



ANGEL ARMOR®

AVAIL® BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

TOYOTA® SIENNA FOR FRONT DOORS

(2011 - 2020 MODELS)



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INTRODUCTION

Congratulations on your purchase of Angel Armor® Avail® Ballistic Door Panels (Level IIIA) for the Toyota® Sienna for front doors! 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, Avail Ballistic Door Panels elevate protective technology to a higher level.



▲ Figure 1. Avail Ballistic Door Panel (Level IIIA) for the Toyota Sienna Front Doors.

Product Description

Angel Armor Avail Level IIIA Ballistic Door Panels 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. Avail Ballistic Door Panels for the Toyota Sienna exceed NIJ Standard 0108.01 protocols 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.

Installation Overview

Avail Level IIIA Ballistic Door Panels for the Toyota Sienna require no additional brackets or fasteners, and eliminate the need to remove the interior door panel or window glass. The door panel is inserted into the door, adjacent to the window glass.

Installation into Toyota Sienna vehicles takes as little as 5 to 15 minutes for experienced installers. The average user installation takes only 30 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 PANEL, INTERNAL DOOR COMPONENTS OR CAUSE VISIBLE EXTERNAL DAMAGE TO THE DOOR.

⚠ 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.

⚠ Avoid tearing the weatherproof cover on the "teeth" inside of the door when removing the Ballistic Door 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.

TOOLS & PARTS LIST

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

Installation Kit Contents

- Avail Ballistic Door Panel (Level IIIA) for Toyota Sienna (2011 - 2020 Newer Models) Front Doors



▲ Figure 2. Angel Armor Ballistic Door Panel (Level IIIA) for Toyota Sienna

- Angel Armor Brand Label



▲ Figure 3. Angel Armor Brand Label

- Isopropyl Alcohol Wipe



▲ Figure 4. Isopropyl Alcohol Wipe

- Two M6 Washers



▲ Figure 5. Two M6 washers

Required Tools

- Panel/Trim Removal Tools of Varying Sizes



▲ Figure 6. Panel/Trim Removal Tools

Required Tools

CONTINUED

- Phillips Head Screwdriver



▲ Figure 7. Phillips Head screwdriver

- 10mm Socket



▲ Figure 8. 10mm socket

INSTALLATION

This section provides instructions for installing Avail Ballistic Door Panels (Level IIIA) into Toyota Sienna front doors.

Overview

Installation of Avail Ballistic Door Panels into the Toyota Sienna is accomplished in 6 easy steps. See *Procedure*, on page 7, for detailed instructions.

General Installation Procedure

- 1 Remove outer window weatherstrip.
- 2 Detach vehicle interior door panel.
- 3 Install supplied spacer washers onto factory window regulator bolts.
- 4 Check and remove if foam block is present.
- 5 Insert and secure ballistic door panel.
- 6 Reassemble door.

Important Notes

- The directions, photographs and illustrations in this guide depict an installation performed on the driver's side front door. The same installation procedure applies to the passenger's side front door.

- ⚠ **NOTE:** The product label faces the interior of the vehicle for both the driver-side and passenger-side front door ballistic door panels.

- Note the location of screws, fasteners, wires and door components before disassembling to aid proper re-assembly after ballistic door panel installation.

- Place all removed hardware and components in a safe place during installation.

- Avail Ballistic Door Panels are semi-rigid, which allows them to be bent slightly for easy installation. To prevent damage to the panels, do not bend them tighter than a 6" radius (12" diameter).

- ⚠ **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 OR CAUSE VISIBLE EXTERNAL DAMAGE TO THE DOOR.**

PROCEDURE

Complete the following steps to properly install Avail Ballistic Door Panels (Level IIIA) for Toyota Sienna front doors.

Preparing for Installation

- 1 Lower the window glass completely.

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

- 3 ⚠ **Disconnect the vehicle battery to avoid accidental airbag deployment.**

Removing the Outer Window Weatherstrip

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

- 1 Using a trim removal tool, unhook the weatherstrip clip at the rear end of the door frame.



▲ Figure 9. Unhooking weatherstrip clip

Removing the Outer Window Weatherstrip

CONTINUED

2 Pull up on the back end of the outer window weatherstrip to remove it from the window frame. Rolling the top of the weatherstrip away from the door to disengage the clips. Work forward along the window frame, pulling up on the trim to remove it completely.



▲ Figure 10. Removing outer window weatherstrip

3 Adjust window height to 3".

4 Turn off the ignition switch, and remove the key.

Removing the Panel Mounting Bolts

1 Remove the Phillips Head screw at the back of the interior vehicle door panel.



▲ Figure 11. Removing the back Phillips screw

2 Remove the trim cover behind the interior door handle, and remove the screw behind it.



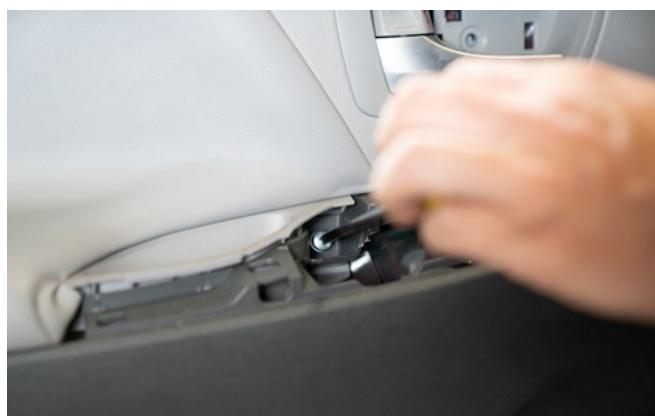
▲ Figure 12. Removing screw behind door handle

3 Remove the door control panel by pulling up on the rear section of the panel.



▲ Figure 13. Removing the control panel

4 Remove the screw from behind the control panel.



▲ Figure 14. Removing the screw behind the control panel

Removing the Vehicle Interior Door Trim Panel

- 1 Pry the top window mirror trim off.



▲ Figure 15. Prying off top window mirror trim

- 2 Visually locate the interior door trim retainers inside the vehicle door trim panel.
- 3 Pry the interior vehicle door trim panel away from the door at the retainer locations.



▲ Figure 16. Prying open the vehicle interior door trim panel

- 4 Pull the vehicle door panel away from the door.
- 5 Remove the window control panel from the door trim panel.

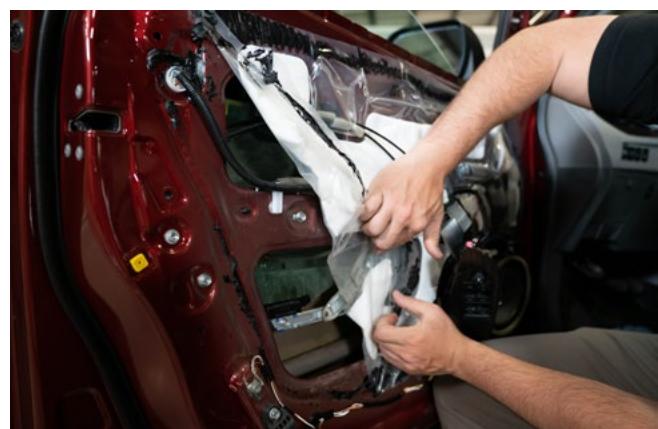
Installing the Spacer Washers

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 17, 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 17. 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.

Installing the Spacer Washers

CONTINUED

- 3 Remove the factory-installed bolt, and stack the provided washer onto the bolt. Reinstall the bolt with the additional washer in compliance with the vehicle's factory recommended torque specification.
- 4 Remove the four screws around the speaker and disconnect the wiring harness.

! If the window regulator bolt is not visible through the speaker hole, temporarily reconnect 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 speaker hole.
- 6 Remove the factory-installed bolt, and stack the provided washer onto the bolt. Reinstall the bolt with the additional washer in compliance with the vehicle's factory recommended torque specification.
- 7 Reinstall the speaker with the four screws, and reconnect the wiring harness.

! Depending on the model year, a foam block toward the rear end of the door needs to be removed with two 10mm bolts.

Inserting the Ballistic Door Panel

- 1 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 Toyota Sienna door and eases installation.



▲ Figure 18. Bending the ballistic door panel

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

- 2 Standing on the outside of the door, begin to insert the panel into the door, adjacent to the outer surface of the window glass.

Inserting the Ballistic Door Panel

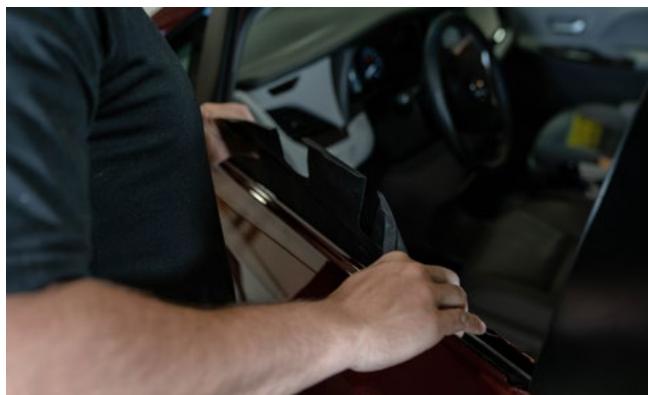
CONTINUED

3 Continue to insert the ballistic door panel into the door, holding the panel against the window glass to avoid obstructions inside the door. This can be achieved by leaning back/pulling the panel out toward the exterior of the door.



▲ Figure 19. Inserting ballistic door panel

⚠ Leaning back while inserting the panel into the door is a critical installation step; not following the process outlined above may cause exterior damage to the door.



▲ Figure 20. Leaning back/pulling ballistic door panel toward exterior of the door

4 Slide the remainder of the panel down into the door until the nylon folds are positioned properly on the window frame.

5 Slide the ballistic door panel forward until the nylon fold is approximately 2.5 - 3 inches from the front window frame. The leading edge of the anti-abrasion panel will likely catch on the vehicle window track. Push the panel toward the outside of the door while pushing the panel forward to move it past the window track.

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



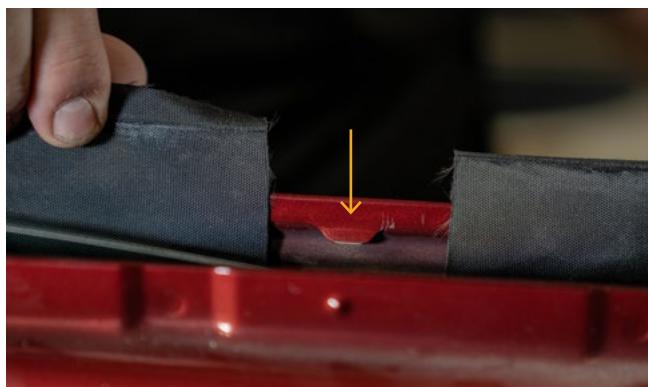
▲ Figure 21. Sliding ballistic door panel forward

Inserting the Ballistic Door Panel

CONTINUED

6 Verify that the panel is in its final position by ensuring the nylon gaps are centered between the front two weatherstrip 'teeth'.

NOTE: If excessive nylon is exposed above the door and the crease does not align with the top edge of the window frame, remove the panel and repeat steps 1 through 5 of this section. Avoid tearing the ballistic door panel's weatherproof cover on the "teeth" inside of door by pushing the panel toward the interior of the vehicle before lifting it out of the door.



▲ Figure 22. Verifying the nylon gaps are centered between the front two weatherstrip 'teeth'

Re-attaching the Interior Door Trim Panel

1 Replace the moisture barrier by pressing its adhesive onto the door.

2 Re-install the window controls into the interior door trim panel.

3 Re-connect the wiring harnesses to the various connections on the door panel.

4 Align the interior door trim retainers with the appropriate holes in the door.

5 Push firmly on each retainer area until the retainers re-engage.

6 Replace the screw panel mounting bolt behind the door handle.

7 Replace the door handle trim cover.

8 Replace the panel mounting screw in the control panel.

9 Replace the control panel.

10 Replace the panel mounting screw at the base of the door.

11 Replace the window mirror trim piece.

Replacing the Outer Window Weatherstrip and Completing Installation

1 Place the rear edge of the outer window weatherstrip on the window frame, and slide the panel rearward into position, aligning the rear edge of the outer window weatherstrip and window frame.



▲ Figure 23. Replacing the window weatherstrip

2 Verify that no nylon is exposed below or around the outer window weatherstrip.

3 Press down on the front end of the outer window weatherstrip and move backward, pressing the entire length of the outer window weatherstrip into the window frame.

4 Verify that all trim and window components are properly re-installed.

5 Re-connect the vehicle battery.

6 Cycle the window to check for obstruction and proper panel placement.

7 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 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.

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 Toyota Sienna.

- 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 7.
- 4** Grip the nylon folds at the top edge of the ballistic door panel.
- 5** Slide the panel toward the back of the vehicle, and then up, to remove it from the door.

NOTE: Avoid tearing the ballistic door panel's weatherproof cover on the "teeth" inside of door by pushing the 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 13.
- 7** If removing the panel for transfer to another vehicle, inspect panel after removal. Contact Angel Armor with any concerns about wear or damage.