



AVAIL™

BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

As shown on

**FORD® CROWN VICTORIA
FOR FRONT DOORS
(1998-2011)**



ALSO COMPATIBLE WITH:

- **Ford Police Interceptor** (1998-2012)



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TABLE OF CONTENTS



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

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INTRODUCTION

Congratulations on your purchase of the Angel Armor™ Avail™ Ballistic Door Panel (Level IIIA) for the Ford Crown Victoria! 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 Avail Ballistic Door Panels elevate protective technology to a higher level.



▲ Figure 1. Angel Armor Avail Ballistic Door Panel (Level IIIA) for the Ford Crown Victoria

Product Description

Angel Armor Avail 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 Avail Ballistic Door Panels (Level IIIA) for Ford Crown Victoria 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 Avail Ballistic Door Panels (Level IIIA) for Ford Crown Victoria require no additional brackets or fasteners, and eliminate the need to remove the window glass. Minimal door disassembly is required to install protective caps. Installation of these caps is intended to protect the panel from the window regulator rivets. Once this is done, the ballistic door panel is inserted into the door, adjacent to the window glass.





The average user installation takes only 15 to 30 minutes.






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 reassembly.

-  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 Avail Ballistic Door Panel (Level IIIA) for Ford Crown Victoria



▲ Figure 2. Angel Armor Avail Ballistic Door Panel (Level IIIA) for the Ford Crown Victoria

- Crown Victoria Protective Caps



▲ Figure 3. Angel Armor Avail Ballistic Door Panel (Level IIIA) for the Ford Crown Victoria

- Angel Armor brand label

Recommended Tools

This section lists tools to be supplied by the installer.

- Panel/trim removal tools of varying sizes
- Torx T30 screwdriver
- Flathead screwdriver
- 11 mm socket
- 7 mm socket



▲ Figure 4. Panel/trim removal tools



▲ Figure 5. Torx T30 and flathead screwdriver



▲ Figure 6. 11 mm socket



▲ Figure 7. 7 mm socket

INSTALLATION

This section provides instructions for installing Angel Armor Avail™ Ballistic Door Panels (Level IIIA) into the Ford Crown Victoria (1998 to 2011 models).

Overview

Installation of the Angel Armor Avail Ballistic Door Panel (Level IIIA) into a Ford Crown Victoria 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 Install protective caps.
- 3 Insert and secure Angel Armor Ballistic Door Panel.
- 4 Reassemble 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 reassembly after panel installation.
- Place all removed hardware and components in a safe place during installation.
- Angel Armor Avail 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 Avail Ballistic Door Panel (Level IIIA) into a Ford Crown Victoria.

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** Using an 11 mm socket, remove the cap nut at the rear end of the outer window weatherstrip.
- 3** Lift up the rear end of the weatherstrip and slide it out.



▲ Figure 8. Removing the window trim

- 4** Adjust window height to 9”.
- 5** Turn off the ignition switch and remove the key.

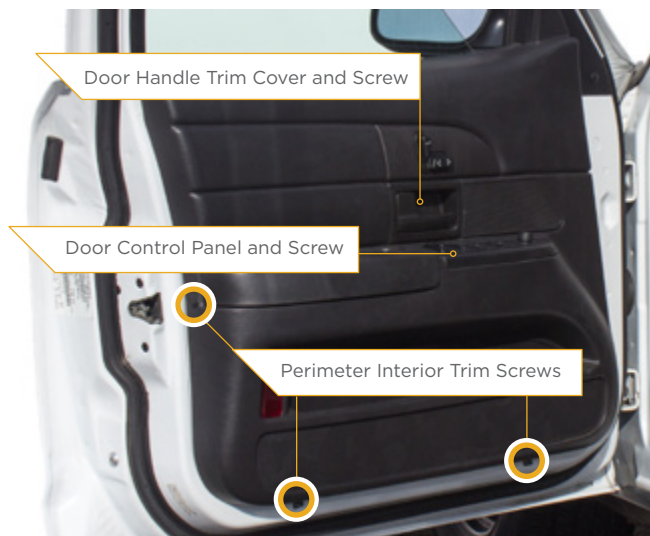
Removing the Panel Mounting Bolts

- 1 Remove the three 7 mm screws around the perimeter of the interior vehicle door panel.



▲ Figure 9. Removing 7 mm panel mounting bolts

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



▲ Figure 10. Trim cover and screw locations

- 3 Remove the T30 screw from behind the interior door handle.

- 4 Prying from the front of the panel remove the door control panel. (See Figure 11.)



▲ Figure 11. Prying open door control panel

- 5 Disconnect the door panel electrical connectors.

- 6 Remove the 7 mm screw from behind the door control panel.



▲ Figure 12. Door control panel screw location

Removing the Vehicle Interior Door Trim Panel

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



▲ Figure 13. Prying open the vehicle interior door trim panel

- 2 Disconnect the wiring harnesses between the door trim panel and door.



▲ Figure 14. Location of the door latch cable

Installing the Protective Caps

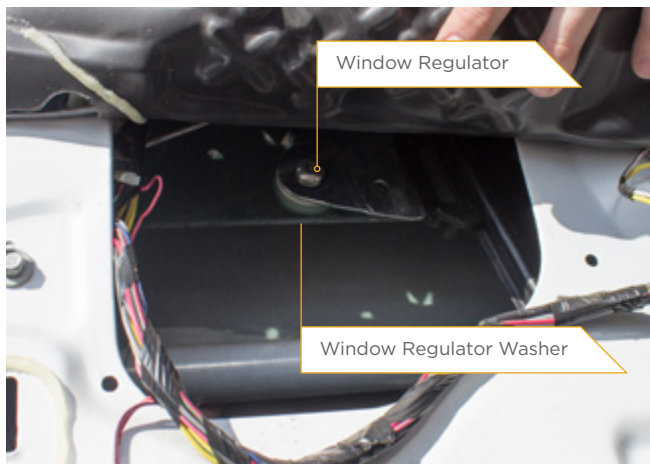
- 1 Peel back moisture barrier partially to expose the window regulator. (See Figure 15, below.)

NOTES:

- Avoid damaging the moisture barrier.
- The adhesive on the back of the moisture barrier is used to re-attach the moisture barrier after installing the protective caps.

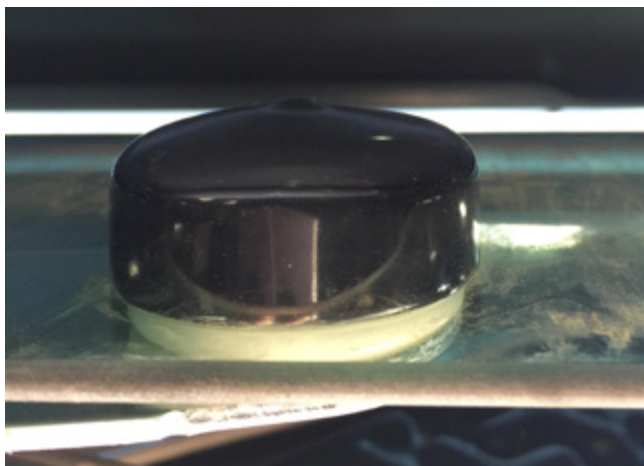


▲ Figure 15. Peeling back the moisture barrier to expose the window regulator



▲ Figure 16. View of the exposed window regulator

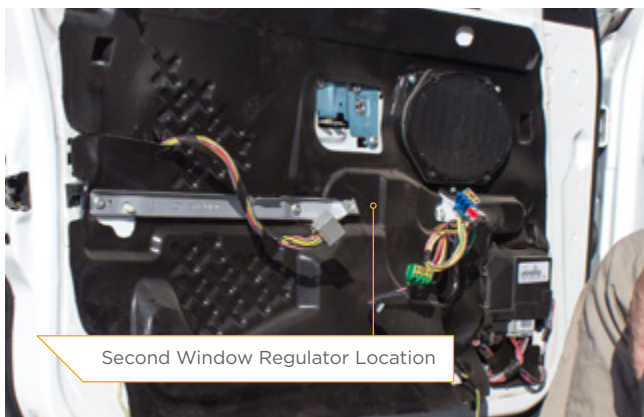
- 2 Push the protective cap onto the window regulator washer on the exterior side of the window regulator. The washer is a disk 1.5 inches in diameter with rough edges. Make sure the cap is fully seated on the washer and making contact with the window glass.



▲ Figure 17. Cap installed on window regulator washer

- 3 Repeat last step for unseen regulator washer located on second window regulator approximately 10 inches forward from the first regulator within the door. Feel to make sure the cap is secured and fully seated.

- 4 Double check that the caps are on by pushing up and down, and left and right.



▲ Figure 18. Location of unseen, second window regulator

Inserting the Ballistic Door Panel

- 1 Temporarily reconnect 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 Crown Victoria door and eases installation.
- 6 Hold the ballistic door panel so its anti-abrasion panel faces 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 19. 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 20. 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 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 Reach down and ensure that the ballistic package top clears the internal sheet metal lip.



▲ Figure 21. Reaching into to door to feel the ballistic package, making sure it is below the internal sheet metal

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

- 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 22. 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 cap nut at the rear end of the weatherstrip.
- 3** Verify that no nylon is exposed below or around the window trim.

Re-attaching the Interior Door Trim Panel

- 1** Replace the moisture barrier by pressing its adhesive onto the door.
- 2** Reconnect the wiring harnesses between the door trim panel and door.
- 3** Align the interior door trim retainers with the appropriate holes in the door.
- 4** Push wiring harness up through the switch panel hole.
- 5** Replace the three 7 mm panel mounting screws around the perimeter of the door panel.
- 6** Replace the one 7 mm panel mounting screw in the arm rest.
- 7** Replace the one T30 Torx panel mounting screw behind the door handle.
- 8** Replace the door handle trim cover.
- 9** Re-connect the wiring harnesses to the various connections on the door panel.
- 10** Re-install the window controls into the interior door trim panel.

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 23. 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 protective caps 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 Reconnect the vehicle battery.
- 8 If removing the ballistic panel for transfer to another vehicle, inspect the panel after removal. Contact Angel Armor for replacement protective caps or with any concerns about wear or damage.