

smart BR451 EV - Diverse fault messages in instrument cluster

Topic number	LI54.18-P-063337
Version	3
Design group	54.18 Cable harnesses
Date	07-19-2017
Validity	smart BR451 EV electric drive
Reason for change	Extension of fault code C212B16
Reason for block	

Complaint:

Diverse CAN errors and 12 V power supply fault

Cause:

Chafe mark in wiring harness in the area of the right rear spring tower and/or right rear engine support.
Examples of possible chafe marks can be seen in the attached photos in this document.

Attachments	
File	Description
Bereich Unterboden hinten rechts.JPG	Right rear area with potential chafe marks on wiring harness
Scheuerstelle Motorträger.jpg	Chafe mark on right rear engine support
Scheuerstelle Federbein hinten rechts.JPG	Chafe mark on right rear suspension strut
Scheuerstelle Federbein hinten rechts zoom.JPG	Chafe mark on right rear suspension strut
Scheuerstelle MRA.jpg	Chafe mark on residual engine heat utilization system at rear right

Remedy:

- (1) Expose wiring harness in this area and check for damage.
- (2) If the wiring harness is damaged, it can be repaired using the wiring harness repair methods described in the WIS.
- (3) Reference WIS Document AR00.19-P-0100A "General wiring harness repair methods".

Symptoms
Power generation / Engine management / Engine running / Stalls/goes out
Power generation / Engine management / Indicator lamp / Engine diagnosis / lit
Power generation / Engine management / Engine performance / No/poor output
Power generation / Engine management / Electric drive / Electric machine / Nonfunctional
Power generation / Engine management / Electric drive / Drive modes / Nonfunctional
Power generation / Engine management / Electric drive / Electric machine / Display message

Control unit/fault code

XENTRY TIPS

Control unit	Fault code	Fault text
A1 (Instrument cluster) (KI_451)	B1101	CAN bus OFF
A1 (Instrument cluster) (KI_451)	B110C	No or incorrect CAN message from control unit N110 (Weight Sensing System (WSS) control unit) ((DEF@USA))
N47-5 (ESP control unit) (ESP8_451)	C1322	The CAN signals sent from control unit N3/9 (CDI control unit) are implausible. ((DEF@DIESEL))
N47-5 (ESP control unit) (ESP8_451)	C1314	CAN communication to control module B24/15 (Rotary speed and lateral acceleration sensor) is faulty.
N47-5 (ESP control unit) (ESP8_451)	C1317	CAN communication to control module A1 (Instrument cluster) is faulty.
N47-5 (ESP control unit) (ESP8_451)	C1322	The CAN signals sent from control unit N3/10 (Motor electronics (ME-SFI [ME])) are implausible. ((DEF@BENZIN))
N47-5 (ESP control unit) (ESP8_451)	C1300	CAN bus OFF
N47-5 (ESP control unit) (ESP8_451)	C1312	CAN communication to control module N10/10 (SAM control unit) is faulty.
N47-5 (ESP control unit) (ESP8_451)	C1316	CAN communication to control module N15/6 (Sprintshift control module) is faulty. ((not(BAUMUSTER@491),not(BAUMUSTER@490),not(BAUMUSTER@390),not(BAUMUSTER@391),not(BAUMUSTER@392),not(BAUMUSTER@492)))
N127 (Drivetrain control unit) (CEPC451)	C212B17	The vacuum pump for supplying the brake system has a malfunction.The limit value for electrical voltage has been exceeded. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U000187	Communication with control unit 'Communications module' has a malfunction.The message is missing. ([VC9_0_SmartEV](CODECO@B54))
N127 (Drivetrain control unit) (CEPC451)	C212B16	The vacuum pump for supplying the brake system has a malfunction.The limit value for electrical voltage has not been attained. ([VC8_0_SmartEV])
N10/10 (SAM control unit) (SAM_451)	U1100	No or incorrect CAN message from control unit Engine control module
N127 (Drivetrain control unit) (CEPC451)	C212B12	The vacuum pump for supplying the brake system has a malfunction.There is a short circuit to positive. ([VC8_0_SmartEV])
N10/10 (SAM control unit) (SAM_451)	U1100	No or incorrect CAN message from control unit N127 (Drivetrain control unit) ((CODECO@MES1)or(CODECO@ME01))
N10/10 (SAM control unit) (SAM_451)	U1102	No or incorrect CAN message from control unit N47-5 (ESP control unit)
N10/10 (SAM control unit) (SAM_451)	U1112	No or incorrect CAN message from control unit N2/7 (Restraint systems control unit)
N10/10 (SAM control unit) (SAM_451)	U1108	No or incorrect CAN message from control unit A1 (Instrument cluster)
N10/10 (SAM control unit) (SAM_451)	U1101	No or incorrect CAN message from control unit Transmission
N10/10 (SAM control unit) (SAM_451)	U1101	No or incorrect CAN message from control unit N129/1 (Power electronics control unit) ((CODECO@MES1)or(CODECO@ME01))
N127 (Drivetrain control unit) (CEPC451)	U113E88	Communication with the battery sensor has a malfunction.Bus OFF ([VC9_0_SmartEV])

XENTRY TIPS

N127 (Drivetrain control unit) (CEPC451)	U011008	Communication with control unit 'Electric machine A' has a malfunction. There is a signal fault or the message is faulty. ([VC9_0_SmartEV])
A1 (Instrument cluster) (KI_451)	B1108	No or incorrect CAN message from control unit N3/9 (CDI control unit) ((DEF@DIESEL))
N127 (Drivetrain control unit) (CEPC451)	U045687	Communication with control unit 'Coolant pump' has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U012287	Communication with control unit 'Traction system' has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016B87	Communication with the 'electric A/C compressor' control unit has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U012908	Communication with control unit 'Regenerative braking system' has a malfunction. There is a signal fault or the message is faulty. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011073	Communication with control unit 'Electric machine A' has a malfunction. The actuator does not open. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016887	Communication with the electronic ignition lock has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U014600	Communication with the central gateway has a malfunction. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U015187	Communication with the supplemental restraint system has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U040008	The data about the requested torque are implausible. There is a signal fault or the message is faulty. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016487	Communication with the air conditioning has a malfunction. The message is missing. ([VC9_0_SmartEV])
A1 (Instrument cluster) (KI_451)	B1106	No or incorrect CAN message from control unit N15/6 (Sprintshift control module) ((not(CODECO@MES1),not(CODECO@ME01)))
N127 (Drivetrain control unit) (CEPC451)	U012908	Communication with control unit 'Regenerative braking system' has a malfunction. There is a signal fault or the message is faulty. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016B87	Communication with the 'electric A/C compressor' control unit has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U010386	Communication with the electronic selector lever module has a malfunction. There is an incorrect signal. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011006	Communication with control unit 'Electric machine A' has a malfunction. There is an algorithm fault. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U113E87	Communication with the battery sensor has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U017087	Communication with the left front crash sensor has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U059387	Implausible data were received from control unit 'Electric machine A'. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U010387	Communication with the electronic selector lever module has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011008	Communication with control unit 'Electric machine A' has a malfunction. There is a signal fault or the message is faulty. ([VC8_0_SmartEV])

XENTRY TIPS

N127 (Drivetrain control unit) (CEPC451)	U059308	Implausible data were received from control unit 'Electric machine A'. There is a signal fault or the message is faulty. ([VC9_0_SmartEV])
A1 (Instrument cluster) (KI_451)	B1109	No or incorrect CAN message from control unit N88/1 (Tire pressure monitoring system (TPM [RDK])) ((DEF@USA))
N127 (Drivetrain control unit) (CEPC451)	U007388	Drive train CAN bus OFF faultBus OFF ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U013187	Communication with control unit 'Power steering' has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U029887	Communication with control unit 'DC/DC converter' has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U105388	Communication with the electric drive CAN bus (E-Cell) has a malfunction. Bus OFF ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011006	Communication with control unit 'Electric machine A' has a malfunction. There is an algorithm fault. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U007300	Drive train CAN bus OFF fault ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U017087	Communication with the left front crash sensor has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U029887	Communication with control unit 'DC/DC converter' has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U012287	Communication with control unit 'Traction system' has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U040008	The data about the requested torque are implausible. There is a signal fault or the message is faulty. ([VC9_0_SmartEV])
A1 (Instrument cluster) (KI_451)	B1103	No or incorrect CAN message from control unit N47-5 (ESP control unit)
N127 (Drivetrain control unit) (CEPC451)	U013187	Communication with control unit 'Power steering' has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U059387	Implausible data were received from control unit 'Electric machine A'. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U015187	Communication with the supplemental restraint system has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011200	Communication with control unit 'High-voltage battery' has a malfunction. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011200	Communication with control unit 'High-voltage battery' has a malfunction. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U105388	Communication with the electric drive CAN bus (E-Cell) has a malfunction. Bus OFF ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U010386	Communication with the electronic selector lever module has a malfunction. There is an incorrect signal. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U113E88	Communication with the battery sensor has a malfunction. Bus OFF ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011004	Communication with control unit 'Electric machine A' has a malfunction. There is an internal fault. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U010387	Communication with the electronic selector lever module has a malfunction. The message is missing. ([VC9_0_SmartEV])

XENTRY TIPS

A1 (Instrument cluster) (KI_451)	B1104	No or incorrect CAN message from control unit N68 (Steering assist control module)
N127 (Drivetrain control unit) (CEPC451)	U045687	Communication with control unit 'Coolant pump' has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U012245	Communication with control unit 'Traction system' has a malfunction. There is an error in the program memory. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011004	Communication with control unit 'Electric machine A' has a malfunction. There is an internal fault. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U11C187	Communication with control unit 'Onboard charger' has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U011073	Communication with control unit 'Electric machine A' has a malfunction. The actuator does not open. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016487	Communication with the air conditioning has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U11C187	Communication with control unit 'Onboard charger' has a malfunction. The message is missing. ([VC8_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U113E87	Communication with the battery sensor has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U016887	Communication with the electronic ignition lock has a malfunction. The message is missing. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U059308	Implausible data were received from control unit 'Electric machine A'. There is a signal fault or the message is faulty. ([VC8_0_SmartEV])
A1 (Instrument cluster) (KI_451)	B1102	No or incorrect CAN message from control unit N2/7 (Restraint systems control unit)
N127 (Drivetrain control unit) (CEPC451)	U014600	Communication with the central gateway has a malfunction. ([VC9_0_SmartEV])
N127 (Drivetrain control unit) (CEPC451)	U012245	Communication with control unit 'Traction system' has a malfunction. There is an error in the program memory. ([VC8_0_SmartEV])
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0100	Communication with control unit 'Drivetrain' has a malfunction. ((ECU1_DEF_DIOVAR@0003))
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0155	Communication with the instrument cluster has a malfunction.
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0140	No or incorrect CAN message from control unit N10/10 (SAM control unit)
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0100	Communication with control unit 'combustion engine' has a malfunction.
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0101	Communication with control unit 'Transmission' has a malfunction.
N15/5 (Electronic selector lever module control unit) (EWM_451)	U0101	Communication with control unit 'Drivetrain' has a malfunction. ((ECU1_DEF_DIOVAR@0003))

XENTRY TIPS

N15/5 (Electronic selector lever module control unit) (EWM_451)	U0073	CAN bus OFF
N129/1 (Power electronics control unit) (LE_TUBE)	U015500	Communication with the instrument cluster has a malfunction.
A1 (Instrument cluster) (KI_451)	B1108	No or incorrect CAN message from control unit N3/10 (ME-SFI [ME] control unit) ((DEF@BENZIN,not(ECU1_DEF_CODE_SOFTWARE_ID0_MBNUMBER@4514467595)))
N129/1 (Power electronics control unit) (LE_TUBE)	U042700	Implausible data were received from the electronic ignition lock.
N129/1 (Power electronics control unit) (LE_TUBE)	U010000	CAN communication with control unit 'N127 (Drivetrain control unit)' has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U014600	Communication with the central gateway has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U012900	Communication with control unit 'Suspension' has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U040200	Implausible data were received from control unit 'Drivetrain'.
N129/1 (Power electronics control unit) (LE_TUBE)	U041800	Implausible data were received from control unit 'Suspension'.
N129/1 (Power electronics control unit) (LE_TUBE)	U011200	Communication with control unit 'High-voltage battery' has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U016800	Communication with the electronic ignition lock has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U010100	CAN communication with control unit 'N127 (Drivetrain control unit)' has a malfunction.
N129/1 (Power electronics control unit) (LE_TUBE)	U044700	Implausible data were received from the central gateway.
A1 (Instrument cluster) (KI_451)	B1105	No or incorrect CAN message from control unit N10/10 (SAM control unit)
N129/1 (Power electronics control unit) (LE_TUBE)	U040100	Implausible data were received from control unit 'Drivetrain'.
N129/1 (Power electronics control unit) (LE_TUBE)	U014200	Communication with the signal acquisition and actuation module has a malfunction.
N47-5 (ESP control unit) (ESP8_451)	C1323	Fault in CAN communication with control unit N15/6 (Sprintshift control module). ((not(BAUMUSTER@491),not(BAUMUSTER@391),not(BAUMUSTER@390),not(BAUMUSTER@490),not(BAUMUSTER@392),not(BAUMUSTER@492)))
N47-5 (ESP control unit) (ESP8_451)	C1315	CAN communication to control module N3/10 (ME-SFI [ME] control unit) is faulty. ((DEF@BENZIN))
N47-5 (ESP control unit) (ESP8_451)	C1315	CAN communication to control module N3/9 (CDI control unit) is faulty. ((DEF@DIESEL))
N47-5 (ESP control unit) (ESP8_451)	C1301	Short circuit or open circuit of CAN wires
N47-5 (ESP control unit) (ESP8_451)	C1311	CAN communication with the steering angle sensor is faulty.
N47-5 (ESP control unit) (ESP8_451)	C1319	CAN communication to control module N129 (Starter generator squib) is faulty.

XENTRY TIPS

N47-5 (ESP control unit) (ESP8_451)	C1318	CAN communication to control module N68 (Steering assist control module) is faulty.
N47-5 (ESP control unit) (ESP8_451)	C1310	Faulty message or timeout

WIS-References			
Document number	Title	Note	Allocation
AR00.19-P-0100A	Wiring harness general repair methods		Remedy

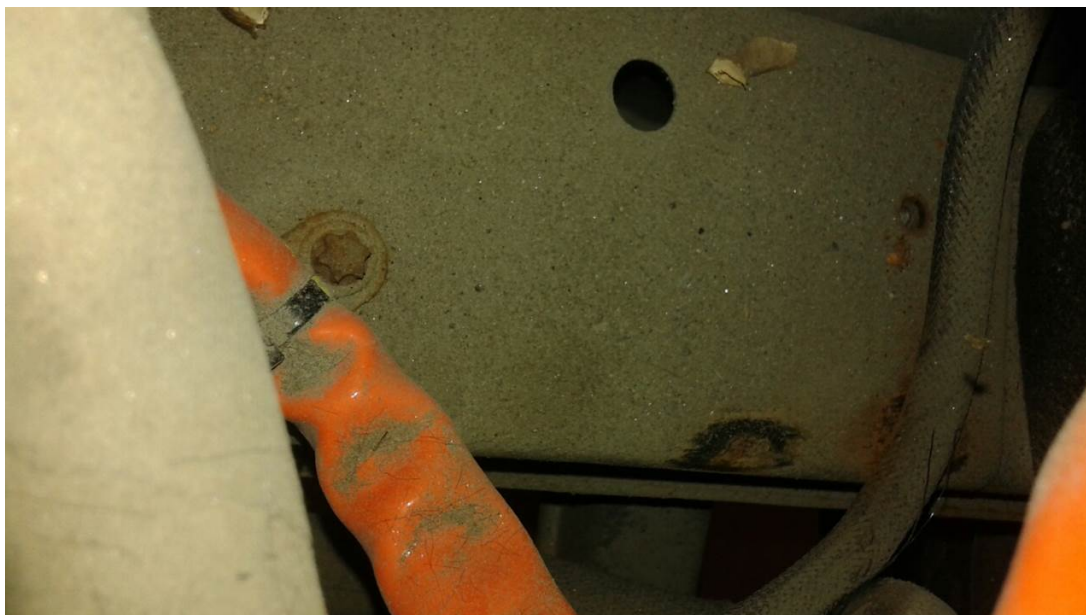
Attachments

Bereich Unterboden hinten rechts.JPG:



XENTRY TIPS

Scheuerstelle Motorträger.jpg:

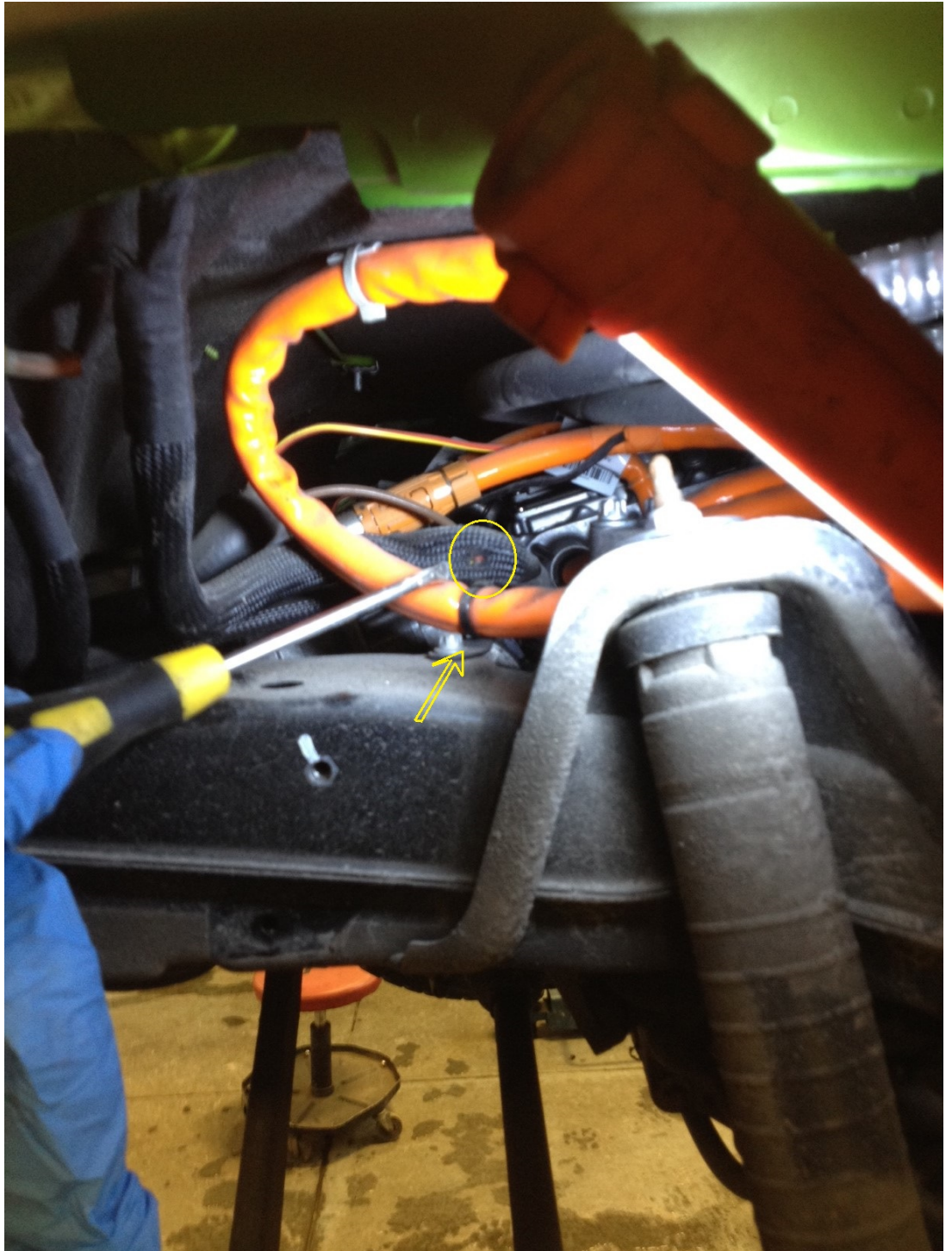


Scheuerstelle Federbein hinten rechts.JPG:



XENTRY TIPS

Scheuerstelle Federbein
hinten rechts zoom.JPG:



XENTRY TIPS

Scheuerstelle MRA.jpg:

