



AVAIL™

BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

**CHEVY® CAPRICE PPV
FOR FRONT DOORS**
(2011 - 2016)



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CHEVY® IS A REGISTERED TRADEMARK OF GENERAL MOTORS.

INTRODUCTION

Congratulations on your purchase of the Angel Armor™ Avail™ Ballistic Door Panel (Level IIIA) for Chevy® Caprice PPV! 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 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.

Product Description



▲ Figure 1. Angel Armor Ballistic Door Panel (Level IIIA) for Chevy Caprice PPV

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 Chevy Caprice PPV exceed NIJ Standard 0108.01 protocol 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 the Chevy Caprice PPV 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.

Installation into a Chevy Caprice PPV take as little as 10 minutes for experienced installers. The average user installation takes only 10 to 25 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 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 help 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. 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.

- Torx T20 screwdriver
- Phillips screwdriver
- 7 mm socket
- 10 mm socket
- Tape measure
- 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 Chevy Caprice PPV (2011 and newer models)



▲ Figure 2. Angel Armor Ballistic Door Panel (Level IIIA) for Chevy Caprice PPV

- Angel Armor brand label



▲ Figure 3. Angel Armor brand label

- Replacement window regulator bolts: Two M6x1.00x14.00 mm Hex Flange Cap Screws



▲ Figure 4. Replacement window regulator bolts

- Isopropyl alcohol wipe



▲ Figure 5. Isopropyl alcohol wipe

- Die-cut, heavy duty double-sided adhesive strip (use only if necessary)



▲ Figure 6. Heavy duty double-sided adhesive strip

INSTALLATION

This section provides instructions for installing Angel Armor Avail Ballistic Door Panels (Level IIIA) into the Chevy Caprice PPV.

Overview

Installation of the Angel Armor Ballistic Door Panel (Level IIIA) into a Chevy Caprice PPV 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 help 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.

PROCEDURE

Complete the following steps to properly install Angel Armor Ballistic Door Panels (Level IIIA) for Chevy Caprice PPV.

Preparing for Installation

- 1 Adjust the window glass height to 8.25 inches.



▲ Figure 7. Adjusting the window glass to 8.25 inches

- 2 Turn off the vehicle ignition switch and remove the key.

Removing the Panel Mounting Bolts

- 1 Remove the two Phillips screws at the bottom of the interior vehicle door panel, starting with the front screw.



▲ Figure 8. Removing the two Phillips screws at the bottom of the interior door panel

- 2 Using the door pry tools, remove the trim cover behind the interior door handle.



▲ Figure 9. Removing the trim cover behind the door handle

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



▲ Figure 10. Removing the 10 mm bolt from the interior door handle

- 4 Using the door pry tools, remove the rubber trim cover in the arm rest pocket.



▲ Figure 11. Removing the rubber trim cover from the arm rest pocket



Removing the Panel Mounting Bolts

CONTINUED

- 5** Remove the Phillips screw from the arm rest pocket.



▲ Figure 12. Removing the Phillips screw from the arm rest pocket

- 6** Using the door pry tools, remove the window control panel from the door panel.



▲ Figure 13. Removing the window control panel from the door panel

- 7** Disconnect the wiring harnesses from the window control panel.



▲ Figure 14. Disconnecting the wiring harness

- 8** Remove the 10 mm bolt from behind the window control panel.



▲ Figure 15. Removing the 10 mm bolt from behind the window control panel

Removing the Vehicle Interior Door Panel

- 1** Visually locate the interior door retainers inside the vehicle door panel. See Figure 14 for approximate interior door retainers.



▲ Figure 16. Approximate locations of the interior door trim retainers

- 2** Starting at the back corner, pry the interior vehicle door panel away from the door at the retainer locations shown in Figure 9.



▲ Figure 17. Prying open the interior vehicle door panel

Removing the Vehicle Interior Door Panel **5**

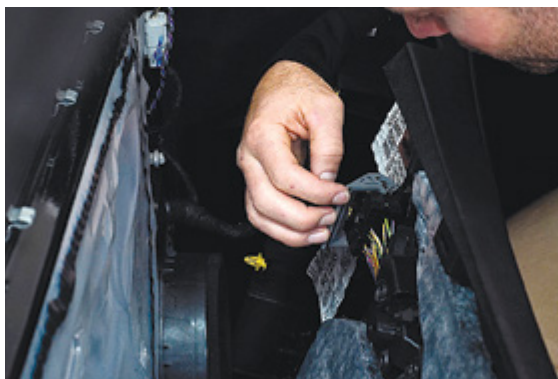
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- 3** Pull the vehicle door panel away from the door to disengage the upper clips. Then, hold the vehicle door panel at the base, and lift it over the door lock pin.



▲ Figure 18. Lifting the door panel over the lock pin

- 4** Disconnect the wiring harness between the door panel and door.



▲ Figure 19. Disconnecting the wiring harness

- 5** Disconnect the door latch cable by prying the retainer clip and unhooking the cable from the door handle.



▲ Figure 20. Disconnecting door latch cable

Replacing the Window Regulator Bolts

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 bolts.
- 1** Peel back moisture barrier partially to expose the window regulator bolts.



▲ Figure 21. Peeling back moisture barrier

Replacing the Window Regulator Bolts

CONTINUED

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.

- 2** 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.



▲ Figure 22. Replacing factory installed window bolt with shorter bolt included in the installation kit

- 3** 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.

Re-attaching the Interior Door Panel

- 1** Replace the moisture barrier by pressing its adhesive onto the door.
- 2** Re-connect the door latch cable.
- 3** Re-connect the wiring harnesses to the door panel.

- 4** Align the interior door retainers with the appropriate holes in the door.
- 5** Push firmly on each retainer area until the retainers re-engage.
- 6** Replace the 10 mm bolt behind the window control panel.
- 7** Reconnect the wiring harnesses to the window control panel.
- 8** Align the door lock pin and snap the upper edge of the door panel on the interior portion of the door near the window.
- 9** Re-install the window control panel into the interior door panel.
- 10** Replace the Phillips screw in the arm rest pocket.
- 11** Replace the rubber trim cover in the arm rest pocket.
- 12** Replace the 10 mm bolt behind the interior door handle.
- 13** Replace the trim cover in the interior door trim cover.
- 14** Replace the two Phillips screws at the bottom of the interior vehicle door panel.

Removing the Outer Window Weatherstrip

- ⚠ Use caution when removing parts that may have sharp edges, such as the outer window weatherstrip.
- ⚠ Use caution when removing the weatherstrip, as it contains a fragile inner snap that is easily damaged. If the snap breaks, see step 1 in the *Replacing the Outer Weatherstrip* procedure on page 12.

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.



Removing the Outer Window Weatherstrip

CONTINUED

- 1 Lower the window glass completely.
- 2 Using the door pry tools, carefully release the inner snap on the rear end of the outer window weatherstrip. If the inner snap is damaged during removal, set the weatherstrip aside and look for instruction in *Replacing the Outer Window Weatherstrip* section.




▲ Figure 23. Using the door pry tools to carefully release inner snap

- 3 Pull up on the rear 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 24. Removing outer window weatherstrip

Inserting the Ballistic Door Panel

- 1  **Disconnect the vehicle battery to avoid accidental airbag deployment.**
- 2 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 Chevy Caprice door and eases installation.
- NOTE:** Do not bend the ballistic door panel tighter than a 6" radius (12" diameter).
- 3 Hold the ballistic door panel so its plastic anti-abrasion panels face the interior of the vehicle.
- 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.
- 4 Leading with the front, bottom corner of the ballistic door panel, begin to insert the panel into the door, adjacent to the outer surface of the window glass. Insert the panel at an angle, guiding the front, top edge fully into the door, under the side view mirror.



▲ Figure 25. Inserting the ballistic panel into the door at an angle

Inserting the Ballistic Door Panel

CONTINUED

- 5 After the front, top edge is inserted fully, rotate the back edge of the ballistic panel down into the door.



▲ Figure 26. Rotating the back edge of the ballistic panel into the door

- 6 Grip the nylon folds at the top of the ballistic panel when it is inserted the majority of the way into the door.



▲ Figure 27. Gripping ballistic door panel's top-edge nylon folds

- 7 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.

NOTE: Work the ballistic panel forward firmly to clear any obstructions, but never use excessive force, which may damage internal door components. It may be useful to shimmy the ballistic panel side to side while pushing forward.

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

- The ballistic panel is all the way down, and the nylon fold sits flush where the weatherstrip is installed.
- The front edge of the nylon is approximately 3.5 inches away from the front vertical edge of the window frame.



▲ Figure 28. Proper measurement from the front edge of the nylon to the vertical edge of the window frame

NOTE: If the ballistic door panel is not properly positioned, repeat steps one through eight of this section.

Replacing the Outer Window Weatherstrip

! If the inner snap on the weatherstrip is damaged during the procedure described in *Removing the Outer Weatherstrip*, begin with step 1 of this section. If the snap is undamaged, immediately move to step 3 of this section.

- 1 Remove any remaining pieces of the damaged snap, ensuring a flat surface.

Replacing the Outer Window Weatherstrip

CONTINUED

- 2** Adhere the die-cut, heavy duty double-sided adhesive strip included in the installation kit over the flat surface of the damaged inner snap on the weatherstrip.



▲ Figure 29. Peeling double-sided adhesive backer

- 3** Tuck the front edge of the weatherstrip on the window frame, and slide it forward into position, carefully seating it under the rear-view mirror.



▲ Figure 30. Reinstalling weatherstrip under rear-view mirror

- 4** Press down on the front end of the weatherstrip and move backward, pressing the entire length of the weatherstrip into the window frame.



▲ Figure 31. Pressing down on the entire length of the weatherstrip

- 5** If you didn't damage the inner snap, ensure proper snap engagement along the weatherstrip. If you did damage the inner snap, apply adequate pressure to the end of the weatherstrip to ensure proper adhesion.
- 6** Re-connect the vehicle battery.
- 7** Verify that all trim and window components are properly re-installed and that the window functions as intended.

Completing Installation

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

- A** Clean the attachment location on the flat surface shown in Figure 32 with isopropyl alcohol.
- B** Allow the door surface to dry completely.
- C** Remove the backing from the brand label.

Completing Installation

CONTINUED

- D** Apply the brand label to the interior panel.



▲ Figure 32. Applying the 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. 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 help prevent accidental airbag deployment.**
- 3** Follow the procedure described in *Removing the Outer Window Weatherstrip*, on page 10.
- 4** Grip the nylon folds at the top edge of the ballistic door panel.

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.

- 5** Slide the ballistic panel toward the back of the vehicle, and then rotate up and out to remove it from the vehicle door.
- 6** Follow the procedure described in *Replacing the Outer Window Weatherstrip*, on page 12.
- 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.