

VILLAGE OF DOWNERS GROVE
Report for the Village
4/13/2021

SUBJECT:	SUBMITTED BY:
Purchase of ballistic vehicle door panels	Shanon Gillette Chief of Police

SYNOPSIS

A motion is requested to approve the purchase of twenty-four (24) ballistic vehicle door panels for police department vehicles for a total cost of \$30,356.27.

STRATEGIC PLAN ALIGNMENT

The goals for 2019-2021 include *Exceptional Municipal Services*.

FISCAL IMPACT

The FY21 budget provides \$30,356.27 in the Asset Forfeiture Fund for this purchase.

RECOMMENDATION

Approval on the April 13, 2021 consent agenda.

BACKGROUND

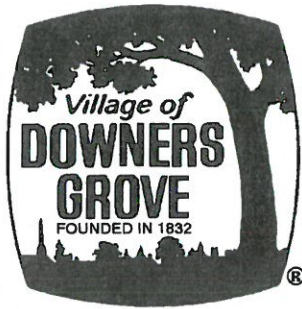
Ballistic vehicle door panels provide bullet resistant protection for officers during response to high-risk incidents. Staff inspected the police department fleet and identified twelve (12) vehicles that require the replacement of existing ballistic vehicle door panels.

The Village published a Call for Bids (CFB) in accordance with the Village's Purchasing Policy. The sole bidder was Angel Armor, LLC, of Fort Collins, Colorado. Angel Armor, LLC provided a similar product to the Village of Downers Grove in 2017. Staff was satisfied with the product and service provided.

ATTACHMENTS

Contract Documents

Village of Downers Grove



CALL FOR BIDS

(Supplies, Materials, Etc.)

I Name of Company Bidding: ANGEL ARMOR, LLC

II. Instructions and Specifications:

- A. Bid No.: **CFB-CFB-0-2021/meg**
 - B. For: Ballistic Vehicle Door Panels
 - C. Bid Opening Date/Time: **March 19, 2021, 2:00pm**
 - D. Pre-Bid Conference Date/Time: **N/A**
- III. Required of Awarded Vendor(s)
- A. Certificate of Insurance: Reserved

Legal Advertisement Published: **March 8, 2021, 11:00am**

Date Issued: **March 8, 2021, 11:00am**

This document comprises **25** pages

Return **original and two duplicate copies** of Bid in a **sealed envelope** marked with the Bid Number as noted above to:

Megan Miles
VILLAGE OF DOWNERS GROVE
801 BURLINGTON AVENUE
DOWNERS GROVE, IL 60515
PHONE: 630/434-5530
FAX: 630/434-5571
www.downers.us

Village of Downers Grove

CALL FOR BIDS

Bid No.: CFB-CFB-0-2021/meg

The VILLAGE OF DOWNERS GROVE will receive bids Monday thru Friday, 8:00 A.M. to 5:00 P.M. at the Village Hall, 801 Burlington Avenue, Downers Grove, IL 60515.

SPECIFICATIONS MUST BE MET AT THE TIME THE BID IS DUE.

The Village Council reserves the right to accept or reject any and all Bids, to waive technicalities and to accept or reject any item of any Bid.

The documents constituting component parts of this Contract are the following:

- I. CALL FOR BIDS
- II. TERMS & CONDITIONS
- III. DETAILED SPECIFICATIONS
- IV. BID/CONTRACT FORM

DO NOT DETACH ANY PORTION OF THIS DOCUMENT. INVALIDATION COULD RESULT. Bidders MUST submit an original, and two (2) paper copies of the total Bid. Upon formal award of the Bid, the successful Bidder will receive a copy of the executed contract.

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I. CALL FOR BIDS**1. GENERAL**

1.1 Notice is hereby given that the Village of Downers Grove will receive sealed Bids up to MARCH 19, 2021, 2:00PM.

1.2 Bids must be received at the Village of Downers Grove by the time and date specified. Bids received after the specified time and date will not be accepted and will be returned unopened to the Bidder.

1.3 Bid forms shall be sent to the Village of Downers Grove, ATTN: Megan Miles, in a sealed envelope marked "SEALED BID". The envelope shall be marked with the name of the project, date, and time set for receipt of Bids.

1.4 All Bids must be submitted on the forms supplied by the Village and signed by a proper official of the company submitting the Bid. Telephone, email and fax Bids will not be accepted.

1.5 By submitting this Bid, the Bidder certifies under penalty of perjury that he has not acted in collusion with any other Bidder or potential Bidder.

2. PREPARATION OF BID

2.1 It is the responsibility of the Bidder to carefully examine the specifications and bid documents and to be familiar with all of the requirements, stipulations, provisions, and conditions surrounding the proposed services.

2.2 No oral or telephone interpretations of specifications shall be binding upon the Village. All requests for interpretations or clarifications shall be made in writing and received by the Village at least five (5) business days prior to the date set for receipt of Bids. The Village shall make all changes or interpretations of the specifications in a written addendum and shall provide an addendum to any Bidder of record. Any and all changes to the specifications/plans are valid only if they are included by written addendum to all Bidders. Each Bidder must acknowledge receipt of any addenda by indicating on the Bid Proposal page. Each Bidder, by acknowledging receipt of any addenda, is responsible for the contents of the addenda and any changes to the Bid therein. Failure to acknowledge any addenda may cause the Bid to be rejected. The Village will not assume responsibility for receipt of any addenda. In all cases, it will be the Bidder's responsibility to obtain all addenda issued. Bidders will provide written acknowledgement of receipt of each addendum issued with the bid submission.

2.3 The Bid shall be executed properly, and Bids shall be made for all items indicated in the Bid Form. The Bidder shall indicate, in figures, a unit price or lump sum price for each of the separate items called for in the Bid Form. The Bidder shall show the products of the respective quantities and unit prices in the column provided for that purpose. The gross sum shown in the place indicated in the Bid Form shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the Bidder, which shall be written with ink.

2.4 In case of error in the extension of prices in the Bid, the hourly rate or unit price will govern.

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In case of discrepancy in the price between the written and numerical amounts, the written amount will govern.

2.5 All costs incurred in the preparation, submission, and/or presentation of any Bid including any Bidder's travel or personal expenses shall be the sole responsibility of the Bidder and will not be reimbursed by the Village.

2.6 The Bidder hereby affirms and states that the prices quoted herein constitute the total cost to the Village for all work involved in the respective items and that this cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, all profits and all other work, services and conditions necessarily involved in the work to be done and materials to be furnished in accordance with the requirements of the Contract Documents considered severally and collectively.

3. PRE-BID CONFERENCE

3.1 A prebid conference may be offered to provide additional information, inspection or review of current facilities or equipment, and to provide an open forum for questions from Bidders. This prebid conference is not mandatory (unless stated "Mandatory" on the cover of this document), but attendance by Bidders is strongly advised as this will be the last opportunity to ask questions concerning the Bid.

3.2 Questions may be posed in writing to the Village (faxed and emailed questions are acceptable), but must be received by the Village prior to the scheduled time for the pre-bid conference. Questions received will be considered at the conference. An addendum may be issued as a result of the prebid conference. Such an addendum is subject to the provisions for issuance of an addendum as set forth in Section 2.2 above.

3.3 No Contract Documents will be issued after a mandatory pre-bid conference except to attendees.

4. SUBMISSION OF BID

4.1 In all cases, an original and duplicate copy of the sealed bids marked as indicated in Section 1 shall be directed to the Purchasing Agent.

5. MODIFICATION OR WITHDRAWAL OF BID

5.1 A Bid that is in the possession of the Village may be altered by a letter bearing the signature of the person authorized for submitting a Bid, provided that it is received prior to the time and date set for the Bid opening. Telephone, email or verbal alterations of a Bid will not be accepted.

5.2 A Bid that is in the possession of the Village may be withdrawn by the Bidder, up to the time set for the Bid opening, by a letter bearing the signature of the person authorized for submitting Bids. Bids may not be withdrawn after the Bid opening and shall remain valid for a period of ninety (90) calendar days from the date set for the Bid opening, unless otherwise specified.

6. REJECTION OF BIDS

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6.1 Bids that contain omissions, erasures, alterations, additions not called for, conditional bids or alternate bids not called for or irregularities of any kind shall be rejected as informal or insufficient bids otherwise acceptable which are not accompanied by the proper bid deposit and/or security shall also be rejected as informal or insufficient. The Village reserves the right to reject any or all Bids and to waive technical errors as may be deemed best for the interest of the Village.

7. COMPETENCY OF BIDDER

7.1 No Bid will be accepted from or contract awarded to any person, firm or corporation that is in arrears or is in default upon any debt or contract. The Bidder, if requested, must present evidence to the Village of ability and possession of necessary facilities, and financial resources to comply with the terms of the Contract Documents. Evidence must be presented within three (3) business days.

8. DISQUALIFICATION OF BIDDERS

8.1 Any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and the rejection of their Bid.

8.1.1 More than one Bid for the same Work from an individual, firm partnership, or corporation under the same or different names.

8.1.2 Evidence of collusion among Bidders.

8.1.3 Unbalanced Proposals in which the prices for some items are substantially out of proportion to the prices for other items.

8.1.4 Failure to submit a unit price for each item of Work listed in the Bid Form.

8.1.5 Lack of competency as revealed by financial statement or experience questionnaire.

8.1.6 Unsatisfactory performance record as shown by past work, judged from the standpoint of workmanship and progress.

8.1.7 Uncompleted work which, in the judgment of the Village, might hinder or prevent the prompt completion of this Work.

8.1.8 Failure to submit a signed Bidder's Certificate stating the following:

8.1.8.1 That the Bidder is not barred from bidding on this Contract as a result of a violation of Sections 720 ILCS 5/33-E3 and 720 ILCS 5/33-E4 of the Illinois Compiled Statutes; and

8.1.8.2 The Bidder is not delinquent in the payment of any tax administered by the Illinois Department of Revenue and;

8.1.8.3 The Bidder will maintain the types and levels of insurance required by the terms of this Contract.

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9. BASIS OF AWARD

9.1 The Village reserves the right to accept or reject any and all Bids or to waive technicalities, or to accept or reject any item of any Bid unless the Bidder includes a restrictive limitation.

9.2 The Village may award the contract on individual items within a particular group or upon the total group of items.

10. AWARD OF CONTRACT

10.1 The Contract will be awarded to that responsible Bidder whose Bid, conforming to the invitation for Bids, will be most advantageous to the Village, price and other factors considered. (the credentials, financial information, bonding capacity, insurance protection, qualifications of the labor and management of the firm, past experience and ability to complete the project within time frame required - lowest responsible bidder)

11. FAILURE TO ENTER INTO CONTRACT

11.1 By submitting a Bid, the Bidder understands and agrees that, if his Bid is accepted, and he fails to enter into a contract forthwith, he shall be liable to the Village for any damages the Village may thereby suffer.

12. TAX EXEMPTION

12.1 The Village is exempt from Illinois sales or use tax for direct purchases of materials and supplies. A copy of the Illinois Sales Tax Exemption Form will be issued upon request. The Village's federal identification number will also be provided to the selected vendor.

13. RESERVED RIGHTS

13.1 The Village reserves the right to waive irregularities and informalities, sections to this Contract and to accept any Bid and to reject any and all Bids and to disapprove of any and all sub-Vendors as may be in the best interest of the Village. Time and date requirements for receipt of Bids, however, will not be waived.

14. CATALOGS

14.1 Each Bidder shall submit catalogs, descriptive literature, and detailed drawings, where applicable, to fully illustrate and describe the material and/or work he proposes to furnish.

15. TRADE NAMES/SUBSTITUTIONS

15.1 Certain materials and equipment are specified by a manufacturer or trade name to establish standards or quality and performance and not for the purpose of limiting competition. Bidders are invited to submit Bids not only on named items but also on items that they propose for substitution of named items. Products of other manufacturers may be substituted, if, in the opinion of the Village, they are equal to those specified in quality, performance, design, and suitability for intended use. If the Bidder proposes to furnish an "equal", the proposed "equal" item must be so indicated in the written Bid. Where two or more items are specified, the selection among those specified is the Vendor's option, or he may submit his Bid on all such items. Detail specification sheets shall be provided by Bidder for all substituted items.

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II. TERMS AND CONDITIONS**16. VILLAGE ORDINANCES**

16.1 The successful Bidder, now the Vendor, will strictly comply with all ordinances of the Village of Downers Grove and laws of the State of Illinois.

17. USE OF VILLAGE'S NAME

17.1 The Bidder is specifically denied the right of using in any form or medium the name of the Village for public advertising unless the Village grants express permission.

18. INSPECTION

18.1 The Village shall have a right to inspect, by its authorized representative, any material, supplies or components as herein specified. Materials, supplies or components that have been rejected by the Purchasing Agent as not in accordance with the terms of the contract specifications shall be replaced by the Vendor at no cost to the Village.

19. DELIVERIES

19.1 All materials shipped to the Village of Downers Grove must be shipped F.O.B. designated location, Downers Grove, Illinois.

20. SPECIAL HANDLING

20.1 Prior to delivery of any product that is caustic, corrosive, flammable or dangerous to handle, the Vendor will provide written directions as to methods of handling such products, as well as the antidote or neutralizing material required for its first aid before delivery. Vendor shall also notify the Village and provide material safety data sheets for all substances used in connection with this Contract which are defined as toxic under the Illinois Toxic Substances Disclosure to Employees Act.

21. COMPLIANCE WITH OSHA STANDARDS

21.1 Equipment supplied to the Village must comply with all requirements and standards as specified by the Occupational Safety and Health Act. All guards and protectors as well as appropriate markings will be in place before delivery. Items not meeting any OSHA specifications will be refused.

22. BUY AMERICA

22.1 The Vendor agrees to comply with 49 U.S.C.5323(j), the Federal Transportation Administration's (FTA) Buy America regulations at 49 C.F.R. Part 661, and any amendments thereto, and any implementing guidance issued by the FTA, with respect to this Contract, when financed by Federal funds (through a grant agreement or cooperative agreement).

22.2 As a condition of responsiveness, the Vendor agrees to submit with its Bid submission, an executed Buy America Certificate, attached hereto.

23. CAMPAIGN DISCLOSURE

23.1 Any Vendor, proposer, bidder or vendor who responds by submitting a bid or proposal to the Village of Downers Grove shall be required to submit with its bid submission, an executed

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Campaign Disclosure Certificate, attached hereto.

23.2 The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

23.3 Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

23.4 By signing the bid documents, Vendor/proposer/bidder/vendor agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

24. BACKING PRECAUTIONS

24.1 Pursuant to Sections 14139(b) and 14171.1 of the Downers Grove Municipal Code, any motor vehicle which has an obstructed view to the rear and is to be operated at any time in reverse gear on the public streets of the Village of Downers Grove by the Vendor or any sub-Vendor shall either be equipped with a reverse signal alarm (backup alarm) audible above and distinguishable from the surrounding noise level, or shall provide an observer to signal that it is safe to back up.

25. OVERWEIGHT, OVERWIDTH AND OVERHEIGHT PERMITS

25.1 The Village has and supports an overweight truck enforcement program. Vendors are required to comply with weight requirements and safety requirements as established by Illinois Law or Village Ordinance, for vehicles, vehicle operators and specialty equipment. In some instances, specialty equipment for road repairs or construction projects requires the movement of overweight, overwidth, or overheight loads utilizing a Village of Downers Grove roadway. Such movement will require obtaining a permit and permission from the Downers Grove Police Department.

26. COPYRIGHT/PATENT INFRINGEMENT

26.1 The Bidder agrees to indemnify, defend, and hold harmless the Village against any suit, claim, or proceeding brought against the Village for alleged use of any materials, supplies, equipment, systems, or services provided by the Bidder that constitutes a misuse of any proprietary or trade secret information or an infringement of any patent or copyright.

27. INDEMNITY AND HOLD HARMLESS AGREEMENT

27.1 To the fullest extent permitted by law, the Bidder shall indemnify, keep and save harmless the Village and its agents, officers, and employees, against all injuries, deaths, strikes, losses, damages, claims, suits, liabilities, judgments, costs and expenses, which may arise directly or indirectly from any negligence or from the reckless or willful misconduct of the Bidder, its employees, or its sub-Vendors, and the Bidder shall at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith, and, if any judgment shall be rendered against the Village in any such action, the Bidder

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shall, at its own expense, satisfy and discharge the same. This agreement shall not be construed as requiring the Bidder to indemnify the Village for its own negligence. The Bidder shall indemnify, keep and save harmless the Village only where a loss was caused by the negligent, willful or reckless acts or omissions of the Bidder, its employees, or its sub-Vendors.

28. NONDISCRIMINATION

28.1 Bidder shall, as a party to a public contract:

(a) Refrain from unlawful discrimination in employment and undertake affirmative action to assure equality of employment opportunity and eliminate the effects of past discrimination;

(b) By submission of this Bid, the Bidder certifies that it is an "equal opportunity employer" as defined by Section 2000(e) of Chapter 21, Title 42, U.S. Code Annotated and Executive Orders #11246 and #11375, which are incorporated herein by reference. The Equal Opportunity clause, Section 6.1 of the Rules and Regulations of the Department of Human Rights of the State of Illinois, is a material part of any contract awarded on the basis of this Bid.

(c) It is unlawful to discriminate on the basis of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental disability unrelated to ability, military status, order of protection status, sexual orientation, sexual identity, or an unfavorable discharge from military service. Bidder shall comply with standards set forth in Title VII of the Civil Rights Act of 1964, 42 U.S.C. Sec. 2000 et seq., The Human Rights Act of the State of Illinois, 775 ILCS 5/1-101 et. seq, and The Americans With Disabilities Act, 42 U.S.C. Sec. 12101 et. seq.

29. SEXUAL HARASSMENT POLICY

29.1 The Bidder or Supplier, as a party to a public contract, shall have a written sexual harassment policy that:

29.1.1 Notes the illegality of sexual harassment;

29.1.2 Sets forth the State law definition of sexual harassment;

29.1.3 Describes sexual harassment utilizing examples;

29.1.4 Describes the Bidder's internal complaint process including penalties;

29.1.5 Describes the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and how to contact these entities; and

29.1.6 Describes the protection against retaliation afforded under the Illinois Human Rights Act.

30. EQUAL EMPLOYMENT OPPORTUNITY

30.1 In the event of the Bidder's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), the Bidder may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the Contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this Contract, the Bidder agrees as follows:

30.2 That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental

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disability unrelated to ability, military status, order of protection status, sexual orientation, sexual identity, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

30.3 That, if it hires additional employees in order to perform this Contract or any portion thereof, it will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

30.4 That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental disability unrelated to ability, military status, order of protection status, sexual orientation, or an unfavorable discharge from military services.

30.5 That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the bidder's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the bidder in its efforts to comply with such Act and Rules and Regulations, the bidder will promptly so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

30.6 That it will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

30.7 That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purpose of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

30.8 That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such sub-Vendor. In the same manner as with other provisions of this Contract, the Bidder will be liable for compliance with applicable provisions of this clause by such sub-Vendors; and further it will promptly notify the contracting agency and the Department in the event any sub-Vendor fails or refuses to comply therewith. In addition, the Bidder will not utilize any sub-Vendor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivision or municipal corporations.

31. DRUG FREE WORK PLACE

Bidder, as a party to a public contract, certifies and agrees that it will provide a drug free workplace by:

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31.1 Publishing a statement: (1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the Village's or bidder's workplace. (2) Specifying the actions that will be taken against employees for violations of such prohibition. (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will: (A) abide by the terms of the statement; and (B) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

31.2 Establishing a drug free awareness program to inform employees about: (1) the dangers of drug abuse in the workplace; (2) the Village's or Bidder's policy of maintaining a drug free workplace; (3) any available drug counseling, rehabilitation and employee assistance programs; (4) the penalties that may be imposed upon employees for drug violations.

31.3 Providing a copy of the statement required by subparagraph .1 above to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

31.4 Notifying the contracting or granting agency within ten (10) days after receiving notice under part (3)(B) of subparagraph .1 above from an employee or otherwise receiving actual notice of such conviction.

31.5 Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by, any employee who is so convicted as required by section 5 of the Drug Free Workplace Act.

31.6 Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

31.7 Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

32. PATRIOT ACT COMPLIANCE

32.1 The Bidder represents and warrants to the Village that neither it nor any of its principals, shareholders, members, partners, or affiliates, as applicable, is a person or entity named as a Specially Designated National and Blocked Person (as defined in Presidential Executive Order 13224) and that it is not acting, directly or indirectly, for or on behalf of a Specially Designated National and Blocked Person. The Bidder further represents and warrants to the Village that the Bidder and its principals, shareholders, members, partners, or affiliates, as applicable are not, directly or indirectly, engaged in, and are not facilitating, the transactions contemplated by this Contract on behalf of any person or entity named as a Specially Designated National and Blocked Person. The Bidder hereby agrees to defend, indemnify and hold harmless the Village, and its elected or appointed officers, employees, agents, representatives, engineers and attorneys, from and against any and all claims, damages, losses, risks, liabilities and expenses (including reasonable attorney's fees and costs) arising from or related to any breach of the foregoing representations and warranties.

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33. INSURANCE REQUIREMENTS

33.1 Prior to starting the work, Contractor and any Subcontractors shall procure, maintain and pay for such insurance as will protect against claims for bodily injury or death, or for damage to property, including loss of use, which may arise out of operations by the Contractor or Subcontractor or any Sub-Sub Contractor or by anyone employed by any of them, or by anyone for whose acts any of them may be liable. Such insurance shall not be less than the greater of coverages and limits of liability specified below or any coverages and limits of liability specified in the Contract Documents or coverages and limits required by law unless otherwise agreed to by the Village.

Workers Compensation	\$500,000	Statutory
Employers Liability	\$1,000,000	Each Accident
	\$1,000,000	Disease Policy Limit
	\$1,000,000	Disease Each Employee
Comprehensive General Liability	\$2,000,000	Each Occurrence
	\$2,000,000	Aggregate
		<i>(Applicable on a</i>
		<i>Per Project Basis)</i>
Commercial Automobile Liability	\$1,000,000	Each Accident
Umbrella Liability	\$5,000,000	
Product Liability	\$20,000,000	

33.2 Commercial General Liability Insurance required under this paragraph shall be written on an occurrence form and shall include coverage for Products/Completed Operations, Personal Injury with Employment Exclusion (if any) deleted, Blanket XCU and Blanket Contractual Liability insurance applicable to defense and indemnity obligations and other contractual indemnity assumed under the Contract Documents. The limit must be on a "Per Project Basis".

33.3 Comprehensive Automobile Liability Insurance required under this paragraph shall include coverage for all owned, hired and non-owned automobiles.

33.4 Workers Compensation coverage shall include a waiver of subrogation against the Village of Downers Grove.

33.5 Comprehensive General Liability, Employers Liability and Commercial Automobile Liability Insurance may be arranged under single policies for full minimum limits required, or by a combination of underlying policies with the balance provided by Umbrella and/or Excess

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Liability policies.

33.6 Contractor and all Subcontractors shall have their respective Comprehensive General Liability (including products/completed operations coverage), Employers Liability, Commercial Automobile Liability, and Umbrella/Excess Liability policies endorsed to add the "Village of Downers, its officers, officials, employees and volunteers" as "additional insureds" with respect to liability arising out of operations performed; claims for bodily injury or death brought against the Village of Downers Grove by any Contractor or Subcontractor employees, or the employees of Subcontractor's subcontractors of any tier, however caused, related to the performance of operations under the Contract Documents. Such insurance afforded to the Village of Downers Grove shall be endorsed to provide that the insurance provided under each policy shall be *Primary and Non-Contributory*.

33.7 Contractor and all Subcontractors shall maintain in effect all insurance coverages required by the Contract Documents at their sole expense and with insurance carriers licensed to do business in the State of Illinois and having a current A. M. Best rating of no less than A- VIII. In the event that the Contractor or any Subcontractor fails to procure or maintain any insurance required by the Contract Documents, the Village of Downers Grove may, at its option, purchase such coverage and deduct the cost thereof from any monies due to the Contractor or Subcontractor, or withhold funds in an amount sufficient to protect the Village of Downers Grove, or terminate this Contract pursuant to its terms.

33.8 All insurance policies shall contain a provision that coverages and limits afforded hereunder shall not be canceled, materially changed, non-renewed or restrictive modifications added, without thirty (30) days prior written notice to the Village. Renewal certificates shall be provided to the Village not less than five (5) days prior to the expiration date of any of the required policies. All Certificates of Insurance shall be in a form acceptable to the Village and shall provide satisfactory evidence of compliance with all insurance requirements. The Village shall not be obligated to review such certificates or other evidence of insurance, or to advise Contractor or Subcontractor of any deficiencies in such documents, and receipt thereof shall not relieve the Contractor or Subcontractor from, nor be deemed a waiver of the right to enforce the terms of the obligations hereunder. The Village shall have the right to examine any policy required and evidenced on the Certificate of Insurance.

33.9 Any deductibles or self-insured retentions shall be the sole responsibility of the Insured. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Village, its officers, officials, employees and volunteers; or the Bidder shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

34. SUBLETTING OF CONTRACT

34.1 No contract awarded by the Village shall be assigned or any part subcontracted without the written consent of the Village Manager. In no case shall such consent relieve the Vendor from his obligation or change the terms of the Contract.

All approved subcontracts shall contain language which incorporates the terms and conditions of this Contract.

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35. TERM OF CONTRACT

35.1 This Contract may be extended no more than twice for subsequent annual periods (two annual extensions) by mutual agreement of both parties, providing such agreement complies with Village purchasing policies and the availability of funds. However, if this Contract is not one that is subject to extension, such information will be available in the detailed specifications or special conditions sections.

36. TERMINATION OF CONTRACT

36.1 The Village reserves the right to terminate the whole or any part of this Contract, upon written notice to the Vendor, for any reason and/or in the event that sufficient funds to complete the contract are not appropriated by the Village.

36.2 The Village further reserves the right to terminate the whole or any part of this Contract, upon written notice to the Vendor, in the event of default by the Vendor. Default is defined as failure of the Vendor to perform any of the provisions of this Contract. In the event that the Vendor fails to cure the default upon notice, and the Village declares default and termination, the Village may procure, upon such terms and in such manner as the Purchasing Agent may deem appropriate, supplies or services similar to those so terminated. The Vendor shall be liable for any excess costs for such similar supplies or services unless acceptable evidence is submitted to the Purchasing Agent that failure to perform the Contract was due to causes beyond the control and without the fault or negligence of the Vendor. Any such excess costs incurred by the Village may be setoff against any monies due and owing by the Village to the Vendor.

37. BILLING & PAYMENT PROCEDURES

37.1 Payment will be made upon receipt of an invoice referencing Village of Downers Grove purchase order number. Once an invoice and receipt of materials or service have been verified, the invoice will be processed for payment in accordance with the Village's payment schedule. The Village will comply with the Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., in that any bill approved for payment must be paid or the payment issued to the Vendor within 60 days of receipt of a proper bill or invoice. If payment is not issued to the Vendor within this 60 day period, an interest penalty of 1.0% of any amount approved and unpaid shall be added for each month or fraction thereof after the end of this 60 day period, until final payment is made.

37.2 The Village shall review in a timely manner each bill or invoice after its receipt. If the Village determines that the bill or invoice contains a defect making it unable to process the payment request, the Village shall notify the Vendor requesting payment as soon as possible after discovering the defect pursuant to rules promulgated under 50 ILCS 505/1 et seq. The notice shall identify the defect and any additional information necessary to correct the defect.

37.3 Please send all invoices to the attention of Village of Downers Grove, Accounts Payable, 801 Burlington, Downers Grove, IL 60515.

38. RELATIONSHIP BETWEEN THE BIDDER AND THE VILLAGE

38.1 The relationship between the Village and the Bidder is that of a buyer and seller of professional services and it is understood that the parties have not entered into any joint venture or partnership with the other.

Village of Downers Grove

39. SUCCESSORS AND ASSIGNS

39.1 The terms of this Contract will be binding upon and inure to the benefit of the parties and their respective successors and assigns; provided, however, that neither party will assign this Contract in whole or in part without the prior written approval of the other. The Bidder will provide a list of key staff, titles, responsibilities, and contact information to include all expected sub-Vendors.

40. WAIVER OF CONTRACT BREACH

40.1 The waiver by one party of any breach of this Contract or the failure of one party to enforce at any time, or for any period of time, any of the provisions hereof will be limited to the particular instance and will not operate or be deemed to waive any future breaches of this Contract and will not be construed to be a waiver of any provision except for the particular instance.

41. SEVERABILITY OF INVALID PROVISIONS

41.1 If any provisions of this Contract are held to contravene or be invalid under the laws of any state, country or jurisdiction, contravention will not invalidate the entire Contract, but it will be construed as if not containing the invalid provision and the rights or obligations of the parties will be construed and enforced accordingly.

42. GOVERNING LAW AND VENUE

42.1 This Contract will be governed by and construed in accordance with the laws of the State of Illinois. Venue is proper only in the County of DuPage for state cases or the Northern District of Illinois for federal cases.

43. NOTICE

43.1 Any notice will be in writing and will be deemed to be effectively served when deposited in the mail with sufficient first class postage affixed, and addressed to the party at the party's place of business. Notices shall be addressed to the Village as follows:

**Village Manager
Village of Downers Grove
801 Burlington Ave.
Downers Grove, IL 60515**

And to the Bidder as specified on the Contract Form.

44. AMENDMENT

44.1 This Contract will not be subject to amendment unless made in writing and signed by all parties.

45. COOPERATION WITH FOIA COMPLIANCE

45.1 Vendor acknowledges that the Freedom of Information Act does apply to public records in possession of the Vendor or a sub-Vendor. Vendor and all of its sub-Vendors shall cooperate with the Village in its efforts to comply with the Freedom of Information Act. 5 ILCS 140/1 *et seq.*

Village of Downers Grove

46. COPYRIGHT or PATENT INFRINGEMENT

46.1 The Vendor agrees to indemnify, defend, and hold harmless the Village against any suit, claim, or proceeding brought against the Village for alleged use of any equipment, systems, or services provided by the Vendor that constitutes a misuse of any proprietary or trade secret information or an infringement of any patent or copyright.

Village of Downers Grove

III. DETAIL SPECIFICATIONS

The Village of Downers Grove is seeking proposals for a qualified proposer to provide pricing for ballistic vehicle door panels for 2017-2019 model year Ford Explorer Interceptor Sport Utility Police Vehicles. The proposal shall include the following:

- NIJ IIIA level of protection pricing for 12 front driver's side ballistic door panels and 12 front passenger side ballistic door panels
- NIJ III+ level of protection pricing for 12 front driver's side ballistic door panels and 12 front passenger side ballistic door panels
- NIJ IV+ level of protection pricing for 12 front driver's side ballistic door panels and 12 front passenger side ballistic door panels

Bidder must include shipping and handling costs in the proposal if applicable.

Bidders must provide certified test results verifying compliance with Ballistic Resistant Protective Materials NIJ Stanard-0108.01

Product weight must be 15 pounds or less to reduce mechanical stress to vehicle door hinges.

Product material must be Kevlar, or equivalent protective ballistic fabric-based design.

Product must include weather protection features to reduce degradation of materials based on the extreme weather fluctuations and exposure to moisture.

Bidder must provide a detailed product specifications sheet, including material type, and threat protection level.

Bidder must provide detailed installation instructions, including but not limited to any modifications or alterations required to install the door panels. Any alterations to existing equipment must be specified in the bidder's proposal.

Product and/or product installation cannot interfere, compromise, or alter the full functionality of any vehicle equipment, including, but not limited to: power windows, power door locks, mirrors, or door handles.


Bidder must provide a statement of warranty for the product.

Village of Downers Grove

IV. BID/CONTRACT FORM

*****THIS BID WHEN ACCEPTED AND SIGNED BY AN AUTHORIZED SIGNATORY OF THE VILLAGE OF DOWNERS GROVE SHALL BECOME A CONTRACT BINDING UPON BOTH PARTIES.**

**Entire Block Must Be Completed When A Submitted Bid Is To Be Considered For Award
BIDDER:**

<u>ANGEL ARMOR, LLC</u> Company Name	Date: <u>3/9/21</u>
<u>4557 DENROSE CT</u> Street Address of Company	<u>jesse.claeys@angelarmor.com</u> Email Address
<u>FORT COLLINS, CO, 80524</u> City, State, Zip	<u>JESSE CLAEYS</u> Contact Name (Print)
<u>970-235-2961</u> Business Phone	<u>712-898-9858</u> 24-Hour Telephone
<u>N/A</u> Fax	 Signature of Officer, Partner or Sole Proprietor
ATTEST: If a Corporation	<u>CHRIS FOTH, GENERAL MANAGER</u> Print Name & Title
_____ Signature of Corporation Secretary	

VILLAGE OF DOWNERS GROVE:

Authorized Signature

Title

Date

ATTEST:

Signature of Village Clerk

Date

In compliance with the specifications, the above-signed offers and agrees, if this Bid is accepted within 90 calendar days from the date of opening, to furnish any or all of the services upon which prices are quoted, at the price set opposite each item, delivered at the designated point within the time specified above.

Village of Downers Grove

MUNICIPAL REFERENCE LIST - RECENT PROCUREMENT

Municipality: VILLAGE OF DOWNERS GROVE
 Address: 801 BURLINGTON AVE
 Telephone # _____
 Contact Name VILLAGE HAS PREVIOUSLY PROCURED MULTIPLE PANELS

Municipality BOSTON POLICE DEPARTMENT (MAYOR'S OFFICE)
 Address: MARLBORO, MASS
 Telephone # 508-573-2643
 Contact Name BECKY WAINWRIGHT (BUYER)

Municipality: METROPOLITAN PD (DC)
 Address: WASHINGTON DC METRO
 Telephone # 202-576-5388
 Contact Name GREG HESTER (FLEET MANAGER)

Municipality: NEENAH PD (WI)
 Address: 211 WALNUT ST NEENAH WI
 Telephone # 920-209-9408
 Contact Name ADAM STREUBEL (FLEET MANAGER)

Municipality: WAUKESHA COUNTY SO
 Address: 1641 WOODBURN RD WAUKESHA WI
 Telephone # 414-475-1208
 Contact Name BRETT WERDIN (UPFITTER)

Municipality: FORT MCCOY - US ARMY DES
 Address: FORT MCCOY WI
 Telephone # 910-944-5800
 Contact Name BRITTANY BARNETT (UPFITTER)

Municipality GARDEN CITY PD
 Address: GARDEN CITY KS
 Telephone # 620-271-4605
 Contact Name JR RAMIREZ (UPFITTER)

Municipality _____
 Address: _____
 Telephone # _____
 Contact Name _____

Village of Downers Grove



VENDOR W-9 REQUEST FORM

The law requires that we maintain accurate taxpayer identification numbers for all individuals and partnerships to whom we make payments, because we are required to report to the I.R.S all payments of \$600 or more annually. We also follow the I.R.S. recommendation that this information be maintained for all payees including corporations.

Please complete the following substitute W-9 letter to assist us in meeting our I.R.S. reporting requirements. The information below will be used to determine whether we are required to send you a Form 1099. Please respond as soon as possible, as failure to do so will delay our payments.

BUSINESS (PLEASE PRINT OR TYPE):

NAME: ANGEL ARMOR LLL

ADDRESS: 4557 DENROSE CT

CITY: FORT COLLINS

STATE: COLORADO

ZIP: 80525

PHONE: 970-235-2961 FAX: N/A

TAX ID #(TIN): 35-2480464
 (If you are supplying a social security number, please give your full name)

REMIT TO ADDRESS (IF DIFFERENT FROM ABOVE):

NAME: _____

ADDRESS: _____

CITY: _____

STATE: _____ ZIP: _____

TYPE OF ENTITY (CIRCLE ONE):

- Individual
- Sole Proprietor
- Partnership
- Corporation
- Government Agency
- Limited Liability Company – Member-Managed
- Limited Liability Company- Manager-Managed
- Medical
- Charitable/Nonprofit

SIGNATURE: [Handwritten Signature]

DATE: 3/9/21

Village of Downers Grove

BIDDER'S CERTIFICATION (page 1 of 3)

With regard to CFB - CFB-0-2021/MR, Bidder ANGEL ARMOR hereby certifies
(Name of Project) (Name of Bidder)
the following:

1. Bidder is not barred from bidding this contract as a result of violations of Section 720 ILCS 5/33E-3 (Bid Rigging) or 720 ILCS 5/33E-4 (Bid-Rotating);
2. Bidder certifies that it has a written sexual harassment policy in place and full compliance with 775 ILCS 5/2-105(A)(4);
3. Bidder certifies that it is in full compliance with the Federal Highway Administrative Rules on Controlled Substances and Alcohol Use and Testing, 49 C.F.R. Parts 40 and 382 and that all employee drivers are currently participating in a drug and alcohol testing program pursuant to the Rules;
4. Bidder further certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue, or that Bidder is contesting its liability for the tax delinquency or the amount of a tax delinquency in accordance with the procedures established by the appropriate Revenue Act. Bidder further certifies that if it owes any tax payment(s) to the Department of Revenue, Bidder has entered into an agreement with the Department of Revenue for the payment of all such taxes that are due, and Bidder is in compliance with the agreement.

BY: [Signature]
Bidder's Authorized Agent

3 5 - 2 4 8 0 4 6 4

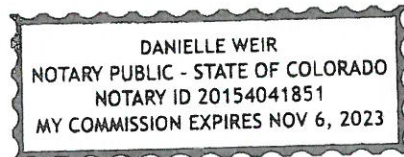
FEDERAL TAXPAYER IDENTIFICATION NUMBER

or _____
Social Security Number

Subscribed and sworn to before me state of Colorado
this 8 day of March, County of Larimer
2021.

Danielle Weir
Notary Public Danielle Weir

My Commission expires Nov. 6, 2023



Village of Downers Grove

BIDDER'S CERTIFICATION (page 2 of 3)

(Fill Out Applicable Paragraph Below)

(a) Corporation

The Bidder is a corporation organized and existing under the laws of the State of _____, which operates under the Legal name of _____, and the full names of its Officers are as follows:

President: _____

Secretary: _____

Treasurer: _____

and it does have a corporate seal. (In the event that this Bid is executed by other than the President, attach hereto a certified copy of that section of Corporate ByLaws or other authorization by the Corporation which permits the person to execute the offer for the corporation.)

(b) Limited Liability Company (LLC)

The Bidder is a LLC organized and existing under the laws of the State of COLORADO , which operates under the legal name of ANGEL ARMOR, LLC , and the full names of its managers or members are as follows:

Manager or Member: JOSH RICHARDSON

Manager or Member: JC RICHARDSON

Manager or Member: CHRIS FOTH

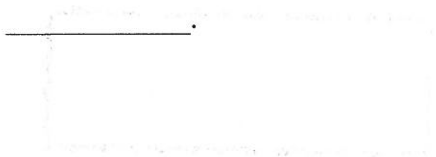
Manager or Member: _____

(c) Partnership

Names and Addresses of All Members of Partnership:

The partnership does business under the legal name of: _____

which name is registered with the office of _____ in the state of _____.



Village of Downers Grove

BIDDER'S CERTIFICATION (page 3 of 3)**(d) Sole Proprietor**

The Bidder or Supplier is a Sole Proprietor whose full name is: _____

and if operating under a trade name, said trade name is: _____

which name is registered with the office of _____ in the state of

_____.

6. Are you willing to comply with the Village's preceding insurance requirements within 10 days of the award of the contract? **(YES)** NO (circle one)INSURER'S NAME FLOOD + PETERSONAGENT KAREN GEORGEStreet Address PO BOX 578City, State, Zip Code GREELEY, CO 80632Telephone Number (970) 330-1867

I/We hereby affirm that the above certifications are true and accurate and that I/we have read and understand them.

Print Name of Company: ANGEL ARMOR LLCPrint Name and Title of Authorizing Signature: JESSE CLAGYS REGIONAL SALES MANAGERSignature:  _____Date: 3/8/21

Village of Downers Grove

Suspension or Debarment Certificate
--

Non-Federal entities are prohibited from contracting with or making sub-awards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement for goods or services equal to or in excess of \$100,000.00. Vendors receiving individual awards for \$100,000.00 or more and all sub-recipients must certify that the organization and its principals are not suspended or debarred.

By submitting this offer and signing this certificate, the Bidder certifies to the best of its knowledge and belief, that the company and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal, state or local governmental entity, department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction, or convicted of or had a civil judgment against them for a violation of Federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (2) of this certification: and
4. Have not within a three-year period preceding this application/proposal/contract had one or more public transactions (Federal, State or local) terminated for cause or default.

If the Bidder is unable to certify to any of the statements in this certification, Bidder shall attach an explanation to this certification.

Company Name: ANGEL ARMOR LLC

Address: 4557 DENROSE CT

City: FORT COLLINS Zip Code: 80524

Telephone: (970) 235-2961 Fax Number: () N/A

E-mail Address: jesse.claeys@angelarmor.com

Authorized Company Signature: 

Print Signature Name: JESSE CLAEYS Title of Official: REGIONAL SALES MANAGER

Date: 3/9/21

Village of Downers Grove

CAMPAIGN DISCLOSURE CERTIFICATE

Any Vendor, proposer, bidder or vendor who responds by submitting a bid or proposal to the Village of Downers Grove shall be required to submit with its bid submission, an executed Campaign Disclosure Certificate.

The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

By signing the bid documents, Vendor/proposer/bidder/vendor agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

Under penalty of perjury, I declare:

Bidder/vendor has not contributed to any elected Village position within the last five (5) years.

Signature

Print Name

Bidder/vendor has contributed a campaign contribution to a current member of the Village Council within the last five (5) years.

Print the following information:

Name of Contributor: _____
(company or individual)

To whom contribution was made: _____

Year contribution made: _____ Amount: \$ _____

Signature

JESSE CLAEYS

Print Name



ANGEL ARMOR™
 4557 DENROSE CT
 FORT COLLINS, CO 80524
 ANGELARMOR.COM

Customer Quote

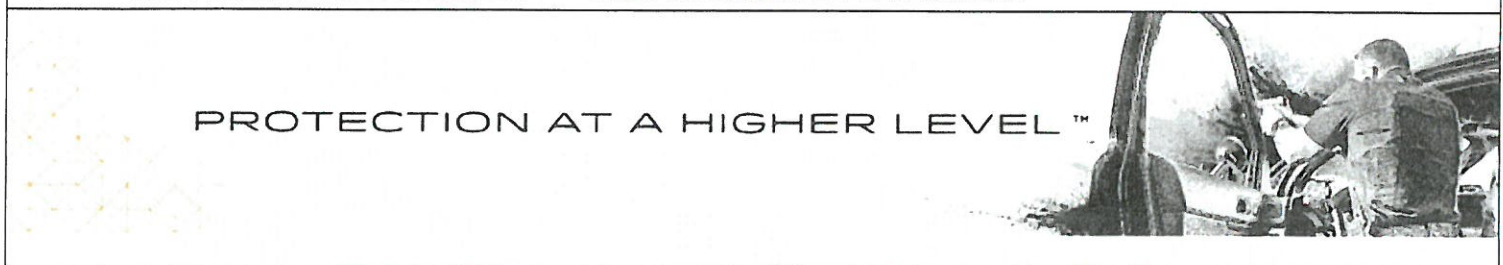
Quote Date:	03/08/21
Expires:	05/07/21
Quote Number:	15860

Bill To:
Village of Downers Grove Police Department 801 Burlington Ave Downers Grove, IL 60515

Ship To:
Village of Downers Grove Police Department 801 Burlington Ave Downers Grove, IL 60515

<u>Part Number</u> <u>Description</u>	<u>Quantity</u>	<u>U/M</u>	<u>Price</u>	<u>Extended Price</u>
01-00001 AVAIL IIIA, FORD SUV 1, FRONT, DRIVER	12	/EA	\$749.0000	\$8,988.00
01-00002 AVAIL IIIA, FORD SUV 1, FRONT, PASSENGER	12	/EA	\$749.0000	\$8,988.00
S&H Shipping and Handling Charges	1	/EA	\$198.2000	\$198.20
			Total	\$18,174.20

I acknowledge that the information listed above is correct and I acknowledge that I have read and accepted the Angel Armor, LLC Terms and Conditions of Sale and the Angel Armor, LLC Product Sample Disclaimer located at armor.angelintelligence.com/terms-and-conditions/
 Signature: _____ Date: _____





ANGEL ARMOR™
 4557 DENROSE CT
 FORT COLLINS, CO 80524
 ANGELARMOR.COM

Customer Quote

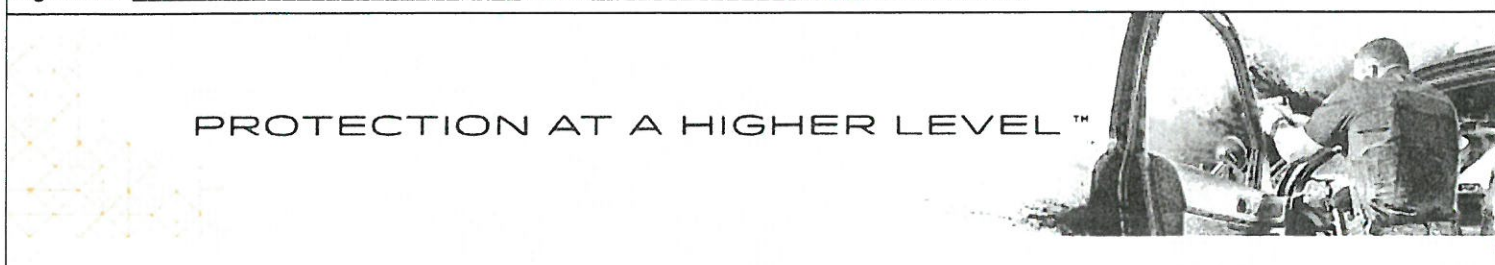
Quote Date:	03/08/21
Expires:	05/07/21
Quote Number:	15861

Bill To:
Village of Downers Grove Police Department 801 Burlington Ave Downers Grove, IL 60515

Ship To:
Village of Downers Grove Police Department 801 Burlington Ave Downers Grove, IL 60515

<u>Part Number</u> <u>Description</u>	<u>Quantity</u>	<u>U/M</u>	<u>Price</u>	<u>Extended Price</u>
01-00362 AVAIL III+, FORD SUV 1, FRONT, DRIVER	12	/EA	\$1,249.0000	\$14,988.00
01-00363 AVAIL III+, FORD SUV 1, FRONT, PASSENGER	12	/EA	\$1,249.0000	\$14,988.00
S&H Shipping and Handling Charges	1	/EA	\$380.2700	\$380.27
			Total	\$30,356.27

I acknowledge that the information listed above is correct and I acknowledge that I have read and accepted the Angel Armor, LLC Terms and Conditions of Sale and the Angel Armor, LLC Product Sample Disclaimer located at armor.angelintelligence.com/terms-and-conditions/
 Signature: _____ Date: _____



Avail BDP IIIA Product Validation



ANGEL ARMOR™

NOTICE OF CONFIDENTIALITY: The information contained in this document, is confidential to Angel Armor. Any dissemination, distribution, or copying of this document or information herein is strictly prohibited without written Angel Armor consent.

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Rev	Date	Description	Approval
A	4/22/2016	Document Creation	Devin Allison
B	4/22/2016	Chesapeake consent added	Devin Allison
C	6/22/2016	Added confidentiality statement	Devin Allison
D	10/10/2016	Updated latest test reports	Devin Allison
E	3/22/2017	Updated latest test reports	Devin Allison

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1 Mission

We work in the name of our heroes, leaders, and citizens—that by our efforts, innovative technologies may be applied to ensure security for the U.S. and across the nations.

The skill, strength, honor, and iron will of those we serve inspire us to defend life from threat so that individuals may live to their fullest potentials.

With leading-edge protective solutions, we seek to lighten the load of those who bear great responsibility, uphold the heroes who defend our way of life, and support every person's right to pursue their mission, passion, and freedom.

WE ARE INNOVATORS. WE ARE PATRIOTS. WE ARE GUARDIANS.

Angel Armor elevates protection to a higher level, dedicating advanced research, design, and testing to the development of pioneering ballistic solutions.

And with these solutions, we provide uncompromising and unparalleled protection, worthy of those we serve.

2 Quality Standards

Angel Armor, LLC is committed to high quality products and services that meet or exceed regulatory compliance, our customer requirements and expectations. We achieve these levels of quality through rigorous ballistic and environmental testing, a total commitment to maintaining the effectiveness of our quality management system and continuous improvement of our products and processes.

This Angel Armor Document summarizes the test standards, procedures and results for Angel Armor III-A Ballistic Door Panels. The test reports and results herein are to be used solely for the purpose of showing testing to NIJ-STD-0108.01. Reproduction of this document is prohibited without written Angel Armor approval. The test reports and results herein do not claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or Chesapeake Testing. The test results relate only to the items tested on the test date under the conditions specified. For more information, see the NIJ-STD-0108.01.

2.1 Ballistic Testing – Confidence in ability

Angel Armor's III-A Ballistic Door Panels have passed the ballistic test procedure NIJ-STD-0108.01 for Type III-A handgun threats. In addition, three special threats have been tested. The NIJ-STD-0108.01 only provides a single data point to measure the safety margin for the product. Angel Armor goes above and beyond the NIJ-STD-0108.01 standard by testing multiple data points on the regression curve. These additional data points increase the statistical confidence the Angel Armor product will defeat the ballistic threats. See Figure 1 for an example of the regression curve we test to provide data above and beyond the NIJ-STD-0108.01.

Quality Document: Angel Armor™ Ballistic Door Panel Testing

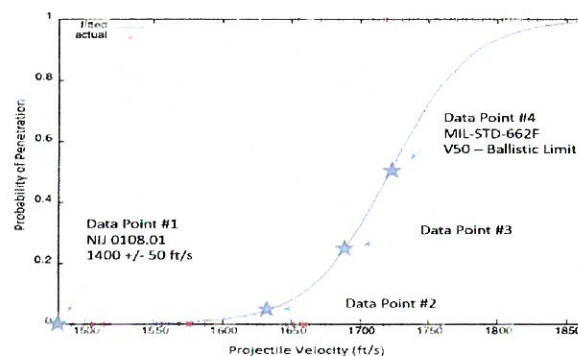


Figure 1 Example Regression Curve

2.2 Environmental Testing – Confidence in durability

In addition to the ballistic testing, Angel Armor tests the Ballistic Door Panels in the environment the product will be used. For a car door panel, this meant considering the temperature swings of hot summer days, cold winter days, high and low humidity, and vibration the panel could experience in its service life. After the armor panels are exposed to the extreme environment, we perform final ballistic testing. This provides confidence to support ballistic performance at the end of the product's five year service life.

3 Technical Summary of Ballistic Testing

3.1 NIJ-STD-0108.01, Type III-A Standard Threats

NIJ Standard 0108.01, Ballistic Resistant Protective Materials, dated September 1985 Type III-A Standard Threats:

- 9mm, 124 grain, full metal jacket (FMJ) 1400 +/- 50 fps
- .44 Magnum, 240 grain, semi-wad cutter (SWC), 1400 +/- 50 fps

3.2 Special Threats Tested, NIJ-STD-0108.01 Test Setup

- Federal 9mm 124gr Hydra-Shok JHP @ 1256 fps
- Federal .40 S&W 165gr Hydra-Shok JHP @ 1085 fps
- Federal .45 AUTO +P 200gr GDHP @ 1203 fps

Quality Document: Angel Armor™ Ballistic Door Panel Testing

4 Ballistic Test Results

4.1 Standard and Special Threats

Test reports below were produced by Chesapeake Testing, an independent ballistic testing facility, and reproduced with its consent.

4.1.1 NIJ-STD-0108.01 Threats

BALLISTIC RESISTANCE TEST										
Chesapeake Testing 4038 Compass Point Road Belcamp, MD 21017						Client: Job No.: 2020-135-4 Test Date: 10/7/2016				
Test Panel		Description: Rigid Armor. Lot Number: 100316								
Manufacturer: Angel Armor						Sample No.: 4245				
Size: 15.00 x 15.00 in Avg. Thick: 0.258 in Thickness: 0.260 in; 0.261 in; 0.260 in; 0.259 in				Weight: 1.88 lbs Plies/Laminates: 14A		Date Received: 10/6/2016 Via: FedEx Returned: FedEx				
Setup										
Shot Spacing: NIJ-STD-0108.01 Level IIIA Witness Panel: 0.02 in 2024-T3 Al Backing Material: 14A Condition: Ambient				Primary Vel. Screens (ft): 6.500, 9.500 Primary Vel. Location (ft): 8.000 Range to Target (ft): 16.400 Target to Witness (in): 6.000			Range No.: 1 Temp: 68.1 °F BP: 30.1 inHg RH: 42.2% Barrel/Gun: 14A Gunner: J. Thomas Recorder: Ramon Chavez			
Ammunition										
Projectile				Lot No.			Powder			
(1) .44-mag., 240-grain SWC				Speer			IMR 4227			
Applicable Standards or Procedures										
(1) NIJ-STD-0108.01 Level IIIA (2) Customer request										
Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	243.3	2154	1393	2152	1394	1393	None	0.0	
2	1	243.5	2186	1372	2184	1374	1373	None	0.0	
3	1	242.6	2158	1390	2156	1391	1391	None	0.0	
4	1	244.0	2167	1384	2166	1385	1385	None	0.0	
5	1	245.1	2167	1384	2166	1385	1385	None	0.0	
Remarks: Requested velocity: 1400 ±50 ft/s										
Footnotes:										

Quality Document: Angel Armor™ Ballistic Door Panel Testing

BALLISTIC RESISTANCE TEST										
Chesapeake Testing 4903B Compass Point Road Belcamp, MD 21017						Client: Job No.: 2020-135-3 Test Date: 10/7/2016				
Test Panel		Description: Rigid Armor. Lot Number: 100316								
Manufacturer: Angel Armor					Sample No.: 4244					
Size: 15.00 x 15.00 in Avg. Thick: 0.256 in Thickness: 0.256 in; 0.259 in; 0.256 in; 0.253 in				Weight: 1.88 lbs Plies/Laminates: NA			Date Received: 10/6/2016 Via: FedEx Returned: FedEx			
Setup										
Shot Spacing: NIJ-STD-0108.01 Level IIIA Witness Panel: 0.02 in 2024-T3 Al Backing Material: NA Condition: Ambient				Primary Vel. Screens (ft): 6.500, 9.500 Primary Vel. Location (ft): 8.000 Range to Target (ft): 16.400 Target to Witness (in): 6.000			Range No.: 1 Temp: 68.7 °F BP: 30.1 inHg RH: 46.5% Barrel/Gun: NA Gunner: J. Thomas Recorder: Ramon Chavez			
Ammunition										
Projectile			Lot No.				Powder			
(1) 9-mm, 124-grain FMJ			Remington 23558				Lovex D032-03			
Applicable Standards or Procedures										
(1) NIJ-STD-0108.01 Level IIIA (2) Customer request										
Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnote:
1	1	124.9	2207	1359	2206	1360	1360	None	0.0	
2	1	124.3	2183	1374	2182	1375	1375	None	0.0	
3	1	124.5	2188	1371	2187	1372	1371	None	0.0	
4	1	125.0	2162	1388	2161	1388	1388	None	0.0	
5	1	124.9	2148	1397	2146	1398	1397	None	0.0	
Remarks: Requested velocity: 1400 ±50 ft/s										
Footnotes:										

Quality Document: Angel Armor™ Ballistic Door Panel Testing

4.1.2 Special Threats

BALLISTIC RESISTANCE TEST										
Chesapeake Testing 4603B Compass Point Road Belcamp, MD 21017						Client: Job No.: 2020-135-2 Test Date: 10/7/2016				
Test Panel		Description: Rigid Armor. Lot Number: 100316								
Manufacturer: Angel Armor						Sample No.: 4243				
Size: 15.00 x 15.00 in Avg. Thick: 0.256 in Thickness: 0.257 in; 0.258 in; 0.258 in; 0.251 in			Weight: 1.88 lbs Plies/Laminates: NA			Date: 10/6/2016 Received: FedEx Via: FedEx Returned:				
Setup										
Shot Spacing: NIJ-STD-0108.01 Level IIIA Witness Panel: 0.02 in 2024-T3 Al Backing Material: NA Condition: Ambient			Primary Vel. Screens (ft): 6.500, 9.500 Primary Vel. Location (ft): 8.000 Range to Target (ft): 16.400 Target to Witness (in): 6.000			Range No.: 1 Temp: 68.7 °F BP: 30.1 inHg RH: 46.3% Barrel/Gun: NA Gunner: J. Thomas Recorder: Ramon Chavez				
Ammunition										
Projectile			Lot No.			Powder				
(1) 9-mm, 124-grain Hydra-Shok JHP			Federal V51M239			Lovex D032-03				
Applicable Standards or Procedures										
(1) NIJ-STD-0108.01 Level IIIA (2) Customer request										
Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	124.2	2365	1268	2364	1269	1269	None	0.0	
2	1	124.3	2395	1253	2393	1254	1253	None	0.0	
3	1	124.5	2386	1257	2381	1260	1259	None	0.0	
4	1	124.0	2398	1251	2396	1252	1252	None	0.0	
5	1	124.0	2411	1244	2409	1245	1245	None	0.0	
Remarks: Requested velocity: 1220 ±50 ft/s										
Footnotes:										

Quality Document: Angel Armor™ Ballistic Door Panel Testing

BALLISTIC RESISTANCE TEST										
Chesapeake Testing 4603B Compass Point Road Belcamp, MD 21017						Client: Job No.: 2020-135-1 Test Date: 10/7/2016				
Test Panel		Description: Rigid Armor, Lot Number: 100316								
Manufacturer: Angel Armor						Sample No.: 4242				
Size: 15.00 x 15.00 in Avg. Thick: 0.260 in Thickness: 0.257 in; 0.262 in; 0.262 in; 0.257 in				Weight: 1.88 lbs Plies/Laminates: 11A			Date: 10/6/2016 Received: FedEx Via: FedEx Returned:			
Setup										
Shot Spacing: NIJ-STD-0108.01 Level IIIA Witness Panel: 0.01 in 2024-T3 Al Backing Material: 11A Condition: Ambient			Primary Vel. Screens (ft): 6,500, 9,500 Primary Vel. Location (ft): 8,000 Range to Target (ft): 16,400 Target to Witness (in): 6,000				Range No.: 1 Temp: 68.7 °F BP: 30.1 inHg RH: 46.6% Barrel/Gun: 11A Gunner: J. Thomas Recorder: Ramon Chavez			
Ammunition										
Projectile			Lot No.				Powder			
(1) .40-cal., 165-grain S&W BJHP			Federal HQV11Z667				Lovex D032-03			
Applicable Standards or Procedures										
(1) NIJ-STD-0108.01 Level IIIA (2) Customer request										
Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	163.1	2768	1064	2769	1083	1064	None	0.0	
2	1	163.7	2862	1048	2859	1049	1049	None	0.0	
3	1	164.5	2804	1070	2803	1070	1070	None	0.0	
4	1	165.0	2702	1110	2699	1112	1111	None	0.0	
5	1	164.3	2704	1109	2701	1111	1110	None	0.0	
Remarks: Requested velocity: 1080 ±50 ft/s										
Footnotes:										

Quality Document: Angel Armor™ Ballistic Door Panel Testing

BALLISTIC RESISTANCE TEST										
Chesapeake Testing 4603B Compass Point Road Belcamp, MD 21017							Client: Job No.: 2020-135-5 Test Date: 10/7/2016			
Test Panel		Description: Rigid Armor. Lot Number: 100316								
Manufacturer: Angel Armor						Sample No.: 4256				
Size: 15.00 x 15.00 in Avg. Thick: 0.260 in Thickness: 0.259 in; 0.267 in; 0.261 in; 0.255 in				Weight: 1.88 lbs Plies/Laminates: NA			Date Received: 10/6/2016 Via: FedEx Returned: FedEx			
Setup										
Shot Spacing: NIJ-STD-0108.01 Level IIIA Witness Panel: 0.02 in 2024-T3 Al Backing Material: NA Condition: Ambient				Primary Vel. Screens (ft): 6.500, 9.500 Primary Vel. Location (ft): 8.000 Range to Target (ft): 16.400 Target to Witness (in): 6.000			Range No.: 1 Temp: 68.9 °F BP: 30.1 inHg RH: 47.0% Barrel/Gun: NA Gunner: J. Thomas Recorder: Ramon Chavez			
Ammunition										
Projectile				Lot No.			Powder			
(1) .45 Auto, +P 200-grain GDHP				Speer 121U34			Lovex D032-03			
Applicable Standards or Procedures										
(1) NIJ-STD-0108.01 Level IIIA (2) Customer request										
Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	200.3	2490	1205	2488	1206	1205	None	0.0	
2	1	199.4	2485	1207	2483	1208	1208	None	0.0	
3	1	199.7	2498	1201	2496	1202	1201	None	0.0	
4	1	198.9	2511	1195	2508	1196	1195	None	0.0	
5	1	197.9	2490	1205	2487	1206	1206	None	0.0	
Remarks: Requested velocity: 1180 ±50 ft/s										
Footnotes:										

5 Summary of Environmental Testing

5.1 Temperature, Humidity and Vibration

Samples are put through testing cycles of high and low temperature, high and low humidity, and vibration testing. Angel Armor then performs final ballistic testing on the samples to support the ballistic performance at the end of the product's five year service life.

6 Environmental Test Results

6.1 Temperature and Humidity

High and Low Temperature, High and Low Humidity Test per procedures below:

1. High Temperature Thermal Cycling (Type 1) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at <10% RH.
2. Low Temperature Thermal Cycling (Type 1) Test. Samples were exposed to 30 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of -10°F (-23°C) and +60°F (+16°C) at <10% RH.
3. High Temperature Thermal Cycling (Type 2) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at 50% RH (best effort).
4. Low Temperature Thermal Cycling (Type 2) Test. Samples were exposed to 30 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of -10°F (-23°C) and +60°F (+16°C) at 50% RH (best effort).
5. High Temperature Thermal Cycling (Type 3) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at 80% RH (best effort).

6.2 Vibration

Vibration Test: Samples were exposed to four (4) hours of sine sweeps from 5 Hz to 200 Hz in each axis. Testing was conducted at Cascade Technical Sciences to validate the materials used in Ballistic Door Panel construction.

Avail III+ Product Validation



ANGEL ARMOR™

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Rev	Date	Description	Approval
A	3/9/2021	Document Creation	Derrick King

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1 Mission

We work in the name of our heroes, leaders, and citizens—that by our efforts, innovative technologies may be applied to ensure security for the U.S. and across the nations.

The skill, strength, honor, and iron will of those we serve inspire us to defend life from threat so that individuals may live to their fullest potentials.

With leading-edge protective solutions, we seek to lighten the load of those who bear great responsibility, uphold the heroes who defend our way of life, and support every person's right to pursue their mission, passion, and freedom.

WE ARE INNOVATORS. WE ARE PATRIOTS. WE ARE GUARDIANS.

Angel Armor elevates protection to a higher level, dedicating advanced research, design, and testing to the development of pioneering ballistic solutions.

And with these solutions, we provide uncompromising and unparalleled protection, worthy of those we serve.

2 Quality Standards

Angel Armor, LLC is committed to high quality products and services that meet or exceed regulatory compliance, our customer requirements and expectations. We achieve these levels of quality through rigorous ballistic and environmental testing, a total commitment to maintaining the effectiveness of our quality management system and continuous improvement of our products and processes.

This Angel Armor Document summarizes the test standards, procedures and results for Angel Armor Avail III+ Ballistic Door Panels. The test reports and results herein are to be used solely for the purpose of showing testing to NIJ STD-0108.01. Reproduction of this document is prohibited without written Angel Armor approval. The test reports and results herein do not claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or Oregon Ballistic Laboratories. The test results relate only to the items tested on the test date under the conditions specified. For more information, see the NIJ STD-0108.01.

2.1 Ballistic Testing – Confidence in ability

Angel Armor's III+ Ballistic Door Panels have passed the ballistic test procedure NIJ-STD-0108.01 for Type III Rifle threats. Angel Armor has performed ballistic validation testing on each Avail III+ Door Panel on the raw panel as well as validation while installed in the intended vehicle door. All ballistic material used in each Avail III+ Door Panel must pass a ballistic lot validation test. This ensures that each Avail III+ Door Panel will perform as designed while in the field. In addition, three special threats have been tested. The NIJ-STD-0108.01 only provides a single data point to measure the safety margin for the product. These additional data points increase the statistical confidence the Angel Armor product will defeat the

Quality Document: Angel Armor® Rifle Ballistic Door Testing

ballistic threats. See Figure 1 for an example of the regression curve we test to provide data above and beyond the NIJ-STD-0108.01.

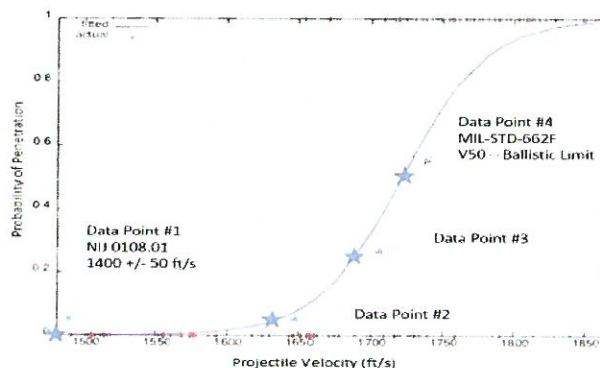


Figure 1 Example Regression Curve

2.2 Environmental Testing – Confidence in durability

In addition to the ballistic testing, Angel Armor tests the Avail III+ Door Panels and brackets in the environment the products will experience. For a door panel product, this meant considering the temperature swings of hot summer days, cold winter days, and high and low humidity along with the product's ability to withstand different terrains a vehicle may encounter. The panels and brackets are specifically designed for each vehicle door. This ensures the product's stability in rough terrain and provides maximum coverage for each vehicle. After the panels are exposed to the extreme environment, we perform final ballistic testing. This provides confidence to support ballistic performance at the end of the product's five year service life.

3 Technical Summary of Ballistic Plate Testing

3.1 NIJ-STD-0108.01, Standard Threats

NIJ Standard-0108.01, Ballistic Resistant Protective Materials, dated September 1985 Standard Threats:

- Type III - 7.62x51mm (M80) 150gr full metal jacket (FMJ) 2750 +/- 50 fps

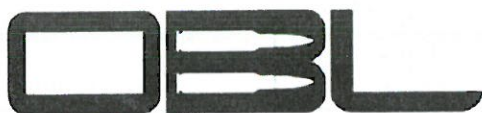
3.2 LAPD MTD 11-BDP01, Special Threats

- 7.62x39mm (M43) 123gr PS Ball @ 2380 +/- 30 fps
- 5.56x45mm (M193) 55gr FMJ @ 3200 +/- 30 fps
- 5.56x45mm (M855) 62gr FMJ @ 3050 +/- 30 fps

4 Ballistic BDP Test Results

Test reports below were produced by Oregon Ballistics Laboratory, an independent ballistic testing facility, and reproduced with its consent.

4.1 NIJ STD-0108.01 Testing



OREGON BALLISTIC LABORATORIES

BALLISTIC RESISTANCE TEST - V₀

Customer: Angel Armor
 OBL ID#: 23719
 Date Rcv'd: 1/2/2020
 Test Date: 1/3/2020
 Purchase Order:

TEST SAMPLE		Size (in.):	46 x 57
Sample No.:	AA0142	Weight (lb.):	114.5
Model No.:	N/A	Thickness:	
Lot No.:	N/A	Avg. Thk. (in):	
Plies:	N/A		
Description:	Reinforced HH- Steel Panel Mounted in door		

RANGE SET-UP			
Range to Target:	50 ft.	Range #:	2
Screen Dist. Vel. 1 (ft.):	5	Temperature:	69.9 °F
Screen Dist. Vel. 2 (ft.):	5	Bar. Pressure:	30.04 in. Hg
Screen 4 to target (ft.):	N/A	Rel. Humidity:	43.1 %
Primary Vel. Location:	8.25 ft. from target	Sample Temp:	Amb. °F
Striking Velocity:	No	Recorder:	Jesse Crisanti
Target to Witness:	6 in	Gunner:	Josh Humphreys
Witness Panel:	0.020" 2024 T3 Alum.		
Backing Material:	N/A		
Obliquity:	0 Degrees		
Barrel:	308/1:9/30"		
		Pre Test:	
		Clay Drops (mm):	
		Drop Avg (mm):	
		Clay Temp °F:	
		Clay Box #:	
		Post Test:	
		Clay Drops (mm):	
		Drop Avg (mm):	
		Clay Temp °F:	

AMMUNITION	
Projectile:	7.62x51mm 147gr. M80 Ball Copper Jacket
Powder:	N133

STANDARDS / PROCEDURES	
NIJ STD-0108.01 Level III - LAPD Special Threats	Required Velocity: 2750 fps ± 50 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 (10 ⁻⁵ s)	TIME 2 (10 ⁻⁵ s)	VELOCITY 1 (ft/s)	VELOCITY 2 (ft/s)	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIBER BFD	NOTES
1	148.5	41.9	1796	1798	2784	2781	2783	P	0°		M80 Copper Shot 1 / 2750 fps ± 50 fps
2	147.9	41.9	1786	1792	2808	2790	2795	P	0°		M80 Copper Shot 2 / 2750 fps ± 50 fps
3	148.7	41.9	1790	1792	2793	2790	2792	P	0°		M80 Copper Shot 3 / 2750 fps ± 50 fps
4	148.0	41.9	1792	1796	2790	2784	2787	P	0°		M80 Copper Shot 4 / 2750 fps ± 50 fps
5	147.8	41.9	1796	1797	2784	2782	2783	P	0°		M80 Copper Shot 5 / 2750 fps ± 50 fps

REMARKS:
 P=Partial Penetration
 C=Complete Penetration
 UH=Unfair Hit

TEST RESULTS
 Test sample satisfied the ballistic requirements given.

FOOTNOTES:

Quality Document: Angel Armor® Rifle Ballistic Door Testing

4.2 LAPD MTD 11-BDP01, Special Threats



BALLISTIC RESISTANCE TEST - V₀

Customer: Angel Armor
 OBL ID#: 23719
 Date Rcv'd: 1/2/2020
 Test Date: 1/3/2020
 Purchase Order:

TEST SAMPLE
 Sample No.: AA0142
 Model No.: N/A
 Lot No.: N/A
 Piles: N/A
 Description: Reinforced HH+ Steel Panel Mounted in door
 Size (in.): 46 x 57
 Weight (lb.): 114.5
 Thickness:
 Avg. Thk. (in):

RANGE SET-UP
 Range to Target: 50 ft. Range #: 2
 Screen Dist. Vel. 1 (ft.): 5 Temperature: 69.9 °F
 Screen Dist. Vel. 2 (ft.): 5 Bar. Pressure: 30.04 in. Hg
 Screen 4 to target (ft): N/A Rel. Humidity: 43.1 %
 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F
 Striking Velocity: No Recorder: Jesse Crisanti
 Target to Witness: 6 in. Gunner: Josh Humphreys
 Witness Panel: 0.020" 2024-T3 Alum.
 Backing Material: N/A
 Obliquity: 0 Degrees
 Barrel: 7.62x39mm/1:9.45/24" Pre Test:
 Clay Drops (mm):
 Drop Avg (mm):
 Clay Temp °F:
 Clay Box #:
 Post Test:
 Clay Drops (mm):
 Drop Avg (mm):
 Clay Temp °F:

AMMUNITION
 Projectile: 7.62x39mm M43 MSC PS Powder: IMR 4227

STANDARDS / PROCEDURES
 NIJ-STD-0108.01 Level III - LAPD Special Threats Required Velocity: 2380 fps ± 30 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 μs (10 ⁻⁶)	TIME 2 μs (10 ⁻⁶)	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIBER BFD	NOTES
1	121.9	23.5	2117	2121	2362	2357	2360	P	0°		Type 56 (PS Ball) / 2380 fps ± 30 fps
2	122.6	23.5	2113	2117	2352	2362	2364	P	0°		Type 56 (PS Ball) / 2380 fps ± 30 fps
3	122.0	23.5	2124	2124	2354	2354	2354	P	0°		Type 56 (PS Ball) / 2380 fps ± 30 fps
4	122.2	23.6	2105	2106	2372	2372	2372	P	0°		Type 56 (PS Ball) / 2380 fps ± 30 fps
5	123.4	23.6	2110	2113	2370	2366	2368	P	0°		Type 56 (PS Ball) / 2380 fps ± 30 fps

REMARKS:
 P=Partial Penetration
 C=Complete Penetration
 UH=Unfair Hit

TEST RESULTS:
 Test sample satisfied the ballistic requirements given.

FOOTNOTES:

Quality Document: Angel Armor® Rifle Ballistic Door Testing



BALLISTIC RESISTANCE TEST - V₀

Customer: Angel Armor
 OBL ID#: 23791
 Date Rcv'd: 1/9/2020
 Test Date: 1/10/2020
 Purchase Order:

TEST SAMPLE		Size (in.): 18 x 18			
Sample No.:	N/A	Weight (lb.):	28.74		
Model No.:	N/A	Thickness:	0.349	0.341	0.343 0.340
Lot No.:	N/A	Avg Thk. (in):	0.343		
Plies:	N/A				
Description:	Reinforced HH+ Steel Panel Door Simulation				

RANGE SET-UP			Range #:		Pre Test:	
Range to Target:	50 ft.	Range #:	2	Pre Test:		
Screen Dist Vel. 1 (ft.):	5	Temperature:	69.5 °F	Clay Drops (mm):		
Screen Dist Vel. 2 (ft.):	5	Bar. Pressure:	30.02 in. Hg	Drop Avg (mm):		
Screen 4 to target (ft):	N/A	Rel. Humidity:	42.0 %	Clay Temp °F:		
Primary Vel. Location:	8.25 ft. from target	Sample Temp:	Amb. °F	Clay Box #:		
Striking Velocity:	No	Recorder:	Jesse Crisanti	Post Test:		
Target to Witness:	6 in.	Gunner:	Josh Humphreys	Clay Drops (mm):		
Witness Panel:	0.020" 2024-T3 Alum.			Drop Avg (mm):		
Backing Material:	N/A			Clay Temp °F:		
Obliquity:	0 Degrees					
Barrel:	5.56mm NATO/1:7/30"					

AMMUNITION		Powder:	
Projectile:	5.56mm M193 Ball	Powder:	BL-C (2)

STANDARDS / PROCEDURES		Required Velocity:	
NIJ-STD-0108.01 Level III - LAPD Special Threat		3200 fps ± 30 fps	

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 μs (10 ⁻⁶)	TIME 2 μs (10 ⁻⁶)	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PERJEN. P/C	OBLIQUITY	CALIBER BFD	NOTES
1	5.0	27.7	1540	1547	3247	3232	3240	P	0°		
2	5.0	27.7	1559	1563	3207	3199	3203	P	0°		
3	5.0	27.6	1557	1563	3211	3199	3205	P	0°		
4	5.0	27.6	1546	1553	3234	3220	3227	P	0°		
5	5.0	27.6	1532	1532	3264	3264	3264	P	0°		

REMARKS:
 P=Partial Penetration
 C=Complete Penetration
 UH=Unfair Hit

TEST RESULTS:
 Test sample satisfied the ballistic requirements given.

FOOTNOTES:

Quality Document: Angel Armor® Rifle Ballistic Door Testing



BALLISTIC RESISTANCE TEST - V₀

Customer: Angel Armor
 OBL ID#: 23719
 Date Rcv'd: 1/2/2020
 Test Date: 1/3/2020
 Purchase Order:

TEST SAMPLE	
Sample No.:	AA0142
Model No.:	N/A
Lot No.:	N/A
Piles:	N/A
Description:	Reinforced HH- Steel Panel Mounted in door
Size (in.):	46 x 57
Weight (lb.):	114.5
Thickness:	
Avg. Thk (in):	

RANGE SET-UP					
Range to Target:	50 ft.	Range #:	2	Pre Test:	
Screen Dist. Vel. 1 (ft.):	5	Temperature:	69.9 °F	Clay Drops (mm):	
Screen Dist. Vel. 2 (ft.):	5	Bar. Pressure:	30.04 in. Hg	Drop Avg (mm):	
Screen 4 to target (ft):	N/A	Rel. Humidity:	43.1 %	Clay Temp °F:	
Primary Vel. Location:	8.25 ft. from target	Sample Temp:	Amb. °F	Clay Box #:	
Striking Velocity:	No	Recorder:	Jesse Crisantfi	Post Test:	
Target to Witness:	6 in.	Gunner:	Josh Humphreys	Clay Drops (mm):	
Witness Panel:	0.020" 2024-T3 Alum.			Drop Avg (mm):	
Backing Material:	N/A			Clay Temp °F:	
Obliquity:	0 Degrees				
Barrel:	5.56mm NATO/1:7/30"				

AMMUNITION	
Projectile:	5.56mm SS109/M855 Ball
Powder:	IMR 4227

STANDARDS / PROCEDURES	
NIJ-STD-0108.01 Level III - LAPD Special Threats	Required Velocity: 3050 fps ± 30 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 μs (10 ⁻⁶)	TIME 2 μs (10 ⁻⁶)	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIBER BFD	NOTES
1	63.1	20.7	16.35	16.43	3058	3043	3051	P	0°		M855 Shot 1 / 3050 fps ± 30 fps
2	62.5	20.7	1618	1622	3050	3049	3047	P	0°		M855 Shot 2 / 3050 fps ± 30 fps
3	62.8	20.7	1622	1630	3083	3067	3075	P	0°		M855 Shot 3 / 3050 fps ± 30 fps
4	62.9	20.7	1616	1623	3094	3081	3068	P	0°		M855 Shot 4 / 3050 fps ± 30 fps
5	63.0	20.7	1629	1635	3069	3058	3064	P	0°		M855 Shot 5 / 3050 fps ± 30 fps

REMARKS:
 P-Partial Penetration
 C-Complete Penetration
 UH=Unfair Hit

TEST RESULTS:
 Test sample satisfied the ballistic requirements given.

FOOTNOTES:

Quality Document: Angel Armor® Rifle Ballistic Door Testing

4.3 LAPD MTD 11-BDP01, Special Threats, Bend Exploitation



BALLISTIC RESISTANCE TEST - V₀

Customer: Angel Armor
 OBL ID#: 23719
 Date Rcv'd: 1/2/2020
 Test Date: 1/3/2020
 Purchase Order:

TEST SAMPLE
 Sample No.: AA0142
 Model No.: N/A
 Lot No.: N/A
 Plies: N/A
 Description: Reinforced HH Steel Panel Mounted in Door
 Size (in.): 46 x 57
 Weight (lb.): 114.5
 Thickness:
 Avg Thk (in):

RANGE SET-UP
 Range to Target: 50 ft. Range #: 2
 Screen Dist. Vel. 1 (ft.): 5 Temperature: 69.8 °F
 Screen Dist. Vel. 2 (ft.): 5 Bar. Pressure: 30.04 in. Hg
 Screen 4 to target (ft): N/A Rel. Humidity: 42.5 %
 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F
 Striking Velocity: No Recorder: Jesse Crisanti
 Target to Witness: 6 in. Gunner: Josh Humphreys
 Witness Panel: 0.020" 2024-T3 Alum.
 Backing Material: N/A
 Obliquity: 0 Degrees
 Barrel: 5.56mm NATO/1:7/30"
 Pre Test:
 Clay Drops (mm):
 Drop Avg (mm):
 Clay Temp °F:
 Clay Box #:
 Post Test:
 Clay Drops (mm):
 Drop Avg (mm):
 Clay Temp °F:

AMMUNITION
 Projectile: Powder: IMR 4227

STANDARDS / PROCEDURES
 NIJ-STD-0108.01 Level III - LAPD Special Threats Required Velocity: fps ± fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 μs (10 ⁻⁶)	TIME 2 μs (10 ⁻⁶)	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIBER BFD	NOTES
1	63.1	20.7	16.09	16.13	3108	3100	3104	P	0°		M855 Shot 1 / 3050 fps ± 30 fps
2	62.5	20.7	16.28	16.35	3071	3055	3065	P	0°		M855 Shot 2 / 3050 fps ± 30 fps
3	55.2	20.9	15.66	15.72	3193	3181	3187	P	0°		M193 Shot 1 / 3200 fps ± 30 fps
4	55.3	20.9	15.33	15.35	3262	3257	3260	P	0°		M193 Shot 2 / 3200 fps ± 30 fps

REMARKS:
 P=Partial Penetration
 C=Complete Penetration
 UH-Unfair Hit

TEST RESULTS:
 Test sample satisfied the ballistic requirements given.
FOOTNOTES:

5 Summary of Environmental Testing

5.1 Temperature and Humidity

Samples are put through testing cycles of high and low temperature along with high and low humidity as well as abrasion testing similar to environments they may experience in the field. Angel Armor then performs final ballistic testing on the samples to support the ballistic performance at the end of the product's five year service life.

5.2 Vibration

Samples are exposed to extreme vibration levels. Typically, the vibration test exposes potential issues within the first 1,000 simulated miles. Angel Armor tests the panels to over 20,000 simulated miles for confidence in a) the design of the armor panel and brackets and b) the ability of the vehicle door to properly hold the panel in the intended place without movement or rattling during the product's life.

6 Environmental Test Set Up

6.1 Temperature and Humidity

High and Low Temperature, High and Low Humidity Test per procedures below:

1. High Temperature Thermal Cycling (Type 1) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at <10% RH.
2. Low Temperature Thermal Cycling (Type 1) Test. Samples were exposed to 30 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of -10°F (-23°C) and +60°F (+16°C) at <10% RH.
3. High Temperature Thermal Cycling (Type 2) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at 50% RH (best effort).
4. Low Temperature Thermal Cycling (Type 2) Test. Samples were exposed to 30 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of -10°F (-23°C) and +60°F (+16°C) at 50% RH (best effort).
5. High Temperature Thermal Cycling (Type 3) Test. Samples were exposed to 20 thermal cycles with transition rates of 5.4°F/min (2.5°C/min) at temperature extremes of +40°F (+4°C) and +140°F (+60°C) at 80% RH (best effort).

6.2 Vibration

Samples were installed into their intended vehicle doors and exposed to vibration test per procedures below:

MIL-STD-810G, Method 514.6, Category 4 – Common Carrier/US Highway Vertical vibration levels of 1.04 Grms from 10-500Hz per Figure/Table below for a period of 20 hours

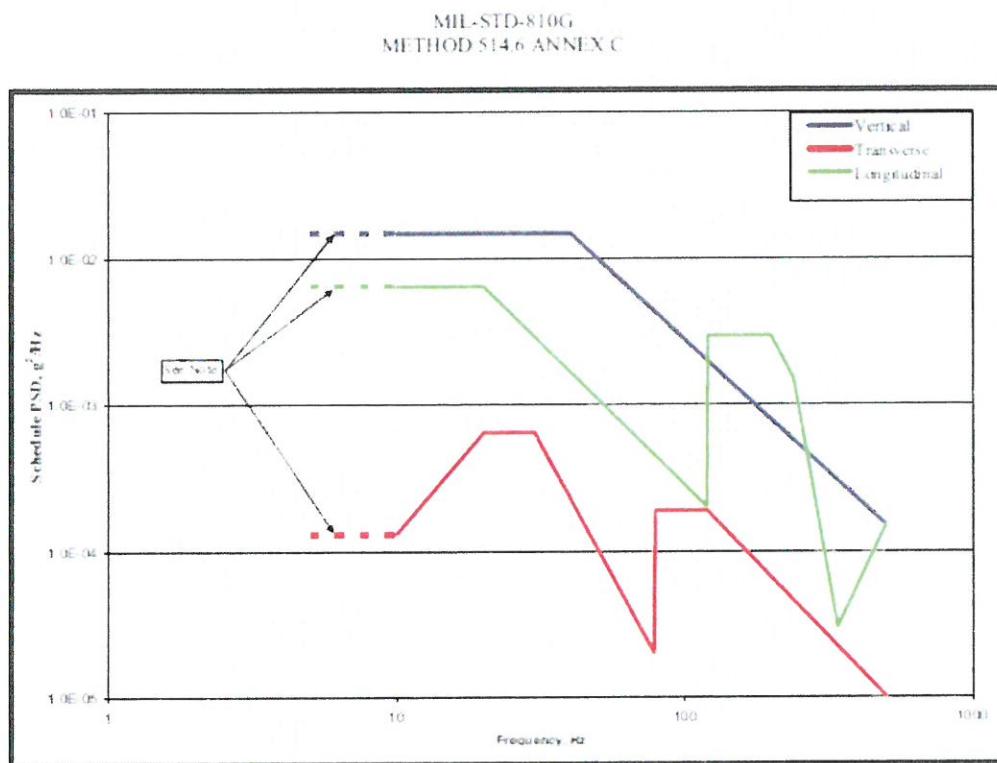


Figure 514.6C-1 – Category 4 - Common carrier (US highway truck vibration exposure).

Note: If it is known that significant excitation is expected below 10 Hz, or if the magnitude of the transfer function between the platform and test item is greater than unity for frequencies < 10 Hz, extend the curve and shape it to comply with the available data.

Table 514.6C-II. Category 4 - Common carrier (Break points for curves of Figure 514.6C-1).

Vertical		Transverse		Longitudinal	
Frequency, Hz	PSD, g ² /Hz	Frequency, Hz	PSD, g ² /Hz	Frequency, Hz	PSD, g ² /Hz
10	0.01500	10	0.00013	10	0.00650
40	0.01500	20	0.00065	20	0.00650
500	0.00015	30	0.00065	120	0.00020
rms = 1.04 g		78	0.00002	121	0.00300
		79	0.00019	200	0.00300
		120	0.00019	240	0.00150
		500	0.00001	340	0.00003
				500	0.00015
			rms = 0.20 g		rms = 0.74 g



AVAIL™

BALLISTIC DOOR PANELS

NIJ LEVEL IIIA



INSTALLATION GUIDE

As shown on

**FORD® POLICE INTERCEPTOR SEDAN
FOR FRONT DOORS
(2013 - 2019)**



ALSO COMPATIBLE WITH:

- **Ford® Taurus** (2010 - 2019)

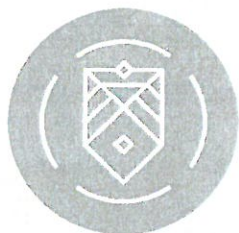


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sales@angelarmor.com

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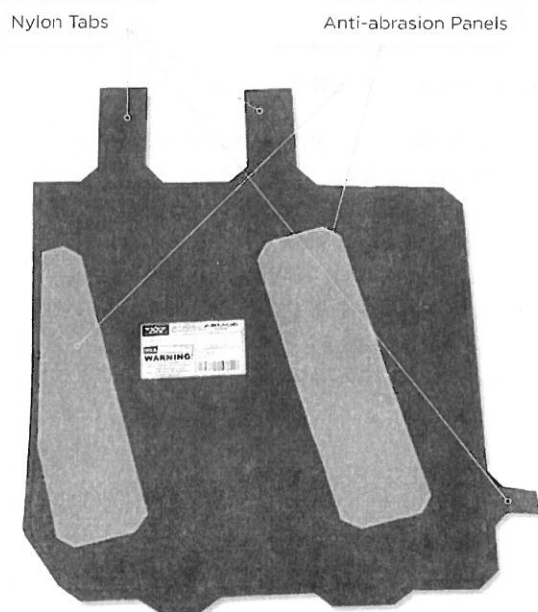
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INTRODUCTION

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

Product Description



▲ Figure 1. Angel Armor Avail Ballistic Door Panel (Level IIIA) for Ford Police Interceptor Sedan

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 protocol. Angel Armor Avail Ballistic Door Panels (Level IIIA) for the Ford Police Interceptor Sedan 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 Avail Ballistic Door Panels (Level IIIA) for the Ford Police Interceptor Sedan require no additional brackets and eliminate the need to remove the window glass. Minimal door disassembly is required to replace the lower hinge bolt. Replacement of this bolt provides additional security 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 Ford Police Interceptor Sedan takes 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.
- ! 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.

- Pry tools
- Phillips screwdriver
- Needle nose pliers
- 3/8" universal socket joint
- 13 mm deep socket
- 13 mm wrench
- 6" socket extension
- 7, 8 and 10 mm sockets

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 Police Interceptor Sedan (2013 - 2019)



▲ Figure 2. Angel Armor Avail Ballistic Door Panel (Level IIIA) for Ford Police Interceptor Sedan

- Angel Armor brand label



▲ Figure 3. Angel Armor brand label

- Panel installation tool



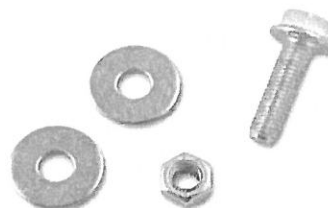
▲ Figure 4. Panel installation tool

- Isopropyl alcohol wipe



▲ Figure 5. Isopropyl alcohol wipe

- One M8x1.25x35mm hex head bolt, two M8 fender washers and one M8 x 1.25 lock nut



▲ Figure 6. One M8x1.25x35mm hex head bolt, two M8 fender washers and one M8x1.25 lock nut

- Loctite
(excluded if hex bolt has loctite already applied)

INSTALLATION

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

Overview

Installation of the Angel Armor Avail Ballistic Door Panel (Level IIIA) into a Ford Police Interceptor Sedan 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 lower hinge bolt with the supplied hex head bolt.
- 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's side. **NOTE:** The anti-abrasion panels face the interior of the vehicle for both the driver's side and passenger's 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 Avail 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 Avail Ballistic Door Panels (Level IIIA) for Ford Police Interceptor Sedan.

Preparing for Installation

- 1 Roll the window all the way down.
- 2 Turn off the vehicle ignition switch and remove the key.
- 3 **!** Disconnect the vehicle battery to avoid accidental airbag deployment.

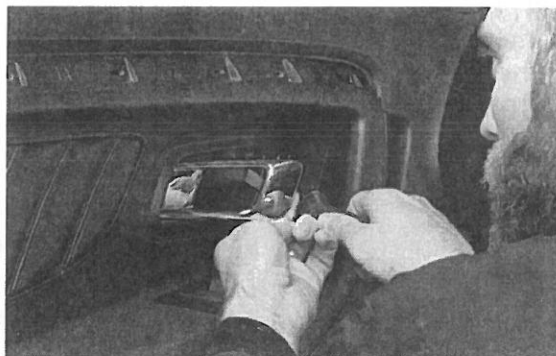
Removing the Panel Mounting Bolts

- 1 Starting at the back of the door, use the pry tools to remove long black decorative trim bar located above door handle.



▲ Figure 7. Removing the trim above the door handle

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



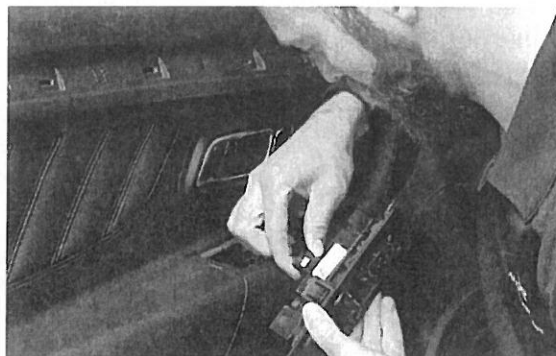
▲ Figure 8. Removing the trim cover behind the door handle

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



▲ Figure 9. Removing the window control panel

- 4 Disconnect the wiring harness from the window control panel.



▲ Figure 10. Disconnecting the wiring harness

Removing the Panel Mounting Bolts

CONTINUED

- 5** Remove the Phillips screw located toward the rear end of the door panel.



▲ Figure 11. Removing the Phillips screw from the rear end of the door panel

- 6** Remove the 8 mm bolt located behind the upper plastic trim bar.



▲ Figure 12. Removing the 8 mm bolt behind the trim bar

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



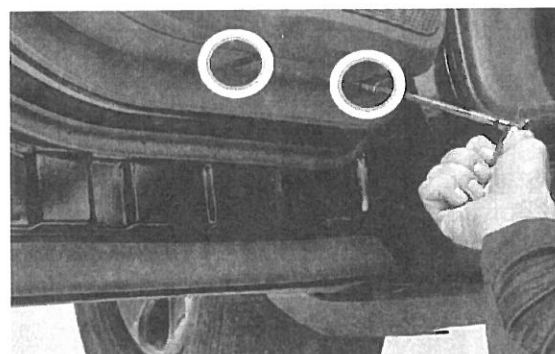
▲ Figure 13. Removing the 10 mm bolt behind the door handle

- 8** Remove the 10 mm bolt from behind the armrest pocket.



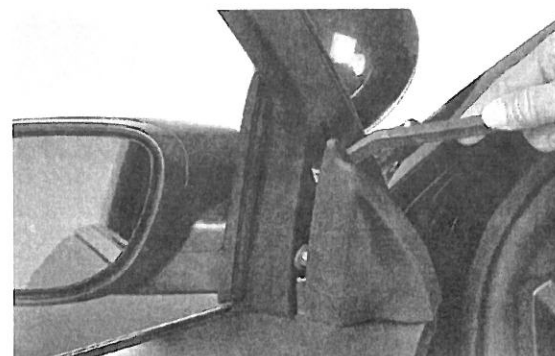
▲ Figure 14. Removing the 10 mm bolt from behind the armrest pocket.

- 9** Remove the two 7 mm bolts at the bottom of the interior vehicle door panel.



▲ Figure 15. Removing the two 7 mm bolts from behind the bottom of the door panel.

- 10** Using the pry tools, gently remove the cover where the side mirror is attached.



▲ Figure 16. Removing the side mirror cover

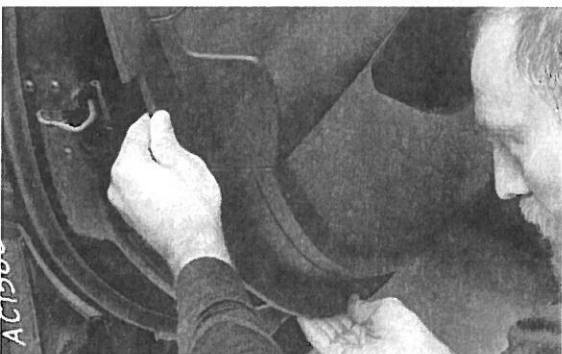
Removing the Vehicle Interior Door Panel

- 1 Using the pry tools, start at the lower back corner and pry the interior vehicle door panel away from the door.



▲ Figure 17. Prying the door panel away from the door

- 2 Using both hands, work around the door panel to release the snaps.



▲ Figure 18. Working around the door panel to release snaps

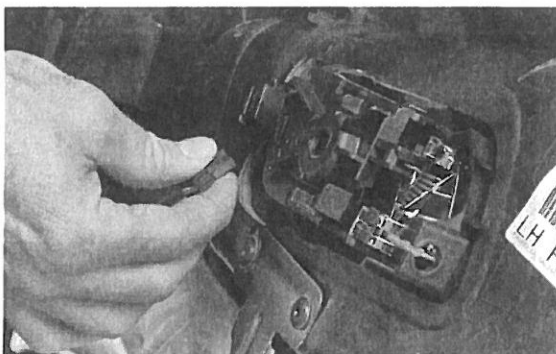
- 3 Pull the top of the vehicle door panel away from the door to disengage the upper clips.

- 4 Hold the vehicle door panel at the base, and lift it over the door lock pin.



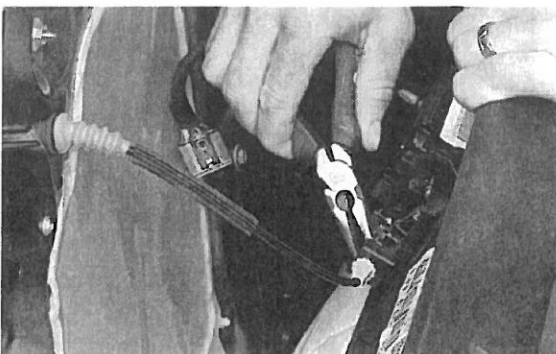
▲ Figure 19. Lifting the door panel over the lock pin

- 5 Disconnect the wiring harness between the door panel and door.



▲ Figure 20. Disconnecting the wiring harness

- 6 Disconnect the door release cable by prying the retainer clip and unhooking the cable from the door handle.

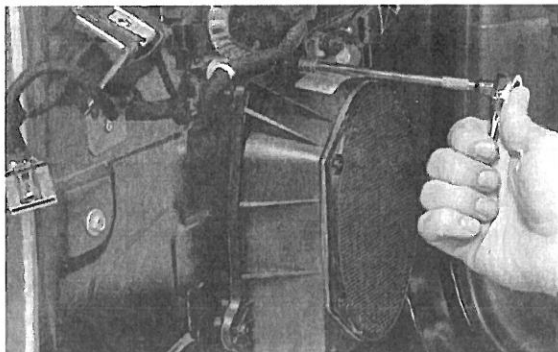


▲ Figure 21. Disconnecting the door latch cable

Removing the Vehicle Interior Door Panel

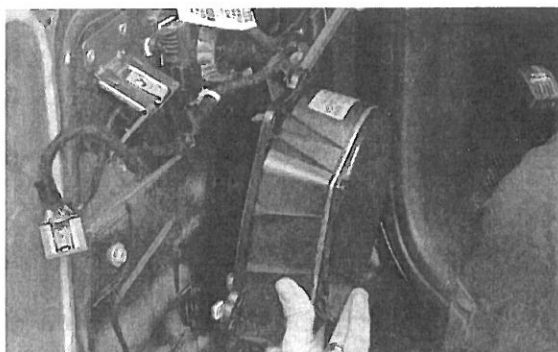
CONTINUED

- 7 Remove the three 7 mm speaker screws.



▲ Figure 22. Removing the speaker screws

- 8 Using the pry tools, gently pry the speaker from the door panel.



▲ Figure 23. Prying the speaker from the door panel

- 9 Disconnect the wiring harness on the speaker, and set it aside.



▲ Figure 24. Disconnecting the speaker wiring harness

Replacing the Lower Hinge Bolt

NOTE: Apply the Loctite on the provided replacement bolt approximately 1/4" from the head of the bolt.

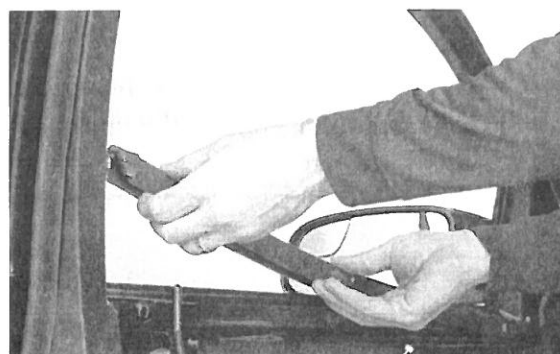
- 1 Remove the factory installed 13 mm bolt from the bottom of the lower hinge, and replace it with the supplied M8x1.0x35mm hex head bolt. Install the hex head bolt in compliance with the vehicle's factory recommended torque specification.



▲ Figure 25. Removing factory installed 13 mm bolt, and replacing it with the supplied hex head bolt.

Inserting and Securing the Ballistic Door Panel

- 1 Remove the inner rubber window weatherstrip.



▲ Figure 26. Removing the inner rubber weatherstrip

Inserting and Securing the Ballistic Door Panel

CONTINUED

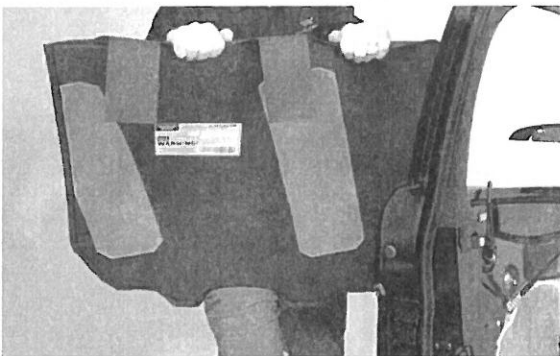
- 2** Insert the supplied panel installation tool in between the window glass and outer window weatherstrip.



▲ Figure 27. Inserting the panel installation tool

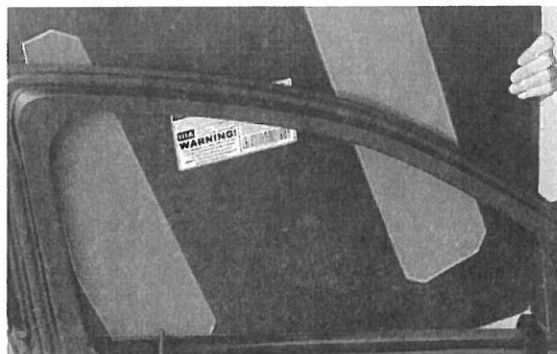
- 3** Bend the bottom of the ballistic panel away from you, pressing with your knee or hand. This creates a slight curve in the ballistic panel that matches the shape of the bottom of the Ford Interceptor Sedan door and eases installation.

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



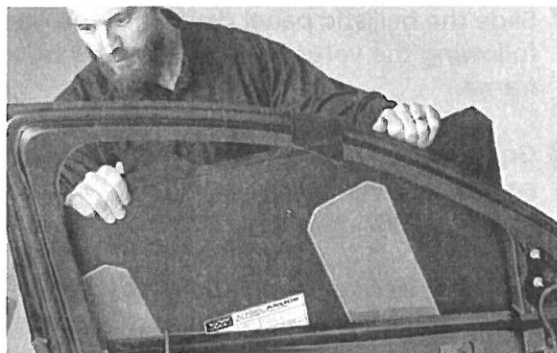
▲ Figure 28. Bending the ballistic panel to create a slight curve

- 4** Hold the ballistic door panel so its plastic anti-abrasion panels face the interior of the vehicle and away from you when standing outside the vehicle, ensuring the bottom left retainer tab faces the hinges.



▲ Figure 29. Proper placement of the ballistic panel before insertion

- 5** 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.



▲ Figure 30. Sliding the panel down into the door

Inserting and Securing the Ballistic Door Panel

CONTINUED

- 6** 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 26. Leaning back while inserting the panel to help avoid obstructions inside the door

- 7** Slide the ballistic panel down into the door, following the vertical edge of the window frame.
- 8** Grip the nylon folds at the top of the ballistic panel when the ballistic panel is inserted the majority of the way into the door.
- 9** 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 the front, top edge of the panel toward the vehicle exterior, while sliding the ballistic panel forward, to move the ballistic panel past the window track.

NOTE: To work the panel all the way forward, you may need to remove the rubber oval cover from the inside of the door. With a long pry tool, push the ballistic door panel toward the outside of the car to maneuver the ballistic door panel past the window slide channel. Be sure to replace the cover when finished.



▲ Figure 27. Gripping ballistic door panel's top-edge nylon folds and sliding the panel forward

- 10** Remove the supplied panel installation tool once the ballistic panel is seated all the way forward.
- 11** Using the pry tools, push the two teeth on the ballistic door panel under the outside sheet metal lip. The teeth are designed to sit inside the door and press upward on the inner sheet metal crease. This causes the ballistic door panel to bow out and match the shape of the door.



▲ Figure 28. Using the pry tools to push the ballistic panel down and under the outside sheet metal lip

Inserting and Securing the Ballistic Door Panel

CONTINUED

- 12** Using the provided panel installation tool, push the remaining nylon handle tabs down until they are lying flat against the outside of the glass.

NOTE: You will know the tabs are seated correctly when the glass is raised and the handles do not come back out. If the handles do come back out, repeat using the panel installation tool to push the tabs all the way down.



▲ Figure 29. Using the panel installation tool to push the remaining nylon down into the door

- 13** Install the included M8 fender washer on the replacement bolt.
- 14** Install the bottom right nylon retainer tab of the ballistic panel on the replacement bolt.



▲ Figure 30. Nylon tab placed over the replacement bolt

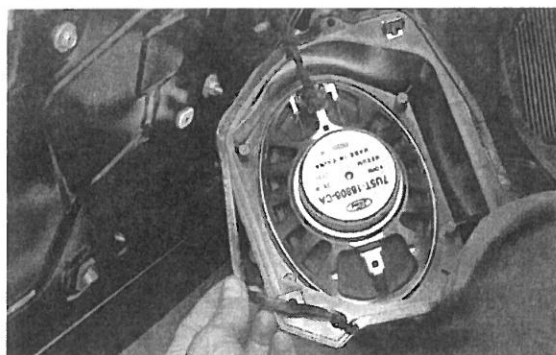
- 15** Install the second M8 fender washer over the retaining tab, and tighten the lock nut. While tightening the lock nut, ensure the replacement bolt isn't moving and not backing out while the lock nut is being tightened. When properly installed, the nylon tab of the ballistic panel is secured between the two washers and the lock nut on the longer replacement hinge bolt.



▲ Figure 31. Tightening the lock nut for proper installation

Re-attaching the Interior Door Panel

- 1** Re-install the gasket around the speaker.



▲ Figure 32. Re-installing the speaker gasket

- 2** Connect the speaker wiring harness.
- 3** Replace the speaker.

Re-attaching the Interior Door Panel

CONTINUED

- 4 Replace the three speaker screws.
- 5 Replace the rubber interior weatherstrip.



▲ Figure 33: Replacing the interior weatherstrip

- 6 Connect the door latch cable.
- 7 Connect the door lock wiring harness.
- 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.

NOTE: Ensure the wiring harness for the window control panel is protruding up through the window control panel hole and is not pinned behind the door.
- 9 Align the interior door retainers with the appropriate holes in the door.
- 10 Push firmly on each retainer area until the retainers re-engage, including the top edge.
- 11 Replace the cover behind where the side mirror is attached.

- 12 Replace the two 7 mm bolts at the bottom of the interior vehicle door panel.
- 13 Replace the 10 mm bolt from the armrest pocket.
- 14 Replace the 10 mm bolt from behind the interior door handle.
- 15 Replace the 8 mm bolt located behind the upper plastic trim bar.
- 16 Replace the Phillips screw located toward the rear end of the door panel.
- 17 Reconnect the wiring harnesses to the window control panel.
- 18 Replace the window control panel.
- 19 Replace the trim cover behind the interior door handle.
- 20 Replace the upper plastic trim bar.
- 21 Reconnect the vehicle battery.
- 22 Ensure all door functions work properly.

Completing Installation

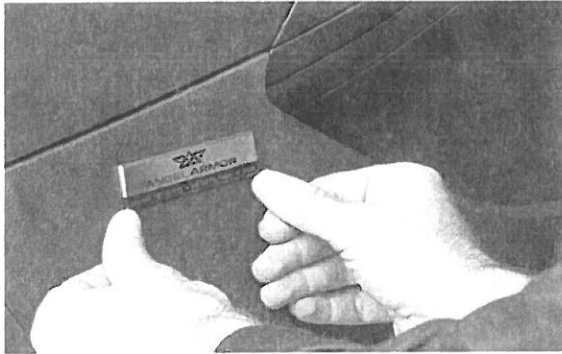
Attach the Angel Armor brand label to the interior door panel by completing the following procedure:

- A Clean the attachment location on the flat surface shown in Figure 34 with the included isopropyl alcohol wipe.
- 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 34. Applying the Angel Armor brand label

INSTALLATION COMPLETE:

Your vehicle is now equipped with advanced ballistic protection from Angel Armor.

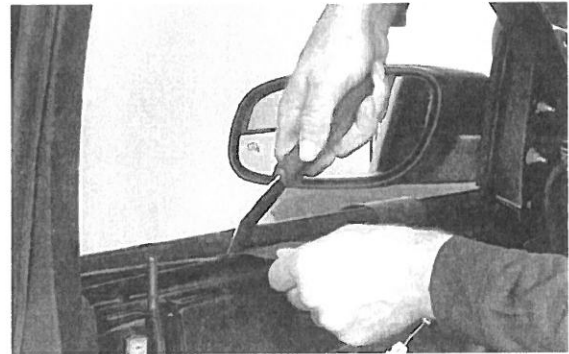
REMOVAL OR DECOMMISSION

This section describes the process for removing the ballistic door panel for decommission or transfer to another vehicle.

NOTE: Removal is almost identical to the ballistic door panel installation. The lower hinge bolt 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** Remove the interior door panel by following the steps outlined in the *Removing the Panel Mounting Bolts* and *Removing the Vehicle Interior Door Panel* sections.
- 4** Remove the nut and washers on the nylon tab
- 5** Use the pry tools to expose the nylon tabs and get them out from inside the steel metal crease.



▲ Figure 35. Exposing nylon tabs

- 6** 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.
- 7** Slide the ballistic panel toward the back of the vehicle, and then pull up and out to remove it from the vehicle door.
- 8** Replace the inner rubber weatherstrip.
- 9** Replace the interior door panel.
- 10** Re-connect the vehicle battery.
- 11** 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.



AVAIL®

BALLISTIC DOOR PANELS

LEVEL III + M855/M193/MSC



INSTALLATION GUIDE

for front driver and passenger-side doors

As shown on

FORD® POLICE INTERCEPTOR UTILITY

(2016 - 2019)



Also compatible with

Ford Explorer

(2016 - 2019)

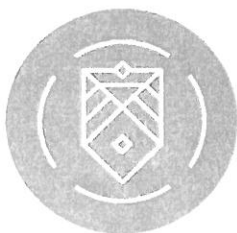


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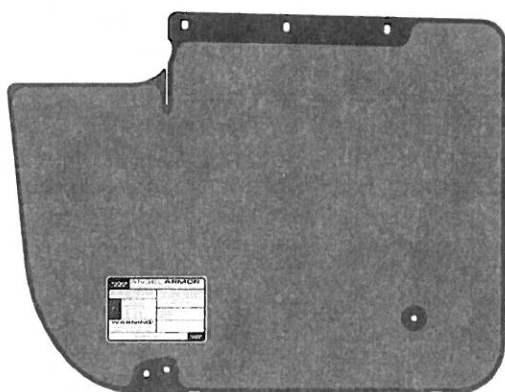


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INTRODUCTION

Congratulations on your purchase of the Angel Armor® Avail Ballistic Door Panel (Level III+) for Ford Police Interceptor Utility (2016 - 2019)! 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.



▲ Figure 1. Angel Armor Avail Ballistic Door Panel (Level III+) for Ford Police Interceptor Utility (2016 & Newer Models)

Product Description

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 Ford Police Interceptor Utility (2016 - 2019). The installation process is the same for front passenger-side doors of the Ford Police Interceptor Utility (2016 - 2019).

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 2-3 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

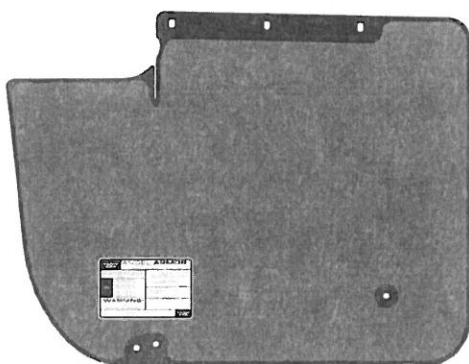
See Warranty and Terms and Conditions for important legal information on angelarmor.com. These instructions are provided for your convenience only, and Angel Armor expressly disclaims any liability for any damage to personal property or personal injury that occurs as a result of either installation or 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 Avail Ballistic Door Panel (Level III) for Ford Police Interceptor Utility (2016 - 2019)



▲ Figure 2. Avail Ballistic Door Panel for Ford Police Interceptor Utility

- One Avail Crash Bar Bracket



▲ Figure 3. Crash Bar Bracket

- One Avail Upper Mounting Bracket



▲ Figure 4. Upper Door Mounting Bracket

- One Avail Lower Mounting Bracket



▲ Figure 5. Lower Door Mounting Bracket

- One Avail Check Strap



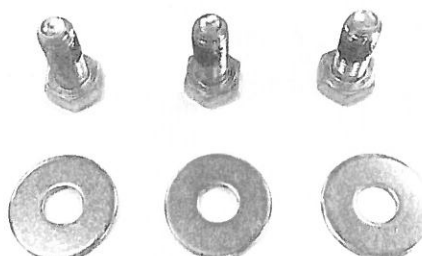
▲ Figure 6. Check Strap

- Two Avail Nylon Installation Straps



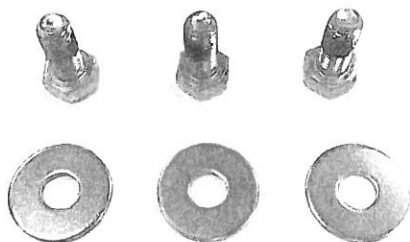
▲ Figure 7. Installation Straps

- 3 Crash Bar Bracket Mounting Bolts and 3 Washers



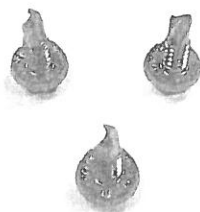
▲ Figure 8. Crash Bar Bracket Mounting Bolts and Washers

- 3 Upper Mounting Bracket Bolts and 3 Washers



▲ Figure 9. Upper Mounting Bracket Bolts and Washers

- 3 Upper Mounting Bracket Sheet Metal Screws



▲ Figure 10. Upper Mounting Bracket Sheet Metal Screws

- 2 Lower Mounting Bracket Bolts and 2 Washers



▲ Figure 11. Lower Mounting Bracket Bolts and Washers

- One Drill Template Appendix A (appended to the end of the guide)



▲ Figure 12. Drill Template Appendix A (appended to the end of this guide)

- One Isopropyl Alcohol Wipe



▲ Figure 13. Isopropyl Alcohol Wipe

- One Brand Label



▲ Figure 14. Angel Armor Brand Label

Personal Protective Equipment

- Protective Gloves
- Protective Eyewear
- Steel-Toe Boots

Required Tools

- Plastic Door Pry Tools
- Impact Driver
- Electric Drill Screwdriver
- Needle Nose Pliers
- Socket Wrench
- 3/8" Universal Socket Joint
- 6" Socket Extension
- 7, 8, 10 and 13mm Sockets, and 1/2" Sockets and/or Ratchet Wrenches
- T25 Torx Driver and T20 Torx Driver
- 7mm Drill Bit
- Torque Wrench
- Marker
- Magnetic Parts Tray

Recommended Tools

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

INSTALLATION

This section provides instructions for installing Angel Armor Avail Ballistic Door Panels (Level III+) into the Ford Police Interceptor Utility (2016 – 2019).

Overview

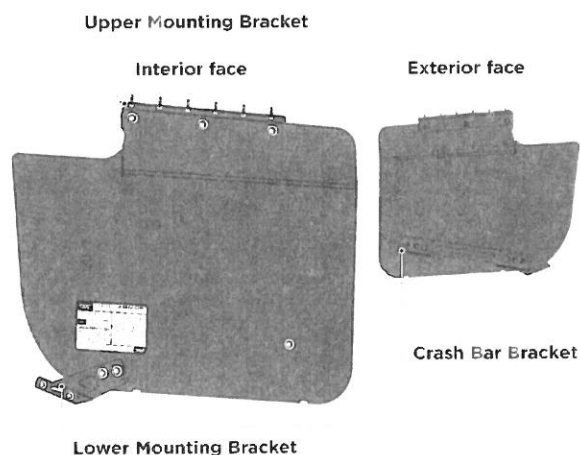
Installation of the Angel Armor Avail Ballistic Door Panel (Level III) into a Ford Police Interceptor Utility is simple and starts with applying the door hinge check strap. Door disassembly is required to install the crash bar brackets and armor mounting bracket. Once this is completed, the armor is 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 the weatherstrip, vehicle door panel, speaker and window.
- 3** Install Crash Bar Bracket.
- 4** Insert the Avail ballistic panel.
- 5** Secure the Avail ballistic panel by installing Door Upper and Lower Mounting Brackets.
- 6** Re-assemble the 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 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.



▲ Figure 15. Rendering of assembled ballistic panel and mounting brackets (driver's side shown).

PROCEDURE

Complete the following steps to properly install Angel Armor Avail Ballistic Door Panels (Level III+) for Ford Police Interceptor Utility (2016 & Newer Models).

Installing Check Strap

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



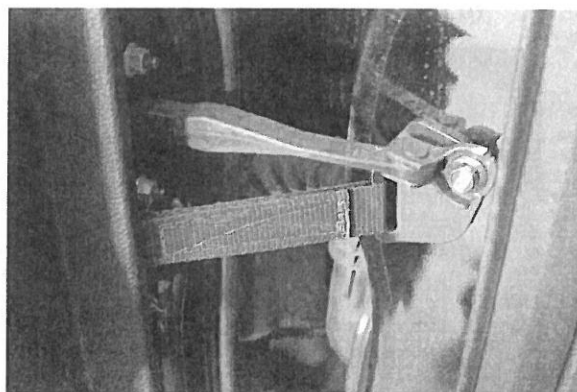
▲ Figure 16. OEM check strap.

- 3 Using a 10mm socket, remove the bolt from the check strap on the cab side of the vehicle. It may help to have an extension to access the bolt head.
- 4 Next, remove the two nuts securing the OEM check strap assembly to the door frame.
- 5 Pre-bend the nylon webbing check strap so that when the door closes, the

nylon bends outward. Pre-bending the check strap gives the nylon material a “memory” to ensure it does not affect door closure.

- 6 Install the nylon check strap / 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.
- 7 Next, insert the other bracket on the opposite end of the nylon webbing under the OEM check strap mount at the A-pillar of the vehicle. The two mounting holes should align and the small locating pin on the OEM check strap mount should align with the small locating hole on the new bracket. Use the original bolt to securely fasten the two check strap mounts to the A-pillar.

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



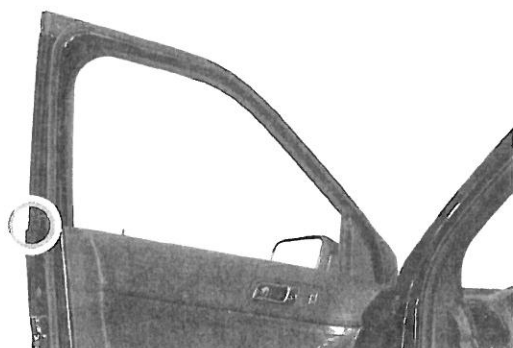
▲ Figure 17. Proper placement of the secured check straps.

Preparing for Ballistic Door Panel Installation

- 1 Open the front driver-side door and lower the window glass completely.
- 2 Turn off the vehicle ignition switch, and remove the key.

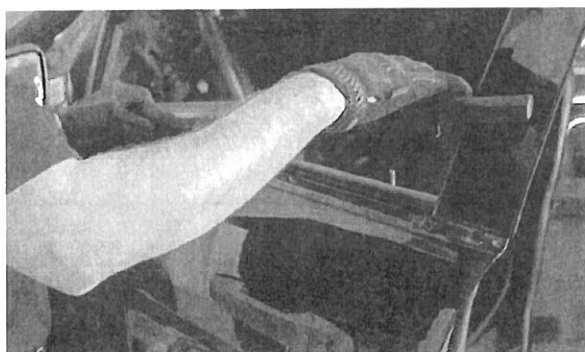
Removing the Window Weatherstrip

- 1 Using a T20 driver, remove the window weatherstrip screw at the back of the door.



▲ Figure 18. Removing the back window weatherstrip screw.

- 2 Lift up on the outer window weatherstrip to remove it from the door.



▲ Figure 19. Removing the outer window weatherstrip.

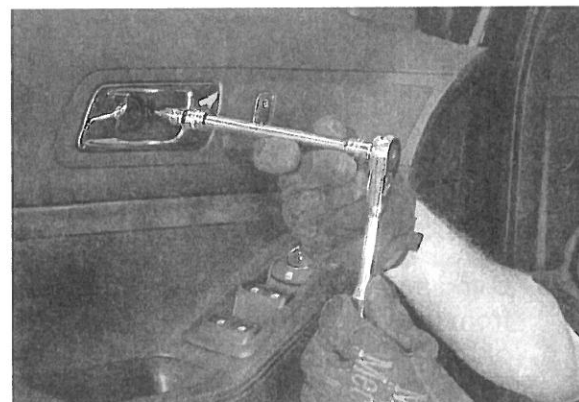
Removing the Vehicle Door Panel and Speaker

- 1 Using a trim pry tool, remove the plastic trim cover behind the interior door handle.



▲ Figure 20. Remove the interior door handle trim cover.

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



▲ Figure 21. Removing the interior door handle bolt.

Removing the Vehicle Door Panel and Speaker

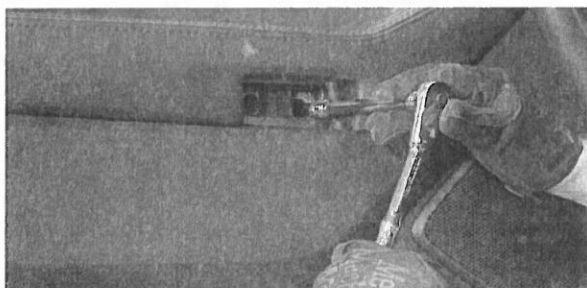
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- 3** Using a trim pry tool, remove the plastic trim cover in the armrest pocket.



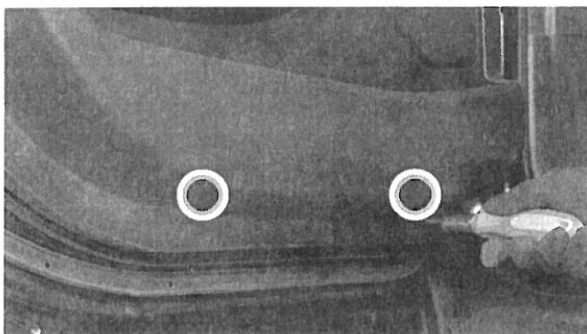
▲ Figure 22. Removing the armrest pocket trim cover.

- 4** Remove the two 10mm hex bolts from the armrest pocket.



▲ Figure 23. Removing the armrest pocket bolts.

- 5** Locate the two 9/32" hex bolts from below the map pocket and remove.



▲ Figure 24. Removing the door panel bolts.

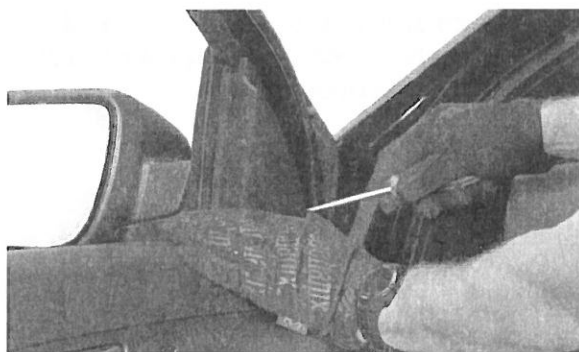
- 6** Using a trim pry tool, lift and remove the window control panel from the door panel.



▲ Figure 25. Prying up the window control panel.

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

- 8** Using a trim pry tool remove the side mirror interior trim panel.



▲ Figure 26. Prying the side mirror interior trim panel away from the door.

Removing the Vehicle Door Panel and Speaker

CONTINUED

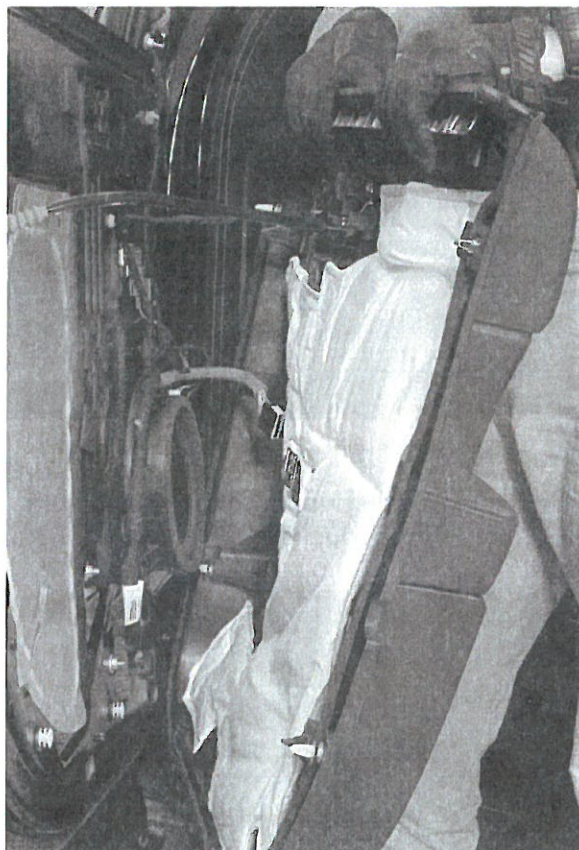
- 9** Starting at the lower back corner, pry the interior vehicle door panel away from the door to disengage the plastic snaps. Work your way along the bottom edge and both sides of the door panel to disengage all the snaps.



▲ Figure 27. Prying the door panel away from the door skin.

- 10** Once all snaps have been released, hold the vehicle door panel at the base and lift it over the door lock pin.

- 11** Tilt the top edge of the door panel toward yourself while supporting the bottom with your legs.



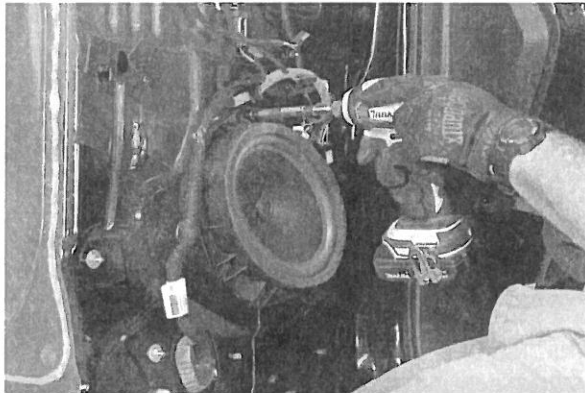
▲ Figure 28. Tilting the door panel away from the door skin.

- 12** Disconnect all wiring harness clips. There are two on the driver side and three on the passenger side (possibly more depending on the vehicle trim package).
- 13** Disconnect the door handle cable by squeezing the two prongs on the black plastic collar with a pair of needle nose pliers.

Removing the Vehicle Door Panel and Speaker

CONTINUED

- 14** Pull the black plastic collar out of the bracket and swing the door handle cable away from yourself.
- 15** Lift the metal cylinder out of its socket (located at the end of the door handle cable).
- 16** Set the door panel aside.
- 17** Use a 9/32" driver to remove the four 9/32" hex screws that mount the speakers.



▲ Figure 29. Removing the speaker screws.

- 18** Pull the speaker out of the door frame, and press the release tab to disconnect the power plug. Set aside.

Removing the Vehicle Window

- 1** Lower the window.
- 2** Remove the internal plastic weather seal.
- 3** Use a 10mm socket to remove the two window mounting bolts at the bottom of the window to release it from the regulator bracket.



▲ Figure 30. Removing the window mounting bolts.

- 4** Carefully slide the window glass up and out of the door window channel to remove it and set aside.



▲ Figure 31. Removing the window glass.

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

Removing the Lower Front Window Track

- 1 Locate the front window track inside the front of the door. Use a 10mm socket to remove the 10mm hex bolt that secures the track to the inner door sheet metal.



▲ Figure 32. Removing the window track bolt.

- 2 Gently pull the window track down to disconnect it from the upper front window track and set aside.



▲ Figure 33. Removing the window track.

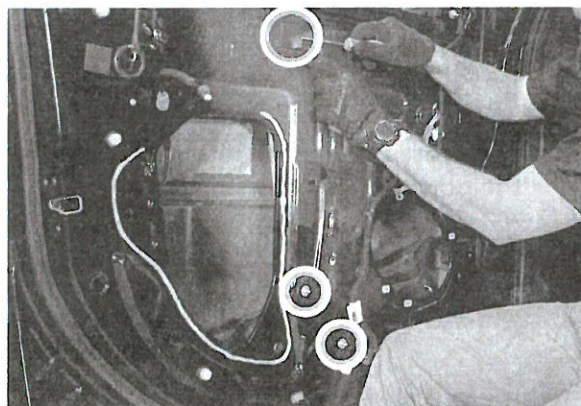
Removing the Front Door Window Regulator

- 1 Disconnect the wiring harness from the window regulator.



▲ Figure 34. Disconnecting window regulator wiring harness.

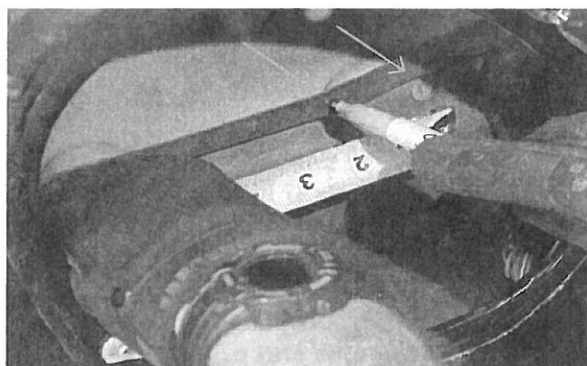
- 2 Locate the two 10mm hex nuts and one 10mm hex bolt (the two hex nuts are located at the bottom, center of the door and the hex bolt is located at the top center of the door behind a small patch of adhesive-backed foam). Remove the fasteners and pull the window regulator bracket from the door cavity and set aside.



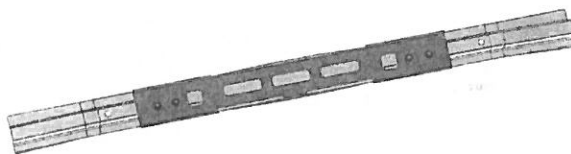
▲ Figure 35. Location of the three window regulator fasteners.

Inserting the Door Crash Bar Mounting Bracket

- 1 Locate the forward hole on the crash bar and make a mark ~2 inches toward the rear of the door from the center of the hole. This will mark location of the forward edge of the Crash Bar Mounting Bracket shown below once installed.

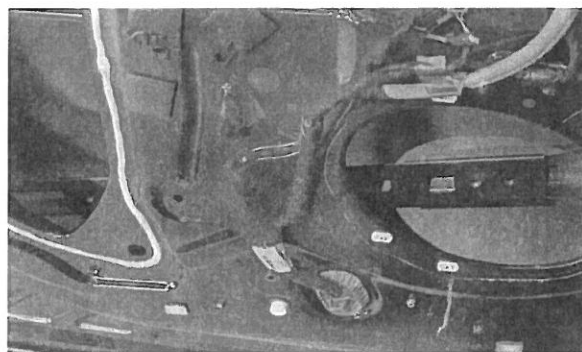


▲ Figure 36. Marking 2 inches toward the rear of the vehicle from the center of the forward crash bar hole.



▲ Figure 37. Rendering of the Crash Bar Mounting bracket showing location on crash bar.

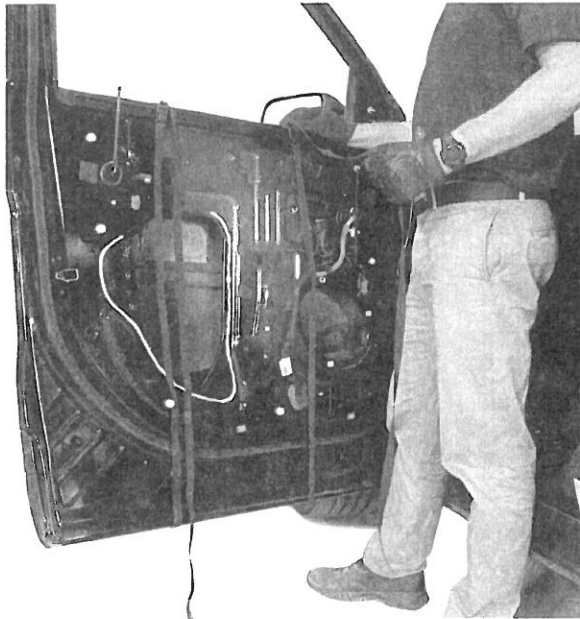
- 2 Insert the Crash Bar Mounting Bracket into the door cavity via the large access hole and position the bracket such that the bent tabs of the bracket hook onto the top of the crash bar flange and the forward edge meets the mark made in the previous step.



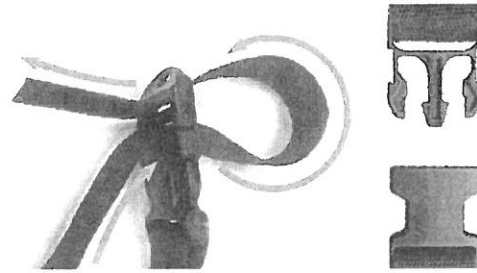
▲ Figure 38. Crash Bar Mounting bracket placed on crash bar.

Inserting and Securing the Ballistic Door Panel

- 1 Locate the two nylon installation straps. These adjustable straps are included to help support the weight of the steel armor while installing it into the door.
- 2 Loop the installation straps around the door with the adjustment feature of the straps easily accessible to the inner side of the door. The straps should create a cradle in the center in the window channel of the door, between the inner and outer skin. Direct the male side of the clip facing down for ease of adjustment. See Figures below.



▲ Figure 39. Looping the installation straps around the door.



▲ Figure 40. Strap path through buckle and buckle direction.

- 3 Hold the ballistic door panel so the product label faces the interior of the vehicle.

▲ **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.**

Inserting and Securing the Ballistic Door Panel

CONTINUED

- Carefully insert the armor through the window opening and into the cradle created by the installation straps. Ensure the straps align with the slots on the bottom of the armor panel to prevent the panel from slipping while lowering into the door.



▲ Figure 41. Placing the armor into the door.

- Slowly adjust the left and right installation straps to begin to lower the armor into the door. Stop when the lower bolt holes align with the holes in the crash bar bracket.

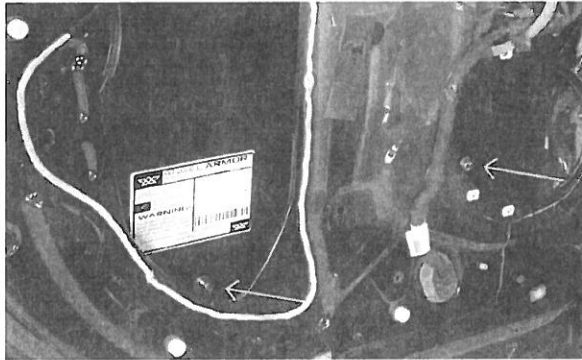


▲ Figure 42. Using the cradle created by the installation straps to lower the armor into the door.

Inserting and Securing the Ballistic Door Panel

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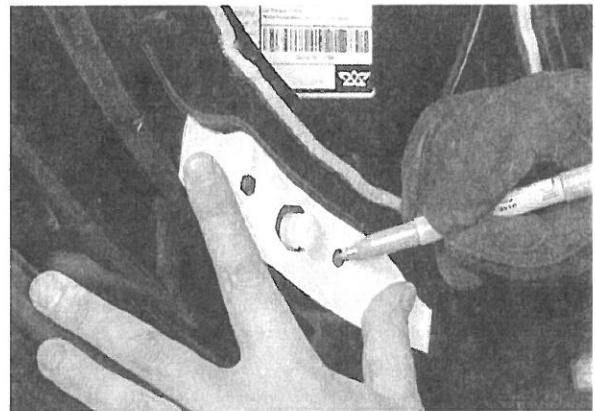
- 6 With the armor aligned with the crash bar, loosely install the front crash bar M8x30mm bolt with washer through the slotted hole at the front portion of the armor. Then place a second M8x30mm bolt and washer into the right-most slotted hole in the rear portion of the armor and loosely thread into the crash bar bracket, leaving approximately 1/4" (6mm) of threads showing. These bolts will be tightened later in this installation.



▲ Figure 43. The front, top crash bar bracket loosely installed.

- 7 With the front and rear crash bar bolts loosely in place, lower the installation straps so that the full weight of the armor panel rests on the bolts. Remove the two installation straps and discard them. (The clips on the straps will need to be removed so the straps can be pulled out of the door skin.)

- 8 Locate the lower mounting bracket drilling template that came with the kit (Appendix A appended to the end of this guide). Cut out the template and holes within for the corresponding door (driver or passenger side). Position the template over the hole in the lower rear corner of the inner door skin as shown and use the profile to align the position of the two holes to be drilled and use a marker to mark the holes.



▲ Figure 44. Marking the hole locations using the template provided (appended to the end of this guide).

- 9 Center punch the hole locations. Using a 7mm drill bit, drill the two holes and use a deburring tool to deburr the edges. Apply a thin coat of black touch-up paint to each hole to prevent corrosion.

Inserting and Securing the Ballistic Door Panel

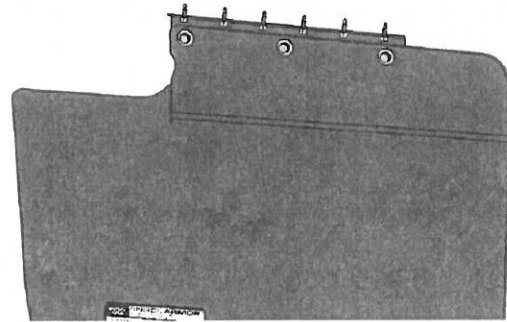
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- 10** Insert the lower mounting bracket into the door cavity and position into place in the lower rear corner of the door. Manipulate the bracket so the slotted cutout in the bracket hooks around the protruding crash bar bolt and the two 6mm bolt holes align with the recently drilled holes in the inner sheet metal. Once in place, insert the third and final M8x30mm bolt and washer through the lower mounting bracket and loosely thread into the crash bar. Finally, insert the two M6x20dmm bolts and washers through the drilled holes in the sheet metal and into the lower mounting bracket. Tighten into place (Torque to 9 ft-lbs).



▲ Figure 45. Lower mounting bracket loosely installed.

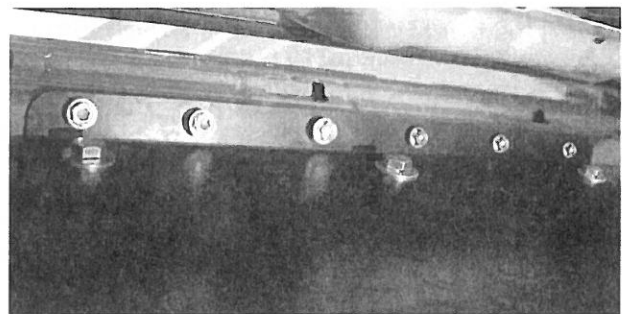
- 11** At the top of the armor, use a 1/2" socket to loosely attach the door mounting bracket to the armor as shown using the three 8mmx20mm bolts. Ensure the bracket presses up against the top of the door frame.



▲ Figure 46. Rendering of the armor and upper mounting bracket showing relative location and placement.

- 12** Using a 10mm socket and impact driver, insert six sheet metal screws through the six holes at the top half of the upper door mounting bracket to attach the bracket to the door frame.

! NOTE: The sheet metal screws will drill six cavities into the metal portion of the door frame and will not show through the outside of the door skin. Ensure the screws are drilled into flat areas of sheet metal by shifting the loosened armor panel left or right as necessary. **DO NOT OVERTIGHTEN** these screws as it could strip out the sheet metal.



▲ Figure 47. The top bracket loosely installed. Looking up from the bottom of the door.

Inserting and Securing the Ballistic Door Panel

CONTINUED

- 13** With the screws in place, the upper mounting bracket and crash bar bracket bolts can be firmly tightened (Torque to 18 ft-lbs).
- 14** Confirm the armor is in its final position by checking the following:
 - The armor sits flush to the crash bar.
 - The bottom mounting bracket sits flush with the armor panel and mounts tightly to the inner side of the door frame.
 - The door handle wiring harness connector sits freely and is not pinched by the upper edge of the armor panel.
 - Firmly grip the armor panel and attempt to shake – there should be no movement of the armor panel.
 - Check that all bolts are torqued appropriately.

Replacing the Lower Front Window Track

- 1** Replace the front window track inside the front of the door. Gently push the window track up to reconnect it to the upper front window track mount.
- 2** Replace and secure the 10mm hex bolt.

Replacing the Front Door Window Regulator

- 1** Replace the window regulator bracket within the door cavity reconnecting to the fasteners. Replace and secure the two 10mm hex nuts and one 10mm hex bolt (and replace small patch of adhesive-backed foam).
- 2** Reconnect the wiring harness to the window regulator.

Replacing the Front Door Window

- 1** Carefully insert the window glass from outside the door into the window channel and lower into the door cavity.
- 2** Align the two mounting holes in the plastic tabs on the bottom of the window with the corresponding holes in the regulator bracket. Attach using the original hardware using a 10mm socket.

Replacing the Speaker and Vehicle Door Panel

- 1** Re-attach the internal plastic weather seal around the rear access hole.
- 2** Place the speaker in the door frame and mount to the door using the four 9/32" hex screws and connect the power plug.
- 3** Hold the door panel near the door frame and tilt the top toward yourself while supporting the bottom edge with your legs.
- 4** Connect all wiring harness clips. There are four on the driver side and three on the passenger side.

Replacing the Speaker and Vehicle Door Panel

CONTINUED

- 5** Replace the metal cylinder back in its socket in the interior door handle.
- 6** Pull the black plastic collar away from the bracket and place the metal cable into the bracket.
- 7** Slide the black plastic collar into the bracket until the two plastic prongs snap securely in place.
- 8** Align the door lock post with the hole at the upper rear corner of the door panel.
- 9** Lower the door panel onto the lip at the top of the metal door frame and press firmly until seated.
- 10** Line up the white plastic snaps and the black plastic peg on the back of the door panel with their corresponding holes in the metal door frame.
- 11** Firmly tap on the snaps along the bottom edge and both sides of the door panel.
- 12** Use a 10mm socket to replace the bolts behind the interior door handle and armrest pocket.
- 13** Snap the black plastic trim covers back into their locations behind the door handle and inside the armrest pocket.
- 14** Install the two 9/32" hex bolts below

the map pocket of the door panel.

- 15** Connect the window control panel wiring harness.
- 16** Replace the window control panel.
- 17** Reconnect the vehicle battery.
- 18** Roll the window all the way down.

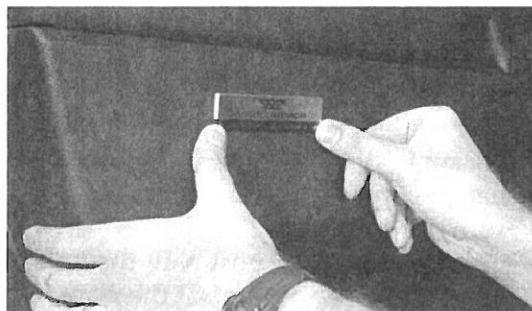
Replacing the Window Weatherstrip

- 1** Press down on the front end of the weather strip and move backward. Pressing the entire length of the weatherstripping into the window frame to ensure proper snap engagement.
- 2** Using a T20 driver, replace the weatherstripping screw at the back of the door.

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 Gently close door to check alignment.
 - B Loosen the door side hinge nuts.
 - C 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.
 - D Re-torque bolts, gently close the door and inspect closure/alignment.
 - E Repeat as necessary.
- 2 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 48. Applying the Angel Armor brand label.

REMOVAL OR DECOMMISSION

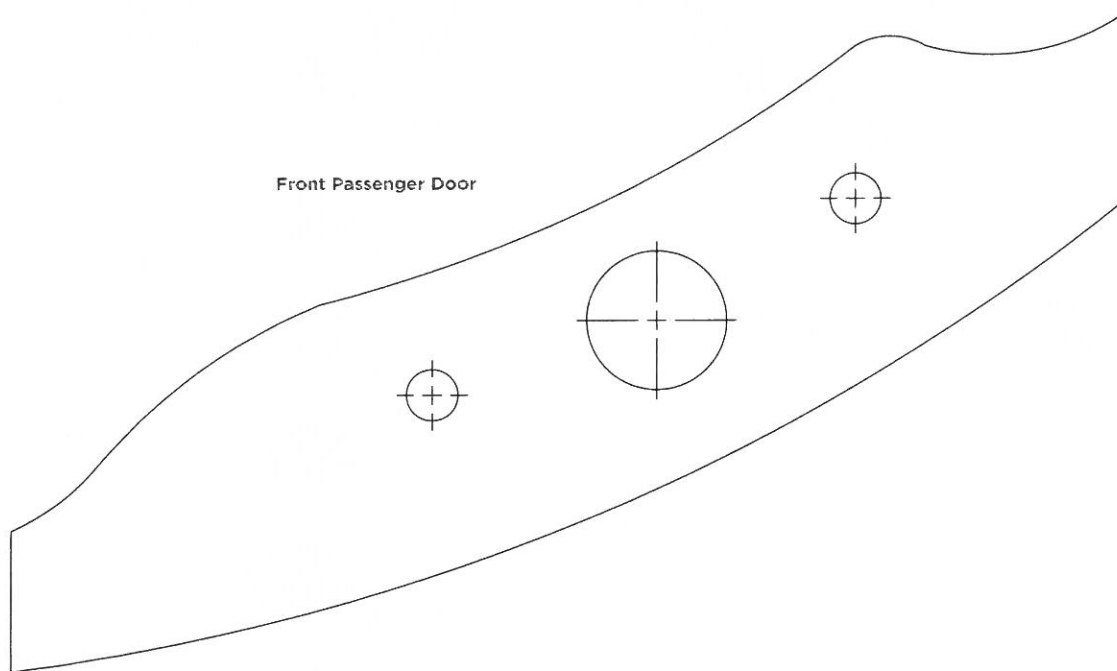
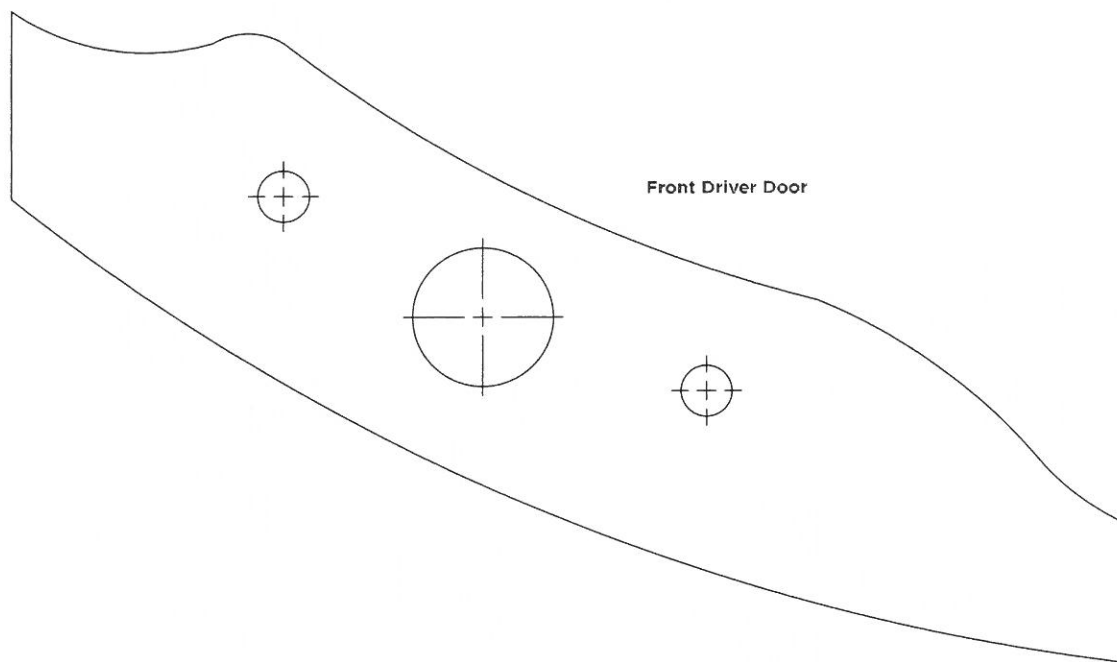
If removing the armor for decommission or transfer to another vehicle, contact Angel Armor for additional support as needed.

INSTALLATION COMPLETE:

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



Front Door Lower Mounting Bracket Drill Template



EXPRESS LIMITED WARRANTY, LIMITATION OF LIABILITY AND PRODUCT USAGE

VERSION DATE: JUNE 2020

Note to Purchaser: Angel Armor reserves the right in its sole and absolute discretion to modify or replace all or any portion of these warranty terms with respect to subsequent transactions with purchaser.

1. Applicable NIJ Standard. The Angel Armor, LLC (“Angel Armor”) product listed above (the “Product”) has been tested at a laboratory accredited by the National Institute of Justice (“NIJ”) and independently verified to meet or exceed the minimum ballistic resistance performance specified under the following NIJ Standard (the “Standard”): Ballistic Resistant Protective Materials – NIJ STD-0108.01, against the threat level designated on the product’s label. Angel Armor’s statement that the Product meets or exceeds the Standard is valid only for new and unused product as of the time of sale, and is subject to all of the limitations and qualifications set out below.

2. Scope and Duration of Our Express Limited Warranty; Sole and Exclusive Remedy.

a. Subject to all of the terms and conditions of this document, Angel Armor warrants to purchaser only that: (1) the Product has been tested against the Standard described in Section 1 above; and (2) that for a period of sixty (60) months after the date of sale to the original purchaser, the Product shall be free from defects in material and workmanship. The sole and exclusive means for determining whether the foregoing expressly limited warranty has been met will be the performance of the examination and optional testing protocols described in Section 2.b. below. Where the date of sale cannot be clearly established and/or documented, Angel Armor’s warranty period shall be held to commence on the date of commencement of manufacture of the lot from which the relevant Product unit was made. The Product must be used and maintained in strict accordance with the instructions set out in this document and in our Product specifications, and compliance with all of the foregoing is a condition precedent to any warranty claim. IN NO EVENT SHOULD OUR PRODUCTS BE

RELIED UPON AFTER THE EXPIRATION OF THE SIXTY (60) MONTH WARRANTY TERM.

b. In the event that the purchaser returns a Product unit based on a claim that the Product has not complied with our express limited warranty in this document, Angel Armor will use reasonable commercial efforts to examine the returned unit (if made available by the purchaser); and to verify and determine the cause of the alleged breach of the warranty (e.g., by examining whether multiple units of Product that were manufactured from the same lot of ballistic material have been returned). Angel Armor may, at its discretion, conduct additional testing of the returned unit or other units of Product from the same lot (if either is available). Notwithstanding any contrary provision or representation, whether the Product unit in question complied with the Standard shall be determined exclusively by Angel Armor based on its internal examination and, if conducted, the testing described above. Any ballistic performance or other tests performed by the purchaser or any other third party shall not be valid in any manner whatsoever for purposes of warranty claims. For the avoidance of doubt, the Product warranty is limited to only those threats specifically identified in the Standard designated above, and does not extend to any special or other threats not specifically identified in the Standard. If Angel Armor in its sole and absolute discretion determines that a product does not conform to the express limited warranty in Section 2.a., Angel Armor shall at its election replace, repair, or issue a pro-rated purchase price credit for such Product unit. Such repair, replacement or refund shall be Angel Armor's sole obligation and purchaser's sole remedy with respect to a breach of warranty claim. A Return Materials Authorization ("RMA") number must be obtained from Angel Armor prior to returning any Product. RMA number requests and all other warranty-related correspondence should be directed to service@angelintelligence.com. All returns shall be made to Angel Armor's manufacturing facility indicated in the RMA and must include: (1) proof of date of purchase; and (2) documentation (including, where available, images of the damage) specifying the claimed defect and all relevant supporting information.

3. Disclaimer of Any Other Express Warranties and Implied Warranties; Limitation of Liability

a. **Warranty Disclaimer.** The express limited warranty in Section 2.a. above is the sole and exclusive warranty made by Angel Armor with respect to the Product. Other than through an express written agreement signed by an authorized Angel Armor officer and our original purchaser, our warranties may not be altered. Without limiting the generality of the foregoing, our warranties may not be and are not expanded or altered by any terms or conditions on a Purchase Order; by any representations, descriptions, course of dealing, trade usage, technical advice, service, samples, models, or marketing materials; or by any acts, statements, or agreements done or purported to be made by any third party (e.g., by any distributor, dealer, or agent of Angel Armor).

ANGEL ARMOR MAKES NO OTHER WARRANTIES – EXPRESS, IMPLIED, OR STATUTORY – INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, OR NON-INFRINGEMENT.

b. **LIMITATIONS OF LIABILITY.** IN NO EVENT SHALL ANGEL ARMOR (OR ANY OF OUR MEMBERS, MANAGERS, OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS) BE LIABLE FOR ANY OF: (I) THE COST OF REPLACEMENT PRODUCTS; (II) ANY PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, ANTICIPATED OR LOST PROFITS, INCIDENTAL DAMAGES, LOSS OF TIME, OR OTHER INDIRECT LOSSES OR EXPENSES THAT ARISE FROM ANY CAUSE RELATING TO OUR PRODUCT, REGARDLESS OF THE FORM OF THE ACTION, WHETHER IN TORT (INCLUDING NEGLIGENCE), CONTRACT, STRICT LIABILITY OR OTHERWISE, AND REGARDLESS OF WHETHER ANGEL ARMOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; OR (III) DIRECT DAMAGES EXCEEDING THE PURCHASE PRICE ACTUALLY PAID FOR THE PRODUCT UNIT(S) GIVING RISE TO SUCH PURPORTED LIABILITY.

c. **Compliance with Law.** Certain jurisdictions do not permit certain limitations on warranties or remedies. In the event the laws of any jurisdiction apply to a transaction covering our products, the foregoing limitations in Sections 3.a. and 3.b. may be amended insofar, and only insofar, as required by such laws.

4. **Conditions Precedent to and Limits on Warranty Coverage**

a. Product Design and Dimensions. The Product is designed to allow for its insertion into certain areas of certain vehicle types specified in our individual Product specifications. This design requires the Product to incorporate holes, gaps, and other similar features to enable the vehicle part (e.g., the door) to function, and to allow insertion into the vehicle by the purchaser or the purchaser's agents (e.g., upfitter, installer, mechanic). Angel Armor's warranty does not apply to any such holes, gaps or similar Product design features, which areas may provide a lower level of protection than other parts of the Product, or no protection at all. Angel Armor also notifies purchaser that the design of the Product may allow it to be subject to risk of removal and theft, even if the vehicle is otherwise locked, and that installation of this Product may affect how vehicle panel performs from day to day or in the event of an accident due to increased weight and differences in material composition.

b. Modification and Misuse. Angel Armor has delivered the Product units ready for installation and use in accordance with its specifications and related installation instructions. Failure to abide by the installation instructions may not only void the express limited warranty, but may also impact performance of the Product, as well as the vehicle into which it has been installed. Angel Armor shall not be held liable for any damage caused by an improper installation of the Product. Our express limited warranty above applies only to our Products as originally manufactured by or for Angel Armor. Our warranty shall be void as to Product units that have been changed, modified, or altered in any way by any person or entity other than Angel Armor. Our warranty also shall be void as to any Product unit that has been subjected to misuse, abuse, accident, neglect, breakage, alteration, damage, improper storage or handling, theft, or any repair or service not performed by Angel Armor. For the avoidance of doubt, "misuse" for this purpose includes but is not limited to any one or more of the following: cutting, piercing, or attempting to shape all or any portion (e.g., the outer layer) of the Product unit; applying glues, solvents, or other chemicals to the Product unit; exposing the Product unit to extremes of temperature, humidity, or other environmental conditions (whether in use or in storage) attempting to install the Product unit other than in accordance with Angel Armor's installation instructions; or taking any other action that would expose or damage the ballistic resistance technologies incorporated within the Product unit. In addition, "misuse" also covers

damage to the Product unit resulting from the operation of the vehicle into which the Product is inserted, including as non-exclusive examples car accidents, electrical short circuits, and manufacturing defects or part failures within the vehicle. In addition to voiding out the warranty, any of the foregoing actions or events could cause the Product unit to fail and could expose the user to increased risk of serious injury or death.

c. Specific Product Usage Limitations and Product Warnings

FAILURE TO CLOSELY FOLLOW ALL WARNINGS AND INSTRUCTIONS WILL VOID ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY BALLISTIC PERFORMANCE WARRANTY, AND COULD LEAD TO SERIOUS INJURY OR DEATH.

Without limiting the effect of Sections 4.a. or 4.b. above, or of the prior sentence, the following instructions and warnings are a non-exclusive list of instructions and warnings that are important to the proper use of the Products. The warnings below further define and limit the scope of Angel Armor's limited express warranty. Failure to follow the instructions below will void our warranty obligations.

- i. Any combat situation or other hostile environment is inherently hazardous. The Product will not provide protection from all threats potentially faced. The Product is a last resort measure to reduce risk after all other actions and methods to preserve personal safety have failed. Without limiting the generality of the foregoing, the Product is not designed to protect against bursting munition threats such as IED's, mines, hand grenades, mortar fire and/or sharp-edged or pointed objects. Also, should the Product be struck by a projectile close to the panel's edge, the Product's ability to dissipate the projectile's energy may be adversely impacted.
- ii. Do not remove or obscure the affixed Product label. It provides important information specific to the Product including the Standard and the types of threats against which the Product has been tested, as described above. Your removal or obscuring of the Product label or messaging will void our warranty, and also could cause increased risk of serious injury or death.
- iii. Purchase this Product only if it is appropriate to your threat risk. It is your obligation to determine in advance if the Product is designed and tested against these types of threats. Without limiting the generality of the foregoing sentence, the

Products are designed to lessen the risk of injury or death from those threats indicated on the affixed Product messaging and as described in the Standard. User should read and fully understand that Standard's various threat levels, and the limitations on the protection afforded by each.

iv. Even for those threats included within the Product's specified NIJ threat level, the Product is only ballistic resistant, NOT "bullet proof". Even where a Product has stopped a threat, some degree of injury to the user could occur, and death is still possible. Ballistics are highly unpredictable and projectiles of any sort can ricochet or deflect off of the Product, and/or shatter into fragments that can pass through the Product, in either case possibly resulting in injury or death.

v. The greater the amount of impacts and the closer the proximity of each impact, the greater the possibility a projectile may penetrate the Product, resulting in serious injury or death.

vi. Purchaser or its agents must carefully inspect each Product unit before using or installing it. Should the Product unit be broken, interrupted, cracked or damaged in any way, it should immediately be sent to Angel Armor or its authorized dealer for an inspection using the RMA process described above. Do not use any Product unit if it is chipped, cracked, delaminated or separated, or shows any other physical change or deterioration. Any of the foregoing may either cause the product to be ineffective or indicate that it has become ineffective, exposing the user to increased risk of serious injury or death.