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On Target

Ford Parts

For Ford and Lincoln wholesalers and the collision repair industry

From left to right: Anton Verwijst, subject matter expert, I-CAR; Gerry Bonanni, senior damageability engineer, Ford Motor Company; Tony Guzman, instructional design supervisor, I-CAR.

More Details on New Ford Explorer® Sectioning Repair Option

Throughout 2025, *On Target* has detailed in-depth collision repair material specific to the Ford Explorer/Lincoln Aviator® (*Editor's note: see 2025 recap story on page 6*), including a look at the new rear-rail sectioning procedure.

Recently, Ford Senior Damageability Engineer Gerry Bonanni joined I-CAR® experts to discuss the rear-rail sectioning repair on an episode of I-CAR's *Repairers Realm*.

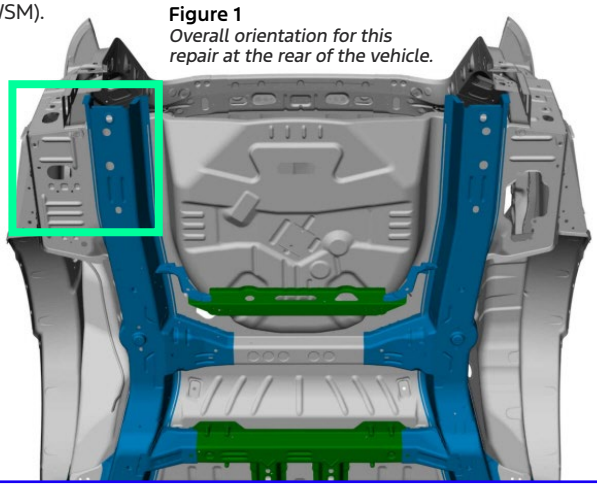
The 61-minute video is divided into several chapters and acts as a helpful visual guide that complements the specific steps noted in the official *Ford Workshop Manual* (WSM).

In the video, Bonanni is joined by I-CAR experts Tony Guzman and Anton Verwijst. Verwijst also appears in several pre-filmed sequences performing the actual rear-rail sectioning repair at the Ford Paint and Body Technology Center (PBTC) in Inkster, Mich. (*Editor's note: for more information on the PBTC, see On Target - 2025, Vol. 2*).

"In doing [replacing] the complete rail, we're looking at a very invasive procedure, if you're doing it all the way forward to the torque box area," said Bonanni. "Particularly the joints where the torque box attached to the inner rocker right in front of the wheel, were quite difficult." Bonanni noted that it was not uncommon to see Explorers getting totaled because of damage to this area.

Bonanni further stated that they received feedback from numerous repairers, asking for some type of repair procedure that could prevent the vehicle from being declared a total loss. The rear-rail sectioning procedure is the result, once again demonstrating the commitment of Ford Motor Company to those who properly repair its vehicles.

Figure 1
Overall orientation for this repair at the rear of the vehicle.



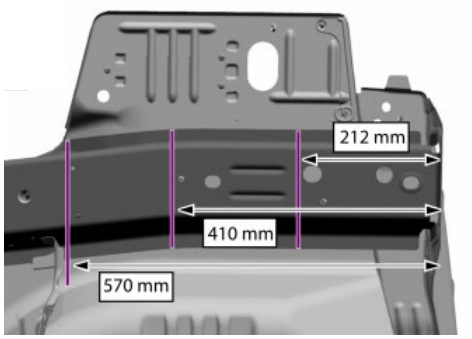


Figure 2 *Available sectioning options on the rear rail of the Ford Explorer.*

The actual repair procedure allows technicians to make the determination as to how far into the vehicle they need to section, based on the specific type of damage it has received. The procedure allows for a short section at **212 mm**, a mid-section of **410 mm** and a longer section at **570 mm**. Any damage to the rear of the vehicle extending past **570 mm** means you are replacing the entire rail, as was done prior to the creation of the sectioning option.

"Notice there's the nut for the rear, bolt-in cradle or subframe," Bonanni noted, referencing an on-screen diagram. "You can see we tried to stay out of that area by going just to the rearward of that [the 570 mm option]. That's about the outer limit for the section that we figured here when we looked at this repair."

Verwijst praised the 570 mm option, noting that in his experience repairing vehicles the first two options are the most likely to be encountered by technicians. Bonanni agreed with that assessment. "Generally speaking, most of the damage on these is usually within the first inch or two of the rear frame-rail."

For the demonstration, Verwijst notes he uses the 410 mm option.

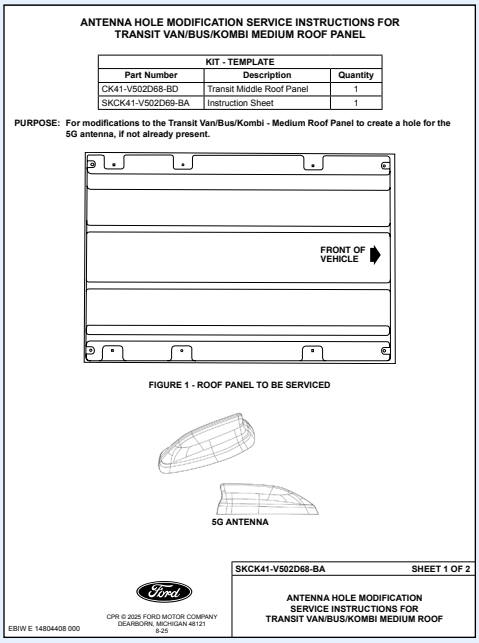
As the repair gets underway, Verwijst provides a personal tip he uses when making the measurement marks on the various components. While following the steps in the WSM—which notes to measure from the rear of the part forward—Verwijst noted he also likes to take additional measurements from a fixed point on the replacement part that moves toward the back of the part.

Continued on page 2

IN THIS ISSUE

Instruction Sheet for Ford Transit® Antenna Hole Guide

On Target is excited to provide **Instruction Sheet #SKCK41-V502D69-BA**, which includes details and a printable template for repairers to properly cut a hole in the medium roof panel (part #CK41-V502D68-BD) of the 2025 Ford Transit to install a 5G antenna.



ANTENNA HOLE MODIFICATION SERVICE INSTRUCTIONS FOR TRANSIT VAN/BUS/KOMBI MEDIUM ROOF PANEL

KIT - TEMPLATE		
Part Number	Description	Quantity
CK41-V502D68-BD	Transit Middle Roof Panel	1
SKCK41-V502D69-BA	Instruction Sheet	1

PURPOSE: For modifications to the Transit Van/Bus/Kombi - Medium Roof Panel to create a hole for the 5G antenna, if not already present.

FIGURE 1 - ROOF PANEL TO BE SERVICED

5G ANTENNA

EBIW E 14804408 000

SKCK41-V502D68-BA SHEET 1 OF 2

ANTENNA HOLE MODIFICATION SERVICE INSTRUCTIONS FOR TRANSIT VAN/BUS/KOMBI MEDIUM ROOF

The instruction sheet notes the exact location and alignment of the hole on the left-hand side of the roof, additional specific measurements of the location in millimeters, as well as dimensions of the hole to be cut.

The entire instruction sheet—including the printable template—can be found at the back of this volume on pages 7 and 8.

For more information on the Transit, instruction sheets, or the proper repair of any Ford or Lincoln vehicle, contact the Ford Crash Parts Hotline at cphelp@fordcrashparts.com or visit I-CAR's RTS Portal at RTS.i-car.com.

More Details on New Ford Explorer® Sectioning Repair Option (continued)

This not only offers a double-check to ensure an exact measurement but is also helpful because you have to transfer the measurement to the vehicle, and depending on the specific damage to the vehicle, you may not be able to obtain an accurate measurement by only going forward.

In this case—Verwijst used the center of the cradle-bolt hole, the exact same location that informed the maximum length of the sectioned repair—as his fixed point to obtain this measurement.

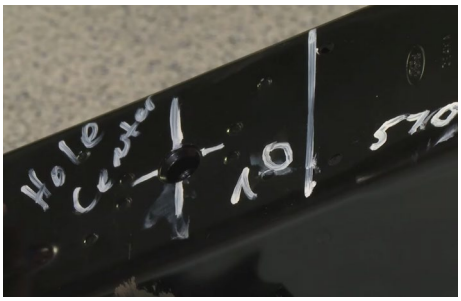


Figure 3 *Repairer Anton Verwijst utilized the center of the cradle-bolt hole as a fixed reference point to obtain an additional measurement moving toward the back of the vehicle.*

In addition, Verwijst also carefully measured all three lengths (212, 410 and 570 mm) and marked them on the replacement part as a guide, demonstrating Bonanni's key advice to *always* research the repair and map out a complete repair plan before any cutting or grinding takes place.

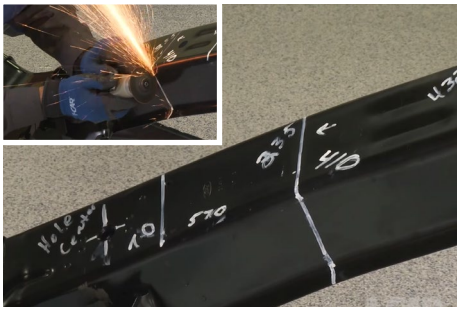


Figure 4

Another helpful tip provided by Verwijst is to put a piece of masking tape on the measuring tape to help transfer the cut line to the damaged area on the vehicle. Verwijst cautioned to ensure you make your mark on the correct side of the tape and noted you can put arrows on the tape to indicate which side of the tape to draw the cut line.

Verwijst emphasized to measure several times and re-check your work multiple times prior to cutting as you don't want to make a mistake that could require an entire new replacement frame rail. He also noted that he finds it helpful to draw an entire cut line on all three sides of the rail instead of just cut marks as it helps to steady the cut.

Figure 5

Bonanni noted that Ford only offers the entire frame rail as a replacement component—and not the individual section pieces—due to a number of factors, including e-coating on the part, cost and inventory management, and giving repairers enough material to make the repair, as each damaged vehicle will have its own unique repair characteristics.

On Target plans to include another installment on this video in a future volume.

A video library containing this and other *Repairers Realm* topics can be found at I-CAR.com/Repairers-Realm.

For more information on this, or the repair of any Ford or Lincoln vehicle, visit FordCrashParts.com.

2025 Ford Expedition® Front Door Skin Panel Repair Procedure

Continuing its efforts to help repairers become more familiar with the detailed steps needed to complete approved and proper vehicle repairs, *On Target* presents a detailed look at the proper removal of the front door skin on the 2025 Expedition, as found in the official *Ford Workshop Manual*.

Please note the following information is intended as a general guideline and may not be all-inclusive. For more in-depth repair information on this and other Ford and Lincoln vehicles, consult the *Ford Workshop Manual*, found at FordServiceInfo.com. Check back often as repair procedures can be updated without notice. Always ensure you are looking up the correct model-year vehicle for proper collision repair information.

For more information, consult **Section 501-29: Side Panel Sheet Metal Repairs, Removal and Installation**.

Special Tools/Equipment

- 6.5 mm drill bit
- Grinder
- Self-piercing rivet (SPR) remover/installer
- Belt sander
- Blind rivet gun
- Hot air gun
- Knife
- Locking pliers

Removal

***Note**: Left-hand side shown; Right-hand side similar*

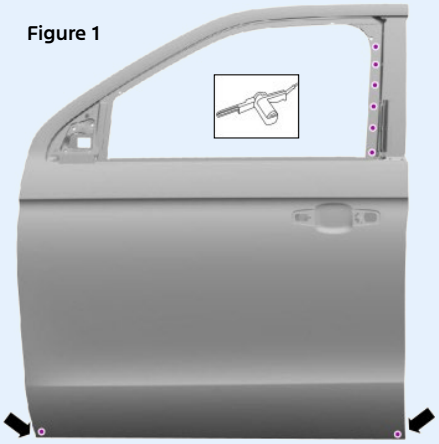
1. Inspect the door hinges for excessive wear or damage. Install new hinges or rebuild as necessary.

Remove the following components from the vehicle:

a. Exterior door handle (Refer to **Section 501-14: Exterior Front Door Handle**).
b. Door-window glass (Refer to **Section 501-11: Front Door Window Glass**).
c. Exterior mirror assembly (Refer to **Section 501-09A: Exterior Mirror**).
d. Door (Refer to **Section 501-03: Front Door**).
e. Door trim (Refer to **Section 501-08: Front Door Upper Moulding**).
f. All door assembly weather stripping.

2. Using the SPR remover/installer and the belt sander, remove the SPR fasteners as indicated.

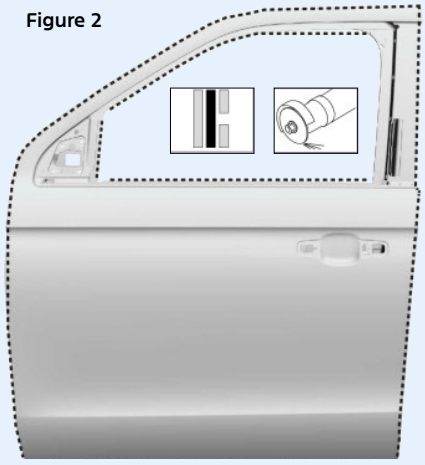
Figure 1



***Note**: The two rivets in the lower door flange are not installed in the replacement panel.*

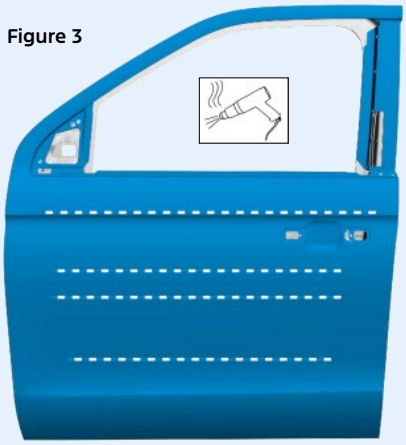
3. Using the grinder, carefully grind the **outer layer only** of the door skin hem flange as indicated.

Figure 2



4. With the hot air gun, remove the door-skin outer panel.

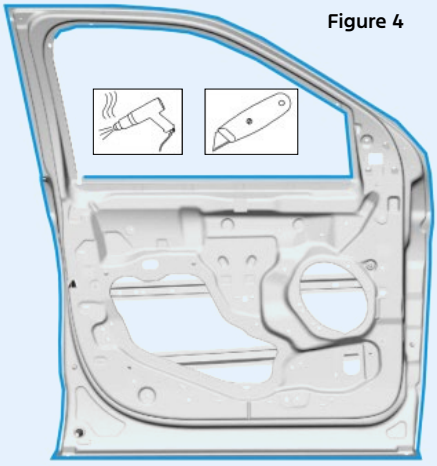
Figure 3



***Note**: The use of heat may aid in separating the door panel from NVH foam.*

5. Continuing with the hot air gun and a knife, remove any remaining portion of the door outer panel hem flange material.

Figure 4



The door is now ready for the installation of the new door skin panel, which will be detailed in a future volume of *On Target*.

For more information on the Expedition, or any Ford or Lincoln vehicle, contact the Ford Crash Parts Hotline at cphelp@fordcrashparts.com or visit I-CAR's RTS Portal at RTS.i-car.com.

Ford Bronco® Supplemental Restraint System

On Target continues its series of detailed schematics on the Ford Bronco—indicating the precise location of the components related to the vehicle's supplemental restraint system (SRS).

For the first installment, see *On Target* - 2025, Vol. 3.

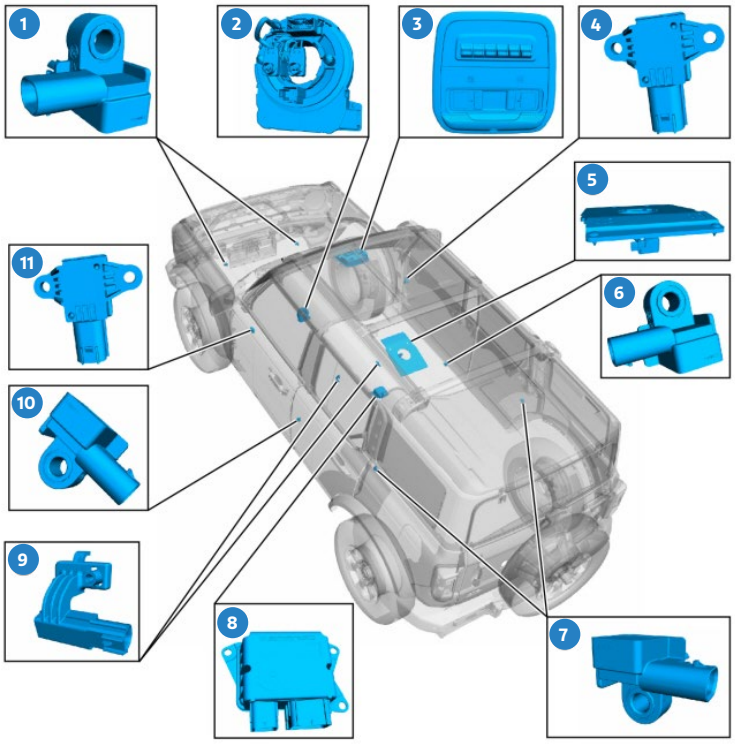
Please note the following information is intended as a general guideline and may not be all-inclusive. For more in-depth repair information on this and other Ford and Lincoln vehicles, consult the *Ford Workshop Manual*, found at FordServiceInfo.com. Check back often as repair procedures can be updated without notice. Always ensure you are looking up the correct model-year vehicle for proper collision repair information.

For more information, consult Section **501-20B: Supplemental Restraint System, Description and Operation**.

Airbag and seatbelt pretensioner supplemental restraint system component location

***Note**: 5-door model shown; 3-door model similar unless noted otherwise*

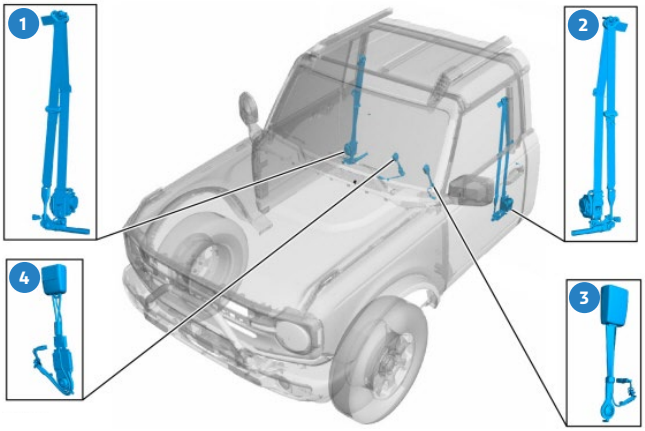
Vehicle Overview



Item	Description
1	Driver and passenger front-impact severity sensors
2	Clockspring
3	PAD indicator (part of the overhead console)
4	Passenger front-door side-impact sensor
5	OCSM (occupant classification system module; also includes occupant classification system sensor and gel-filled bladder)
6	Passenger-side B-pillar side-impact sensor (5 door)
7	Driver and passenger B-pillar side-impact sensor (3 door) / Driver and passenger C-pillar side-impact sensor (5 door)
8	RCM (restraints control module)
9	Driver and passenger seat position sensors
10	Driver-side B-pillar side-impact sensor (5 door)
11	Driver front-door side-impact sensor

Front Seatbelt Pretensioners and Buckle Switches

***Note:** 3-door and 5-door models*



Item	Description
1	Front passenger seatbelt retractor (includes retractor pretensioner, retractor load limiter and anchor pretensioner)
2	Driver seatbelt retractor (includes retractor pretensioner and anchor pretensioner)
3	Driver seatbelt buckle (includes buckle sensor)
4	Front passenger seatbelt buckle (includes buckle sensor and belt tension sensor [BTS])

Additional diagrams and repair details on SRS will continue in future volumes of *On Target*, focusing on re-powering procedures, pyrotechnic device disposal and more.

For questions on this or the proper repair of any Ford or Lincoln vehicle, contact the Ford Crash Parts Hotline at cphelp@fordcrashparts.com.

Ford Bronco® Raptor® Front Fender Moulding Removal and Installation

On Target is excited to continue providing collision repair information specific to the Ford Bronco Raptor. The Ford Bronco and Bronco Raptor share many similarities, including exterior body components, which were previously covered in all four volumes of *On Target* for 2021, and Volume 2 for 2022, all of which can be found on FordCrashParts.com.

All repair information for the Bronco Raptor is found inside the official *Ford Workshop Manual* entry for the Bronco. Any repair material specific to the Raptor will be called out as such.

For a previous Bronco Raptor entry on the upper front bumper removal, see *On Target* - 2023, Vol. 2.

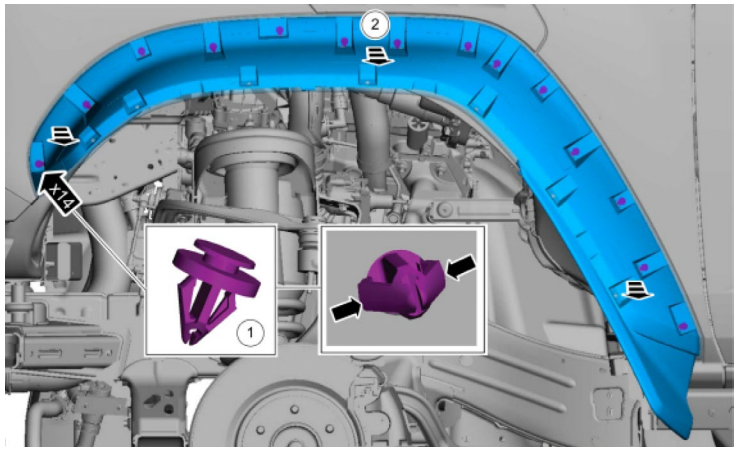
Please note the following information is intended as a general guideline and may not be all-inclusive. For more in-depth repair information on this and other Ford and Lincoln vehicles, consult the *Ford Workshop Manual*, found at FordServiceInfo.com. Check back often as repair procedures can be updated without notice. Always ensure you are looking up the correct model-year vehicle for proper collision repair information.

For more information, consult **Section 501-08: Exterior Trim and Ornamentation, Removal and Installation**.

Note: *Removal steps in this procedure may contain installation details.*

Left-hand side shown; right-hand side similar.

1. With the vehicle in NEUTRAL, position it on a hoist. (Refer to **Section 100-02: Jacking and Lifting, Description and Operation**).
2. Remove the left-hand side front wheel and tire. (Refer to **Section 204-04A Wheels and Tires, Diagnosis and Testing**).
3. Remove the fender splash shield. (Refer to **Section 501-02 Front End Body Panels, Removal and Installation**).
4. Remove the front fender moulding by first removing the pushpins from the fender.



Installation

1. To install, reverse the removal procedure.

On Target plans to include more construction details on the Bronco and Bronco Raptor in future volumes.

For more information on these, or any Ford or Lincoln vehicle, contact the Ford Crash Parts Hotline at cphelp@fordcrashparts.com or visit I-CAR's RTS Portal at RTS.i-car.com.

PPG® *SEM® Mix'n'Shake™* Automated Paint Stirring Solution

When a collision-damaged car enters a body shop or repair center, the owner expects their vehicle to be repaired and returned to them in good time, in pristine condition and with no trace of any damage sustained. But for even the most skilled technicians, a less-than-perfect paint mix can stand in the way of efficiency and results.

PPG *SEM Mix'n'Shake* is an automated paint stirring solution that is changing the game for body shops. This easy-to-use system eliminates manual paint stirring from the repair process, making it quicker and easier for technicians to achieve a uniform mix.

How it Works

The *SEM Mix'n'Shake* system comprises a compact stirring device and a specially designed notched cup. After adding paint to the cup, the technician simply places it into the mixing machine, closes the lid and selects one of the three available programs for primer, basecoat or clearcoat. The combination of the machine's speed and movement and the unique cup design results in a uniform, ready-to-spray paint mix every time.

Boosting the Body Shop

An incomplete paint mix can result in poor adhesion and inaccurate color, as well as wasted time and materials. Integrating the *SEM Mix'n'Shake* system into the automotive repair process can help a shop boost productivity, profitability and sustainability. An accurate paint mix reduces the need for reworks and cuts down on product waste. Painters can work more efficiently by spending valuable time on important tasks while the *Mix'n'Shake* system takes care of the hard work, and the body shop becomes a cleaner working environment with fewer spills.

PPG LINQ™ Digital Ecosystem

The *SEM Mix'n'Shake* system is also a key component of the PPG LINQ™ digital ecosystem, a cloud-based suite of integrated digital hardware, software and services designed exclusively for vehicle repair. By digitalizing repair and refinishing processes, body shops can transform the customer experience while increasing efficiency and performance.

For more information, please visit semmixnshake.com.

The Crash Parts Corner

Did You Know That ...

Ford Motor Company recently updated its official collision position statement regarding the use of Ford OEM glass.

The new statement—dated October 1, 2025—notes that Ford does not endorse the use of non-OEM glass. Ford original equipment parts are conceived, engineered and rigorously tested as fundamental elements of your vehicle's safety and performance architecture—covering crashworthiness, advanced driver assistance system (ADAS) functionality and structural integrity. Because they're developed by Ford Motor Company in lockstep with the vehicle itself, Ford original equipment parts—including glass—are designed to deliver precision in fit, form and function.

Bonded windshield glass is a structural component that helps distribute crash energy. Aftermarket glass has not been tested or validated by Ford as to whether it can deliver equivalent safety and structural integrity to Ford OEM glass.

Camera-equipped windshields use precise Ford original equipment brackets designed to provide optical clarity and alignment. Aftermarket glass—untested by Ford—may not provide accurate camera position or distortion-free vision, which could potentially risk improper ADAS function.

To ensure the correct OEM replacement glass is being utilized, visit the Carlex OEM replacement glass search tool at Carlex.com/automotive-replacement-glass.

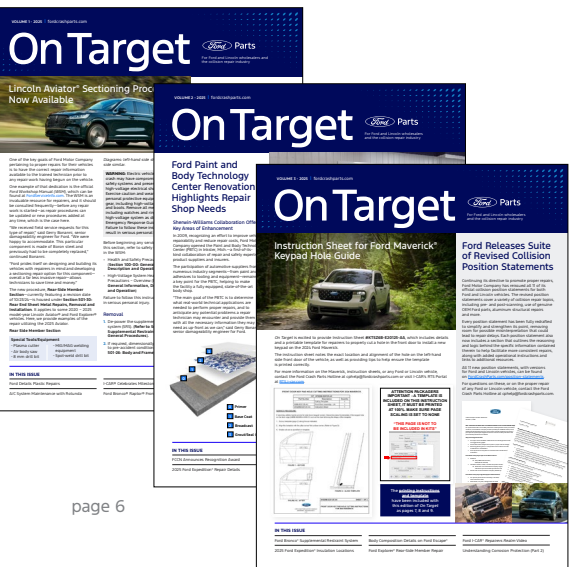
For more information on Ford OEM glass, including job aids, repair videos and more, visit FordCrashParts.com/Glass.

For more information on the Ford Certified Glass Network, or to join the program, visit Collision.Ford.com/FordCertifiedGlassNetwork or call (833) 837-7694.

Keep on Trucking: 2025 in Review

As 2025 comes to an end, we look back at some of the main stories *On Target* included throughout the year.

Distributed in early spring, the first volume of *On Target* included a detailed look at the new rear-rail sectioning procedure for the Lincoln Aviator® and Ford Explorer® in addition to an in-depth look at plastic repairs—including the different types of plastics and their unique characteristics. Volume 1 also noted new A/C maintenance tools and equipment from Rotunda Service Solutions, repair information on the Ford Bronco® Raptor® front bumper, 3D measuring tips from Spanesi® and updates from I-CAR® as they celebrated a milestone of 10,000 Gold-Certified shops.



Volume 2, a summer release, covered the renovation of the Ford Paint and Body Technology Center (PBTC), courtesy of a collaboration with Sherwin-Williams. The Ford Certified Collision Network (FCCN) announced the creation of the 'Pinnacle Performer' award recognizing those shops that consistently reach the highest levels of collision repair. A detailed look at the "decision criteria" was also included to help repairers determine when to repair and when to replace a component, using the 2025 Ford Expedition® as an example vehicle. Volume 2 also noted updated electric and hybrid vehicle safety information on FordCrashParts.com, as well as I-CAR's updated RTS mobile app, available here for Android® devices and here for Apple® devices.

Released in the fall, Volume 3 provided repairers with the full instruction sheet—number KTSZ6B-E20125-AA—on installing a new keypad on the Ford Maverick® as well as announcing the new suite of revised Ford and Lincoln collision position statements. Additional technical information included supplemental restraint system (SRS) component locations on the Ford Bronco®, insulation locations on the Ford Expedition®, body composition details on the Ford Escape® and rear side-member repair procedures on the Ford Explorer.

Current and past issues of *On Target* are available on FordCrashParts.com, OEM1stop.com, and I-CAR's RTS Portal at RTS.i-car.com.

On Target plans to produce four new volumes—detailing critical, OEM-approved repair procedures and other important information—in 2026.

On Target

Scheduled to be published four times a year, *On Target* aims to provide Ford and Lincoln dealership parts departments and independent collision repair shops with the technical information needed to deliver efficient, high-quality repairs to Ford and Lincoln vehicle owners.

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Larry Coan

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Chris Caris
Travis Alber
Andrea Presnell

On Target Digital

Download *On Target* for free at FordCrashParts.com, or by clicking the Ford page on OEM1Stop.com

Genuine Parting Thoughts

Have an idea? We'd love to hear from you. Your comments and article suggestions can be sent to **cphelp@fordcrashparts.com.**

ANTENNA HOLE MODIFICATION SERVICE INSTRUCTIONS FOR TRANSIT VAN/BUS/KOMBI MEDIUM ROOF PANEL

KIT - TEMPLATE		
Part Number	**Description**	**Quantity**
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SKCK41-V502D69-BA	Instruction Sheet	1

PURPOSE: For modifications to the Transit Van/Bus/Kombi - Medium Roof Panel to create a hole for the 5G antenna, if not already present.

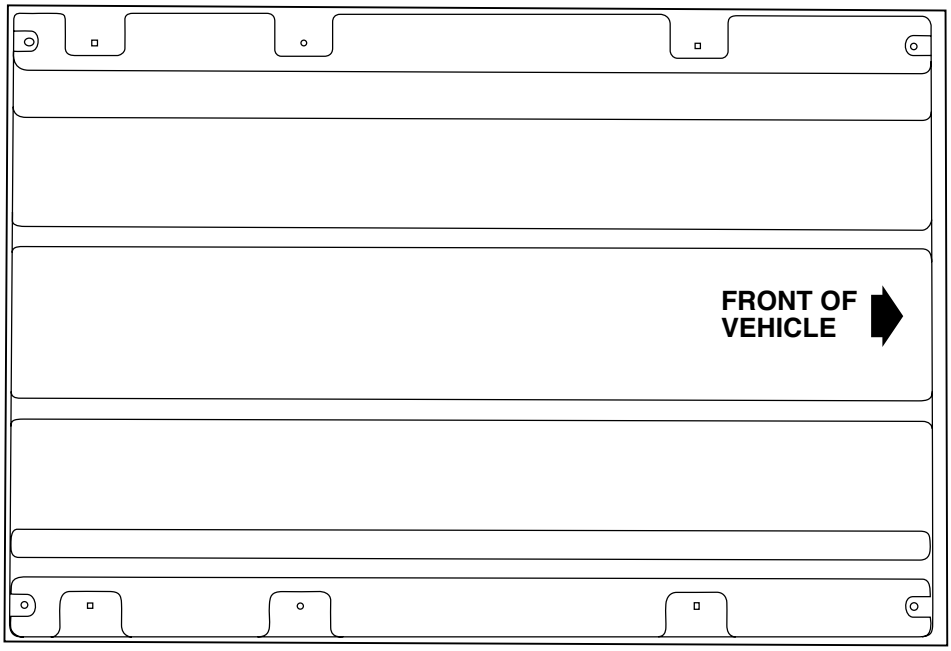
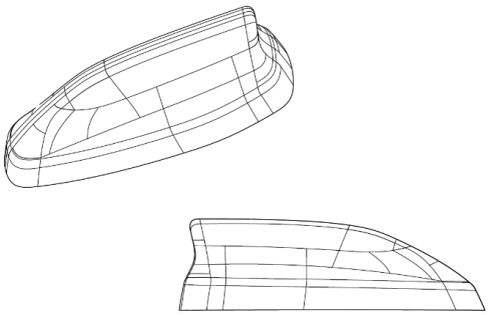


FIGURE 1 - ROOF PANEL TO BE SERVICED



5G ANTENNA

EBIW E 14804408 000

ANTENNA HOLE MODIFICATION SERVICE INSTRUCTIONS FOR TRANSIT VAN/BUS/KOMBI MEDIUM ROOF

SERVICE PROCEDURE:

1. Cut out template for 5G Antenna hole (page 3) following the lines as indicated.
2. Align template on the roof panel as shown and tape into place. (Refer to Figure 2).

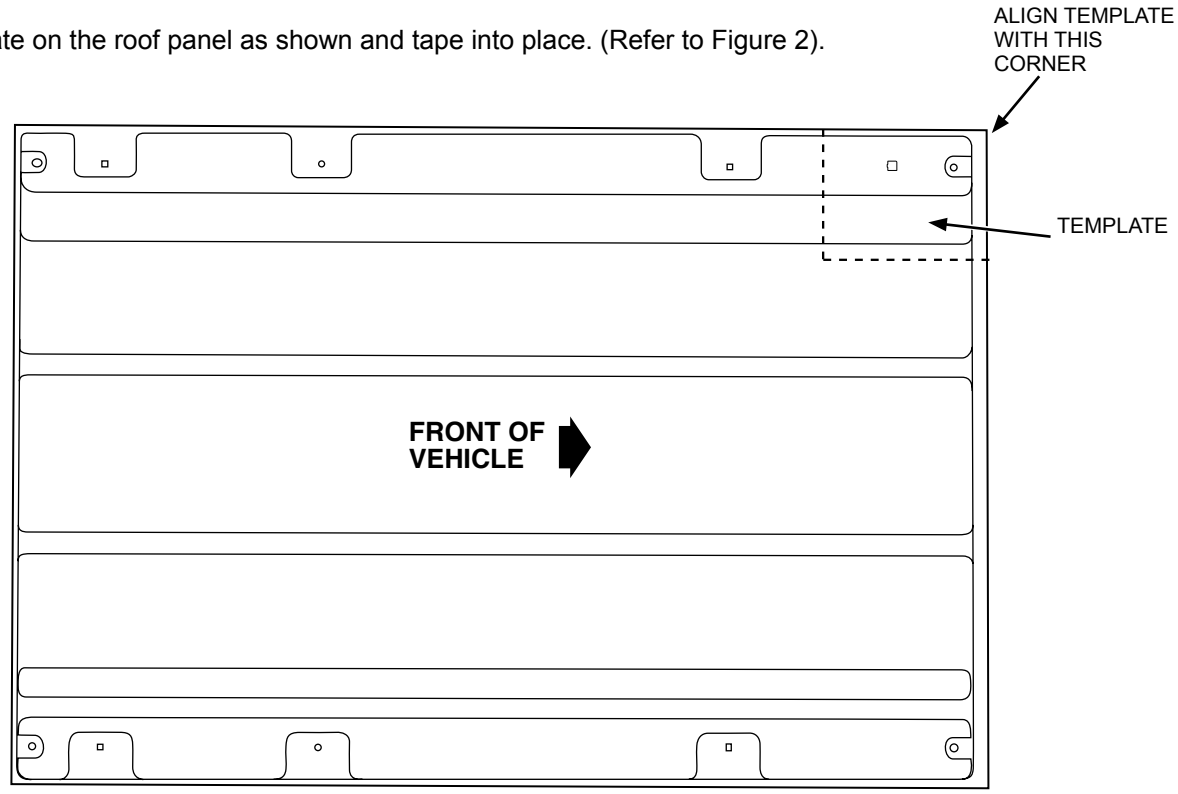


FIGURE 2 - TEMPLATE PLACEMENT

4. Drill hole at location indicated. (Refer to Figures 3-4).

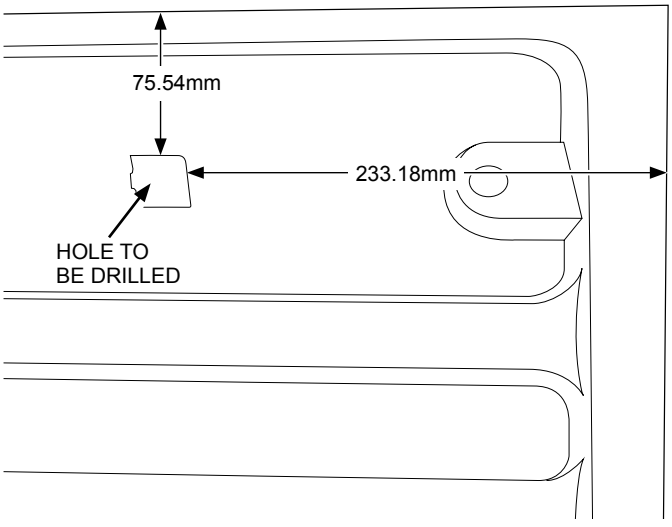


FIGURE 3 - POSITION OF HOLE TO BE DRILLED FOR 5G ANTENNA

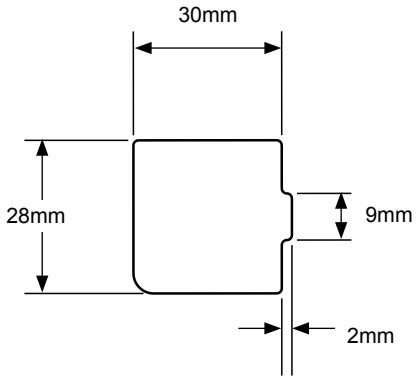


FIGURE 4 - DIMENSIONS OF HOLE TO BE DRILLEDFOR 5G ANTENNA

ANTENNA HOLE MODIFICATION SERVICE INSTRUCTIONS FOR TRANSIT VAN/BUS/KOMBI MEDIUM ROOF