TECHNICAL SERVICE BULLETIN

TSB #:	TSB40082301	**Release Date:**	9/12/2023
Main Group:	40 - Interior		
Subject:	Instrument Panel (IP) Vents – Malfunction and Replacement		
Vehicle:	FM29 OCEAN	**Production Range:**	SORP
Model Year(s):	2023	**Region(s):**	Global
Mobile Service:	**NO**		

Complaint:

Customer may complain of IP vents not functioning correctly with the following symptoms:

1. IP vents may not respond to commands from the CID/Central Touchscreen for side-to-side movements.
2. IP vents may be in a closed position.
3. Clicking noise may be heard.

Cause:

1. Possible calibration lost for one or more Air-Vents unable to be adjusted.
2. Possible mechanical failure of the internal vent mechanism.

Correction:

All vehicles manufactured before **AUGUST 7, 2023** may present a potential to mechanical failure leading to breaking components, for that reason, on a customer complaint basis, test the vent using the diagnostic steps provided on the bulletin.

After completing the diagnostic steps, follow one of the corrective actions:

- Manually engage vent calibration.
- Replace the affected malfunctioning vent(s).
- **The working technician will complete log vent replacement details in Technical Service Report** – Vent Replacement document and attach to Technical Case in Storefront (**TSR100401** Attached at the end of the bulletin
- **NOTE:** Before replacing any vents on the instrument panel main carrier, it must be confirmed and inspect that the vehicles have the most updated MDV controller installed. If the vehicle doesn't have the must updated one, it would need to update/replace to the most updated version of the MDV controller before any vent replacement activity. (Follow "MDV module replacement for update software" bulletin for more detail information).

Handling:

When working on replacing the vents, the procedure will take place inside the vehicle cabin and with high interaction with the instrument panel, for these reason Fisker recommends the removal procedure to be performed by 2 technicians for an easier management of the complete part.

In addition of the suggested amount of technicians, Fisker recommend the use of cover protections to avoid any unintended damage for the instrument panel, seats, door trim, A-pilar trim, B-pilar, floor mats & center consoles. The following pictures are recommended examples for a correct cover protection.

Figure 1. Example of interior trim cover protections

After removing the air vents, you should remove both actuators from the housing and needs to be marked with a **red sticker** and marked as an outdated version, removal date & vehicle VIN number. Disposal will be aligned with the latest FISKER direction for collection, shipping & return policy.

DO NOT DISCARD the old actuators without a preview FISKER notification to the service center. If clear instructions are not given for the removed modules, Fisker service centers need to hold the modules until further direction is received.

Part identification:

For rework vents on the same revision level, you need to identify the following physical components, to be sure that the vents that actually installed on the vehicle are not an older version:

1. FM29 DEV SP 0442 AIR VENT: Identify an extra white hot melt component on the end stop area.

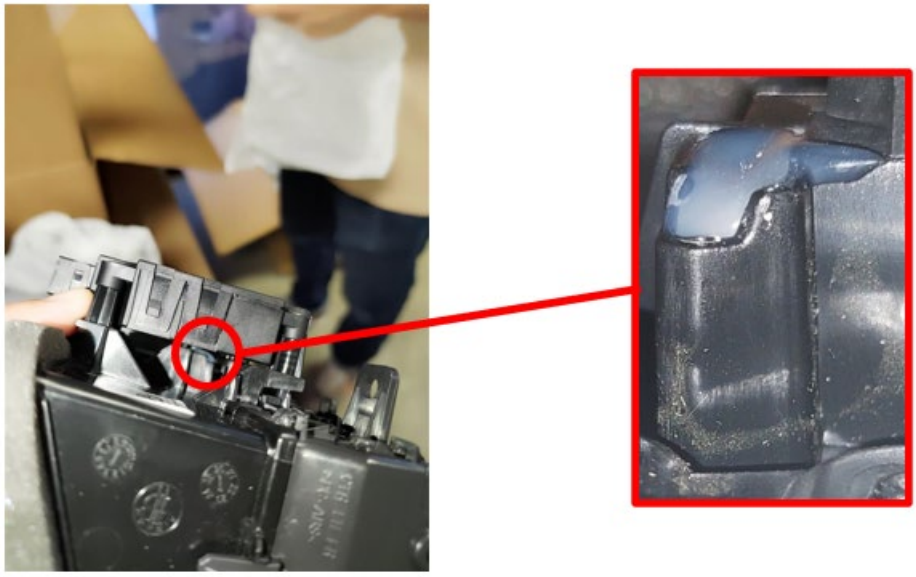


Figure 2. Air vent with hot melt rework

2. FM29_DEV_SP_0451 AIR VENT: Identify a 3D printed insert on the end stop area can be orange, red or white color.

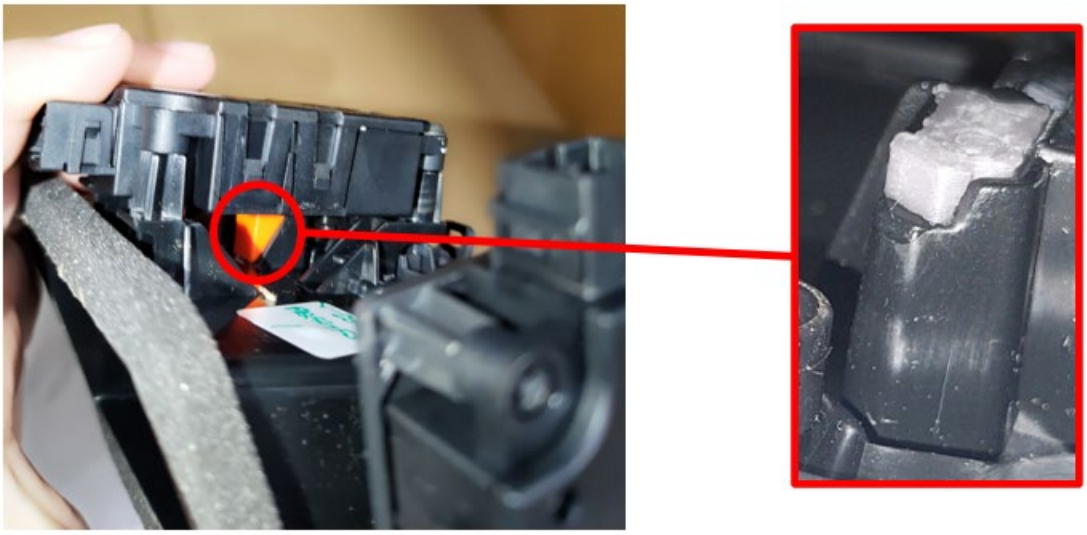


Figure 3. Air vent with 3D insert

Parts Info:

Part Number	Description	Quantity
FM2940120020ASP	IP_FACE_VENT_RH_ASSEMBLY_SERVICE	1

FM2940120018ASP	IP_FACE_VENT_LH_ASSEMBLY_SERVICE	1
FM2940120021ASP	IP_FACE_VENT_CTR_RH_ASSEMBLY_SERVICE	1
FM2940120019ASP	IP_FACE_VENT_CTR_LH_ASSEMBLY_SERVICE	1

Warranty Info:

Information provided below must be used when completing the Work Order Line item associated to this complaint and repair, covered under the terms of the Fisker New Vehicle Limited Warranty

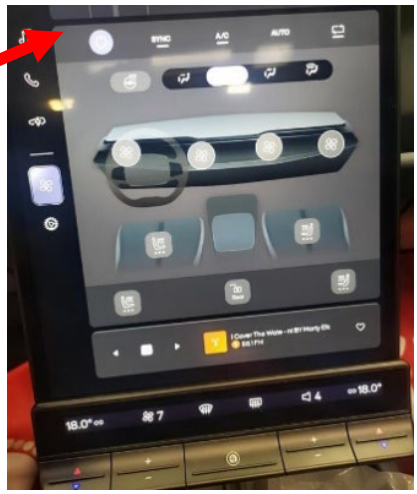
Job Code:	30.20	Thermal Management-Front Interior HVAC Airflow - General
Defect Code:	302018820005	Ventilation Outlet Open / Close - Broken/Damaged
Labor Operation	**Labor Time**	**Description**
40120101	32 FRU	Air Vent(s) - Remove/Replace
OR		
40120105	4 FRU	Air Vent - Calibration Only

Procedure:

Diagnostic Steps:

This is required to determine if any of the vents should be replaced, or if software troubleshooting should be performed.

1. Turn on the air conditioning in the CID screen.



2. Press the button on the screen that represents a vent, slide it to the top of the screen and then release it. Observe the selected vent on the IP if it is moving. Note the visual inspection results.

3. Press the button on the screen that represents a vent, slide to the bottom of the screen, and then release it. Observe the selected vent on the IP if it is moving. Note the visual inspection results.

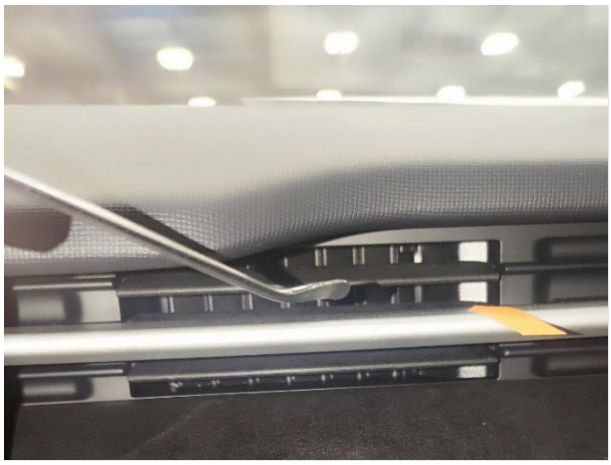
4. Press the button on the screen that represents a vent, slide it to full right and then release it. Observe the selected vent on the IP if it is moving. Note the visual inspection results.

5. Press the button on the screen that represents a vent, slide it to full left and then release it. Observe the selected vent on the IP if it is moving. Note the visual inspection results.

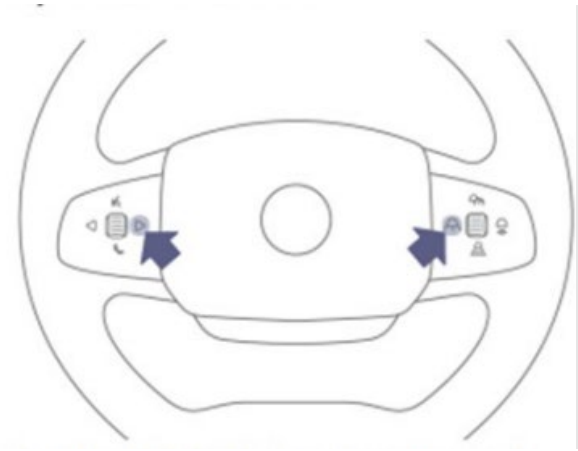
6. Repeat steps 2 to 5 for the other 3 vents.

7. If there is one or more vents that didn't move while performing the steps 2 to 5, grab a small tool of 8mm diameter (a No. 2 pencil or pen can also be used).

8. Use the tool and place it near the vents which didn't move from the previous steps (see Notes), and gently move the vent from side to side.



9. If the vent has some resistance to be displaced, Infotainment software may need to be reset by pressing and holding the two inner steering wheel buttons for 30 seconds.



10. If the suspected vent didn't respond after infotainment reboot, follow the Vent Calibration Procedure.
Note: If the vent moves freely without any resistance, replace vent by following the Vent Replacement Procedure.

Vent Calibration Procedure:

IMPORTANT:

- **This procedure should be performed only on the Passenger Side (RH Side) of the vehicle.** Instructions and picture guidance below show the driver side, as these references come from the Service Manual, which only shows the Driver Side.
- Fisker recommends using long sleeves as part of the PPE while performing removal procedure.

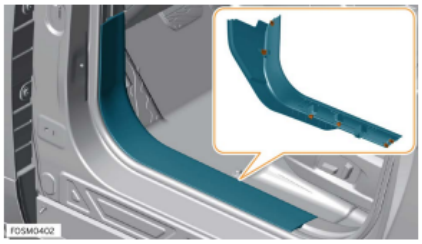
Trim panels removal for access

1. Remove the A-pillar upper mid trim & lower trim.

Trim - A Pillar - Lower - LH

Removal

1. Release section of weatherstrip covering A pillar lower trim.



2. Release clips (x6) securing A pillar lower trim to vehicle.
3. Remove A pillar lower trim.

Installation

1. Installation is the reverse of removal procedure except for the following:

   NOTE: Inspect clips for damage and replace if necessary.

2. Remove weather trip & A-pilar mid trim.

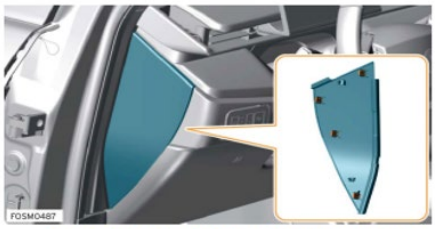
3. Release upper section of weatherstrip covering A pillar upper and middle trim panels.

4. Release A pillar mid substrate trim from A pillar upper trim.

3. Remove IP End Caps.

End Cap - LH

Removal



1. Release clips (x4) securing end cap trim panel to instrument panel (IP).
2. Remove end cap trim.

4. Remove Passenger side lower panel (PSL).

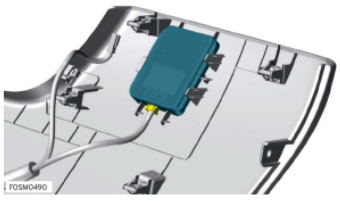
Trim - Lower - Driver

Removal

1. Remove driver side hush panel. Refer to Hush Panel - Driver.
2. Remove driver side end cap trim. Refer to End Cap - LH.

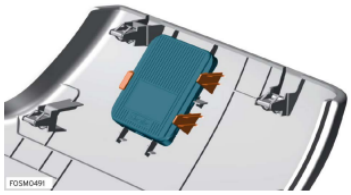
3. Remove M4.2x16 Torx screw securing lower driver`s trim panel to Instrument Panel (IP) structure. **Torque 1.6 Nm.**

4. Release clips (x15) securing trim panel to IP structure.



5. Disconnect electrical harness from NFC module.
6. Remove trim panel.

Do not carry out further disassembly if component is removed for access only.



7. Release clips (x3) securing NFC module to trim panel.
8. Remove NFC module.

Installation

1. Installation is the reverse of removal procedure except for the following:

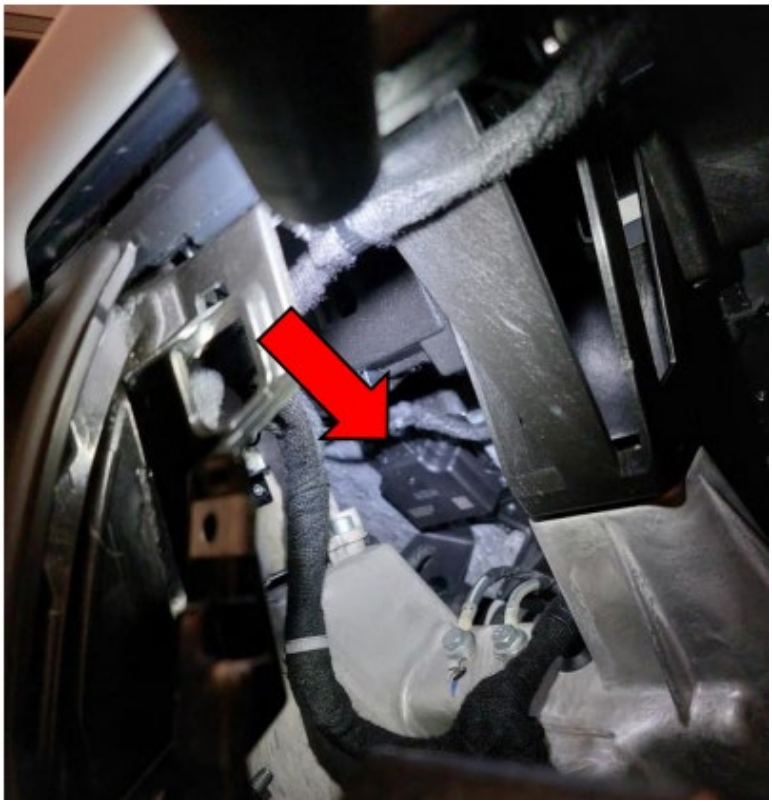
   NOTE: Inspect clips for damage and replace if necessary.

5. Remove the taco tray.

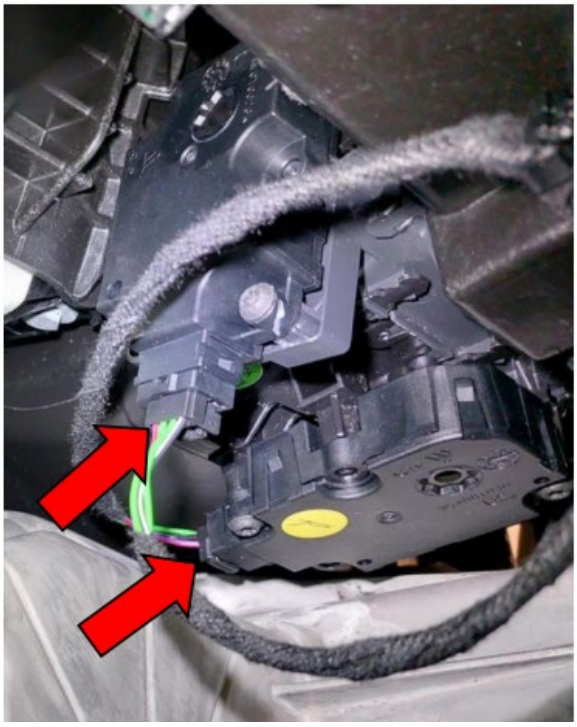
Vents Calibration

1. Vehicle is on READY status and must remain on READY throughout the entire process.
2. Make sure that all the vents are off in the AC display function.

3. Manually disconnect the plug connection to the MDV control unit (motorized deco vent) (approx. installed in the middle directly under the I-panel skin).



4. Disconnect both connectors to the right Air-Vent (passenger outboard side).



5. Re-connect the plug connection to the MDV control unit & wait at least 4 minutes for the following step.
6. Re-connect both connectors to the right Air-Vent (passenger outboard side).
7. Disconnect again the plug connection to the MDV control unit.
8. Connect the MDV control unit plug connections (unplugging/plugging in).
9. After Air-Vents are re-addressed (calibrated), reactivate air conditioning functions via display and all 4 Air-Vents are set to function.

10. Perform the above Diagnostic Steps again to ensure functionality.

Vent Replacement Procedure:

Notes:

- Fisker recommends the removal procedure to be performed by 2 technicians.
- Use cover protection for all interior trims, doors & seats and don't remove them during the removal procedure.
- Consider using long sleeves as part of the PPE while performing removal procedure.

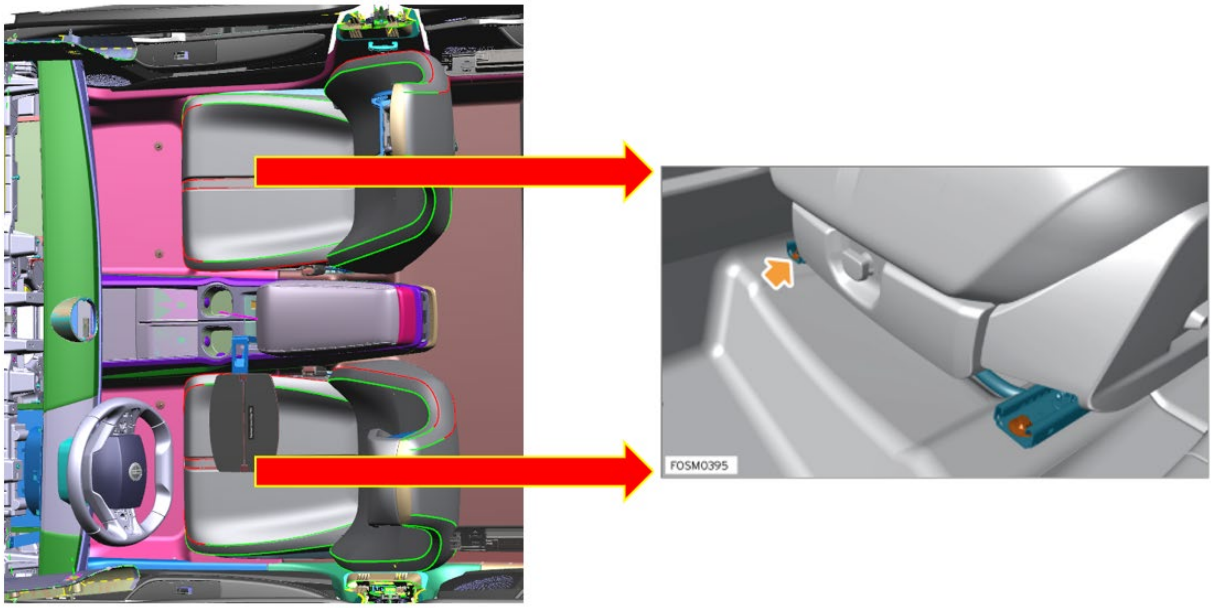
Required Tools:

- Plastic pry tool
- T10 Torx
- T20 Torx
- T25 Torx
- T30 Torx
- 10 mm socket w/ ratchet
- 4 mm Allen for Floating buttons
- 3 mm Allen for air bag removal
- 16 mm Deep socket w/ Breaker bar for steering wheel bolt
- Paint Pen for steering wheel bolt
- witness mark (After torquing)
- 3/8" Torque wrench (62.4 NM torque spec)

Steps:

- **IP Removal**

1. Move seats backwards to create the maximum working space between the IP console and seats.



Note: By setting the seat at the highest position, it will be easier for having access for the seat bolts and will be giving more space for working area.

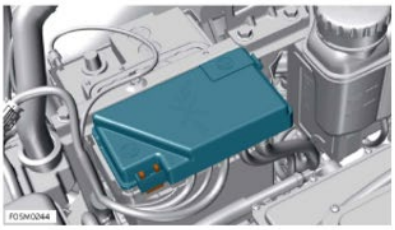
2. Disconnect the 12V battery. This is to ensure there is no power going into any of the airbags to trigger unintended deployment. After disconnecting, wait about 15 minutes to enable all the capacitors to fully drain.

Battery Disconnect - 12V

Disconnection

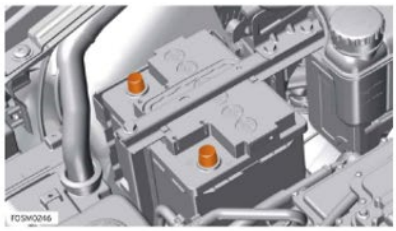
1. Open hood. Refer to Open Hood.

2. Loosen nut securing negative (-) electrical terminal to battery. **Torque 4 Nm.**
3. Disconnect electrical terminal from battery and position aside.



4. Release clips (x3) and open busbar box lid.

5. Loosen nut securing positive (+) terminal to battery. **Torque 5 Nm.**
6. Release busbar box from battery and position aside.



7. Install insulated caps to battery terminals to prevent accidental connection of electrical terminals.

Connection

1. Battery connection is the reverse of the procedure for disconnection except for the following:

   NOTE: Clean battery terminals and apply battery terminal grease to prevent corrosion.

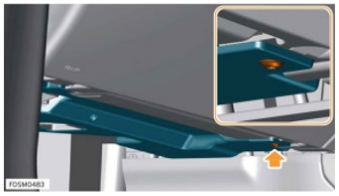
2. After installation perform the window and sunroof programming/calibration procedures and delete DTC's using the Fisker Aftersales Service Tool.

Note: This important step is to ensure that there is no power leftover at the airbags which could trigger an unintended deployment.

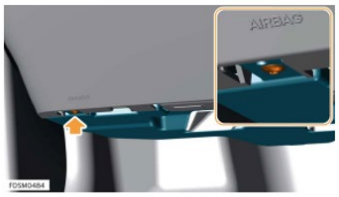
3. IP hush panels – driver side, passenger side – remove, unsnap electrical connections.

Hush Panel - Driver

Removal



1. Remove M4.2x16 Torx screw securing hush panel to lower instrument panel (IP) trim. **Torque 1.6 Nm.**



2. Remove M4.2x16 Torx screw securing hush panel to lower IP trim. **Torque 1.6 Nm.**
3. Pull hush panel to release from rear locator.

   NOTE: Be careful not to damage air ducts when removing hush panel.

4. Remove hush panel.

   NOTE: If equipped, disconnect and remove footwell lamp from hush panel.

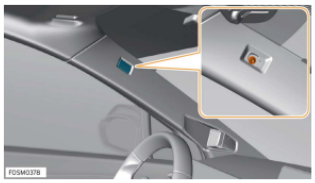
Installation

1. Installation is the reverse of removal procedure.

4. Remove the A-pillar upper trim, mid trim & lower trim.

Trim - A Pillar - Upper - LH

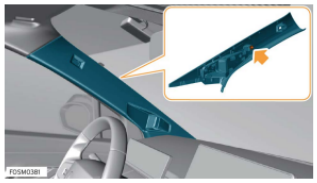
Removal



1. Remove airbag trim cover from A pillar trim.
2. Remove M6x20 Torx screw securing A pillar trim to A pillar. **Torque 5 Nm.**

3. Release upper section of weatherstrip covering A pillar upper and middle trim panels.

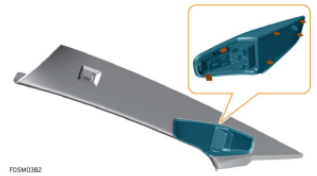
4. Release A pillar mid substrate trim from A pillar upper trim.



5. Release clip securing A pillar trim to A pillar.

6. Disconnect harness connectors (x2) from occupant camera.
7. Remove A pillar trim.

Do not carry out further disassembly if component is removed for access only.



8. Release clips (x6) securing camera bezel trim to A pillar trim.
9. Remove camera bezel trim.

Installation

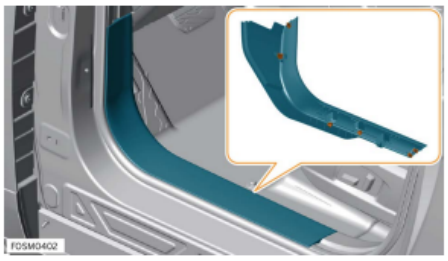
1. Installation is the reverse of removal procedure except for the following:

5. Remove the lower trim.

Trim - A Pillar - Lower - LH

Removal

1. Release section of weatherstrip covering A pillar lower trim.



2. Release clips (x6) securing A pillar lower trim to vehicle.
3. Remove A pillar lower trim.

Installation

1. Installation is the reverse of removal procedure except for the following:

   NOTE: Inspect clips for damage and replace if necessary.

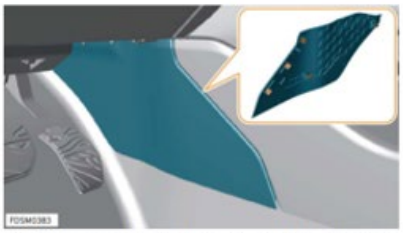
6. Remove the front extension panels on the center console.
7. Remove the center console bolts and slide rearward.

Floor Console Assembly

Removal

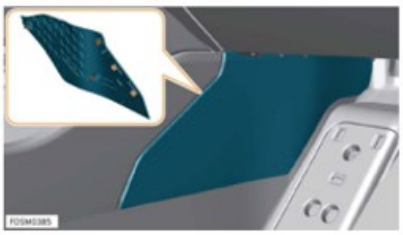
1. Remove LH front seat assembly. Refer to Seat Assembly - LH.
2. Remove RH front seat assembly.

   NOTE: Procedure is the same as for left side component.



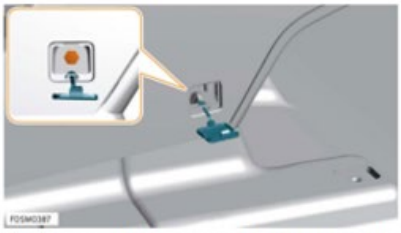
3. Release clips (x5) securing LH extension panel to floor console assembly.
4. Remove LH extension panel.

5. Remove M6x20 bolt securing floor console assembly to vehicle. **Torque 5 Nm.**

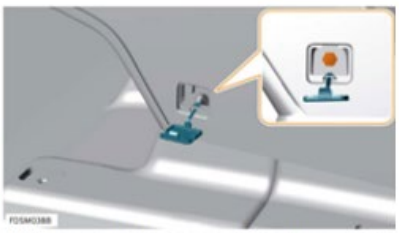


6. Release clips (x5) securing RH extension panel to floor console assembly.
7. Remove RH extension panel.

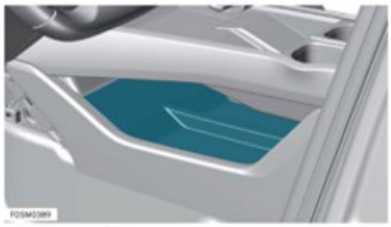
8. Remove M6x20 bolt securing floor console assembly to vehicle. **Torque 5 Nm.**



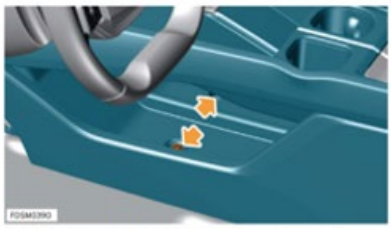
9. Remove LH cover cap from floor console assembly.
10. Remove M6x20 bolt securing floor console assembly to vehicle. **Torque 5 Nm.**



11. Remove RH cover cap from floor console assembly.
12. Remove M6x20 bolt securing floor console assembly to vehicle. **Torque 5 Nm.**



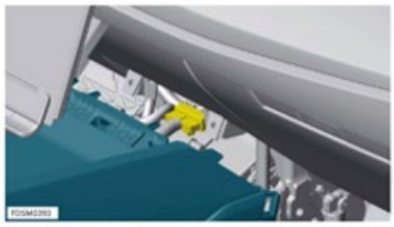
13. Remove lower storage mat.



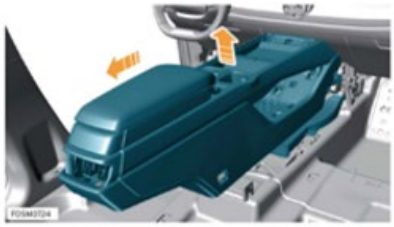
14. Remove M6x20 bolts (x2) securing floor console assembly to vehicle. **Torque 5 Nm.**

15. Release clips (x3) securing front screw cover to floor console assembly.
16. Remove front screw cover.

17. Remove M6x20 bolts (x2) securing floor console assembly to vehicle. **Torque 5 Nm.**



18. Disconnect harness connector from floor console assembly.



19. Manouvre floor console assembly up and rearwards to release from heating duct.
20. Remove floor console assembly.

Do not carry out further disassembly if component is removed for access only.

21. Pull down rear USB panel.

Note: It's not necessary to remove center console for the following steps, slide it as rearward as possible.

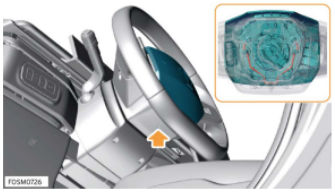
8. Remove driver airbag.

Air Bag Module - Driver

Removal

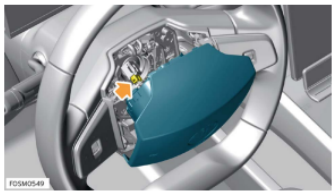
1. Disconnect 12V battery. Refer to Battery Disconnect - 12V.

CAUTION: Wait 2 minutes to allow Supplementary Restraint System back up power circuit to discharge before commencing work.



2. Insert release pin through hole in bottom of steering wheel to release internal spring clip securing driver`s airbag to steering wheel.
3. Release driver`s airbag from steering wheel.

CAUTION: Do not allow the airbag to hang by the harness.



4. Disconnect harness connector from driver`s airbag.
5. Remove airbag.

CAUTION: Store airbag face up in a cool, dry, secure area away from all corrosives, oxidizers, ignition sources, or high heat sources.

Installation

1. Installation is the reverse of removal procedure except for the following:

CAUTION: Carefully inspect the airbag before installing it. Do not install an airbag that shows signs of being dropped or improperly handled, such as dents, cracks or deformation.

2. Locate driver`s airbag on steering wheel and then firmly press to engage locking pins. Check that both sides of the airbag are securely retained.

WARNING: Do not hit the airbag to engage the locking pins. This could damage the airbag or cause accidental deployment. Remove airbag, inspect locking mechanism and then try reinstalling the airbag. If the airbag will not securely engage on the steering wheel, either the airbag or steering wheel may need to be replaced.

CAUTION: Do not try to disassemble, or tamper with the airbag assembly.

3. After installation delete DTC's using the Fisker Aftersales Service Tool.

9. Remove steering wheel.

Steering Wheel

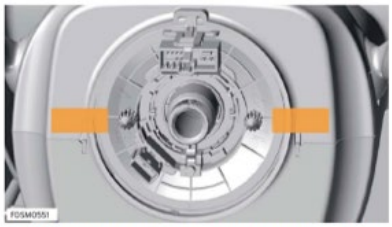
Removal

1. Remove driver air bag module. Refer to Air Bag Module - Driver.

2. Disconnect harness connector from clock spring.
3. Restrain steering wheel and loosen M16x25 bolt securing steering wheel to column. **Torque 62.5 Nm.**

WARNING: Do not remove bolt until steering wheel has been released from splines.

4. Release steering wheel from column splines by rocking steering wheel from side-to-side and pulling with both hands.
5. Position steering wheel with front wheels in straight ahead position.
6. Remove bolt securing steering wheel to column.
7. Remove steering wheel.



8. Attach tape across edge of clock spring to retain central setting and prevent it from being rotated.

Installation

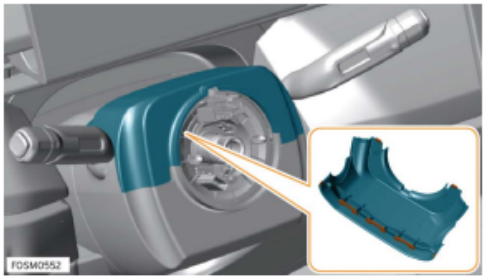
1. Installation is the reverse of removal procedure.

10. Remove Column Shrouds.

Column Shroud - Upper

Removal

1. Remove steering wheel. Refer to Steering Wheel.



2. Release clips (x7) securing upper column shroud.
3. Remove upper column shroud.

Installation

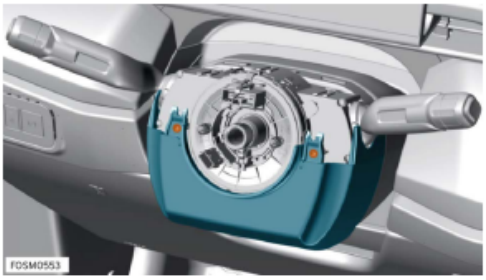
1. Installation is the reverse of removal procedure except for the following:

   NOTE: Inspect clips for damage and replace if necessary.

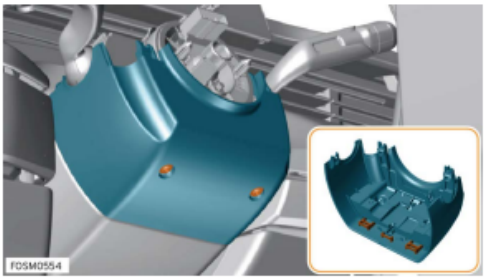
Column Shroud - Lower

Removal

1. Remove upper column shroud. Refer to Column Shroud - Upper.



2. Remove screws (x2) securing lower column shroud to clock spring. **Torque 0.7 Nm.**



3. Remove screws (x2) securing lower column shroud to clock spring. **Torque 0.7 Nm**.
4. Release clips (x3) and remove lower column shroud.

Installation

1. Installation is the reverse of removal procedure except for the following:

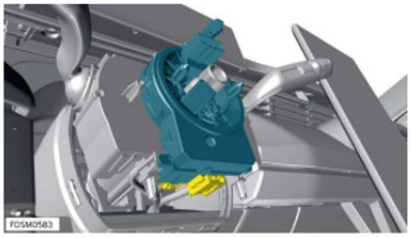
   NOTE: Inspect clips for damage and replace if necessary.

11. Remove clock spring.

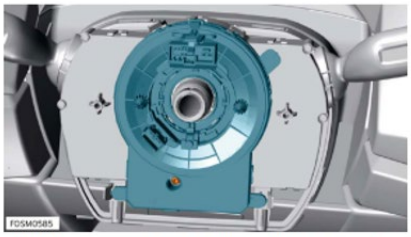
Clock Spring

Removal

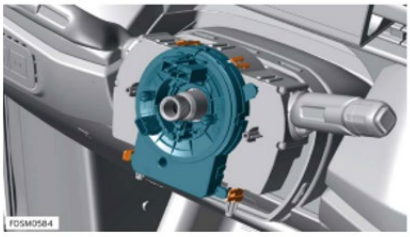
1. Remove lower column shroud. Refer to Column Shroud - Lower.



2. Disconnect harness connectors (x2) from clock spring.



3. Remove screw securing clock spring to integrated column switch module. **Torque 0.7 Nm.**



4. Release clips (x4) securing clock spring to multi-function switch housing.
5. Remove clock spring.

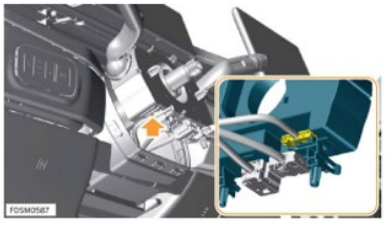
12. Remove CSI module.

Column Switch Integrated Module

Removal

1. Remove clock spring. Refer to Clock Spring.

2. Remove M5x10 bolts (x3) securing column switch integrated module to steering column. **Torque 5 Nm**.
3. Release column switch integrated module from steering column.



4. Disconnect harness connector from column switch integrated module.
5. Remove column switch integrated module.

Installation

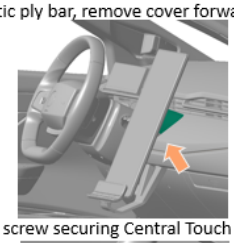
1. Installation is the reverse of removal procedure except for the following:
2. After installation perform programming using the Fisker Aftersales Service Tool and perform a function check.

13. Unsnap electrical connection & remove the CID screen.

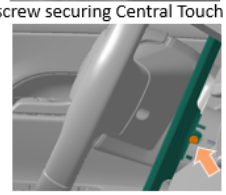
Central Touchscreen

Removal

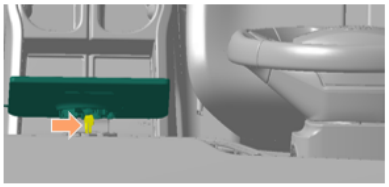
1. Using a plastic ply bar, remove cover forward of the Rotator to access bolt.



2. Loose single screw securing Central Touch screen to the rotator.



3. Separate the central touch screen from the rotator by pulling it away, pull it carefully to avoid any damage or pressure on the screen.
4. Disconnect harness connector from the touch screen.



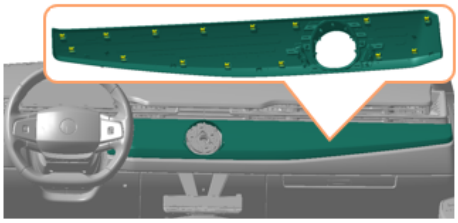
5. Remove touch screen. Be careful to not hit the screen with the floating buttons.

14. Unsnap electrical connection & remove CID button pack.

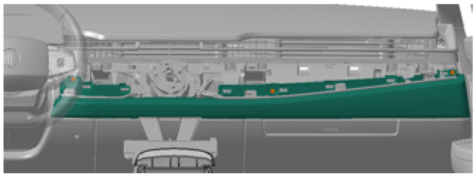
Central button pack

Removal

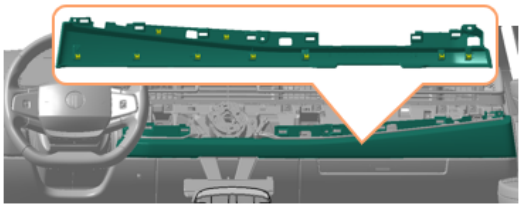
1. Release clips (x15) securing the middle panel to the IP dash.



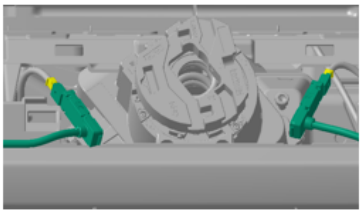
2. Remove middle panel.
3. Remove T20 Bolts (x3) securing lower panel to IP dash.



4. Release clips (x9) securing the lower panel to IP dash.



5. Disconnect harness connector from light bars.



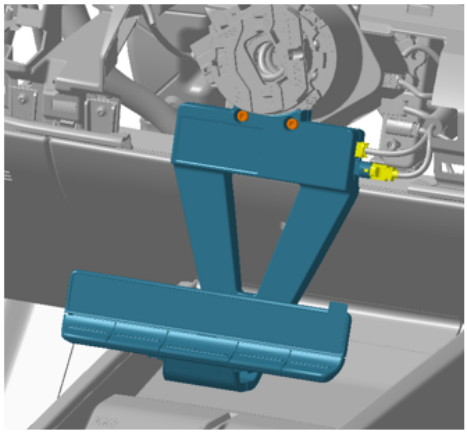
6. Remove lower panel.

15. Unsnap electrical connection & remove CID button pack.

Central button pack

Removal

7. Disconnect harness connectors from the floating buttons.
8. Remove 4mm Allen bolts (x2) securing floating buttons.



9. Remove floating buttons.

16. IP End Caps Removal

End Cap - LH

Removal

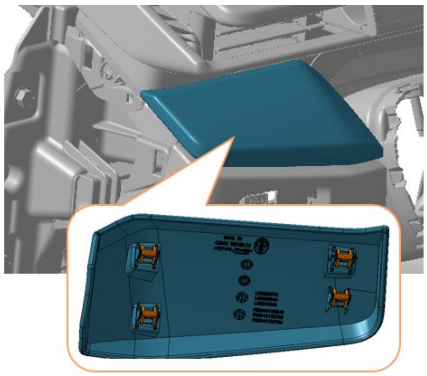
1. Release clips (x4) securing end cap trim panel to instrument panel (IP).
2. Remove end cap trim.

17. IP upper mid panels – Remove

Central button

Removal

1. Release clips (x15) securing the middle panel to the IP dash



18. Driver side lower panel (DSL) – remove, unsnap electrical connection.

19. Passenger side lower panel (PSL) – Remove.

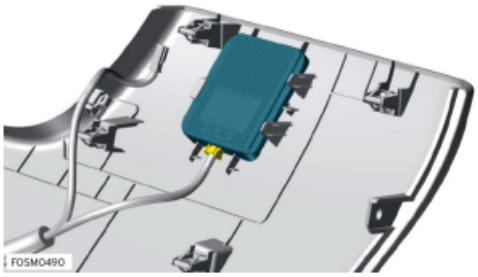
Trim - Lower - Driver

Removal

1. Remove driver side hush panel. Refer to Hush Panel - Driver.
2. Remove driver side end cap trim. Refer to End Cap - LH.

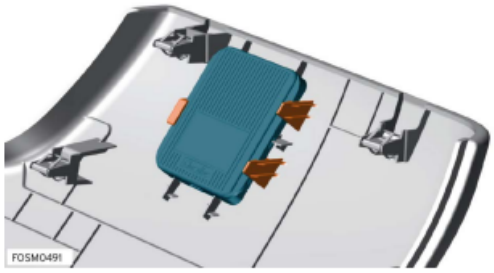
3. Remove M4.2x16 Torx screw securing lower driver`s trim panel to Instrument Panel (IP) structure. **Torque 1.6 Nm.**

4. Release clips (x15) securing trim panel to IP structure.



5. Disconnect electrical harness from NFC module.
6. Remove trim panel.

Do not carry out further disassembly if component is removed for access only.



7. Release clips (x3) securing NFC module to trim panel.
8. Remove NFC module.

Installation

1. Installation is the reverse of removal procedure except for the following:

   NOTE: Inspect clips for damage and replace if necessary.

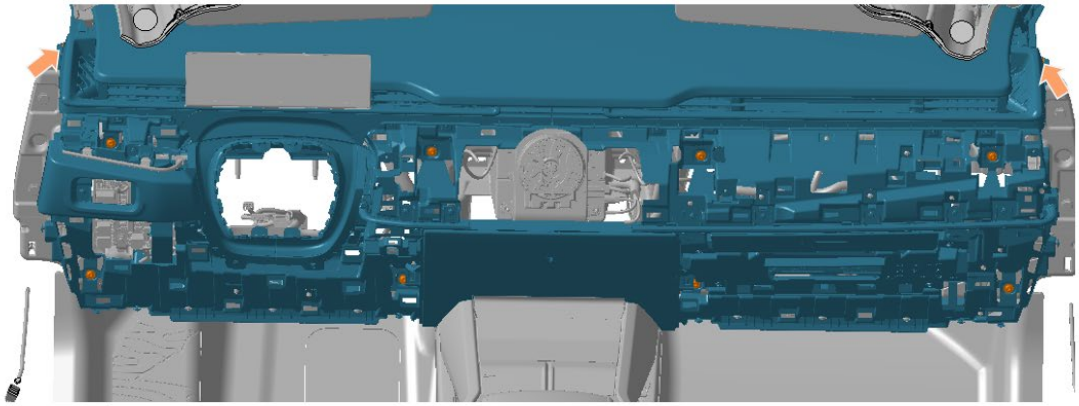
Note: Passenger & driver side are mirror steps for removal until step 4.

20. Passenger side – remove two electrical connections.
21. IP main carrier – remove bolts, unsnap electrical connections.

IP main carrier

Removal

1. Remove T6x20 (x10) securing the IP main carrior to the CCB

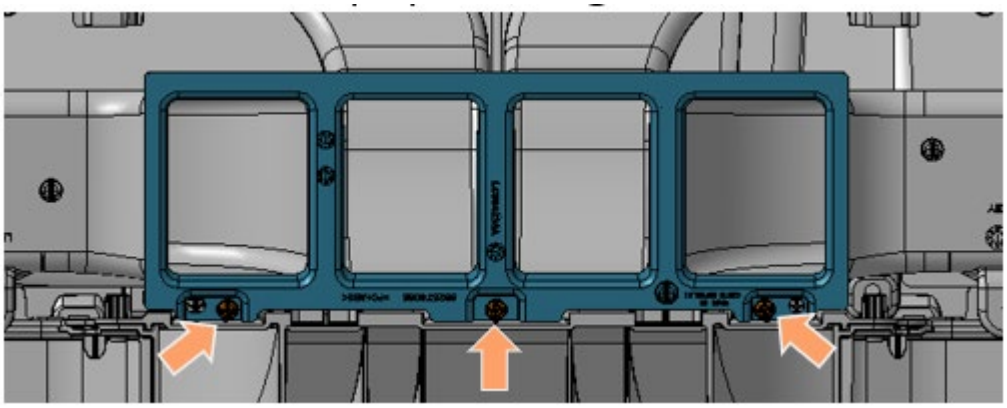


2. Disconnect wire harness.
3. Remove carefully the IP main carrier, place the IP in a suitable working table.

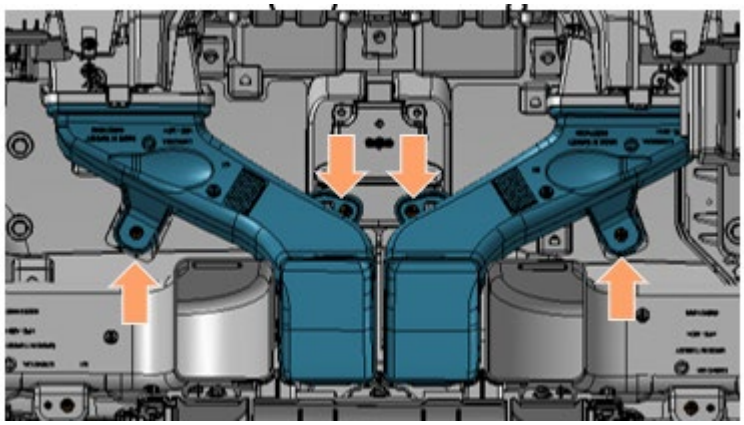
Note: The moment of starting to pull the IP out, ensure that the center air ducts have a free path above the electrical cables that are located in front of the air ducts.

- **AC Outlet Vents Removal**

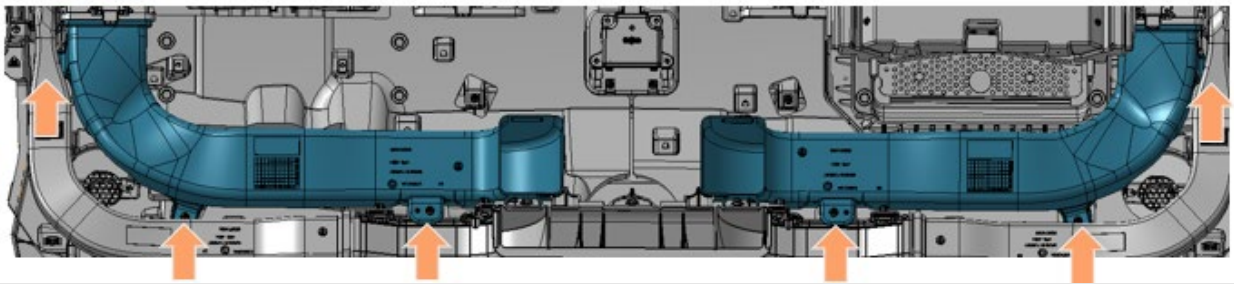
1. Remove T4x12 (x3) securing the IP duct manifold.



2. Remove IP duct manifold.
3. Remove T4.2x13 (x4) securing central ducts to IP.

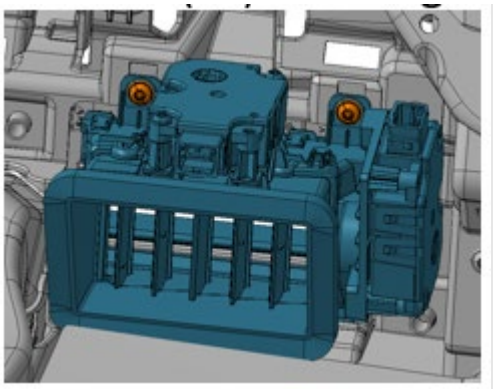


4. Remove Central ducts.
5. Remove T4.2x13 (x6) securing central ducts to IP.



6. Remove side ducts.

7. Remove T4.2x13 (x2) securing Face vents Assembly.



8. Remove driver outboard face vents assembly.

Repeat step 7 & 8 for the rest of face vents assemblies.

- **IP assembly.**

IP Assembly will be backward as removal procedure up to step 16 (IP upper mid panels – Remove). When reaching this point follow the next steps:

1. Perform vents calibration (follow vent calibration procedure).
2. Continue assembly of trim panels, starting from step 15.

When reaching Step 9 make sure to mark the bolt for quality check after assembling the bolt correctly (joint to torque), to make sure that has been secured to the correct recommended torque as mentioned on the procedure.

3. **When the installation of all the components have been finished, test the vents functionality after performing at least one complete vehicle sleep cycle.**

APPENDIX A.

Technical service report example.

TECHNICAL SERVICE REPORT

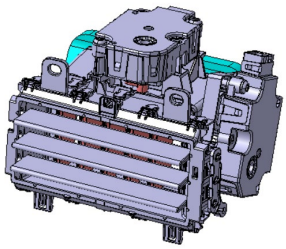
TSM Number:	TSR100401	**Date:**	10/04/23
Subject:	Vent Replacement Report		
Vehicle:	FM29 OCEAN	**TCM Case #:**	
Technician Name(s):	2023	**VIN #:**	

Parts Affected:
Detail vents condition at the moment of diagnostic and which vents are physically broken.

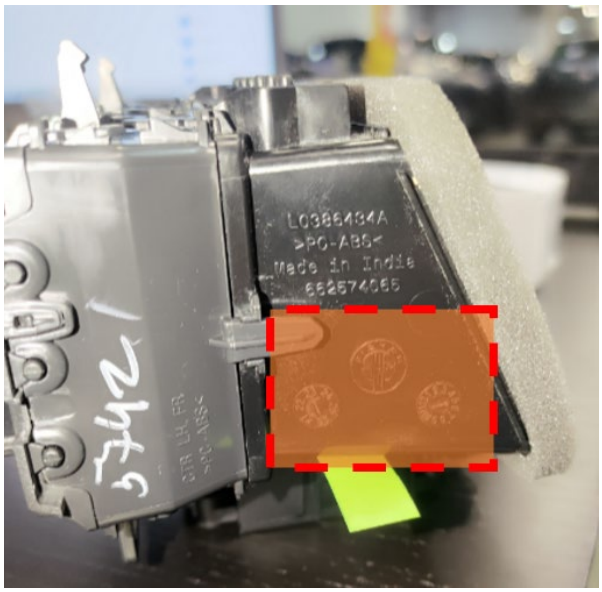
Description:
Write a brief summary of the issue. Which component of the vent is broken? Please document with pictures below.

Reference:
Add any picture on the applicable section and additional information to highlight the affected or broken areas on the vents. Repeat step for each one of the replaced vents.
*Pictures below are for example only:

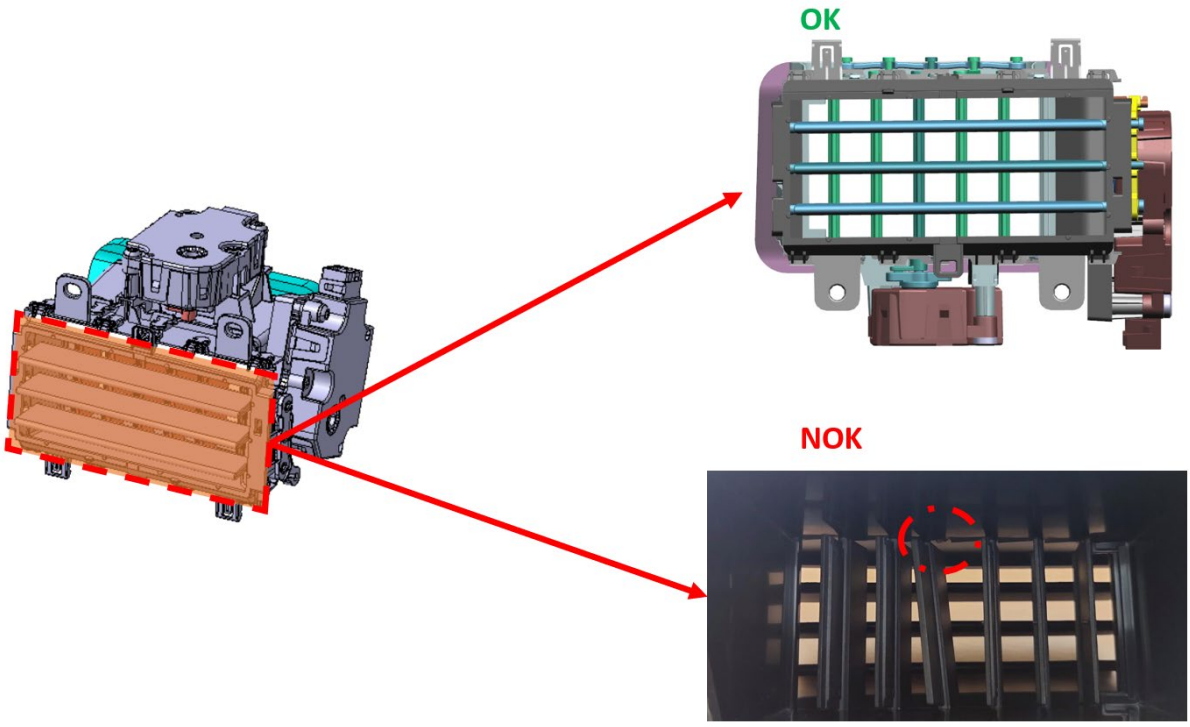
- Vent overview:



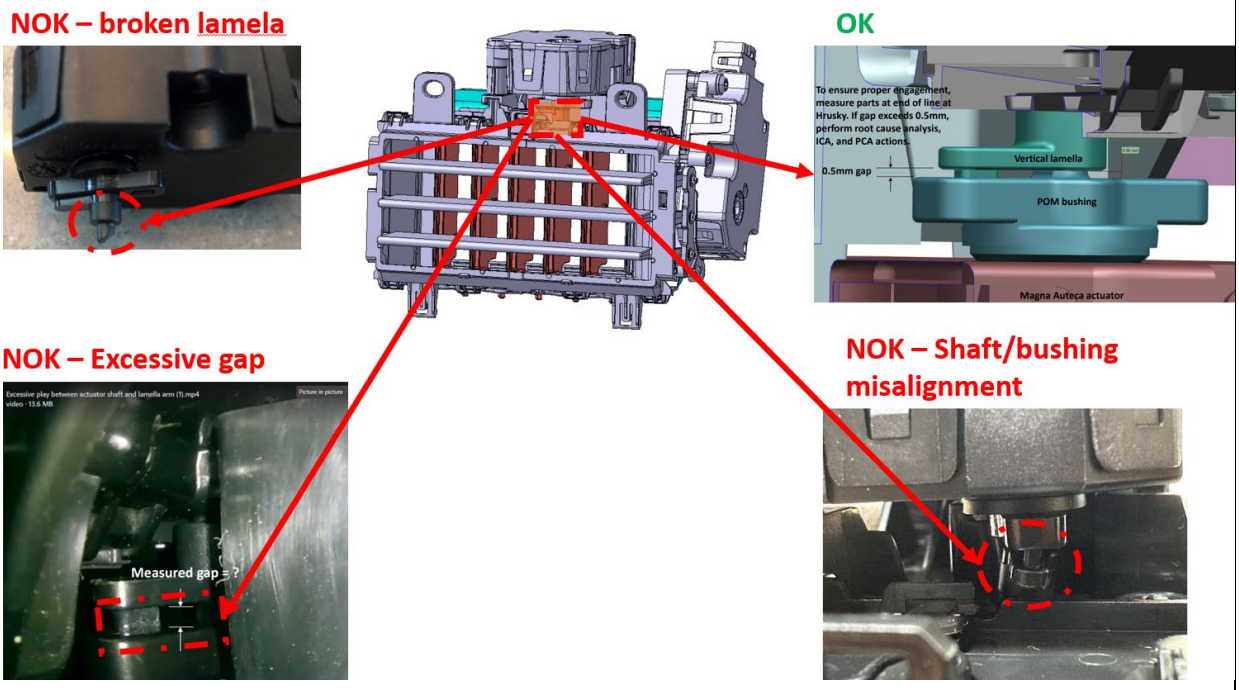
- Vent time stamp



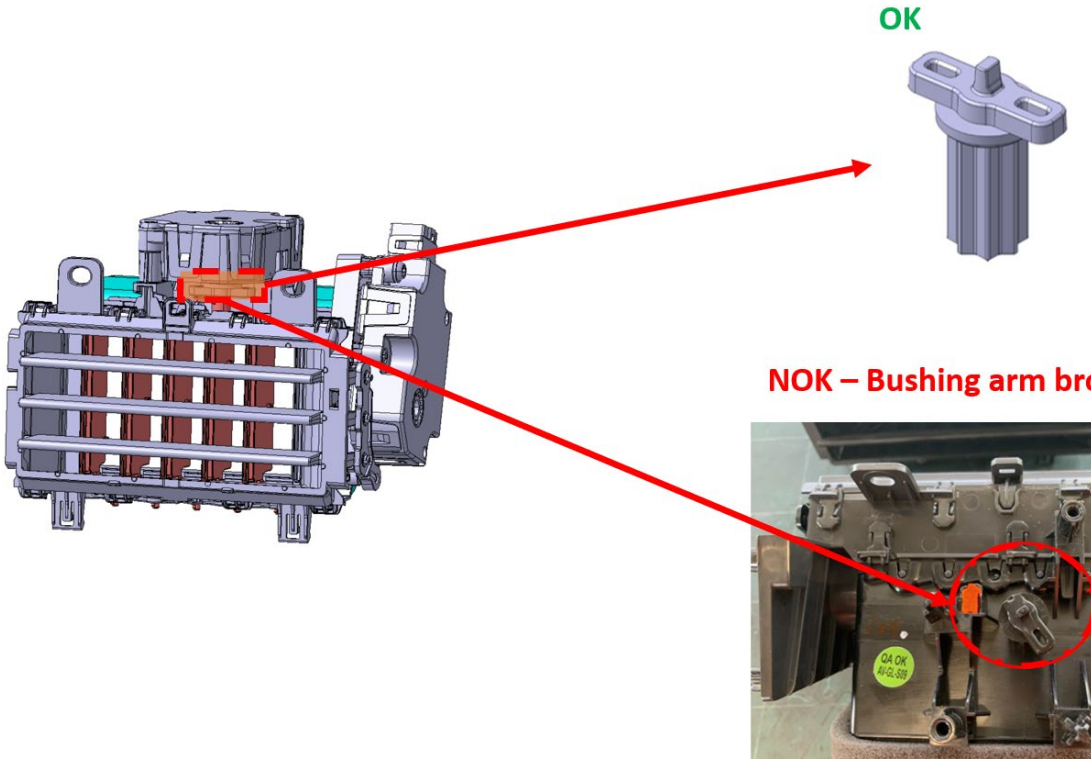
- Vane & linkage:



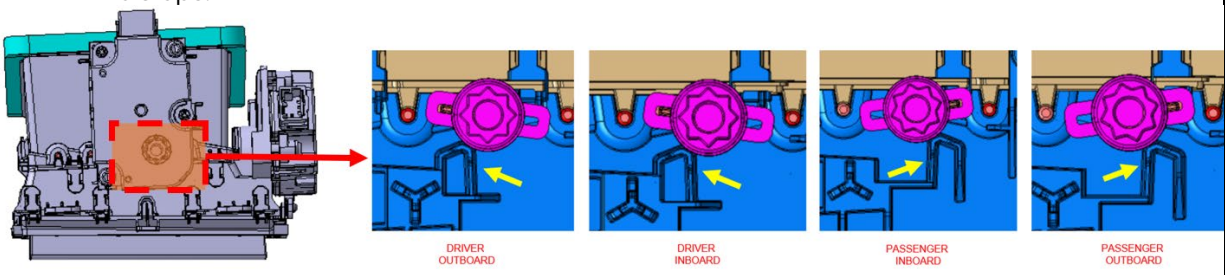
- Vertical Lamela:



- Actuator Bushing:



- End stops:



NOK – Hard stop arms damaged