



SIB 51 07 22 DOOR AND WINDOW DIAGNOSIS RESOURCE

MODEL

G01 (X3 Sports Activity Vehicle)	G02 (X4 Sports Activity Coupe)	G05 (X5 Sports Activity Vehicle)	G06 (X6 Sports Activity Coupe)
G07 (X7 Sports Activity Vehicle)	F95 (X5 M Sports Activity Vehicle)	F96 (X6 M Sports Activity Coupe)	F97 (X3 M Sports Activity Vehicle)
F98 (X4 M Sports Activity Coupe)			

SITUATION

This bulletin outlines known areas of possible functional issues, operational noise, or wind noise for the vehicles listed above. It serves only as a diagnostic resource in troubleshooting complaints pertaining to the doors, windows, and mirrors.

This bulletin and the associated attachments are designed to provide one single diagnostic resource for troubleshooting all known issues related to the door, windows, and mirrors of BMW Sports Activity Vehicles which have quality improvement measures already in place.

CAUSE

The attached diagnostic resource provides repair instructions to over 40 potential causes related to doors, windows, or mirrors.

CORRECTION

Utilize the attached diagnostic troubleshooting document based on the customer complaint

Note: The diagnostic troubleshooting document is interactive.

- For each area of customer complaints (door handle, exterior mirror, door brake, window regulator, door latch) an overview page will be displayed showing the areas of potential concern related only to the customer complaint
- Clicking the applicable links will bring the technician to specific areas to investigate and repair

Note: This bulletin acts as a supplement, and is secondary to all other service information bulletins. Always check for and follow any other applicable bulletin before working through the scenarios outlined in this bulletin.

This bulletin does not override TeileClearing (TC) or any other authorization that may be required before replacing certain parts.

This bulletin serves as a diagnostic resource ONLY. Its purpose is to communicate and share with technicians the issues which have been identified previously.

PROCEDURE

Each slide is accompanied by a suggested diagnostic troubleshooting method and a repair suggestion.

Note: **For any vehicle where a defect is found that is NOT included in the diagnostic troubleshooting document, a TSARA INFO case must be submitted providing feedback/photos when possible of the defect so that product quality improvements and diagnostic resources such as this can continue to be developed.**

- **If the vehicle cannot be diagnosed using the troubleshooting document and additional diagnostic assistance is required or additional information is needed on any issue in the document, a TSARA reply requested case should be submitted.**

Please reference the exact issue found in the technician warranty notes (“the story”) so that we can continue to compare your findings against the quality improvements which we have in place. The title of the slide related to the issue that was found should be included in the technician notes for reference.

PARTS INFORMATION

Required parts will depend on the specific repair that is necessary. This bulletin only serves as a diagnostic resource. Refer to ETK/AIR if parts are required for repair.

CLAIM INFORMATION

Warranty defect code and labor operations will depend on the specific repairs made to each vehicle. This bulletin only serves as a diagnostic resource.

Repairs which are eligible for warranty coverage should be claimed for using the applicable defect code and labor operations found in AIR.

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

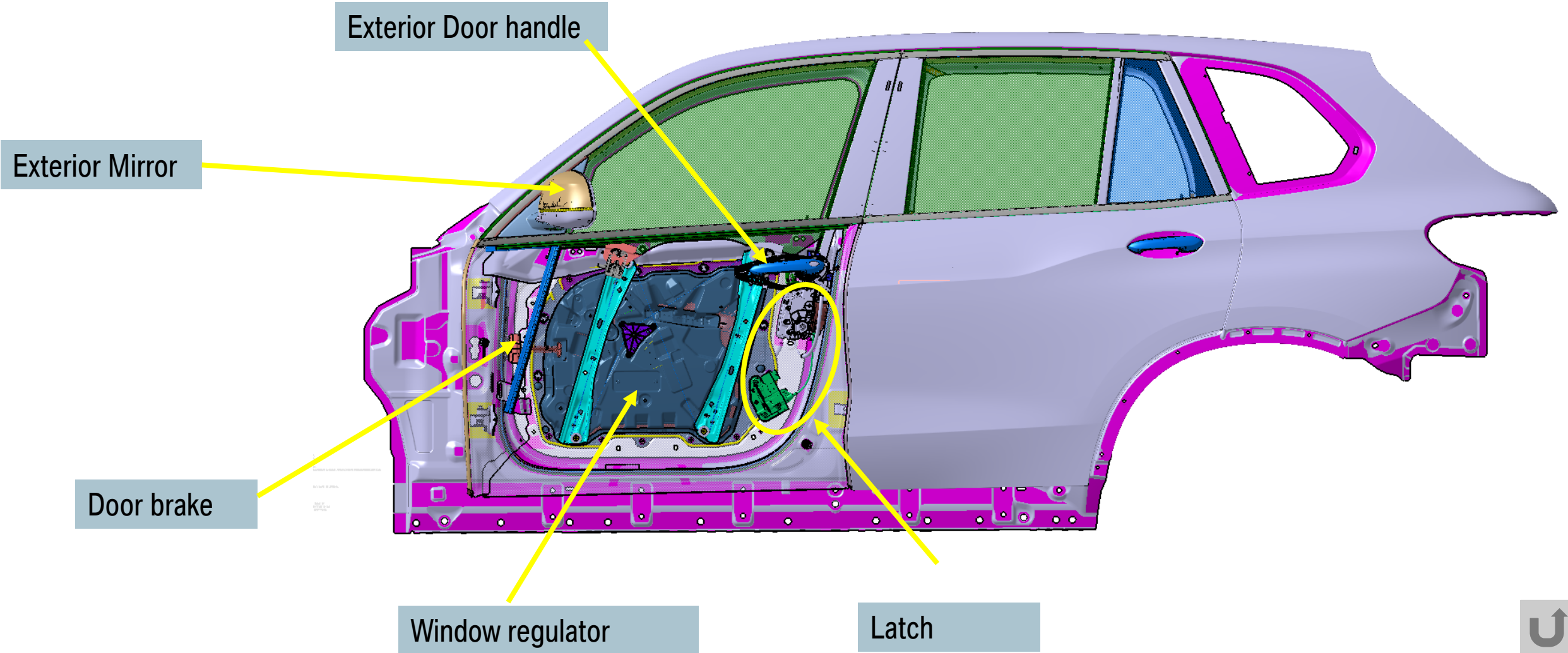
[picture_as_pdf B51 07 22 Attachment 1.pdf](#)

DOOR DIAGNOSIS

WHERE IS THE ISSUE?

Attachment to P51.07.22

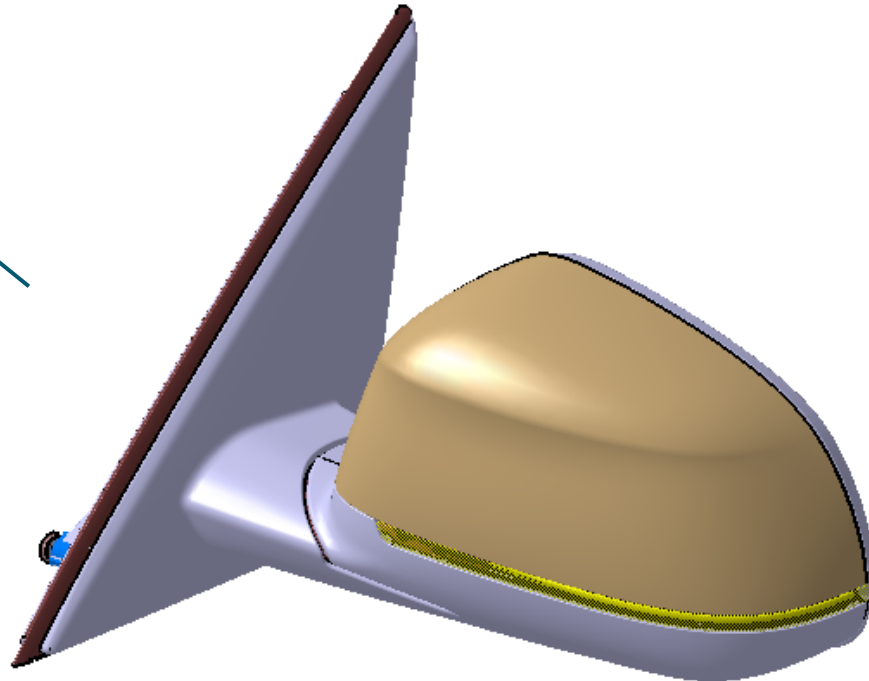
May 2022



DOES THE CUSTOMER HAVE A NOISE OR A FUNCTIONAL ISSUE?

Noise issue

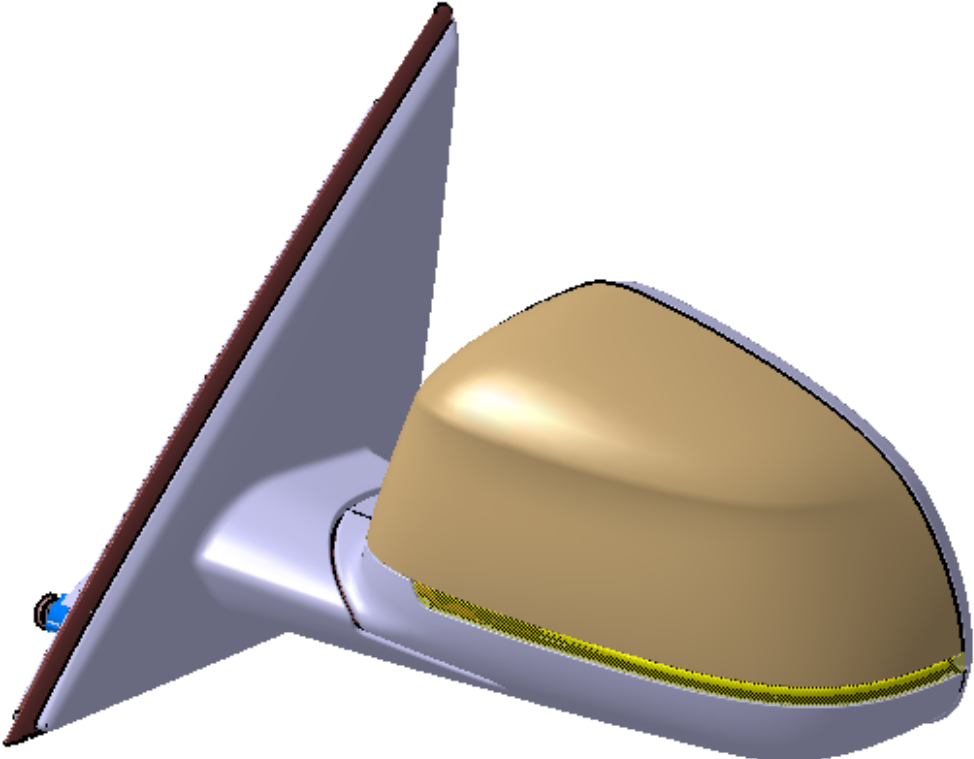
Functional issue



MIRROR - NOISE ISSUES

Wind noise while driving

Function noise when adjusting the glass



High speed wind noise (60+ Mph)

Function noise while folding

Low speed wind noise (<30-40 Mph)



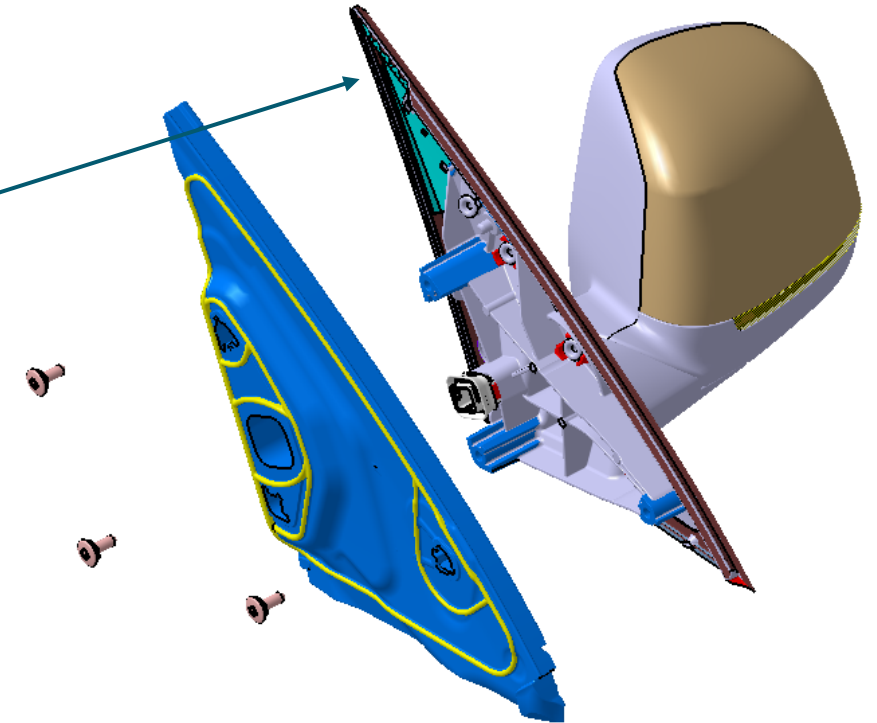
MIRROR – NOISE ISSUES – WIND NOISE DURING DRIVING

Situation:

- Wind noise during driving

Repair:

- 1) Inspect the mirror seal for damage or improper installation. Correct if improperly installed. (Rep 51 16 001)
- 2) Inspect the mirror cap for proper installation. Correct if improperly installed. (REP 51 16 041)



Inconsistent fit of seal to window frame finisher:



Improper installation of the mirror cap:



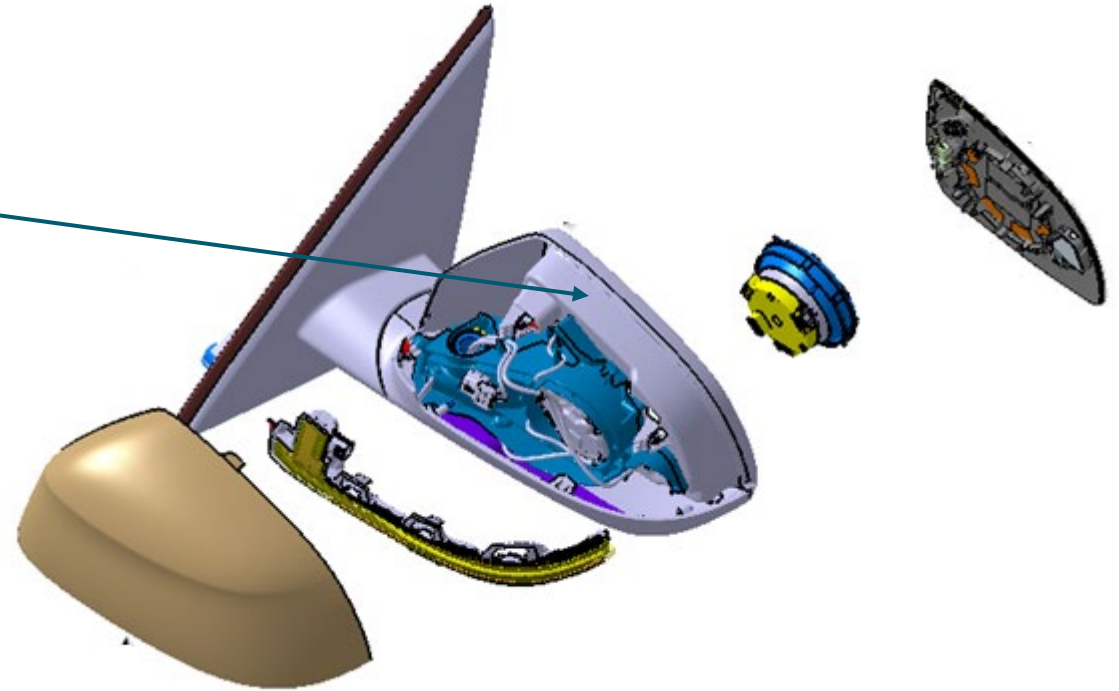
MIRROR WIND NOISE AT HIGH SPEEDS

Situation:

- High speed wind noise (60+ mph)

Repair:

- 1) Inspect the supporting ring for proper installation to the mirror base and cap. Reinstall if necessary. (REP 51 16 045)



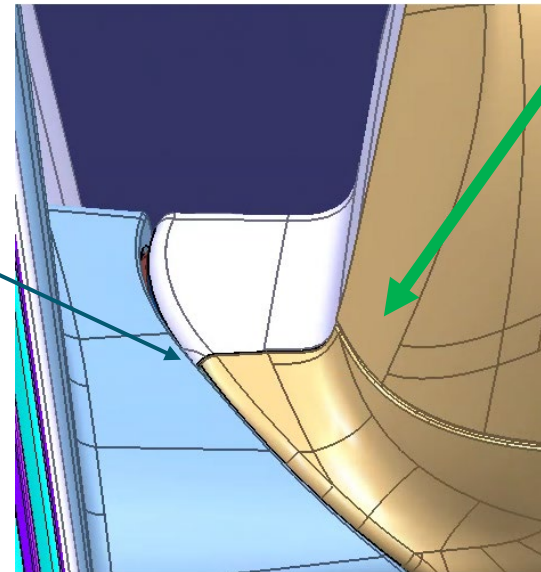
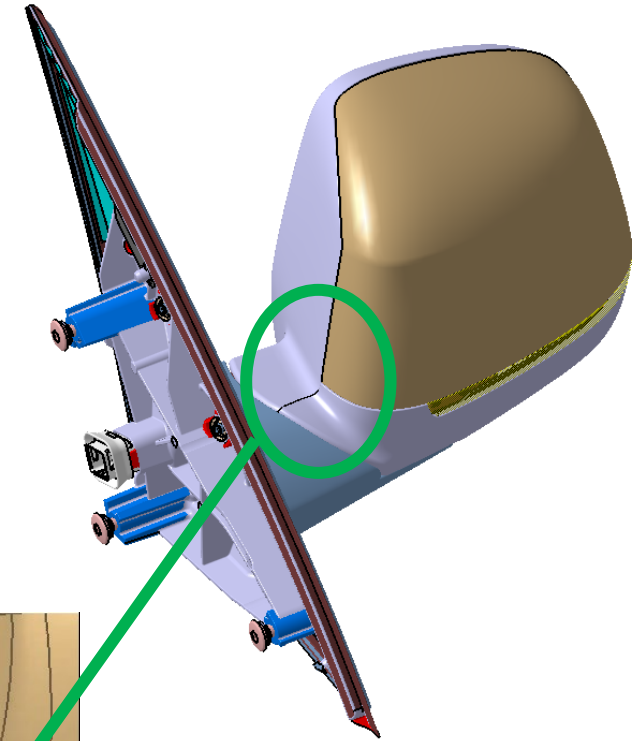
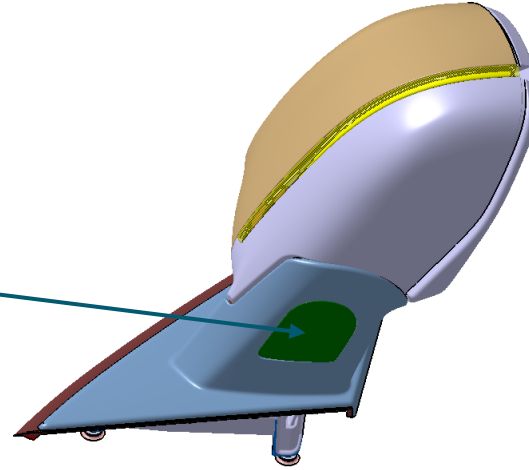
MIRROR WIND NOISE AT LOWER SPEEDS

Situation:

- Low speed wind noise (<40 mph)

Repair:

- 1) Inspect access cover for proper installation. Correctly install if necessary.
- 2) Verify that the cover, supporting ring, and lower housing are correctly assembled. Repair if necessary.



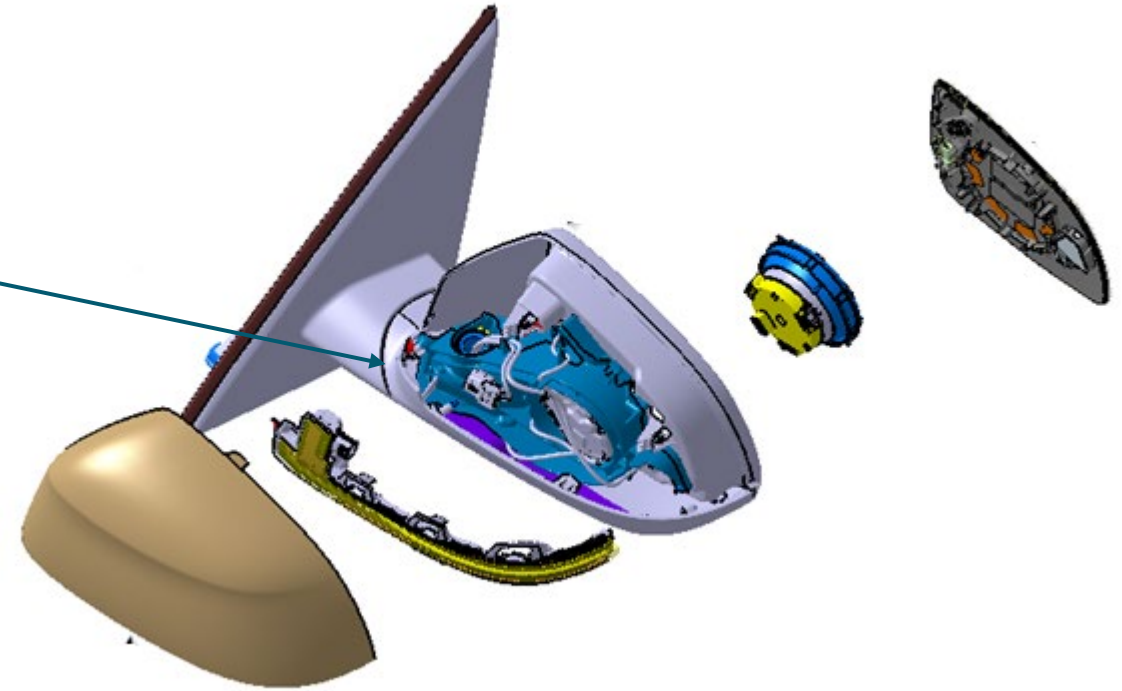
MIRROR NOISE WHILE FOLDING

Situation:

- Noise while folding mirrors in or out

Repair:

- 1) Inspect the installation of the lower housing to the mirror base and supporting ring. Correct if necessary.



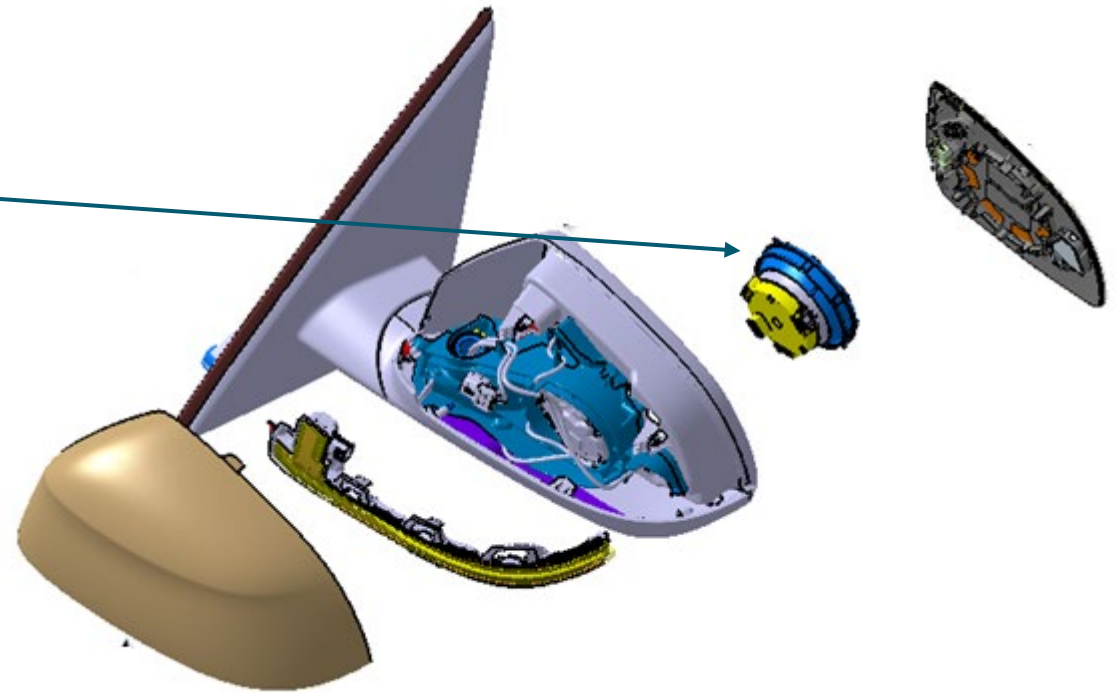
MIRROR NOISE WHEN ADJUSTING THE GLASS

Situation:

- Noise when adjusting the mirror glass

Repair:

- 1) Replace the adjustment drive.
(REP 67 13 001)



MIRROR – FUNCTIONAL ISSUES

Power folding operation not working

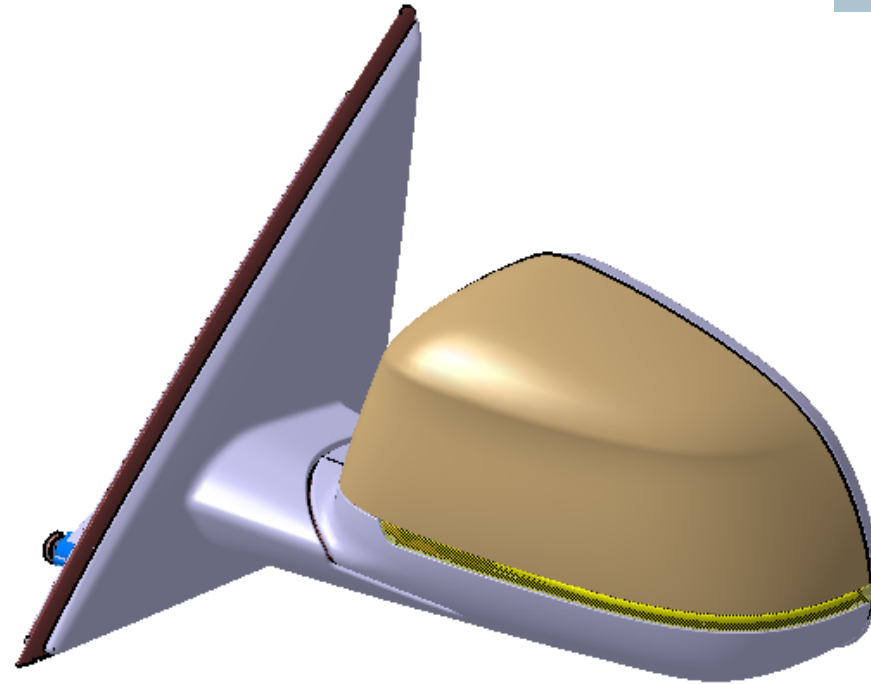
Mirror seal coming apart

Camera not working or incorrect image displayed

Glass issues

Water ingress in turn signal

Cerium gray finish not okay



Turn signal not working



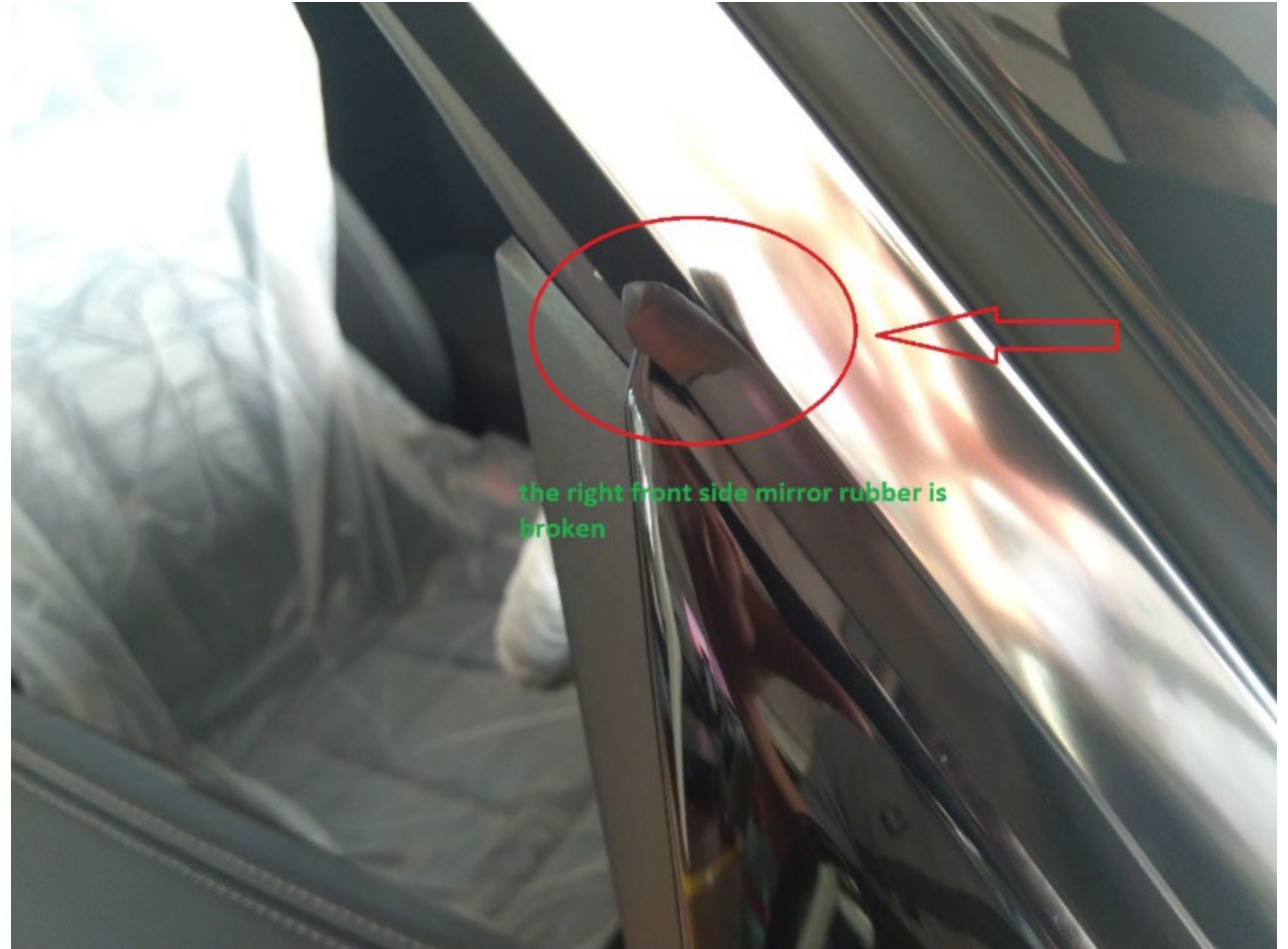
MIRROR – FUNCTIONAL ISSUES – MIRROR SEAL COMING APART

Situation:

- Mirror seal coming apart

Repair:

- 1) Inspect vehicle for outside influence.
Replace mirror assembly (Rep 51 16 001)



the right front side mirror rubber is broken



MIRROR – FUNCTIONAL ISSUES – CERIUM GRAY FINISH NOT OKAY

Customer symptom:

- Cerium gray finish is not okay

Step by step instructions:

- 1) Attempt to clean with BMW Matte paint special cleaner PN 83 12 5 A16 474.
- 2) If cleaning is not effective, cover must be replaced. Staining due to hard water or environmental impact is not covered under warranty.

Cerium gray finish on the mirror cap is damaged:



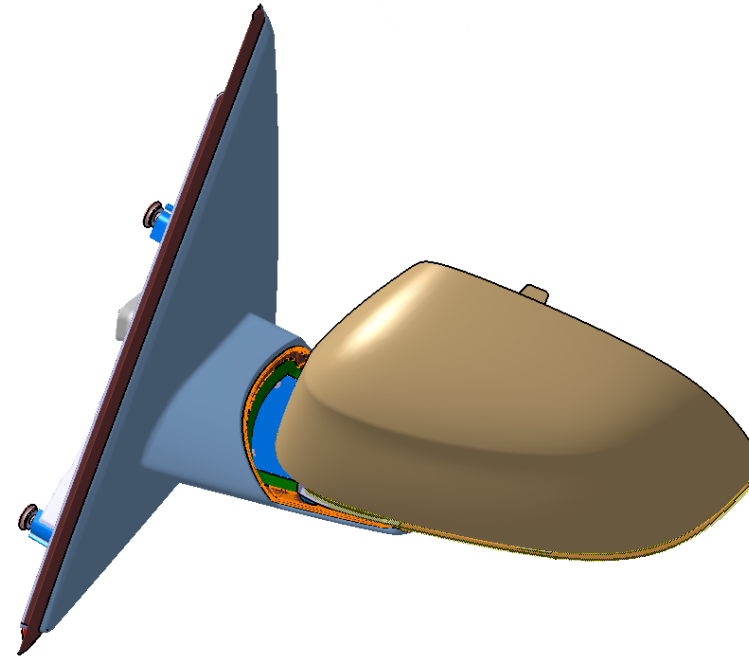
MIRROR – FUNCTIONAL ISSUES – POWER FOLDING OPERATION NOT WORKING

Situation:

- Power folding operation does not work

Repair:

- 1) Ensure proper assembly of the mirror and base
- 2) Replace the mirror base if damaged



Mirror not being in detent:



MIRROR – CAMERA NOT WORKING OR INCORRECT IMAGE DISPLAYED

Situation:

- The camera is not working at all

Repair:

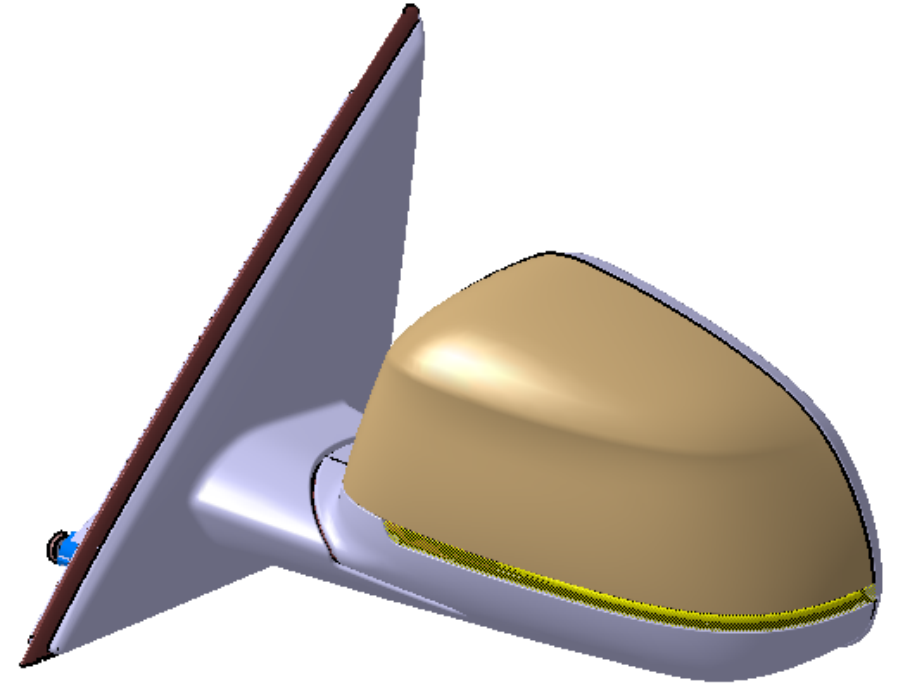
- 1) Reference B66 17 20 & B66 17 20 to start if applicable
- 2) Properly connect the camera cable
- 3) Repair / Replace pinched or damaged cables according to official instructions
- 4) Correctly plug in all mirror pins and verify continuity

Situation:

- The camera displays an incorrect image (e.g. tilted)

Repair:

- 1) B66 29 19 if applicable
- 2) B66 17 20 if applicable
- 3) Fully fasten the camera holder
- 4) Correctly plug in all mirror pins and verify continuity



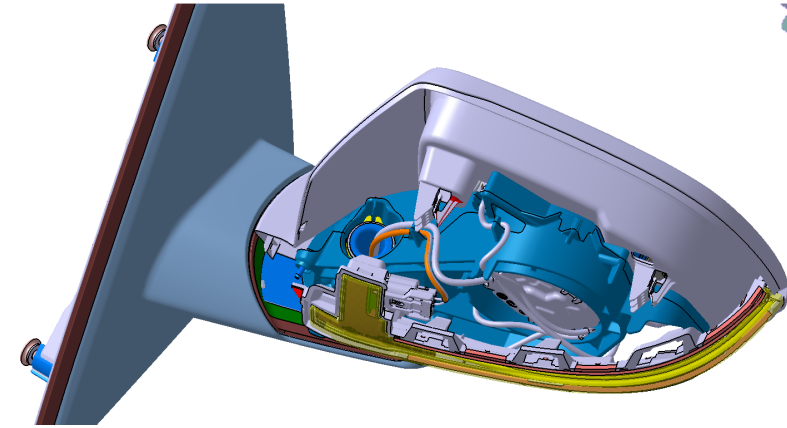
MIRROR – FUNCTIONAL ISSUES – TURN SIGNAL NOT WORKING

Situation:

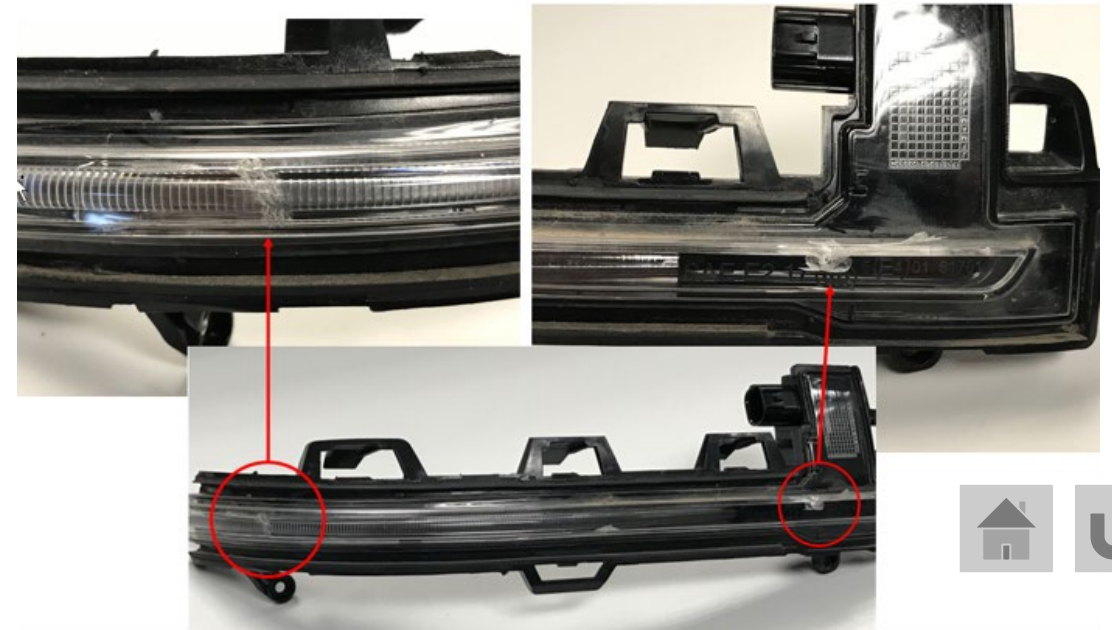
- The turn signal is not working

Repair:

- 1) Properly connect the turn signal cable
 - 2) Repair / Replace pinched or damaged cables according to official instructions
 - 3) Correctly plug in all mirror pins and verify continuity
 - 4) Remove the turn signal and check the weld seams and the front of the turn signal for (impact) damage
- > If outside influence is the cause, repair cannot be claimed under warranty



Impact damage at turn signal:



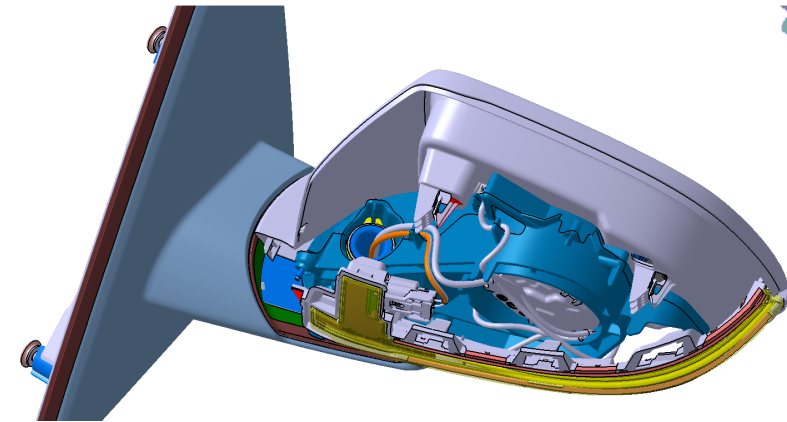
MIRROR – FUNCTIONAL ISSUES – WATER INGRESS IN TURN SIGNAL

Situation:

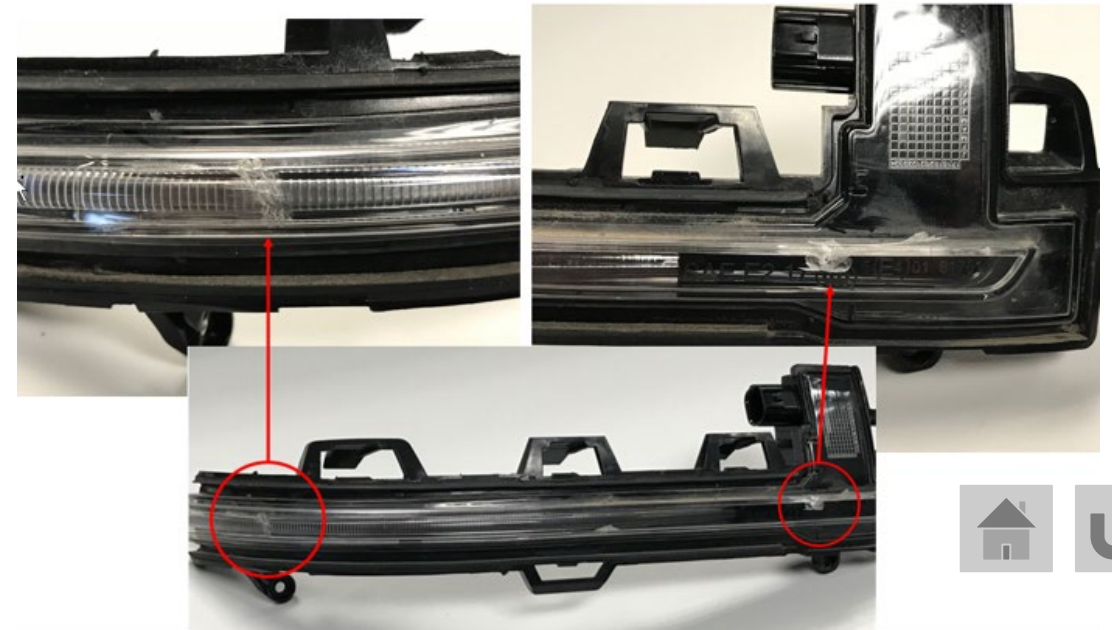
- Water ingress in turn signal

Repair:

- 1) Remove the turn signal and check the weld seams and the front of the turn signal for (impact) damage
-> If outside influence is the cause, repair cannot be claimed under warranty



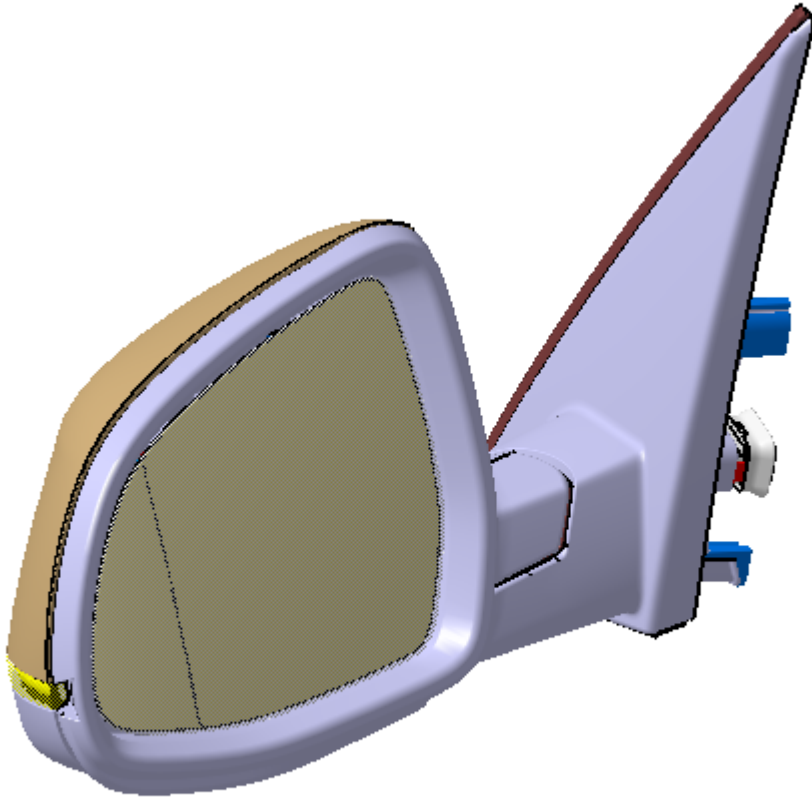
Impact damage at turn signal:



MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES

Glass falling off

Blind spot detection does not work



Glass heating does not work

Glass not operating properly

Electronic dimming does not work /
Discolored glass



MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES – GLASS FALLING OFF

Situation:

- Mirror glass is falling off

Repair:

- 1) Properly seat the glass to the motor (Replace the glass if proper installation does not solve the issue)
- 2) Replace the glass if there are any issues with glass adhesion / sliding (check back of glass to verify this)

The glass is sliding down due to issues with adhesion:



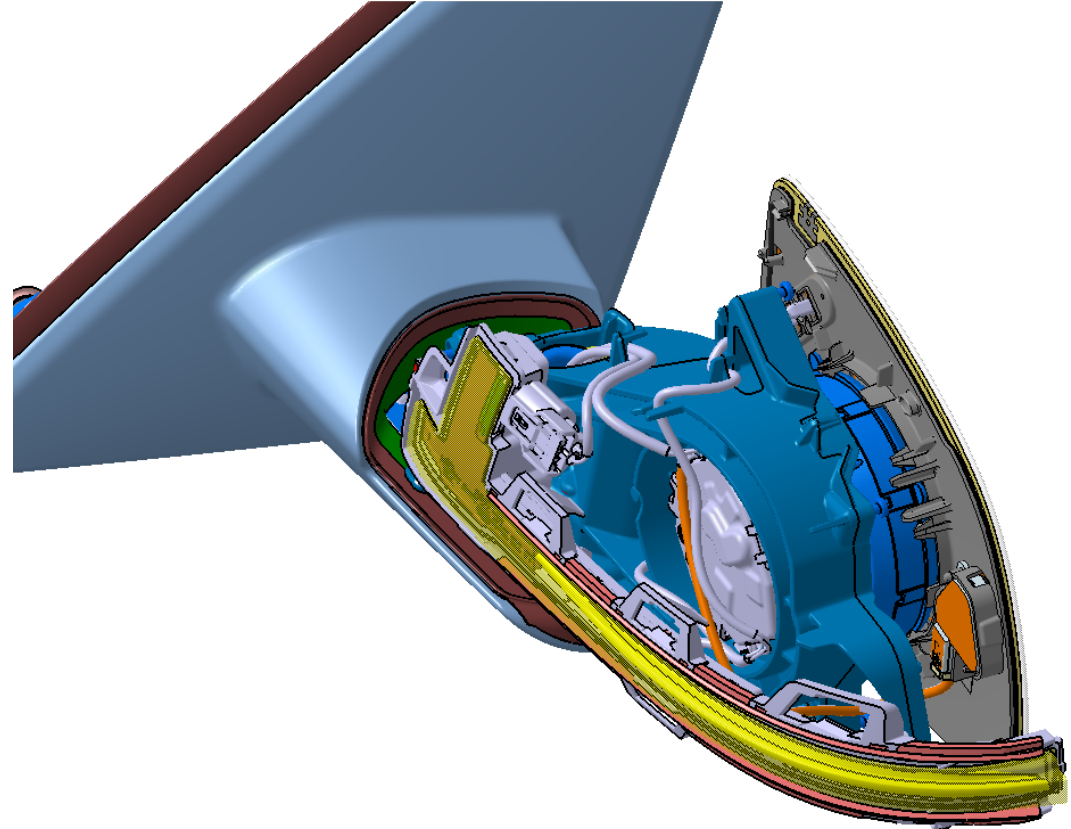
MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES – BLIND SPOT DETECTION DOES NOT WORK

Situation:

- The blind spot detection does not work

Repair:

- 1) If FCs exist, work through ISTA test plan
- 2) Inspect wiring and connections at glass
- 3) Repair / Replace damaged wires.
- 4) Replace glass if steps 1 & 2 are ineffective.



MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES – EC DOES NOT WORK / GLASS DISCOLORATION

Situation:

- Dimming function does not work

Repair:

- 1) If FCs exist, work through ISTA test plans
- 2) Inspect wiring and connections at glass
- 3) Replace glass

Situation:

- Permanent discoloration of the glass

Repair:

- 1) Replace glass

Discoloration of the mirror glass:



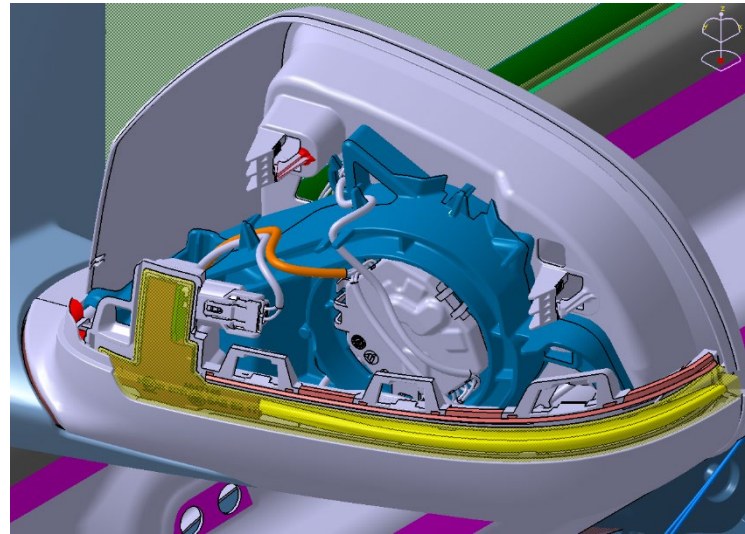
MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES – GLASS NOT ADJUSTING PROPERLY

Situation:

- Glass not adjusting properly

Repair:

- 1) If FCs exist, work through ISTA test plan
- 2) Inspect the plug on the back of the motor & back of the glass for proper installation.
- 3) Inspect for damaged pins on the backside of the motor (Replace the glass adjustment motor if pins are damaged)
- 4) Replace the adjustment motor if steps 1 & 2 are not effective.



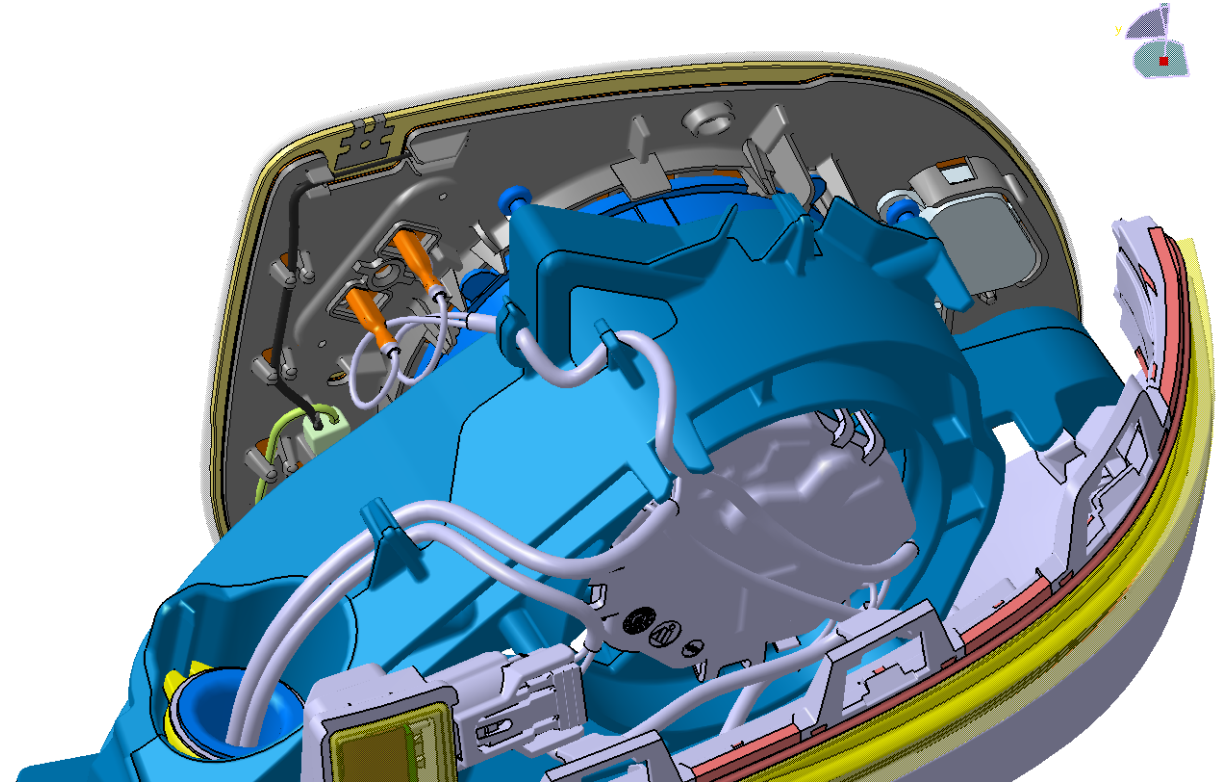
MIRROR – FUNCTIONAL ISSUES – GLASS ISSUES – GLASS HEATING DOES NOT WORK

Customer symptom:

- Glass heating does not work

Step by step instructions:

- 1) If FCs exist, work through ISTA test plan
- 2) Inspect all connections, pins, and wiring to the mirror glass.
- 3) If step 2 is ineffective, replace the mirror glass.

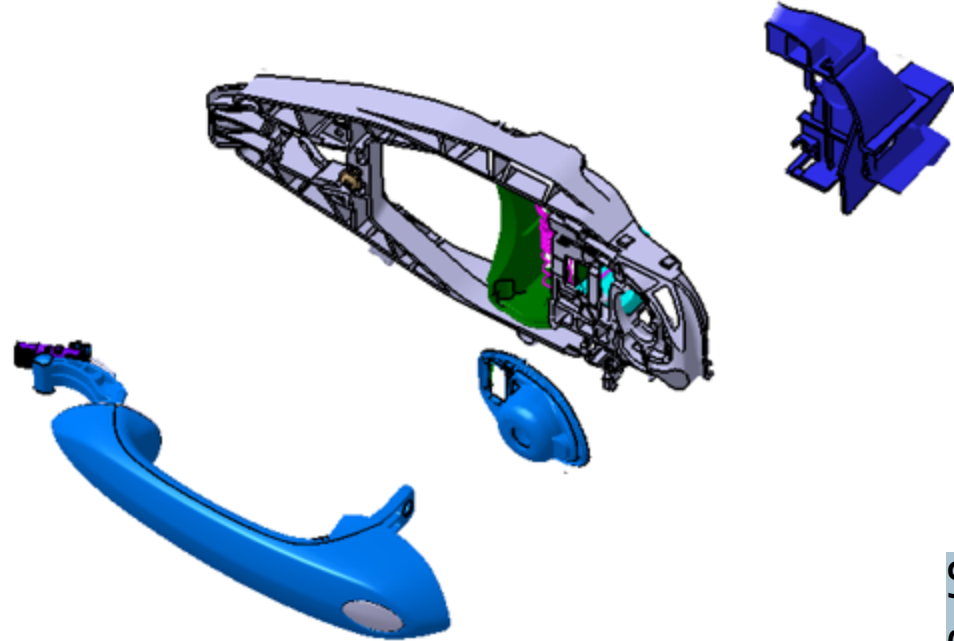


DOOR HANDLE

TAGE (CAS) does not work properly

Key FOB interaction does not work properly

Key card interaction does not work properly



Loose handle

Spring noise (when functioning the handle)

Smartphone interaction does not work properly



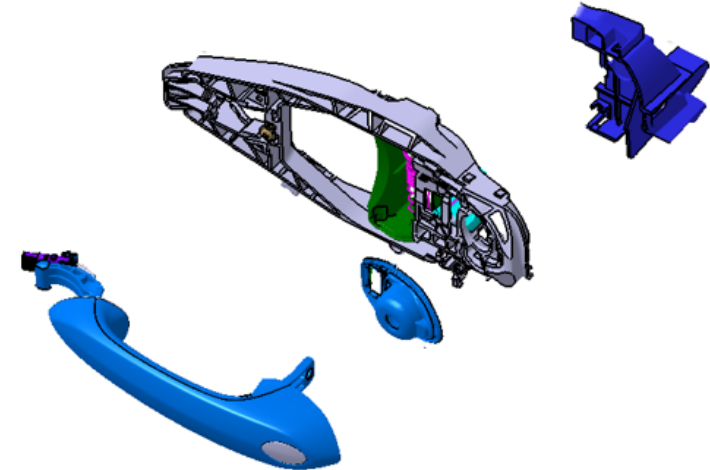
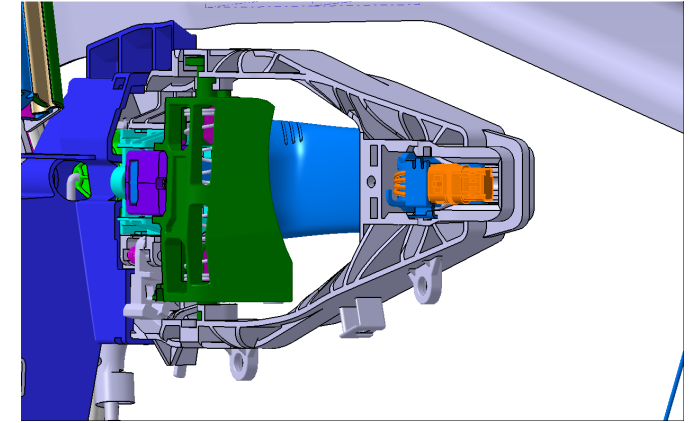
DOOR HANDLE – TAGE (CAS) DOES NOT WORK PROPERLY

Customer symptoms:

- TAGE (CAS 1.0 function) does not work properly

Step by step instructions:

- 1) If FCs exist, work through ISTA test plan
- 2) Verify that the key works (If the key does not work: Perform a full key troubleshooting)
- 3) Check the wire harness between TAGE and BDC
 - a) If no FC is present -> Continue diagnosis of BDC functions



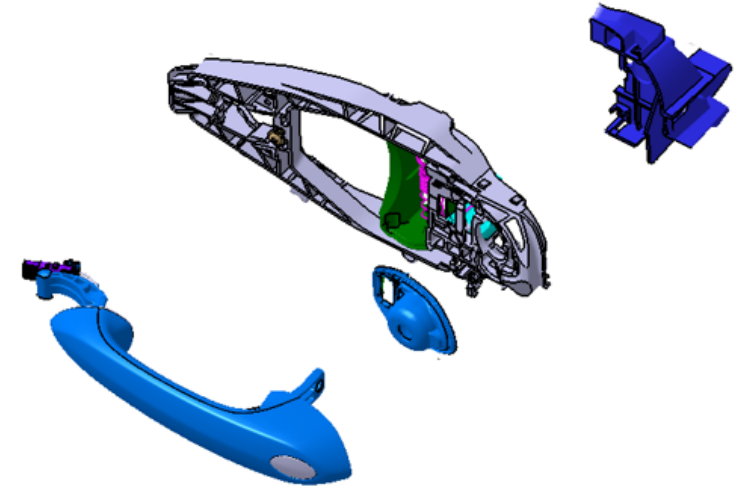
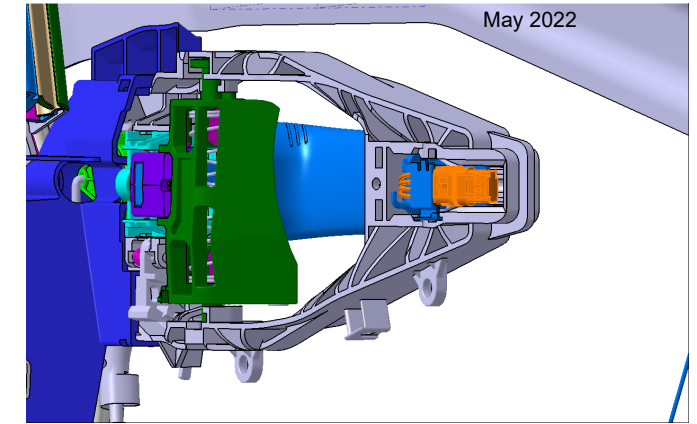
DOOR HANDLE – KEY FOB INTERACTION ISSUES

Customer symptom:

- Key FOB interaction does not work properly

Step by step instructions:

- 1) Verify that the key works (If the key does not work: Perform a full key troubleshooting)
- 2) Check the wire harness between TAGE and BDC
 - a) Check for and address if present FC "0xD90D52 NFC-Reader außen TAGE FAT: Fehlender LIN-Slave"
 - b) If no FC is present -> Continue troubleshooting BDC function



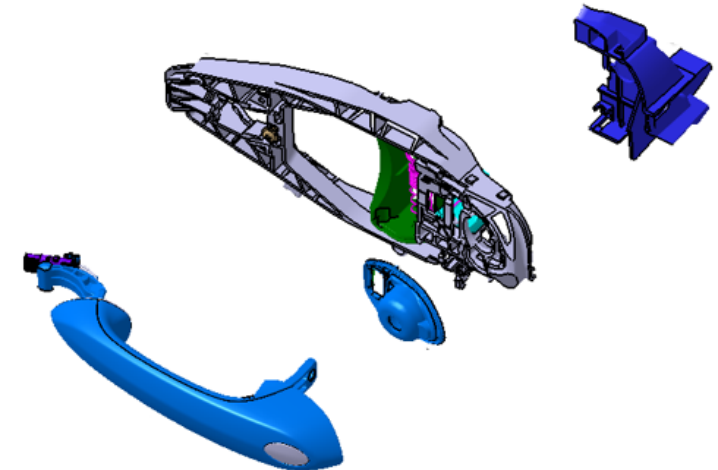
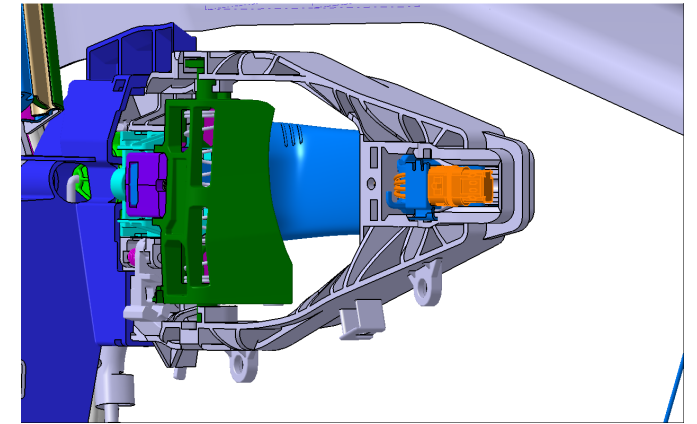
DOOR HANDLE – KEY CARD INTERACTION ISSUES

Customer symptom:

- Key card interaction does not work properly

Step by step instructions:

- 1) Go into the door and window menu and verify that the digital key menu can be accessed (if the menu cannot be shown: provision the car)
- 2) Check whether the key card is initialized in the system (If card is **not** listed as a valid key: Perform a reinitialization of the card)
- 3) Check for and address if present FC "0x804855 NFC-Reader außen TAGE FAT: HW-Defekt"
- 4) Check the wire harness between TAGE and BDC
 - a) Check for and address if present FC "0xD90D52 NFC-Reader außen TAGE FAT: Fehlender LIN-Slave"
 - b) If no DTC is present -> Continue troubleshooting BDC function



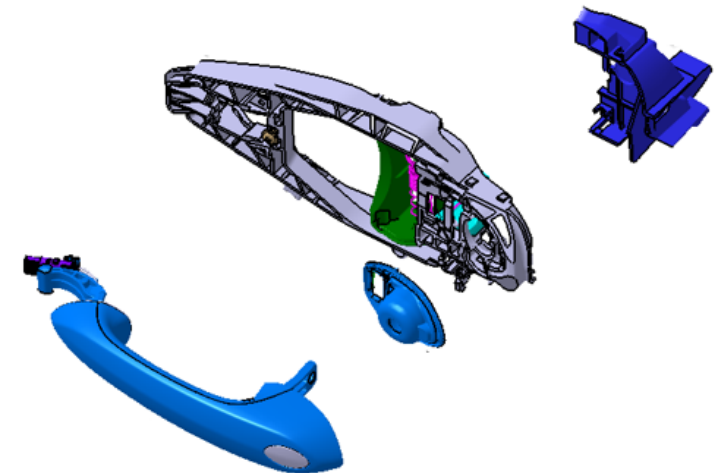
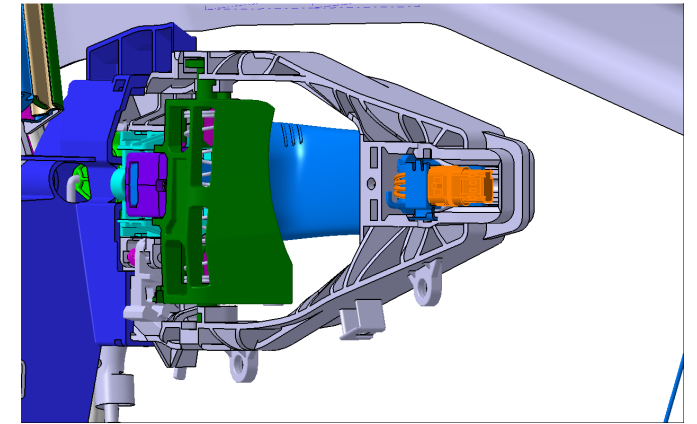
DOOR HANDLE – SMARTPHONE INTERACTION ISSUES

Customer symptom:

- Smartphone interaction does not work properly

Step by step instructions:

- 1) Activate NFC on the smartphone
- 2) Go into the door and window menu and verify that the digital key menu can be accessed (if the menu cannot be shown: provision the car)
- 3) Check whether the smartphone is initialized in the system (If phone is **not** listed as a valid key: Perform a reinitialization of the phone)
- 4) Check for and address if present FC "0x804855 NFC-Reader außen TAGE FAT: HW-Defekt"
- 5) Check the wire harness between TAGE and BDC
 - a) Check for and address if present FC "0xD90D52 NFC-Reader außen TAGE FAT: Fehlender LIN-Slave"
 - b) If no DTC is present -> Continue troubleshooting BDC function



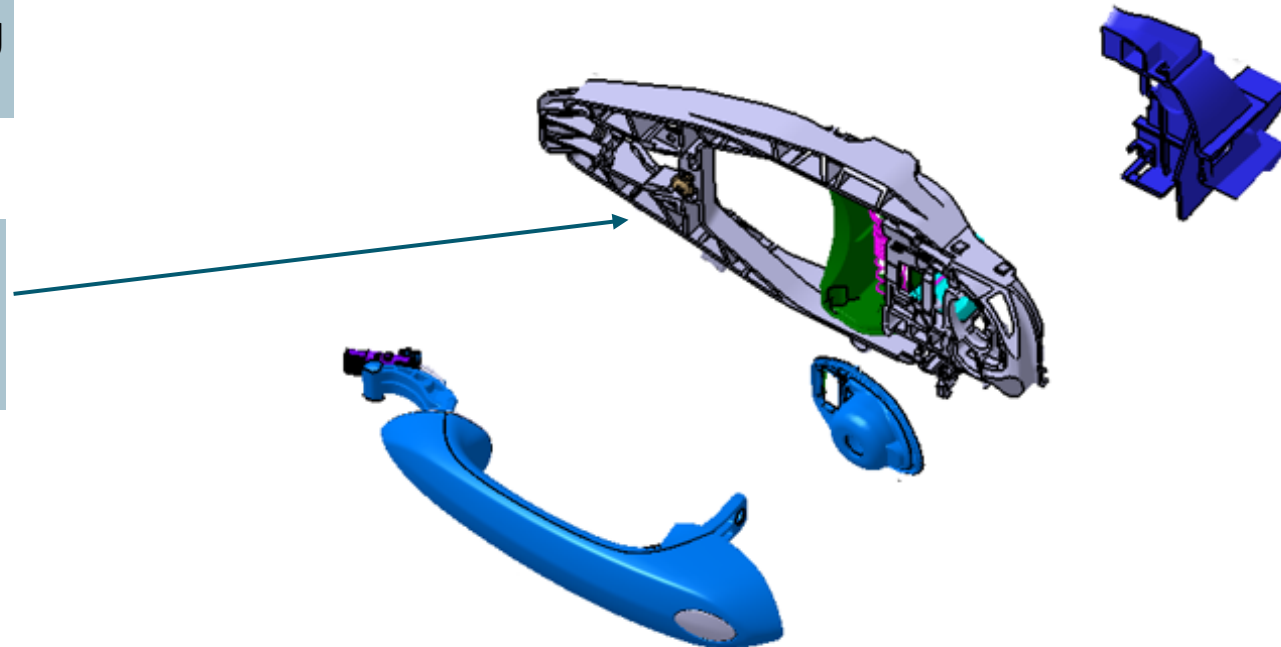
DOOR HANDLE – SPRING NOISE WHEN FUNCTIONING THE HANDLE

Situation:

- Spring noise when opening the door using the exterior handle (front or rear).

Repair:

- 1) Replace the door handle carrier following ISTA/AIR repair instructions.



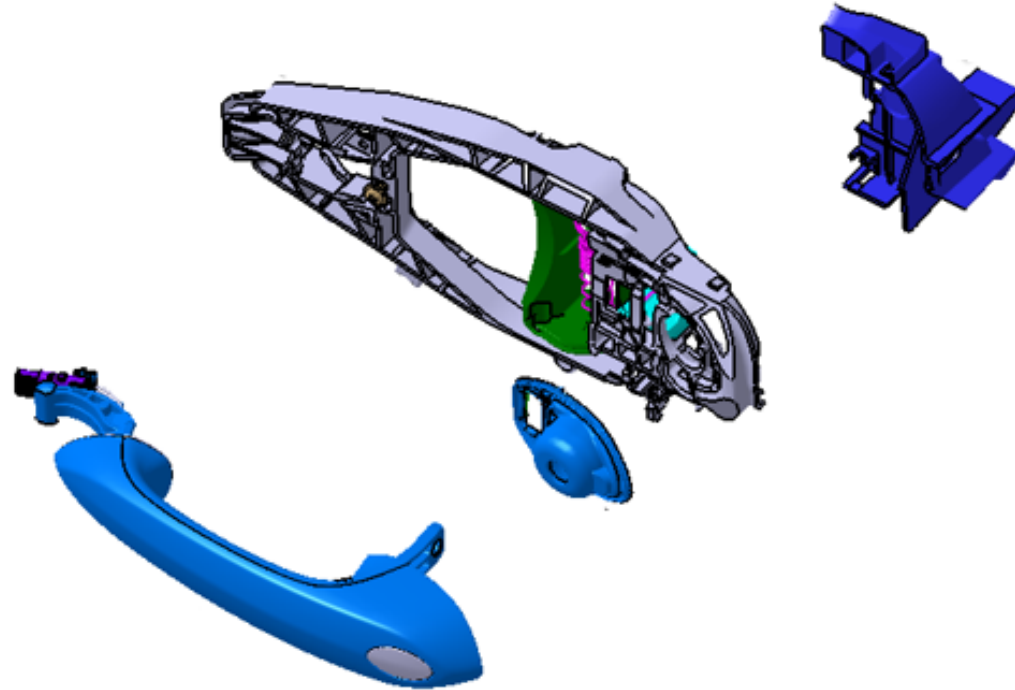
DOOR HANDLE – LOOSE HANDLE

Situation:

- Loose door handle

Repair:

- 1) Check and correct door handle carrier installation.

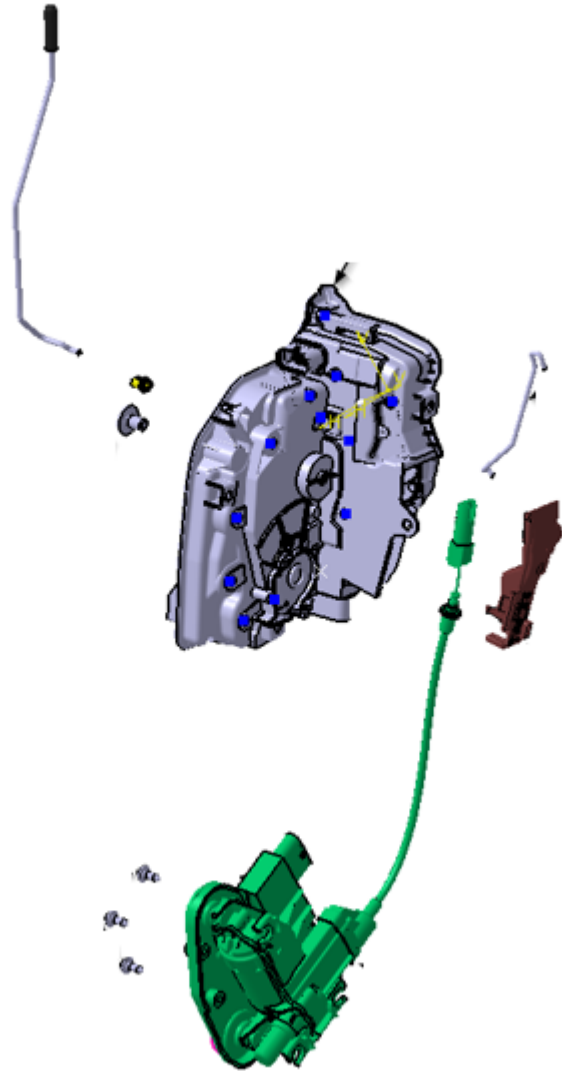


DOOR LOCK

Door won't close

Door won't lock / unlock

Door won't open from inside



Door pops open to 1st position

Vehicle recognizes incorrect door status

Door won't open from the outside



DOOR LOCK - DOOR WON'T CLOSE

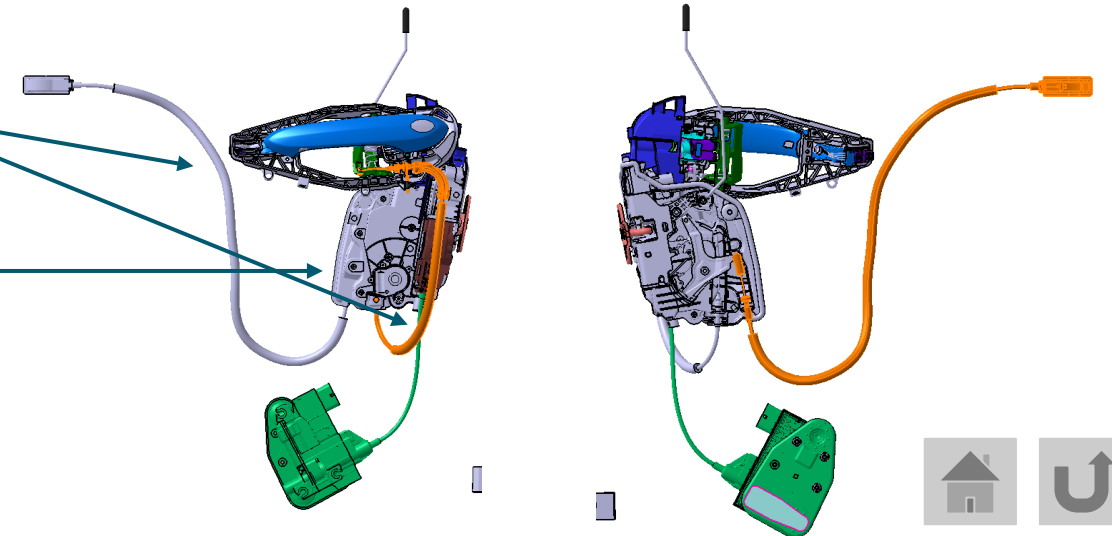
Situation:

- A door won't close

Repair:

- 1) Manually disengage the claw by opening the door via the handle
- 2) Verify that the door seals are seated correctly and do not prevent the door from closing. Correct any blockages if necessary.
- 3) Verify that the striker is adjusted correctly . Readjust the striker if necessary following ISTA/AIR repair instructions.
- 4) Inspect inner and outer Bowden cables. If damage/corrosion is found, replace the affected cable following ISTA/AIR repair instructions.
- 5) Replace the door lock actuator if the claw cover is broken following ISTA/AIR repair instructions.

Broken claw cover:



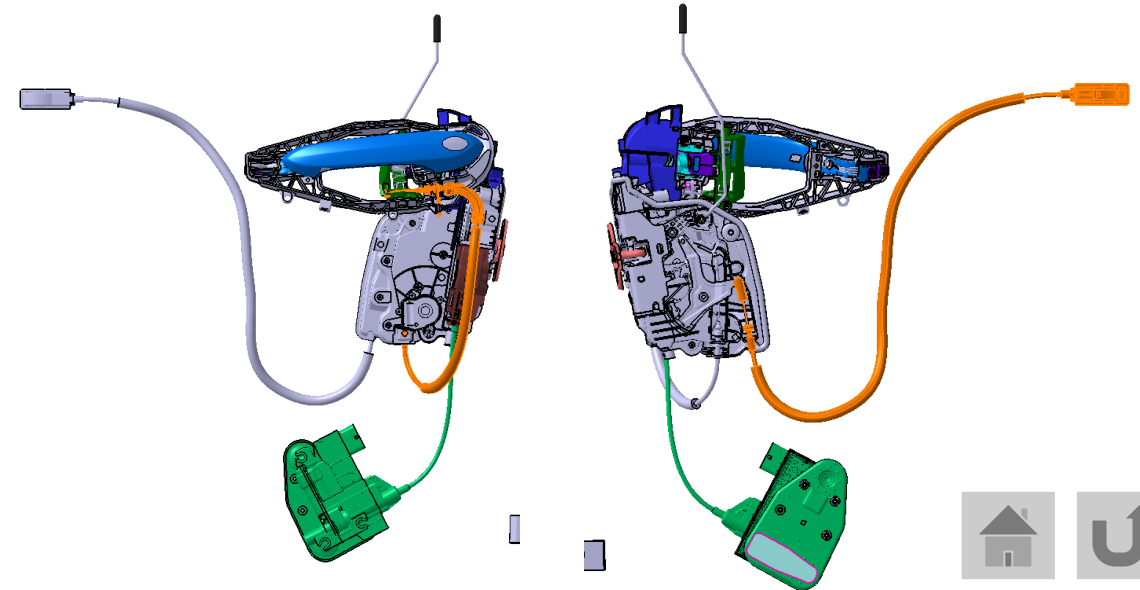
DOOR LOCK - DOOR WON'T LOCK / UNLOCK

Situation:

- A door won't lock/unlock

Repair:

- 1) Inspect inner and outer Bowden cables. If damage/corrosion is found, replace the affected cable following ISTA/AIR repair instructions.
- 2) Inspect electrical connections at the door lock actuator and repair if necessary.
- 3) If door only fails to lock/unlock with the key, ensure the key is initialized and functional.
- 4) Inspect the lock rod for damage and ensure free movement. Repair or replace if necessary following ISTA/AIR repair instructions.



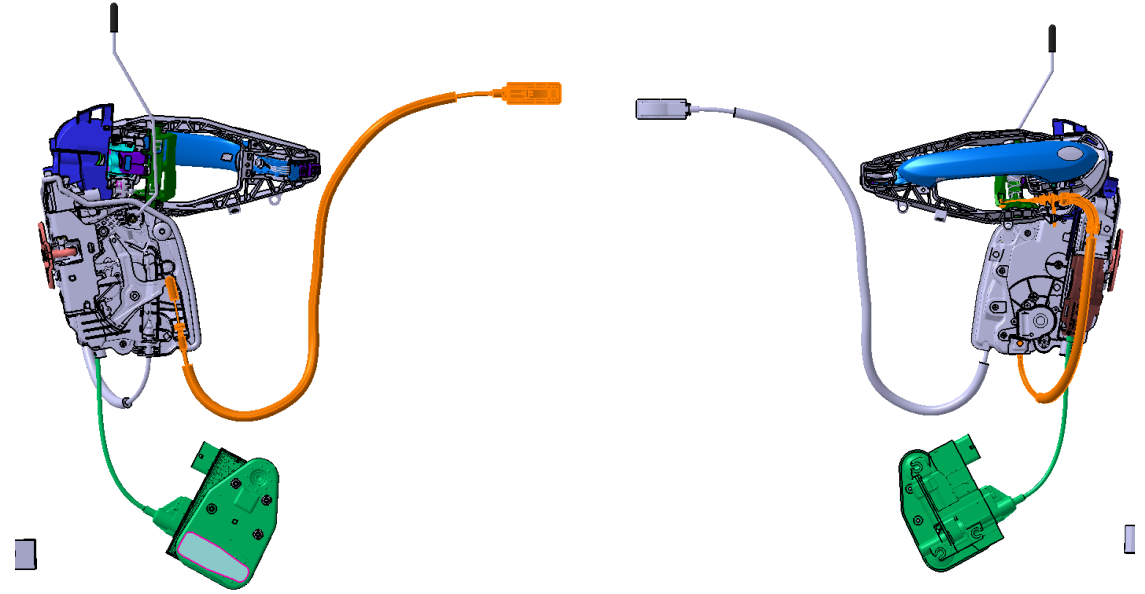
DOOR LOCK - DOOR WON'T OPEN FROM INSIDE

Situation:

- Door won't open when using the inside door handle

Repair:

- 1) If rear door: Disengage the child safety mechanism if activated.
- 2) Inspect inner and outer Bowden cables. If damage/corrosion is found, replace the affected cable following ISTA/AIR repair instructions.
- 3) Inspect the inner door handle for defects and ensure proper installation.



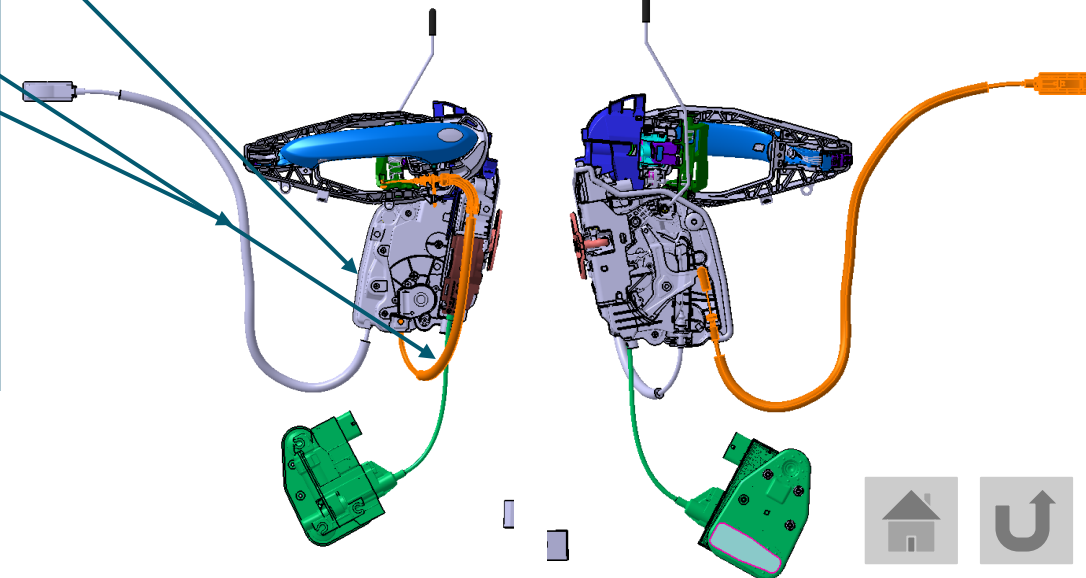
DOOR LOCK - DOOR WON'T OPEN FROM OUTSIDE

Situation:

- Door won't open when using the outside door handle

Repair:

- 1) Verify the door lock actuator is properly locking/unlocking. Replace door lock actuator if damage is found following ISTA/AIR repair instructions.
- 2) Inspect inner and outer Bowden cables. If damage/corrosion is found, replace the affected cable following ISTA/AIR repair instructions.
- 3) Verify that the outer door handle works correctly and properly connect the main door harness



DOOR LOCK - SYSTEM STATES WRONG DOOR STATUS

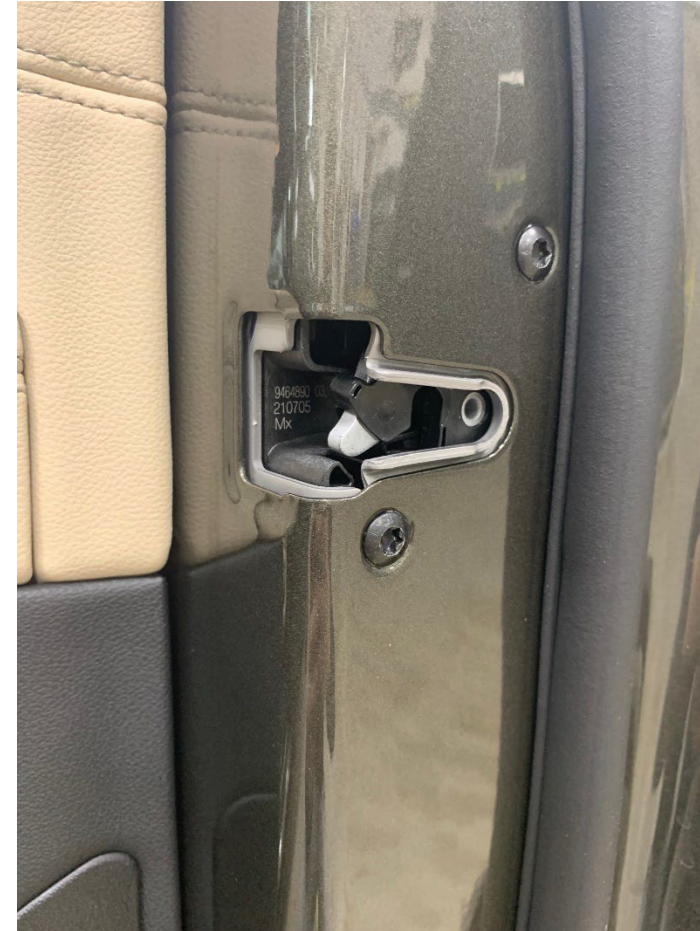
Situation:

- Vehicle recognizes incorrect door status

Repair:

- 1) Manually disengage the claw by opening the door via the handle
- 2) Inspect wiring and plug connections at the door lock actuator. Repair if necessary.
- 3) If no plug/wiring damage is found, replace the door lock actuator following ISTA/AIR repair instructions.

Door lock manually engaged in 1st position:



DOOR LOCK - DOOR POPS OPEN TO 1ST POSITION

Situation:

- Door pops open to 1st locked position (latched/slightly open)

Repair:

- 1) Inspect door striker adjustment and readjust if necessary following ISTA/AIR repair instructions.

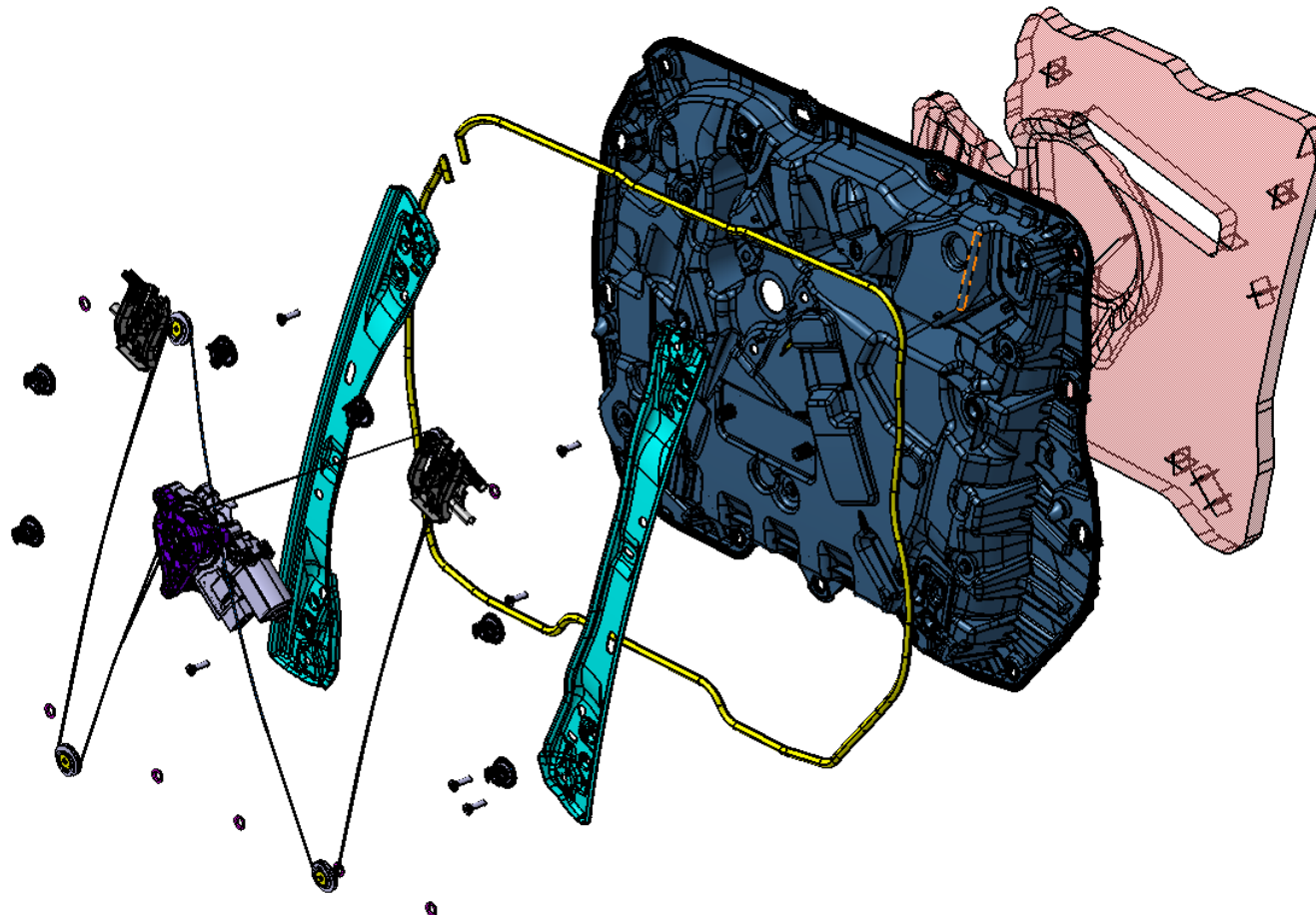


WINDOW REGULATOR

Noise issues



Functional issues



WINDOW REGULATOR- NOISE ISSUES

Situation:

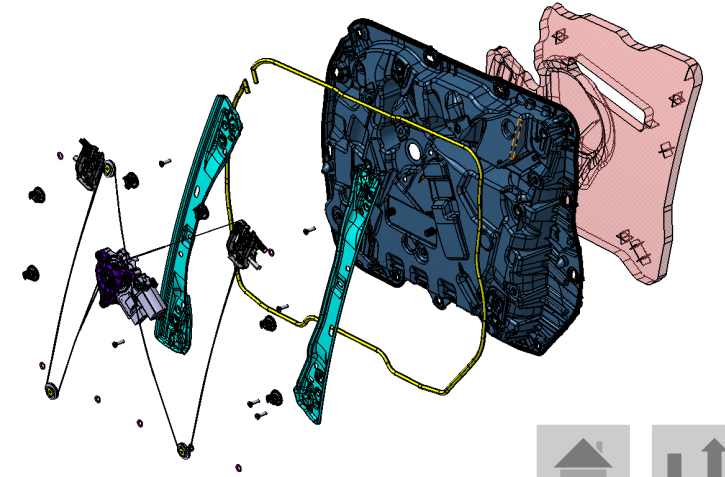
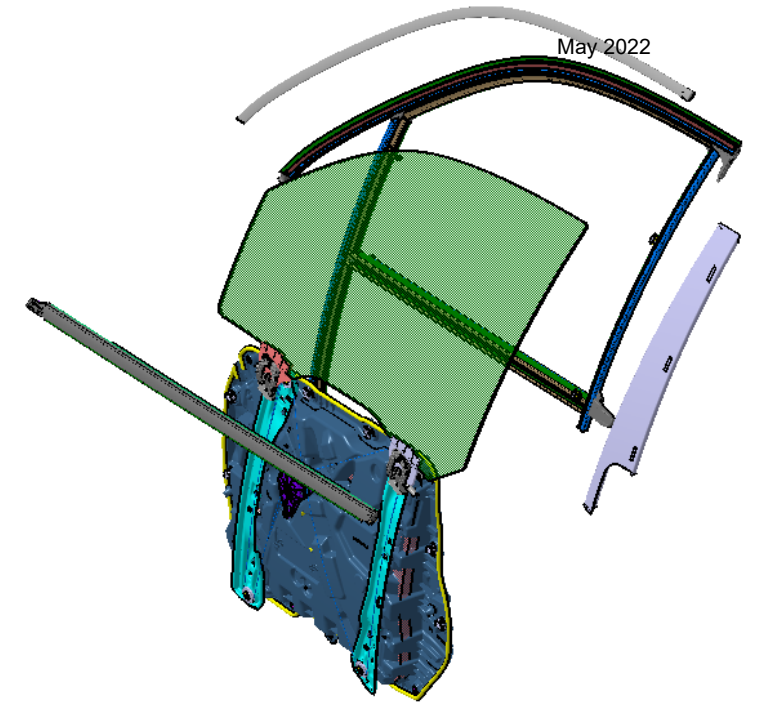
- Wind noise while driving (due to window not fully closing -> see corresponding functional issue)

Situation:

- Noise while functioning the glass up and down

Repair:

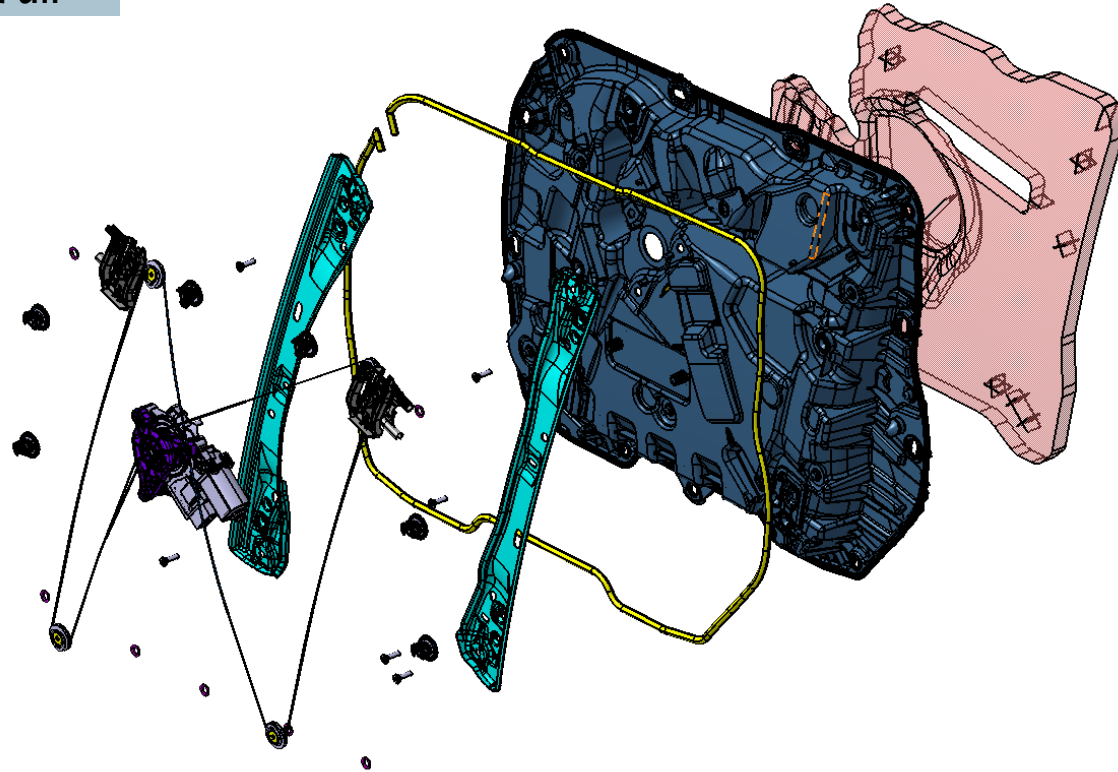
- 1) Clean the glass of any dirt, lubricants, etc. using BMW glass cleaner
- 2) Verify that the mechanics work correctly
 - a) Clean all seals (including inner waist belt and window guide seal)
 - b) Clip the glass fully into the window lifter
 - c) Route the door harness correctly away from the glass or window guide lifters



WINDOW REGULATOR- FUNCTIONAL ISSUES

Window not operating at all

One touch function issue
• One touch function not operating



Window moving too slowly
-> X3 or X4 affected
-> X5 or X6 affected

Reversal
-> window will fully go up and afterwards immediately come down
-> window does not go fully up before going down again

Window moving in steps

Window not fully closing



WINDOW REGULATOR- FUNCTIONAL ISSUES – WINDOW DOES NOT OPERATE AT ALL

Situation:

- Window does not operate at all

Repair:

- 1) Verify that the motor reacts to input (noise, attempted movement)
- 2) If the motor reacts to input
 - a) Perform a vehicle test with ISTA and work address any associated faults
- 3) If the motor does not react to input
 - a) Verify that the window switch positions referencing ISTA BDC status request/test plan
 - b) Verify that the other windows operate correctly
 - i. If other windows operate: Continue window diagnosis ([see these instructions](#))
 - ii. If other windows don't operate: Continue vehicle diagnosis (Voltage supply, terminal control, etc.)



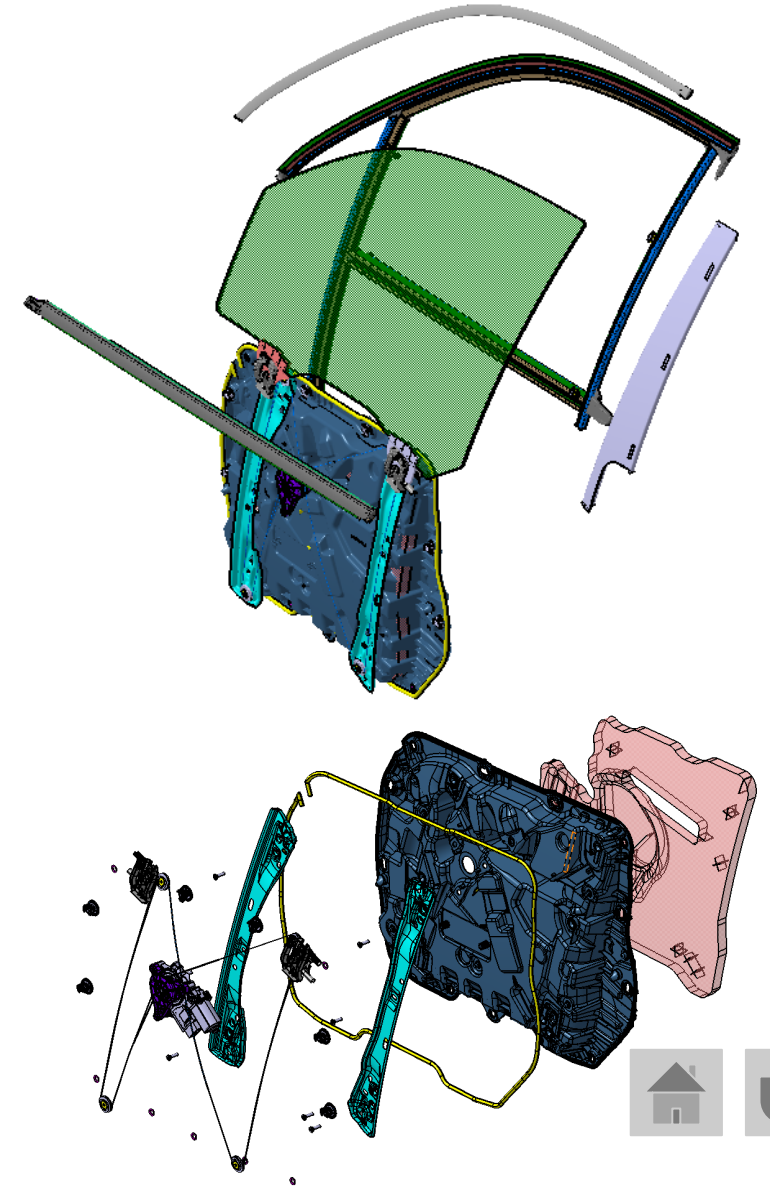
WINDOW REGULATOR- FUNCTIONAL ISSUES – INITIALIZATION ISSUE

Situation:

- Initialization issue
 - The one touch function is not working at all
 - One touch does not fully open/close the window

Repair:

- 1) Close the window completely
- 2) Perform a reinitialization



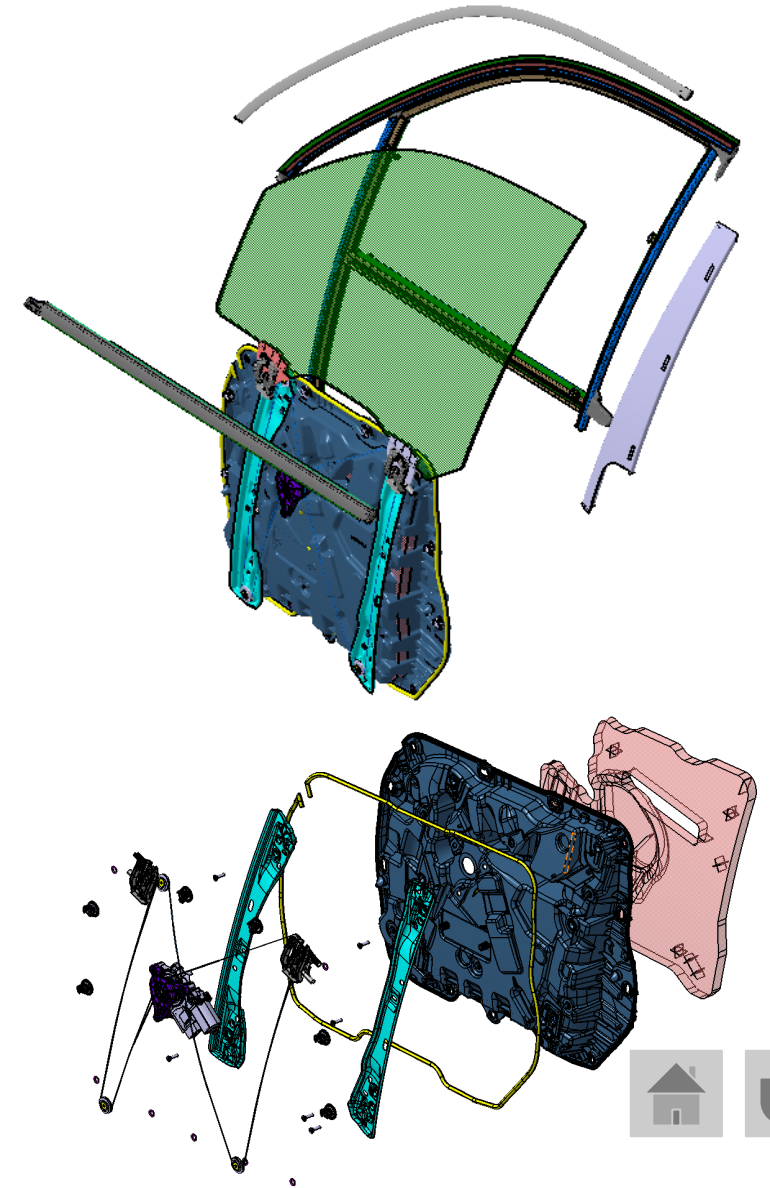
WINDOW REGULATOR- FUNCTIONAL ISSUES – WINDOW ONLY MOVING IN STEPS

Situation:

- Window moves only in steps

Repair:

- 1) Perform a reinitialization



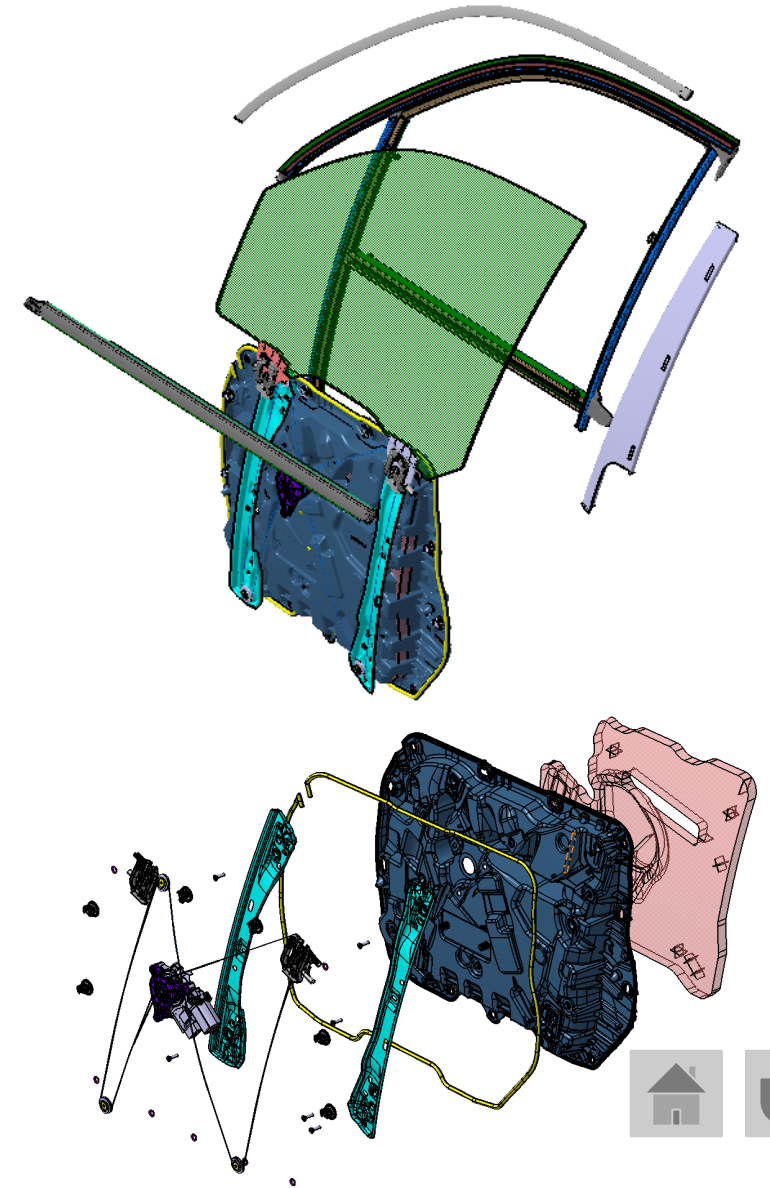
WINDOW REGULATOR- FUNCTIONAL ISSUES – WINDOW NOT FULLY CLOSING

Situation:

- Window not fully closing

Repair:

- 1) Perform a reinitialization



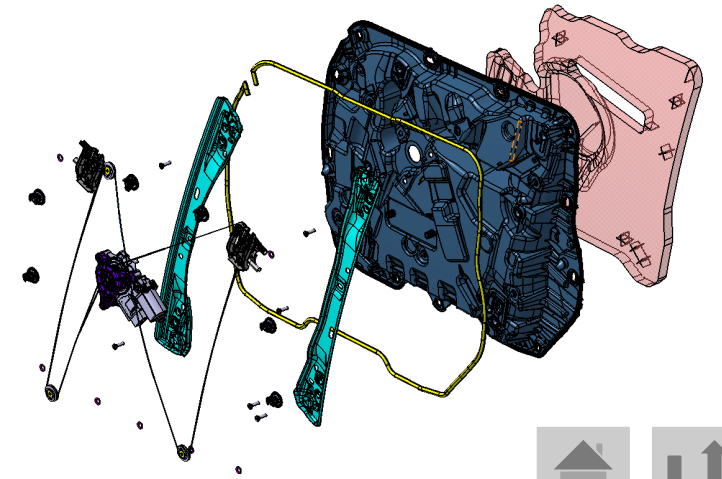
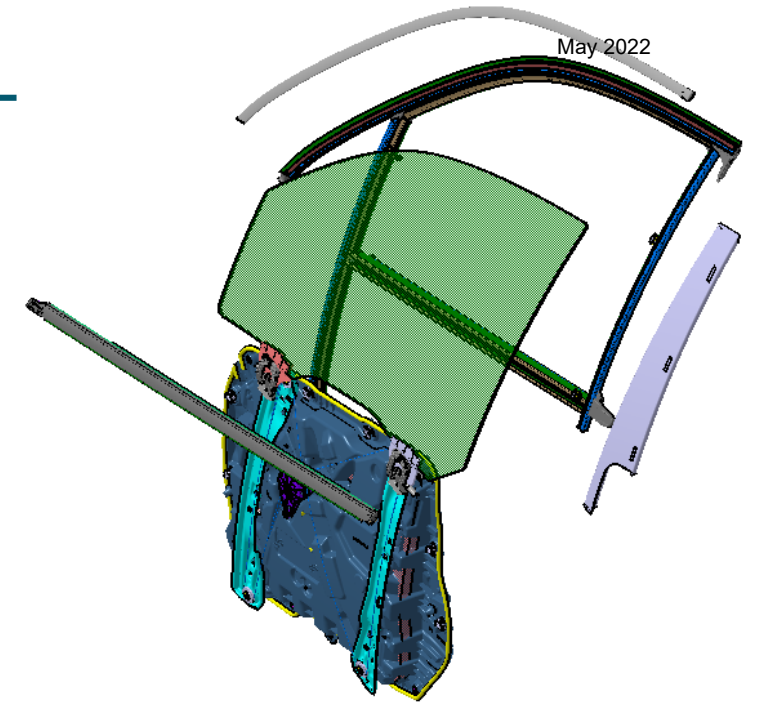
WINDOW REGULATOR- FUNCTIONAL ISSUES – REVERSAL

Situation:

- Reversal - Window will fully go up and afterwards immediately come down

Repair (if window goes fully up before reversal):

- 1) Perform a reinitialization



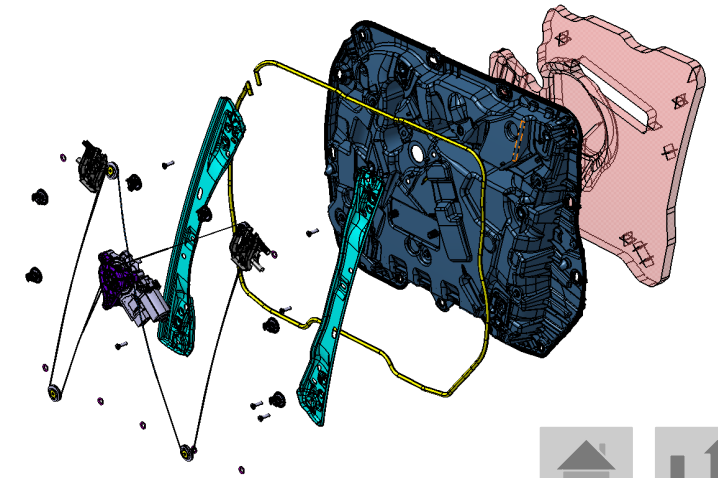
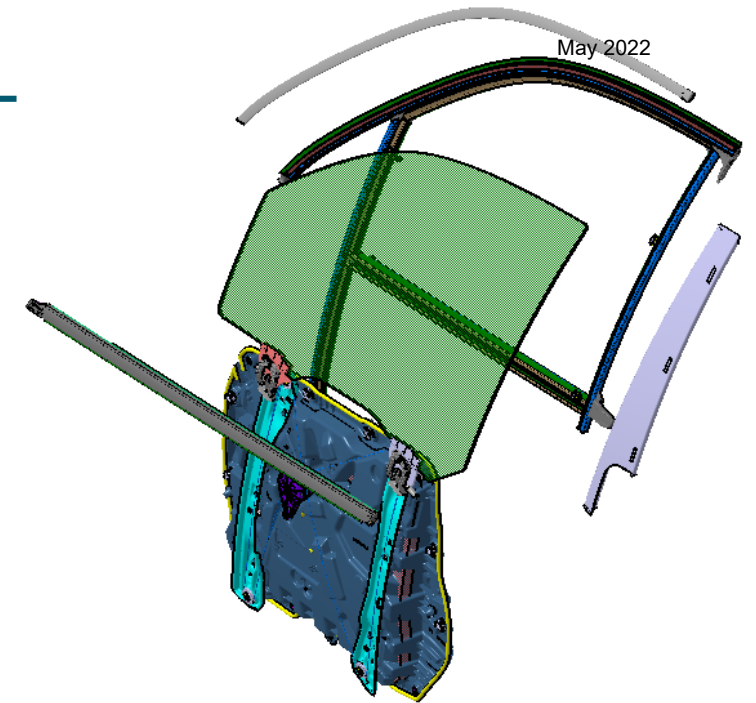
WINDOW REGULATOR- FUNCTIONAL ISSUES – REVERSAL

Situation:

- Reversal - window does not go fully up before going down again

Repair (if window does not go fully up before reversal):

- 1) Clean the glass of any dirt, lubricants, etc. using BMW glass cleaner
- 2) Verify that the mechanics work correctly
 - a) Ensure glass is completely clipped into regulator
 - b) Ensure the door harness is not interfering with the window/regulator.



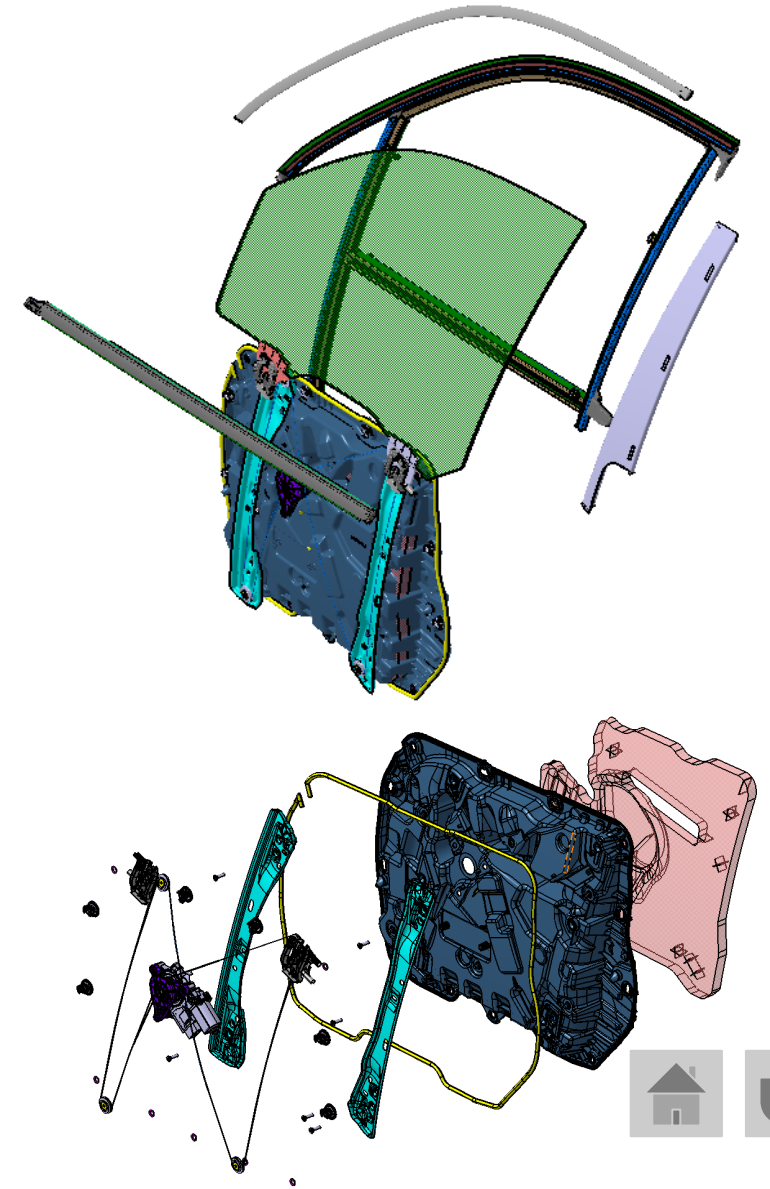
WINDOW REGULATOR- FUNCTIONAL ISSUES – WINDOW MOVING TOO SLOW

Situation:

- Window moves too slow (G01 & G02)

Repair (for G01 and G02):

- 1) Clean the glass of any dirt, lubricants, etc. using BMW glass cleaner
- 2) Verify that the mechanics work correctly
 - a) Ensure glass is completely clipped into regulator
 - b) Ensure the door harness is not interfering with the window/regulator.



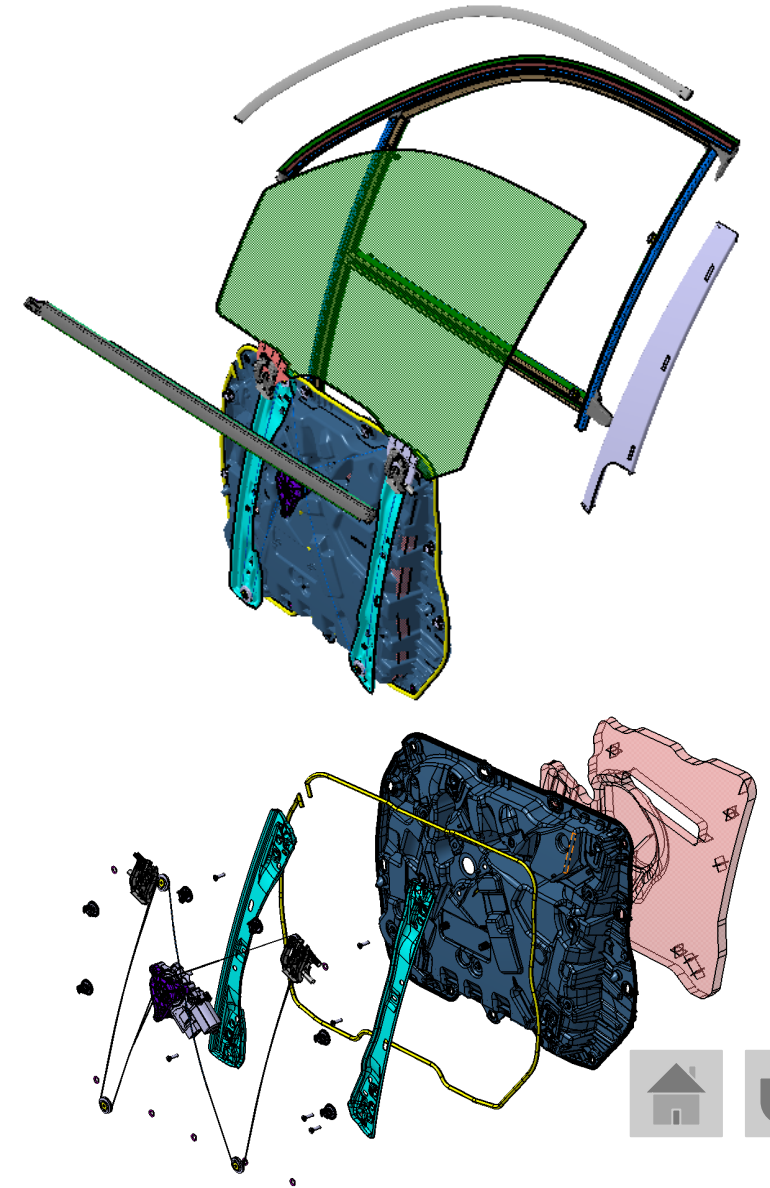
WINDOW REGULATOR- FUNCTIONAL ISSUES – WINDOW MOVING TOO SLOW

Situation:

- Window moves too slow (G05 & G06/7)

Repair (for G05 and G06/7):

- 1) Compare speed to known good vehicle
- 2) If window is found to be too slow, continue diagnosis at window motor and/or window regulator.
- 3) Replacement of window motor and/or regulator may be required.



DOOR BREAK – NOISE WHEN FUNCTIONING THE DOOR

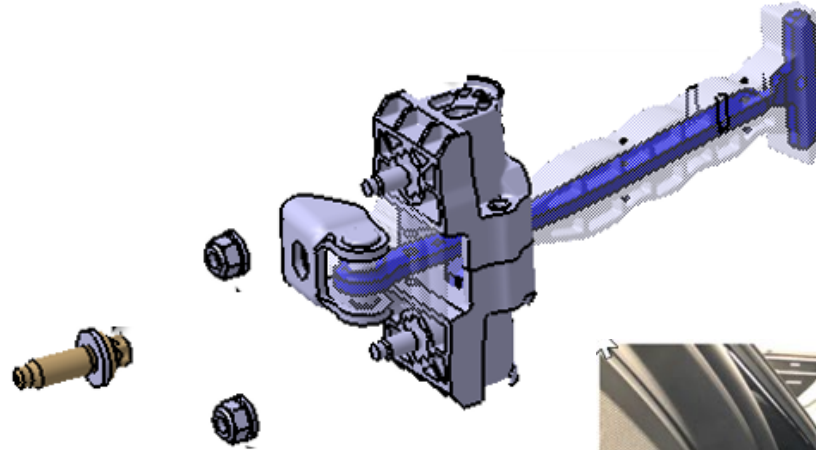
Customer symptom:

- Clicking/Popping noise when opening / closing the door

Step by step instructions:

- 1) Tighten all nuts on the door, torquing to ISTA repair instruction specifications.
- 2) Tighten the bolt to the body, torquing to ISTA repair instruction specifications.
- 3) Repair cross threaded nuts/studs as necessary

*Please note in claim comment if loose condition was on door or body side



Door brake nut cross-threaded onto stud, causing noise when opening and closing door.

