 – 71.0)	2
33 30 6 787 062	Combination nut (M14x1,5-10ZNNIV)	2
31 11 6 899 302	Multi-purpose bolt (10x45 ZNS3)	14
61 27 9 487 465	Screw (12X1.5X100 10.9)	4
37 10 6 789 678	Hex nut with flange (M12x1.5-10-ZNS3)	2
83 23 8 849 305	Grease FB-1 (100 gr / 3.53 oz)	Shop supply

# **CLAIM INFORMATION**

Vehicle Programming and Encoding

During this workshop visit, the affected vehicle may also show one or more programming and encoding Technical Campaign repairs open, the programming and encoding procedure may only be invoiced one time.

After replacing the Electric Power Steering (EPS) gear, select this open Technical Campaign to perform and submit for updating the vehicle to a required I-level, or higher when applicable (Includes labor operation codes 00 00 006/556, 61 21 528 and 61 00 730).

Please be sure to also perform any additional before and/or after work (including attaching labels) as required by the other open campaigns on the vehicle. Close any remaining open programming and encoding Campaign repairs as outlined in the corresponding Service Information Bulletin.

As determined by the above, reimbursement for this Service Action will be via normal claim entry utilizing the applicable work package information below and the part numbers listed above that apply.

### Repair Code: 0032540300 I20 Replace steering gear

Below are the special flat rate labor operation code choices for this action.

### Completion before the first vehicle delivery to a customer or the vehicle is already in the workshop.

Work Pkg	Labor Operation	Description (Plus work)	Labor Allowance
# 1	00 75 895**	Replace the steering gear, programming and encoding the vehicle control units, includes Carrying out vehicle test <b>(00 00</b> <b>556/61 21 528)</b>	As applicable
Or:			
#2	00 75 897**	Replace the steering gear (Programming and encoding the vehicle control units was performed in conjunction with <b>another</b> <b>campaign/repair during the same</b> <b>workshop visit)</b>	As applicable

Or:

The vehicle arrives at your center and this Service Action shows open (No other Main work will be performed or claimed during this workshop visit).

Work Pkg	Labor Operation	Description (Main work)	Labor Allowance
# 3	00 75 304**	Replace the steering gear, programming and encoding the vehicle control units, includes Carrying out vehicle test <b>(00 00</b> <b>006/61 21 528)</b>	As applicable
Or:			
# 4	00 75 305**	Replace the steering gear (Programming and encoding the vehicle control units was performed in conjunction with <b>another</b> <b>campaign/repair during the same</b> <b>workshop visit</b> )	As applicable

Only one Main work flat rate labor operation code can be claimed per workshop visit.

## Associated Work Procedures (\*\*Included)

The flat rate labor operation codes listed above also includes:

- Commissioning of electromechanical steering gear (EPS) / initialization,
- Checking alignment (Kinematics Diagnosis System wheel alignment with ride height measurement without loading the vehicle), with
- · Adjusting toe-in on front axle, and

And:

### Other Additional Associated Work

Labor Operation	Description (Associated work – Work Time - WT)	Labor Allowance
00 75 968	Additional work to adjusting rear axle, and when applicable, renewing eccentric screws and/or activating integral active steering (HSR).	Up to 15 FRU WT (See below)

For the other additional Associated Work above:

- Adjusting rear axle (10 FRU WT), or
- Adjusting rear axle and renewing with eccentric screws (14 FRU WT), and/or
- Additional work for integral active steering (HSR) (When applicable, 1 FRU WT)

## BMW Group's AIR Application Resource for Flat Rate Labor Operation Codes

To obtain the corresponding flat rate unit (FRU) allowance information from the BMW Group AIR application resource, start by entering the Chassis Number (the last seven (7) characters of the VIN, select the applicable Model if two or more vehicle choices show), or enter the full VIN (17 characters), click on the "Search" button. Next, click on the "Flat Rate Units" button and enter the flat rate labor operation code in the field to the right, click "Search" to display the Flat Rate Unit Group detail choices.

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

This Service Action qualifies for Alternative Mobility Solution (AMS) expense reimbursement, claim this item under the Repair Code in this bulletin as follows:

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

Please refer to SI B01 29 16 for additional information.

### Vehicle Programming and Encoding – Additional Work (RO and Claim Comments Required)

This procedure automatically reprograms and encodes any vehicle control modules that do not have the latest software llevel.

If one or more control modules fail during the reprogramming procedure, claim the required consequential repair work procedures to address this issue (including performing the IRAP Control Unit Recovery first as required, refer to the SIB in AIR) under the Repair Code in this bulletin together with the corresponding labor operation codes and their flat rate unit (FRU) allowance(s), including the diagnosis\* that applies.

Please explain the additional work procedures that were performed (The why and the what) on the repair order and in the claim comments.

For covered repairs that address control module failures that occurred prior to performing this reprogramming procedure, claim this work with the Repair Code listed in AIR together with the corresponding labor operation codes and their flat rate unit (FRU) allowance(s), including the diagnosis\* that applies.

(\*) Based on which one applies to your center, please refer to **SI B01 01 20 or B01 07 20** for the applicable procedure for documenting, claiming, and explaining, on the RO and in the claim comments, your diagnosis work time (WT), job/repair work time (WT), and the vehicle repairs your center performed, unless otherwise required by State law.

# FEEDBACK REGARDING THIS BULLETIN

Technical Feedback	To submit feedback for the technical topic of this bulletin: Submit your
	feedback in the rating box at the top of this bulletin

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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