



AVAIL™

BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

As shown on

**FORD® POLICE INTERCEPTOR UTILITY
FOR FRONT DOORS**
(2013 & NEWER MODELS)



ALSO COMPATIBLE WITH:

- **Ford® Explorer** (2011 & Newer Models)



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INTRODUCTION

Congratulations on your purchase of the Angel Armor™ Avail™ Ballistic Door Panel (Level IIIA) for the Ford® Interceptor Utility Vehicle! It's our honor to provide advanced protection to those who put their lives on the line in the name of law and order.

In just minutes, your vehicle will be upfitted with the finest ballistic technology available. With innovative ballistic materials, advanced designs, and the fastest installation in the industry, Angel Armor Ballistic Door Panels elevate protective technology to a higher level.



▲ Figure 1. Angel Armor Ballistic Door Panel (Level IIIA) for the Ford® Interceptor Utility Vehicle

Product Description

Angel Armor Ballistic Door Panels (Level IIIA) are constructed of a proprietary technology that is not only remarkably strong, but also thin, lightweight, and weatherproof. These properties, plus semi-rigid material characteristics, enable unprecedented ease of installation, while providing protection independently tested in accordance with NIJ Standard 0108.01 protocols. Angel Armor Ballistic Door Panels (Level IIIA) for Ford Interceptor Utility Vehicles exceed NIJ Standard 0108.01 protocols for multi-round protection and offer a 5-year express limited warranty. Within this period, the panels may be removed and transferred to another vehicle of the same make and model without violating the warranty.

Installation Overview

Angel Armor Ballistic Door Panels (Level IIIA) for Ford Interceptor Utility Vehicles require no additional brackets or fasteners, and eliminate the need to remove the window glass. Minimal door disassembly is required to replace the factory window regulator bolts. Replacement of these bolts provides additional clearance for the ballistic door panel within the vehicle door. Once this is done, the ballistic door panel is inserted into the door, adjacent to the window glass.

The average user installation takes only 5 to 15 minutes.



Watch an installation in action at www.AngelArmor.com.

Warnings and Cautions

Please adhere to the following guidelines to prevent personal injury, equipment damage, and unnecessary difficulty during installation.



DISCONNECT THE VEHICLE BATTERY AFTER THE WINDOW IS ADJUSTED FOR INSTALLATION TO AVOID ACCIDENTAL AIRBAG DEPLOYMENT. ACCIDENTAL DEPLOYMENT OF THE AIRBAG MAY CAUSE SERIOUS PERSONAL INJURY.

- Read this guide in its entirety before beginning installation.
- Wear appropriate protective gear, including eye and foot protection.
- Avoid excessive force when inserting the ballistic door panel into the car door. Excessive force may damage the ballistic door panel or internal door components.
- Avoid puncturing speakers with screws, push-snaps, fasteners, or other sharp pieces during door disassembly, panel insertion, and door re-assembly.

- Do not drop screws or other assembly components inside the door, as they may be difficult to retrieve. If possible, use magnetic tools during installation.
- Use only plastic trim removal/prying tools on finished surfaces to prevent scratching.
- Avoid tearing the weatherproof cover on the “teeth” inside of the door when removing the ballistic panel by pushing the panel toward the interior of the door before lifting it out of the door.
- Discard and replace any door components that are inadvertently damaged during the installation process, such as the moisture barrier. Proper installation according to the instructions in this guide should not cause damage to any vehicle or ballistic door panel parts or components.
- Use caution when removing parts that may have sharp edges, such as the outer window weatherstrip.

Legal Statements

See supplied Warranty and Terms and Conditions for important legal information. These instructions are provided for your convenience only, and Angel Armor expressly disclaims any liability for any damage to personal property or personal injury that occurs as a result of either installation or removal of panels.

PARTS & TOOLS LIST

This section lists the parts included in the installation kit, and the tools recommended for installation.

Installation Kit Contents

This section lists the ballistic panel type and all parts included with it.

- Angel Armor Ballistic Door Panel (Level IIIA) for Ford Interceptor Utility Vehicle
- Replacement window regulator bolts: 10 mm head, 8 mm metric thread
- Angel Armor brand label



▲ Figure 2. Angel Armor ballistic door panel (Level IIIA) for the Ford® Interceptor Utility Vehicle

Recommended Tools

This section lists tools to be supplied by the installer.

- Panel/trim removal tools of varying sizes
- Torx T20 screwdriver
- 10 mm socket
- 7 mm socket



▲ Figure 3. Panel/trim removal tools



▲ Figure 4. Torx T20 screwdriver



▲ Figure 5. 10 mm socket



▲ Figure 6. 7 mm socket

INSTALLATION

This section provides instructions for installing Angel Armor Avail™ Ballistic Door Panels (Level IIIA) into the Ford Interceptor Utility Vehicle (2013 to 2014 models).

Overview

Installation of the Angel Armor Ballistic Door Panel (Level IIIA) into a Ford Interceptor Utility Vehicle is accomplished quickly and easily, with minimal door disassembly. See *Procedure*, on page 7, for detailed instructions.

General Installation Procedure

- 1** Detach vehicle interior door trim panel.
- 2** Replace the factory window regulator bolts with supplied shorter replacement bolts.
- 3** Insert and secure Angel Armor Ballistic Door Panel.
- 4** Re-assemble door.

Important Notes

- The directions, photographs, and illustrations in this guide depict an installation performed on the driver's side. The same installation procedure applies to the passenger door. NOTE: The anti-abrasion panels face the interior of the vehicle for both the driver-side and passenger-side ballistic panels.
- Note the location of screws, fasteners, wires, and door components before disassembling to aid proper re-assembly after panel installation.
- Place all removed hardware and components in a safe place during installation.
- Angel Armor Ballistic Door Panels are semi-rigid, which allows them to be bent slightly for easy installation. To prevent damage to the ballistic panels, do not bend them tighter than a 6" radius (12" diameter).
- Firm pressure may be needed to clear minor obstructions during insertion of the ballistic panels, but never use excessive force. Excessive force may damage internal door components.
- Bypass obstructions inside the door, such as crash bars or window attachment brackets, by angling the panel during insertion or by removing and re-inserting the ballistic panel, as described in *Inserting the Ballistic Door Panel*, on page 12.

PROCEDURE

Complete the following steps to properly install the Angel Armor Ballistic Door Panel (Level IIIA) into a Ford Interceptor Utility Vehicle.

Removing the Outer Window Weatherstrip

! Use caution when removing parts that may have sharp edges, such as the outer window weatherstrip.

- 1** Lower the window glass completely into the door.
- 2** Remove the Torx screw at the rear end of the outer window weatherstrip.
- 3** Lift up the rear end of the weatherstrip and slide it out.



▲ Figure 7. Removing the window trim

- 4** Adjust window height to 8”.
- 5** Turn off the ignition switch and remove the key.

Removing the Panel Mounting Bolts

- 1 Remove the 2 7 mm screws at the bottom of the interior vehicle door panel.



▲ Figure 8. Removing 7 mm panel mounting bolts

- 2 Remove the trim cover behind the interior door handle.



▲ Figure 9. Trim cover and bolt locations

- 3 Remove the 10 mm bolt from behind the interior door handle.

- 4 Remove the trim cover in the arm rest. (See Figure 9.)

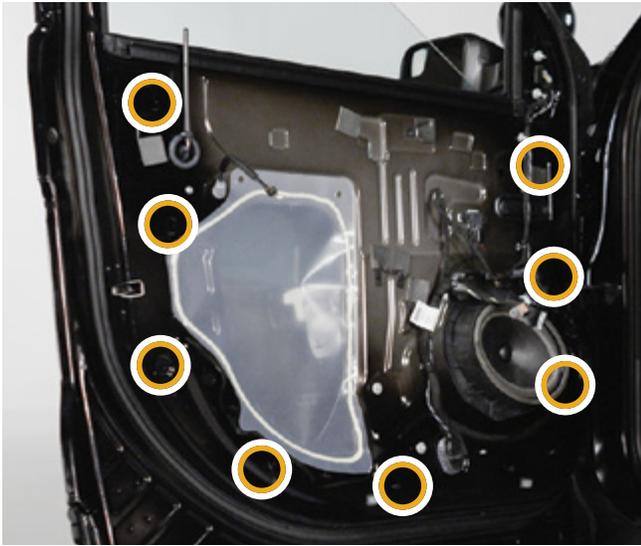
- 5 Remove the 2 10 mm bolts from the arm rest.

Door Handle Trim Cover and Bolts

Arm Rest Trim Cover and Bolts

Removing the Vehicle Interior Door Trim Panel

- 1 Visually locate the interior door trim retainers inside the vehicle door trim panel.



▲ Figure 10. Approximate locations of the interior door trim retainers

- 2 Pry the interior vehicle door trim panel away from the door at the retainer locations shown in Figure 10, above.



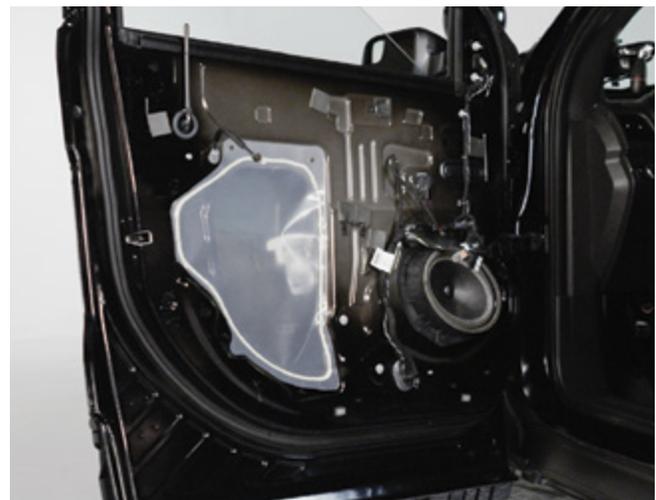
▲ Figure 11. Prying open the vehicle interior door trim panel

- 3 Hold the vehicle door panel at the base and lift it over the door lock pin. Then, pull the vehicle door panel away from the door.



▲ Figure 12. Location of the door latch cable

- 4 Disconnect the door latch cable, compressing the connector retainers before unhooking the cable from the door handle.
- 5 Disconnect the wiring harnesses between the door trim panel and door.
- 6 Remove the window control panel from the door trim panel.



▲ Figure 13. Interior door components

Replacing the Window Regulator Bolts

NOTE: Only 1 window regulator bolt may be removed at a time to prevent the need to remove and re-align the window glass. Complete the entire removal and replacement of the first bolt before removing the second bolt.

- 1 Peel back moisture barrier partially to expose the window regulator bolt. (See Figure 14, below.)

NOTES:

- Avoid damaging the moisture barrier.
- The adhesive on the back of the moisture barrier is used to re-attach the moisture barrier after replacement of the window regulator bolt.



▲ Figure 14. Peeling back the moisture barrier to expose the window regulator bolt

- 2 Remove the factory-installed window regulator bolt located behind the moisture barrier.

NOTE: Use magnetic tools to avoid dropping the bolt inside the door.

- 3 Replace the factory-installed bolt with a replacement bolt included in the installation kit. Install the replacement bolt in compliance with the vehicle's factory-recommended torque specification.



▲ Figure 15. Replacing the factory-installed window regulator bolt located behind the moisture barrier with the supplied replacement bolt

Replacing the Window Regulator Bolts

CONTINUED

- 4 Remove the black foam cover to expose the window regulator bolt access hole.



▲ Figure 16. Removing black foam cover to expose window regulator bolt access hole

- ⚠ If the window regulator bolt is not visible through the bolt access hole, temporarily re-connect the window control panel and vehicle battery. Adjust window height so the bolt is visible, and then disconnect the window controls and vehicle battery before replacing the bolt.

- 5 Remove the factory-installed window regulator bolt inside the window regulator bolt access hole.

- 6 Replace the factory-installed bolt with a replacement bolt included in the installation kit. Install the replacement bolt in compliance with the vehicle's factory-recommended torque specification.



▲ Figure 17. Replacing the front window regulator bolt through the window regulator bolt access hole

Inserting the Ballistic Door Panel

- 1 Temporarily re-connect the window control panel and vehicle battery.
- 2 Lower the window glass completely into the door.
- 3 Disconnect the window control panel.
- 4 **⚠️ Disconnect the vehicle battery to avoid accidental airbag deployment.**
- 5 Bend the bottom of the ballistic panel away from you, pressing with your knee or hand. This creates a slight curve in the ballistic panel that matches the shape of the bottom of the Ford Interceptor door and eases installation.

NOTE: Do not bend the ballistic door panel tighter than a 6" radius (12" diameter).

- 6 Hold the ballistic door panel so its plastic anti-abrasion panels face the interior of the vehicle.
- 7 Leading with the bottom edge of the ballistic door panel, and lining up back edge of ballistic panel with back edge of window frame, begin to insert the panel into the door, adjacent to the outer surface of the window glass.

NOTE: Hold the leading edge of the ballistic door panel against the window glass as you insert to avoid obstructions inside the door. This can be achieved by lightly leaning back/pulling the panel out toward the exterior of the door.



▲ Figure 18. Inserting the panel into the door

- 8 Slide the ballistic panel down into the door, following the edge of the window frame.
- 9 Grip the nylon folds at the top of the ballistic panel when the ballistic panel is inserted the majority of the way down into the door.



▲ Figure 19. Gripping ballistic door panel's top-edge nylon folds

Inserting the Ballistic Door Panel

CONTINUED

10 Slide the ballistic panel forward, toward the front of the vehicle. The leading edge of the anti-abrasion panel will likely catch on the vehicle window track. Push on the upper anti-abrasion panel, toward outside of door, while pushing the ballistic panel forward to move it past the window track.

NOTES:

- Work the ballistic panel forward firmly to clear any obstructions, but never use excessive force, which may damage internal door components or puncture the ballistic door panel's weatherproof covering. It may be useful to shimmy the ballistic panel side to side while pushing forward to move it into position.
- If the ballistic panel does not clear the airbag sensor, move to the inside of the door to guide the panel forward of the sensor.
- If the ballistic panel will not seat fully forward, shift the panel backward and move the door wiring harness to manually position wires into the notch in the ballistic panel.

11 Verify that the ballistic panel is properly positioned by confirming the following:

- The airbag sensor is visible behind the back edge of the ballistic panel.
- The nylon folds at the top of the ballistic panel align with and fold over the top edge of the window frame, and the front edge of the nylon aligns with the vertical edge of the window frame.



▲ Figure 20. Proper alignment of nylon fold with window frame

NOTES:

- If the ballistic door panel is not properly positioned, repeat steps 1 through 11 of this section.
- Avoid tearing the ballistic panel's weatherproof cover on the "teeth" inside of the door by pushing the ballistic panel toward the interior of the vehicle before lifting it out of the door.

Replacing the Outer Window Weatherstrip

- 1** Place the front end of the weatherstrip in position slightly under the mirror. Press the remaining length down, working front to back, and aligning the screw holes on the weatherstrip and the door.
- 2** Replace the Torx screw at the rear end of the weatherstrip.
- 3** Verify that no nylon is exposed below or around the window trim.



▲ Figure 21. Exterior view of properly installed ballistic panel

Re-attaching the Interior Door Trim Panel

- 1** Replace the moisture barrier by pressing its adhesive onto the door.
- 2** Replace the black foam cover over the window regulator bolt access hole.
- 3** Re-connect the door latch cable.
- 4** Re-install the window controls into the interior door trim panel.
- 5** Re-connect the wiring harnesses to the various connections on the door panel.
- 6** Align the door lock and hook the upper edge of the door trim panel on the interior portion of the door near the window.
- 7** Align the interior door trim retainers with the appropriate holes in the door.
- 8** Push firmly on each retainer area until the retainers re-engage.

- 9** Replace the 1 10 mm panel mounting bolt behind the door handle.
- 10** Replace the door handle trim cover.
- 11** Replace the 2 10 mm panel mounting bolts in the arm rest.
- 12** Replace the arm rest trim cover.
- 13** Replace the 2 7 mm panel mounting screws at the base of the door.

Completing Installation

- 1** Re-connect the vehicle battery.
- 2** Attach the Angel Armor brand label to the interior door panel by completing the following procedure:
 - A** Clean the attachment location on the door with isopropyl alcohol.
 - B** Allow the door surface to dry completely.
 - C** Remove the backing from the brand label.
 - D** Apply the brand label to the door, pressing for at least 30 seconds to ensure proper adhesion.



▲ Figure 22. Attaching Angel Armor brand label

INSTALLATION COMPLETE:

Your vehicle is now equipped with advanced ballistic protection from Angel Armor.

REMOVAL OR DECOMMISSION

This section describes the process for removing the ballistic door panel for decommission or transfer to another vehicle.

NOTE: Removal is performed entirely through the window frame. There is no need for any interior door trim panel disassembly. If the ballistic door panel has been properly installed, the window regulator replacement bolts supplied by Angel Armor may remain in the vehicle with no effect on window performance.

- 1 Lower the window glass completely.
- 2 **⚠️ Disconnect the vehicle battery to prevent accidental airbag deployment.**
- 3 Follow the procedure described in *Removing the Outer Window Weatherstrip*, on page 7.
- 4 Grip the nylon folds at the top edge of the ballistic door panel.
- 5 Pull the ballistic panel toward the back of the vehicle, and then up, to remove it from the vehicle door.

NOTE: Avoid tearing the ballistic panel's weatherproof cover on the "teeth" inside of the door by pushing the ballistic panel toward the interior of the vehicle before lifting it out of the door.

- 6 Follow the procedure described in *Replacing the Outer Window Weatherstrip*, on page 14.
- 7 Re-connect the vehicle battery.
- 8 If removing the ballistic panel for transfer to another vehicle, inspect the panel after removal. Contact Angel Armor with any concerns about wear or damage.