



AVAIL™

BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

As shown on

**FORD® SUPER DUTY TRUCKS
FOR FRONT DOORS**
(2011 - 2016 MODELS)



COMPATIBLE WITH:

- **F-250 — Regular Cab** (2011 - 2016 Models)
- **F-250 — SuperCrew Cab** (2011 - 2016 Models)
- **F-350 — Regular Cab** (2011 - 2016 Models)
- **F-350 — SuperCrew Cab** (2011 - 2016 Models)
- **F-450 — Regular Cab** (2011 - 2016 Models)
- **F-450 — SuperCrew Cab** (2011 - 2016 Models)
- **F-550 — Regular Cab** (2011 - 2016 Models)
- **F-550 — SuperCrew Cab** (2011 - 2016 Models)



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TABLE OF CONTENTS



INTRODUCTION	3
Product Description	3
Installation Overview	3
Warnings & Cautions	4
Legal Statements	4
TOOLS & PARTS LIST	5
Recommended Tools	5
Installation Kit Contents	5
INSTALLATION	6
Overview	6
– General Installation Procedure	6
– Important Notes	6
Procedure	7
– Preparing for Installation	7
– Removing the Vehicle Interior Door Panel Mounting Bolts	7
– Removing the Vehicle Interior Door Panel	8
– Replacing the Window Regulator Bolts	9
– Re-attaching the Vehicle Interior Door Trim Panel	10
– Removing the Outer Window Weatherstrip	11
– Inserting the Ballistic Door Panel	12-13
– Replacing the Outer Window Weatherstrip and Completing Installation	14
REMOVAL OR DECOMMISSION	15

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INTRODUCTION

Congratulations on your purchase of the Angel Armor™ Avail™ Ballistic Door Panel (Level IIIA) for Ford Super Duty (2011 - 2016) trucks! It's our honor to provide advanced protection to those who put their lives on the line in the name of law and order.

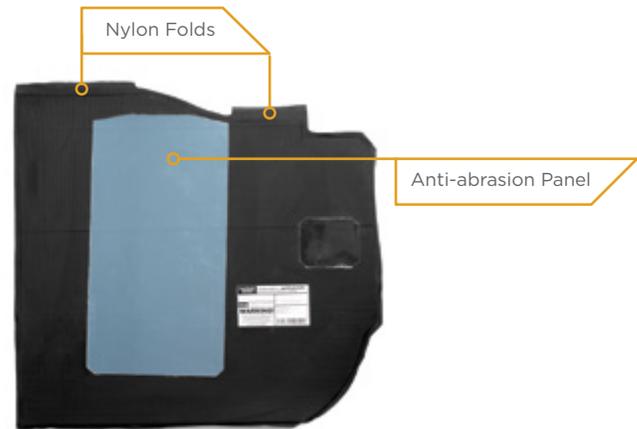
In just a matter of minutes, your vehicle will be outfitted with the finest ballistic technology available. With innovative ballistic materials, advanced designs and the fastest installation in the industry, Angel Armor Ballistic Door Panels elevate protective technology to a higher level.

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 protocol. Angel Armor Ballistic Door Panels (Level IIIA) for the Ford Super Duty trucks exceed NIJ Standard 0108.01 protocol for multi-round protection and offer a five-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.

The Ballistic Door Panel installation shown in this Installation Guide was performed on a

Ford F-350 Super Duty SuperCrew Cab. The installation process is the same for the Super Duty F-250 Regular Cab, Super Duty F-250 SuperCrew, Super Duty F-350 Regular Cab, Super Duty F-450 Regular Cab, Super Duty F-450 SuperCrew, Super Duty F-550 Regular Cab and Super Duty F-550 SuperCrew.



▲ Figure 1. Angel Armor Ballistic Door Panel (Level IIIA) for Ford Super Duty (2011 - 2016)

Installation Overview

Angel Armor Ballistic Door Panels (Level IIIA) for the Ford Super Duty 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 panel is inserted into the door, adjacent to the window glass.

Installation into Ford Super Duty trucks takes as little as five minutes for experienced installers. The average user installation takes only 10 to 15 minutes.



Watch an installation in action at 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 THE POSSIBILITY OF 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.
-  When weatherstrip is disassembled, 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 help prevent scratching.
-  Discard and replace any door components that are inadvertently damaged during the installation process. 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.

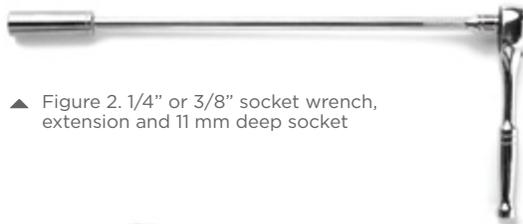
TOOLS & PARTS LIST

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

Recommended Tools

This section lists tools to be supplied by the installer.

- 1/4" or 3/8" socket wrench, extension and 11 mm deep socket (see Figure 2)
- 7 mm socket and 10 mm deep socket (see Figure 3)
- Plastic door pry tools (see Figure 4)



▲ Figure 2. 1/4" or 3/8" socket wrench, extension and 11 mm deep socket



▲ Figure 3. 7 mm socket and 10 mm deep socket



▲ Figure 4. Plastic door pry tools

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 Super Duty (2011 - 2016) (see Figure 5)
- Two 10 mm replacement bolts (see Figure 6)
- Angel Armor brand label (see Figure 7)
- Isopropyl alcohol wipe (see Figure 8)



▲ Figure 5. Angel Armor Ballistic Door Panel (Level IIIA) for Ford Super Duty (2011 - 2016)



▲ Figure 6 Two 10 mm replacement bolts



▲ Figure 7. Angel Armor brand label



▲ Figure 8. Isopropyl alcohol wipe

INSTALLATION

This section provides instructions for installing Angel Armor Avail Ballistic Door Panels (Level IIIA) into the Ford Super Duty.

Overview

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

General Installation Procedure

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

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 panel faces the interior of the vehicle for both the driver-side and passenger-side Ballistic Door Panels.
- The Ballistic Door Panel installation shown in this Installation Guide was performed on a Ford Super Duty F-350 SuperCrew Cab. The installation process is the same for the Super Duty F-250 Regular Cab, Super Duty F-250 SuperCrew Cab and Super Duty F-350 Regular Cab trucks.
- 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 help prevent damage to the 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 Door Panels, but never use excessive force. Excessive force may damage internal door components.

PROCEDURE

Complete the following steps to properly install Angel Armor Ballistic Door Panels (Level IIIA) for Ford Super Duty trucks.

Preparing for Installation

- 1 Lower the window glass completely.
- 2 Turn off the vehicle ignition switch, and remove the key.

Removing the Vehicle Interior Door Panel Mounting Bolts

- 1 Remove the two door compartment 7 mm bolts at the bottom of the interior vehicle door panel.



▲ Figure 9. Removing door compartment screws

- 2 Using the door pry tools, remove the bolt cover under the interior door arm rest.



▲ Figure 10. Removing the bolt cover

- 3 Remove the two 7 mm bolts from behind the interior door arm rest.

Removing the Vehicle Interior Door Panel

- 1 Using the door pry tools, remove the window control panel from the vehicle door panel.



▲ Figure 11. Removing the window control panel

- 2 Disconnect the wiring harnesses from the window control panel.



▲ Figure 12. Disconnecting the wiring harnesses

- 3 Pull the vehicle door panel up and away from the door. Then, hold the vehicle door panel at the base, and lift it over the door lock pin.



▲ Figure 13. Pulling the door panel up and away from the door

- 4 Disconnect the wiring harnesses from the side-view mirror control panel.



▲ Figure 14. Disconnecting the wiring harnesses

- 5 Set the detached door panel aside.

Replacing the Window Regulator Bolts

NOTES:

! Avoid damaging the moisture barrier. The adhesive on the back of the moisture barrier is used to reattach the moisture barrier after replacement of the window regulator bolts.

- 1** Connect the window control wiring harness.
- 2** Roll the window up until the two window regulator bolts are aligned with the appropriate panel cutouts.

NOTES:

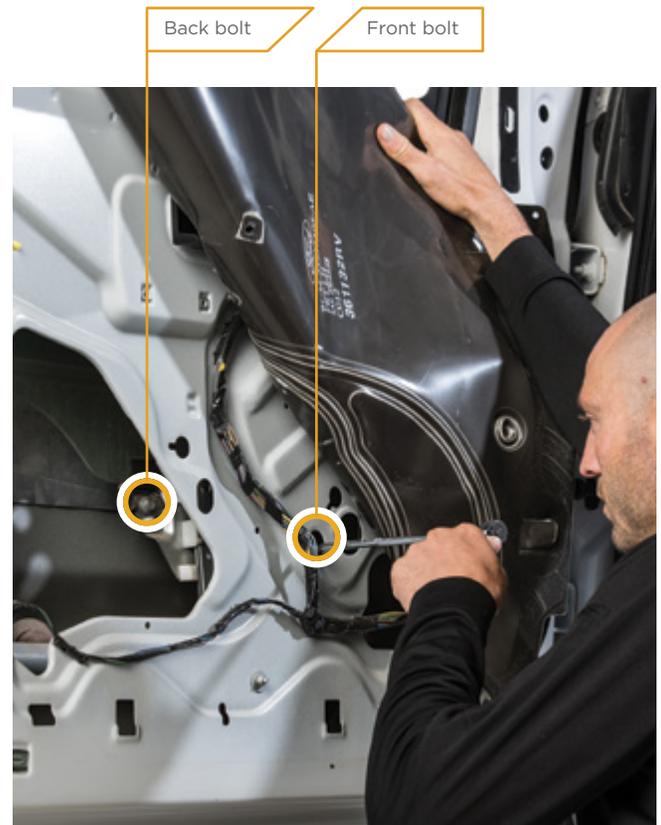
! Only one window regulator bolt may be removed at a time to help prevent the need to re-align the window glass. Complete the entire removal and replacement of the first bolt before removing the second bolt.

! Use magnetic tools to avoid dropping the bolt inside the door.



▲ Figure 15. Removing the regulator bolts

- 3** Use a 10 mm deep socket to replace the front factory-installed window bolt with the shorter bolt included in the installation kit. Install the shorter bolt in compliance with the vehicle's factory recommended torque specification.
- 4** Use a 10 mm deep socket to replace the back factory-installed window bolt with the shorter bolt included in the installation kit. Install the shorter bolt in compliance with the vehicle's factory recommended torque specification.



▲ Figure 16. Replacing the window bolts

Re-attaching the Vehicle Interior Door Panel

- 1** Replace the moisture barrier by pressing its adhesive onto the door.
- 2** Disconnect the window control wiring harness.
- 3** Connect the wiring harnesses for the side-view mirror control panel.
- 4** Feed the window control wires through the window control panel opening so they are visible through the interior side of the door panel.
- 5** Align the door lock pin and snap the upper edge of the door panel on the interior portion of the door near the window.



▲ Figure 17. Aligning the door lock pin and snapping the upper edge of the door panel on the interior

⚠ NOTE: Ensure the wiring harness for the window control panel and side-view mirror (if applicable) are visible through the control panel openings and are not pinned behind the door.



▲ Figure 18. Ensuring the wiring harnesses are visible

- 6** Align the interior door retainers with the appropriate retaining holes in the door.
- 7** Push firmly on each retainer area until the retainers engage, including the top edge.
- 8** Connect the window control wiring harness.
- 9** Install the window control panel into the interior door panel.
- 10** Replace the two 7 mm bolts behind the interior door arm rest.
- 11** Replace the bolt cover under the interior door arm rest.
- 12** Replace the two 7 mm door compartment bolts at the bottom of the interior vehicle door panel.
- 13** Roll the window all the way back down.

Removing the Outer Window Weatherstrip

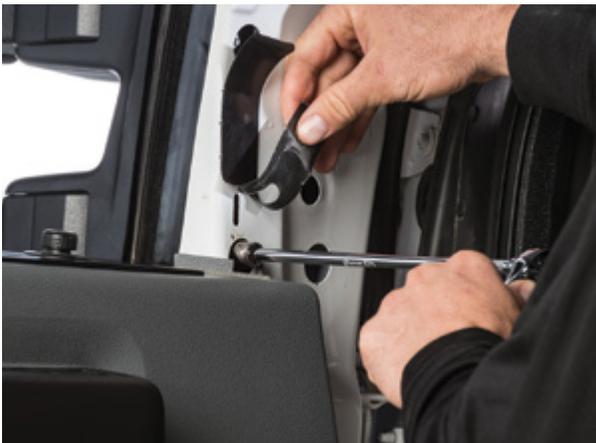
⚠ Use caution when removing parts that may have sharp edges, such as the outer window weatherstrip.

- 1 Use the plastic door pry tools to remove the side-view mirror mounting cover.



▲ Figure 19. Removing the side-view mirror mounting cover

- 2 Remove the two side-mirror rubber plugs, using your fingers to pull up on the edge of each plug.
- 3 Use an 11 mm socket to loosen the top and bottom side-view mirror nuts.



▲ Figure 20. Loosening the side-view mirror nuts

- 4 Use your hand to hold to bottom of the side mirror up to create a gap between the side mirror and outer window weatherstrip.
- 5 Carefully pull up on the back end of the outer window weatherstrip to remove it from the window frame. Work forward along the window frame, pulling up on the trim to remove it completely.



▲ Figure 21. Removing the window weatherstrip

Inserting the Ballistic Door Panel

- 1**  **Disconnect the vehicle battery to avoid the possibility of accidental airbag deployment.**

- 2** Bend the bottom of the Ballistic Door Panel away from you, pressing with your knee or hand. This creates a slight curve in the panel that matches the shape of the bottom of the Ford F-250 SSV door and eases installation. See Figure 22.

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



▲ Figure 22. Bending the bottom of the panel away from you

- 3** Hold the Ballistic Door Panel so that its anti-abrasion panel faces the interior of the vehicle.

- 4** Leading with the bottom edge of the Ballistic Door Panel, begin to insert the panel into the door adjacent to the outer surface of the window glass.

 **NOTE:** Hold 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 23. Inserting the Ballistic Door Panel into the door

- 5** Slide the Ballistic Panel Down into the door, following the edge of the window frame.
- 6** Grip the nylon folds at the top of the Ballistic Door Panel when it is inserted the majority of the way into the door.

Inserting the Ballistic Door Panel CONTINUED

7 Slide the Ballistic Door 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 the front, top edge of the Ballistic Door Panel toward the vehicle exterior, while sliding it forward, to move the panel past the window track.

⚠ NOTE: Work the Ballistic Door Panel forward firmly to clear any obstructions, but never use excessive force. Excessive force may damage internal door components or puncture the Ballistic Door Panel's weatherproof cover. It may be useful to shimmy the panel side to side while pushing forward to move it into position.



▲ Figure 24. Positioning the Ballistic Door Panel

8 Push the Ballistic Door Panel down into its final location until the nylon fold at the top of the ballistic panel folds over the horizontal metal edge of the window frame. This is the same edge that the outer window weatherstrip sits on when installed.



▲ Figure 25. Positioning the nylon folds over the window frame

9 Verify that the Ballistic Door Panel is properly positioned by confirming the following:

- The Ballistic Door Panel is seated all the way forward.
- The nylon edge of the ballistic panel is lined up with the curve of the horizontal metal edge of the window frame.
- The Ballistic Door Panel is all the way down, and the nylon fold sits flush where the weatherstrip is installed.
- Ensure the gaps in the nylon fold allows for exposure to all weatherstrip snaps.

⚠ NOTE: If excessive nylon is exposed above the door and the crease does not align with the top edge of the window frame, repeat steps 1 through 8 of this section. Avoid tearing the ballistic panel's weatherproof cover on the 'teeth' inside of door by pushing the ballistic panel toward the interior of the vehicle before lifting it out of the door.

Replacing the Outer Window Weatherstrip and Completing Installation

- 1** Press the front edge of the outer window weatherstrip on the metal edge of the window frame, and carefully slide the weatherstrip under the gap in the side-view mirror to engage the existing trim.
- 2** Verify that no nylon is exposed below or around the outer window weatherstrip.
- 3** Working from front to back, press down to seat the entire length of the outer window weatherstrip onto the metal edge of the window frame.



▲ Figure 26. Pressing down the window weatherstrip

- 4** Tighten the top and bottom side-mirror bolt with an 11 mm socket.
- 5** Replace the side-view mirror rubber plugs.
- 6** Replace the side-view mirror bolt cover.
- 7** Verify that all trim and window components are properly installed.
- 8** Connect the vehicle battery.

- 9** Attach the Angel Armor brand label to the interior door panel by completing the following procedure:

- A** Clean the attachment area on the door with the supplied isopropyl alcohol wipe.
- 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 15. Applying 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.

- 1** Lower the window glass completely.
- 2**  **Disconnect the vehicle battery to avoid accidental airbag deployment.**
- 3** Follow the procedure described in *Removing the Outer Window Weatherstrip* on page 11.
- 4** Grip the nylon folds at the top edge of the Ballistic Door Panel.
- 5** Slide the Ballistic Door Panel toward the back of the vehicle, and then up to remove it from the door. Be sure to align the panel with the vertical window frame for easier removal.

 **NOTE:** Avoid tearing the Ballistic Door Panel's weatherproof cover on the 'teeth' inside of door by pushing the Ballistic Door 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** If removing the panel for transfer to another vehicle, inspect panel after removal. Contact Angel Armor with any concerns about wear or damage.