



AVAIL[®]

BALLISTIC DOOR PANELS

LEVEL III + M855/M193/MSR



INSTALLATION GUIDE

for front driver and
passenger-side doors

As shown on
CHEVROLET[®] SILVERADO
(2019 & Newer Models)



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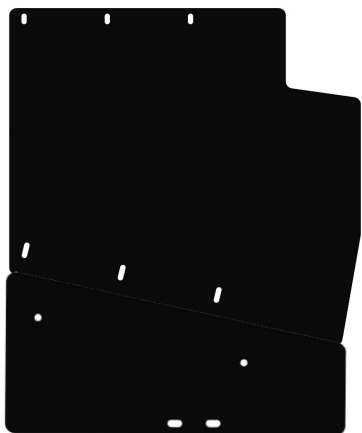


INTRODUCTION

Congratulations on your purchase of the Angel Armor® Avail Ballistic Door Panel (Level III+) for Chevrolet Silverado (2019 – Newer Models)! It's our honor to provide advanced protection to those who put their lives on the line in the name of law and order.

Your vehicle will soon be upfitted with the finest ballistic technology available. With optimized coverage area, a seamless design and powerful protection from NIJ Level III rifle threats, Avail elevates vehicle protection to a higher level.

Product Description



▲ Figure 1. Angel Armor Avail Ballistic Door Panel (Level III+) for Chevrolet Silverado (2019 - Newer Models)

The Avail Level III+ armor panel is made of a premium steel plate packed with superior protective capabilities. This high-strength solution features discreet, seamless coverage in a single-piece design and a weatherproof coating to help resist environmental wear and corrosion. The alloy steel crash bar brackets

and door mounting bracket secure the armor in place to help prevent rattling and shifting within the door and a nylon check strap is included to preserve door functionality and hinder over-extension.

When fully installed, the complete Avail Level III+ ballistic armor package gives officers the ability to use their door as a tactical shield against rifle-round threats without compromising the integrity/functionality of the vehicle door.

Avail exceeds NIJ Level III Standard 0108.01 protocol for multi-round protection and offers a five-year express limited warranty.

Installation Overview

The ballistic door panel installation shown in this guide was performed on the front driver-side door of the Chevrolet Silverado (2019 - Newer Models). The installation process is the same for front driver-side doors of the Chevrolet Silverado (2019 - Newer Models).

Avail Level III+ armor features a simple installation starting with applying the door hinge check strap. Door disassembly is required to install the crash bar brackets and door mounting bracket. Once this is completed, the armor is secured in place and the vehicle door panel is reassembled. Installation takes approximately 1.5 - 2 hours per vehicle door.



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 REMOVAL/ 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, hand and foot protection.
-  Use extreme caution when transporting the ballistic door panel. The armor panel is very heavy and impact may result in serious injury.
-  To avoid muscle strain or back injury, use lifting aids and proper lifting techniques when transporting the ballistic door panel.
-  Avoid excessive force when inserting the armor into the car door. Excessive force may damage the weatherstripping or scratch finished surfaces.
-  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.



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 window armor parts or components.



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

Legal Statements

See Warranty and Terms and Conditions for important legal information on angelarmor.com. 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.

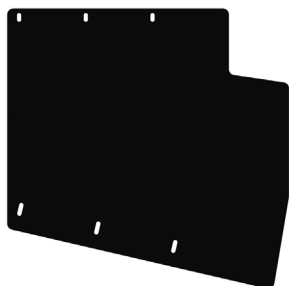


PARTS & TOOLS LIST

This section lists the parts included in the installation kit and the tools recommended for installation. Installation kit contents are for one door panel.

Installation Kit Contents

- One Upper Avail Ballistic Door Panel (Level III+) for Chevrolet Silverado (2019 - Newer Models)



▲ Figure 2. Avail Ballistic Door Upper Panel for Chevrolet Silverado (driver side part shown)

- One Lower Avail Ballistic Door Panel (Level III+)



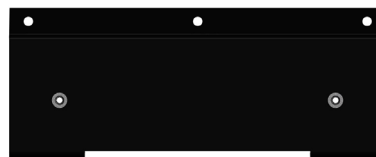
▲ Figure 3. Avail Ballistic Door Lower Panel for Chevrolet Silverado (driver side part shown)

- Avail Upper Bracket



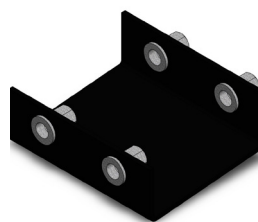
▲ Figure 4. Render of Upper Bracket (driver side part shown)

- One Avail Crash Bar Bracket



▲ Figure 5. Render of Crash Bar Bracket

- One Lower Bracket



▲ Figure 6. Render of Lower Bracket

- One Avail Check Strap



▲ Figure 7. Render of Check Strap

- Two Avail Nylon Installation Straps



▲ Figure 10. Nylon installation straps

- Five 20mm M8 Bolts



▲ Figure 9. 20mm M8 Bolts

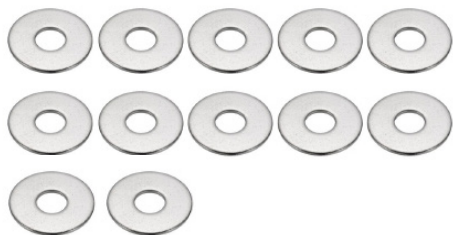


■ Seven 25mm M8 Bolts



▲ Figure 10. 25mm M8 Bolts

■ Twelve M8 Washers



▲ Figure 11. M8 Washers

■ Three M8 Hammer Nuts



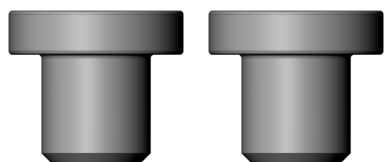
▲ Figure 12. Hammer Nuts

■ Five Self Taping Screws



▲ Figure 13. Self-tapping Screws

■ Two Rubber Bumpers



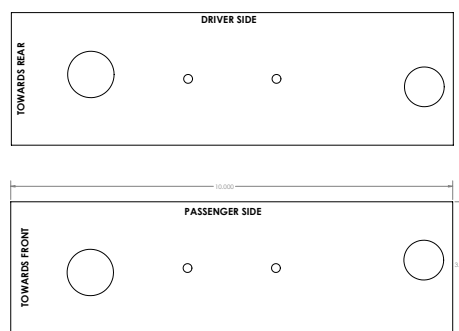
▲ Figure 14. Rubber Bumpers

■ Panel Bonding Adhesive



▲ Figure 15. One Panel Bond container

■ One Drill Template (Appended at the end of guide)



▲ Figure 19. Drill Template

■ One Isopropyl Alcohol Wipe



▲ Figure 20. Isopropyl Alcohol Wipe

■ One Brand Label



▲ Figure 21. Angel Armor Brand Label

Personal Protective Equipment

- Protective Gloves
- Protective Eye wear
- Steel-Toe Boots

Recommended Tools

- Touch-up Paint
- Magnetic Retrieval Tool
- Headlamp or Flashlight

Required Tools

- Panel/trim removal tools of varying sizes
- Torx T15 screwdriver
- 7mm socket
- 10mm socket
- 13mm socket
- Socket wrench
- Pick tool
- Torque wrench
- Magnetic parts tray
- Panel bond gun (3M Plus 11 Epoxy Applicator H-7878 or equivalent)
- Coarse-grit sandpaper
- Battery drill
- Drill extension
- 3/8" Free fit drill bit (X bit)
- 3/8" Drill bit



INSTALLATION

This section provides instructions for installing Angel Armor Avail Ballistic Door Panels (Level III+) into the Chevrolet Silverado (2019 - Newer Models.)

Overview

Installation of the Angel Armor Avail Ballistic Door Panel (Level III+) into a Chevrolet Silverado is simple. Door disassembly is required to install the check strap crash bar brackets, and armor mounting brackets. Once this is completed, the armor is secured in place and the vehicle door panel is quickly reassembled. See page 9 for detailed instructions.

General Installation Procedure

- 1** Install the Check Strap.
- 2** Remove vehicle door panel, weather strip, window and window regulator.
- 3** Install the Upper Bracket.
- 4** Install the Lower Bracket.
- 5** Install the Crash Bar Bracket.
- 6** Install the Lower Armor.
- 7** Install the Upper Armor.
- 8** Re-assemble the door.

Important Notes

- The directions, photographs and illustrations in this guide depict an installation performed on the driver side. The same installation procedure applies to the passenger door.
- 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 or magnetic tray during installation.
- The Avail Level III+ armor panel is made of a premium steel plate. This protective material is heavy and extra caution should be taken when transporting, handling and installing the armor.
- 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.

- ⚠ Use extreme caution when transporting the ballistic door panel. The armor panel is very heavy and impact may result in serious injury.**
- ⚠ To avoid muscle strain or back injury, use lifting aids and proper lifting techniques when transporting the ballistic door panel.**
- ⚠ Wear appropriate protective gear, including eye, hand and foot protection. Protective gloves are highly recommended when handling the steel armor.**



PROCEDURE

Complete the following steps to properly install Angel Armor Avail Ballistic Door Panels (Level III+) for Chevrolet Silverado (2019 - Newer Models).

Instaling the Check Strap

- 1 Open the door to its fully opened position.
- 2 Locate the OEM (Original Equipment Manufacturer) check strap that connects to the front and middle of the door to the A-pillar of the vehicle cabin.



▲ Figure 22. OEM Check Strap mount

- 3 Using a 10mm socket, remove the bolt from the check strap mount. Use the original bolt to securely fasten the check strap to the bolt head.
- 4 Insert the smaller bracket on the A-pillar under the OEM check strap mount. Use the original bolt to securely fasten the check strap to the A-pillar.

- 5 Remove the two nuts securing the OEM check strap assembly to the door frame.
- 6 Pre-bend the nylon webbing of the check strap so that when the door closes, the nylon bends outward. Pre-bending the check strap gives it a “memory” to ensure it does not affect the door closure.
- 7 Install the nylon check strap and bracket assembly by placing the bracket with two mounting holes over the threaded studs that mount the OEM check strap to the door frame. Use the OEM nuts to secure the bracket in place. This requires a slight angle to place.

NOTE: The installed strap helps prevent over-extension of the vehicle door. Adjustments to the door hinges will be made after armor is installed for proper alignment due to the added weight of the armor. Nut torquing will occur after the final adjustment.

Removing the Outer Window Weatherstrip

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

- 1 Open the door and lower the window glass completely.
- 2 Turn off the vehicle ignition switch and remove the key.
- 3 Using a T15 driver, remove the window weatherstrip screw at the back of the door (shown on next page).





▲ Figure 23. Window trim T15 screw

- 4** To remove the weather stripping, push down, rotate the weather stripping towards the exterior, and lift.

Removing the Panel Mounting Bolts

- 1** Enable accessory mode and roll the window up fully. Once raised, turn the vehicle off.
- 2** Using a trim tool or pick, remove the rubber insert sitting in the handle of the door.
- 3** Remove the two 7mm bolts revealed in the last step.



▲ Figure 24. Bolts revealed in handle pocket

- 4** Locate and remove the two 7mm bolts from below the map pocket.

Removing the Door Panel

- 1** Using the trim tool and starting at the lower back corner of the door, pry the interior door panel away from the door to disengage the plastic snaps. Work your way along the bottom edge and both sides of the door panel to disengage all snaps.
- 2** Once all the snaps have been released, lift the door panel away from the door and up over the door lock pin.
- 3** Support the door panel with your legs and tilt the top edge towards yourself.
- 4** Remove the wiring harness and door handle cable from the rear side of the interior trim panel.
- 5** Set the door panel aside.

Removing Internal Components

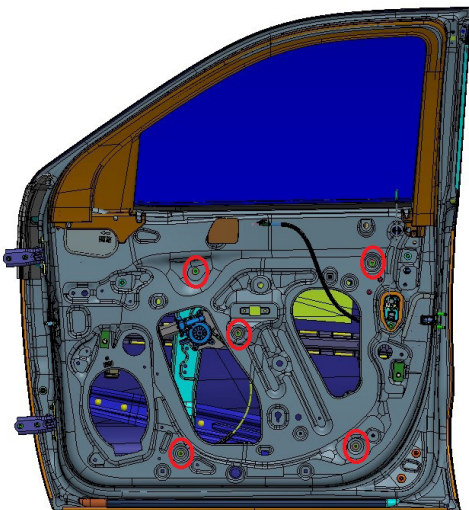
- 1** Remove the two 7mm bolts holding the handle mounting bracket in the center of the door.
- 2** Remove the 7mm bolt holding the speaker to the door skin.
- 3** Slowly pull back the speaker and disconnect the wiring harness.
- 4** Starting at one of the top corners, peel the weather seal from the door skin and set aside.

Removing the Glass and Regulator

- 1** Reconnect the wiring harness to the back of the door trim panel.



- 2** Enable accessory mode on the vehicle.
- 3** Lower the window until the regulator clips are easily accessible via the access port in the door skin.
- 4** Disable accessory mode and remove the key from the vehicle.
- 5** Using a trim tool, pry between the back of the window regulator clip and the window itself. Apply upwards pressure on the window while doing this until you feel the regulator release the window.
- 6** Repeat this process with the other window regulator clip.
- 7** Lift and rotate the window out of the door and set aside.
- 8** Locate the five 10mm nuts holding the window regulator to the door skin and remove them.



▲ Figure 25. Window regulator nut locations

- 9** Remove the window regulator by twisting both sections and pulling them out of the

large viewing port in the center of the door.

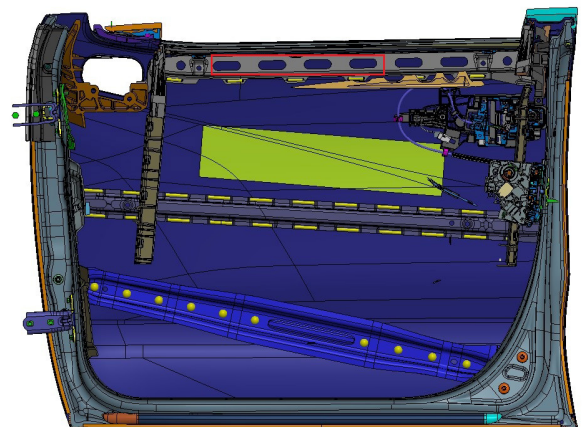
- 10** Loosely fasten the nuts to the regulator once removed from the door.

Installing the Upper Bracket

- 1** Remove all rust, primer, and paint from the top of the door frame using a coarse grit sandpaper.
- 2** Prepare the panel bond adhesive and applicator.

NOTE: The panel bond adhesive can be set in the tube, clogging the applicator for future use. It is best practice to get all doors to this point, so the panel bond does not sit for more than 15 minutes between uses.

- 3** Apply the panel bond adhesive to the back side of the upper bracket.
- 4** Align the upper bracket with the first four pill holes in the door skin..



▲ Figure 26. Door section cut

- 5** Press the upper bracket flush to the



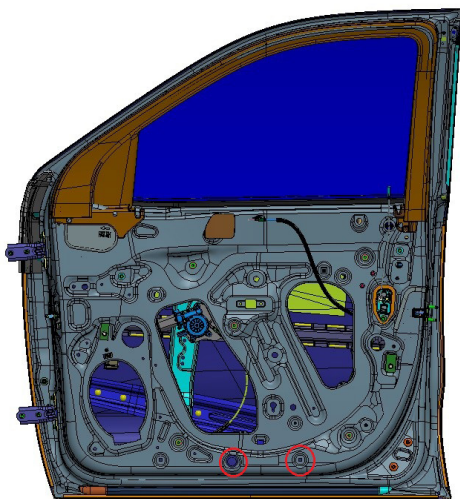
portion of the door with holes cut into it. Then, raise the bracket until the angled portion of the bracket and the door skin are flushed.

NOTE: The bracket should protrude over the holes slightly once properly aligned.

- 6** Using the self-tapping screws, fasten the upper bracket to the door skin.

Installing the Lower Bracket and Crash Bar Bracket

- 1** Align the drill template (Appendix A) with the two depressions in the door skin.



▲ Figure 27. Drill template alignment

- 2** Using a 3/8" free fit drill bit, preferably an "X" or similar size, drill the two holes from the template.
- 3** Using two M8 x 25mm bolts and washers, fasten the lower bracket into position through the two drilled holes.
- 4** Using the crash bar bracket, wrap the hem joint around the bottom of the crash bar of the door. Roughly center this for

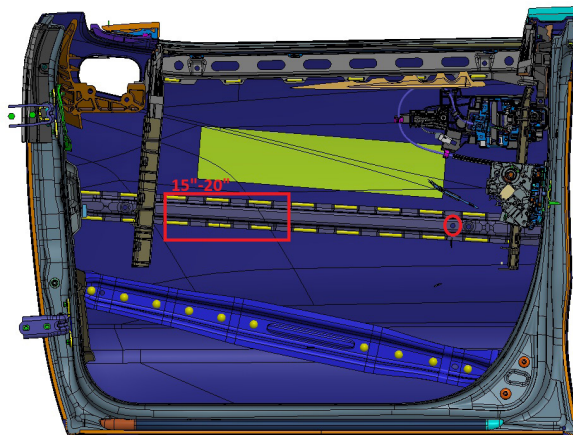
now.

Installing the Lower Armor

- 1** Thread the lower armor into the door through the viewing port.
- 2** Attach the lower armor to the lower bracket using two M8 x 20mm bolts and washers.
- 3** Slide the crash bar bracket into position behind the lower armor.
- 4** Attach the lower armor to the crash bar bracket using two M8 x 25mm bolts and washers.

Installing the Upper Armor

- 1** Place a rubber bumper into the second hole from the right on the middle crash bar in the door.

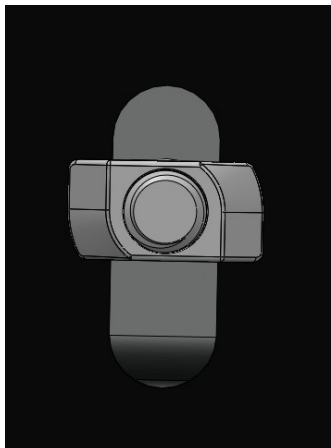


▲ Figure 28. Rubber bumper location

- 2** Measure at least 15" (no more than 20") to the left and drill another hole with a 3/8" drill bit.



- 3** Place the second bumper in this drilled hole.
- 4** Using the nylon installation straps, lower the upper armor into the door.
- 5** Slide the armor behind the crash bar bracket (towards the exterior side of the door skin) as you are dropping it into the door.
- 6** Using three M8 x 20mm bolts and washers, attach the top of the upper armor to the top bracket.
- 7** Put a M8 x 25mm bolt (with washer) through each of the holes in the crash bar bracket.
- 8** Locate the five 10mm nuts holding the window regulator to the door skin and remove them.
- 9** Loosely thread the hammer nuts onto each bolt. Flush the bolt with the back side of the hammer nut for the next installation step.
- 10** Slide the hammer nuts through the slots in the upper armor, turning them 90 degrees clockwise and tightening.



▲ Figure 29. Rear view of hammer nut after installation

NOTE: The hammer nuts will sit horizontally behind the armor, with a slight protrusion into the armor from the back. Tighten the hammer nuts by placing a pry tool underneath the washer and pulling it towards yourself. This will lock the hammer nuts into the slot and pull the armor to the crash bar bracket.

- 11** Confirm that the armor is in its final position by checking the following:
 - The crash bar bracket is properly hooked around the crash bar
 - The door handle wiring harness connector sits freely and is not pinched by any portion of the armor
 - Torque all M8 bolts to 18 ft/lbs.
 - Firmly grip the armor and shake, assuring no movement in the armor panel
 - Torque all check strap bolts to OEM guidelines

Reinstalling the Door Panel

- 1** Put all sections of the door back together in reverse order of removal.

NOTE: Be sure to use all OEM parts during reinstall. Refer to instructions at the beginning for guidelines.

Completing Installation

- 1** Verify that all trim and window components are properly re-installed and that the window, door locks and mirrors function as intended.
- 2** Once armored, the vehicle door may require additional adjustment at the hinges for proper closing and matching of body



lines. Conduct final door adjustment by completing the following steps:

- A** Loosen the door side hinge nuts.
 - B** With the help of an assistant or door lift, apply gentle upward pressure on bottom of door and move in/out at top and bottom of door as required.
 - C** Re-torque bolts, gently close the door and inspect closure and alignment.
 - D** Repeat as necessary.
- 3** Attach the Angel Armor brand label toward the top of 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.



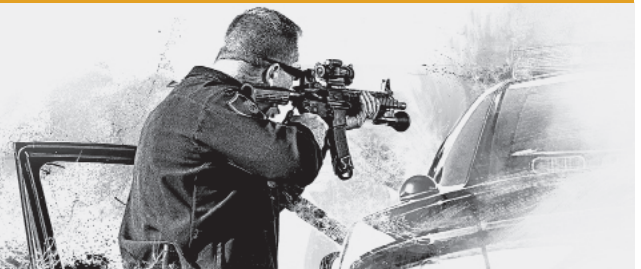
▲ Figure 30. Applying the brand label to the door

REMOVAL OR DECOMMISSION

If removing the armor for decommission or transfer to another vehicle, contact Angel Armor for support.

INSTALLATION COMPLETE:

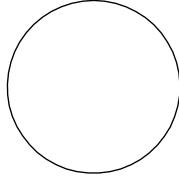
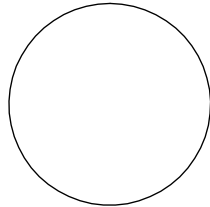
Your vehicle is now equipped with Avail Level III+ — advanced ballistic protection from Angel Armor.



DRILL TEMPLATE

DRIVER SIDE

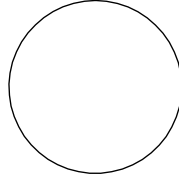
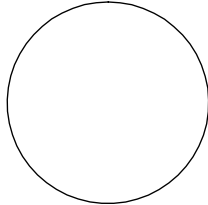
TOWARDS REAR



10.000

PASSENGER SIDE

TOWARDS FRONT



3.000