US AIR FORCE HEADQUARTERS/ASFSC INTERCEPTOR PROGRAM

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Interceptor

Tactical Body Armor System

Selected on performance and cost factors to maximize military utility.

Basic Outer Tactical Vest with Removable Front (right & left) and Back Ballistic Panels

+

Collar/Yoke Assembly (Permanent Yoke Ballistics) (Removable Collar Ballistics)

+

Throat Protector (Removable Ballistic Panel)

+

Groin Protector (Removable Ballistic Panel)

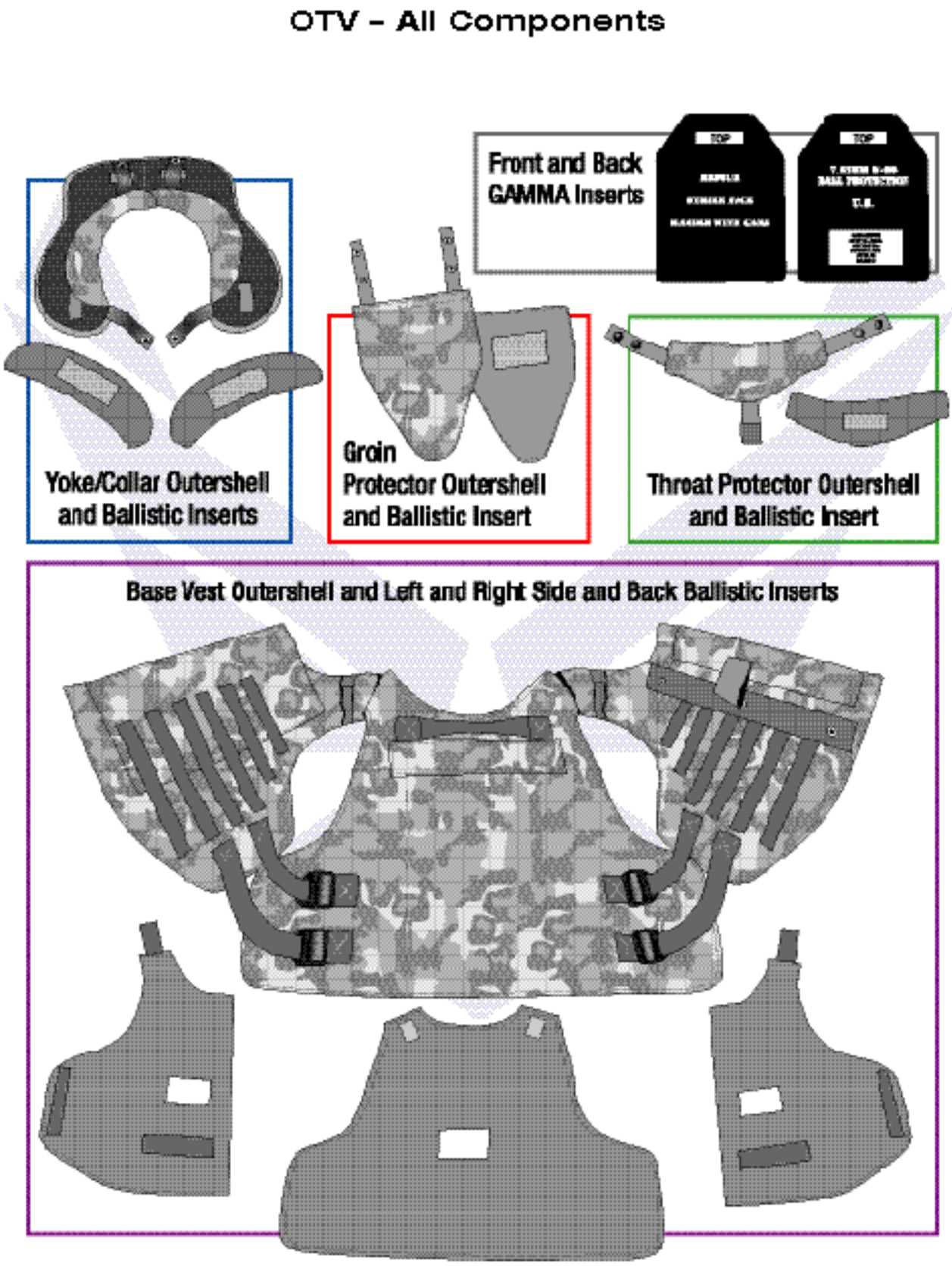
GAMMA PLATES

I. Description – Introduction to Product

A. OTV (Outer Tactical Vest)

1. Parts

a. Illustrations with NSNs



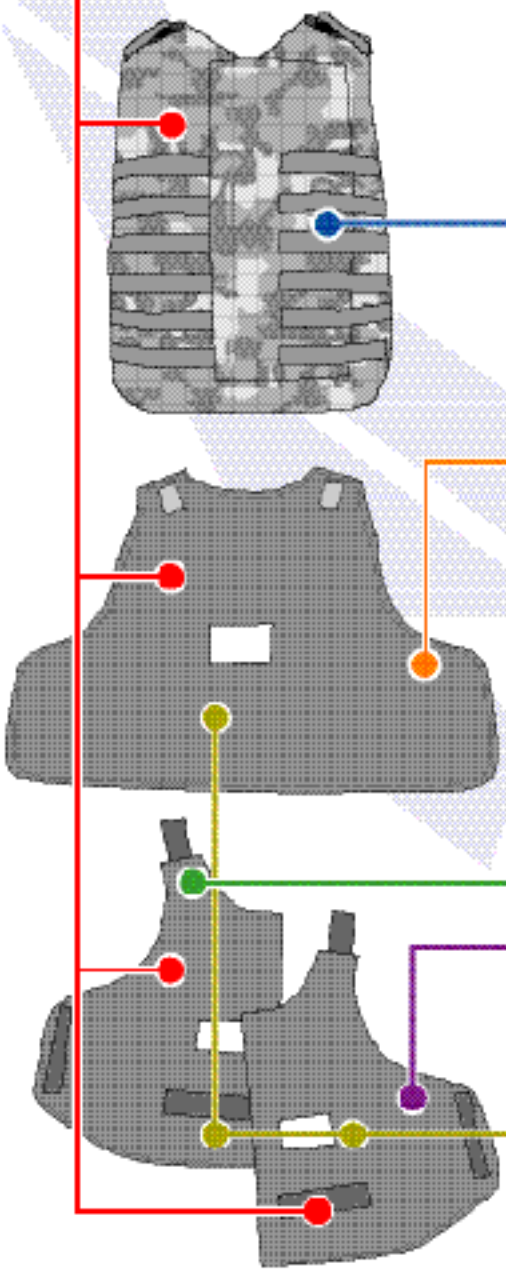
I. Description – Introduction to Product

A. OTV (Outer Tactical Vest)

1. Parts

a. Illustrations with NSNs

OTV – Base Vest



NATIONAL STOCK NUMBERS

Base Vest, Assembly

Size	Number
XS	8470-01-465-1876
S	8470-01-465-1901
M	8470-01-465-1904
L	8470-01-465-1907
XL	8470-01-465-1911

Base Vest, Outershell

Size	Number
XS	8470-01-465-1918
S	8470-01-465-1924
M	8470-01-465-1926
L	8470-01-465-1928
XL	8470-01-465-1929

Ballistic Panel, Back

Size	Number
XS	8470-01-465-9481
S	8470-01-465-9482
M	8470-01-465-9483
L	8470-01-465-9486
XL	8470-01-465-9487

Ballistic Panel, Left Front

Size	Number
XS	8470-01-465-0396
S	8470-01-465-0399
M	8470-01-465-0400
L	8470-01-465-1569
XL	8470-01-465-1571

Ballistic Panel, Right Front

Size	Number
XS	8470-01-465-1614
S	8470-01-465-1615
M	8470-01-465-1642
L	8470-01-465-1676
XL	8470-01-465-1677

Ballistic Panel Set

Size	Number
XS	8470-01-465-1194
S	8470-01-465-1195
M	8470-01-465-1196
L	8470-01-465-1198
XL	8470-01-465-1199

A. OTV (Outer Tactical Vest)

1. Parts

Gamma Plate

Weight: 5.2 lbs. in 10" x 12"

Ballistic Protection	RDS	Velocity (in fps)
	5.56 mm M 855	3350+
	7.62 x 51 M80 Ball	2925+
	7.62 x 54 R LPS	2400+

One Size Fits All (OSFA)

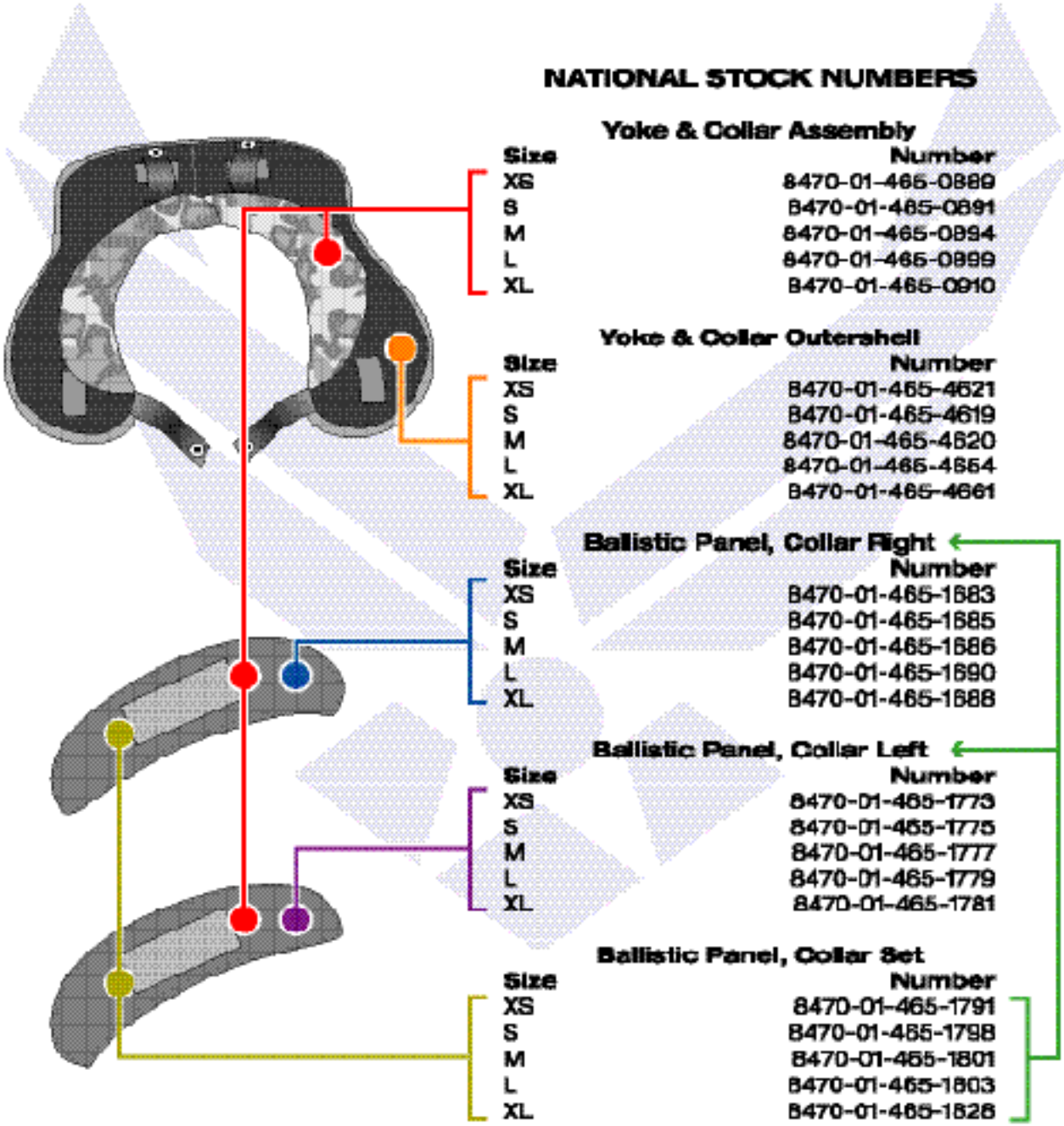
10" x 12"

A. OTV (Outer Tactical Vest)

1. Parts

a. Illustrations with NSNs

Yoke/Collar Assembly

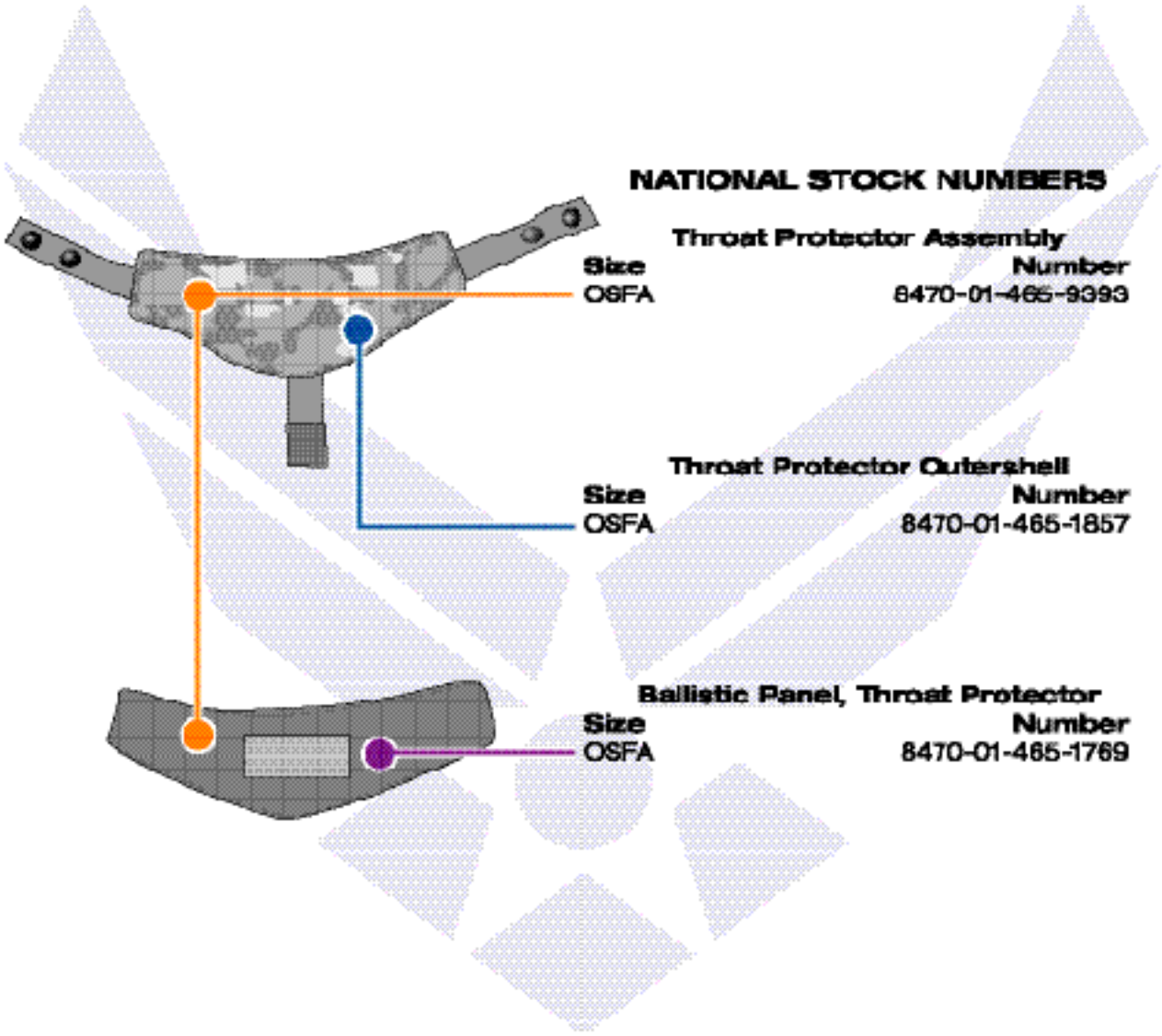


A. OTV (Outer Tactical Vest)

1. Parts

a. Illustrations with NSNs

Throat Protector Assembly

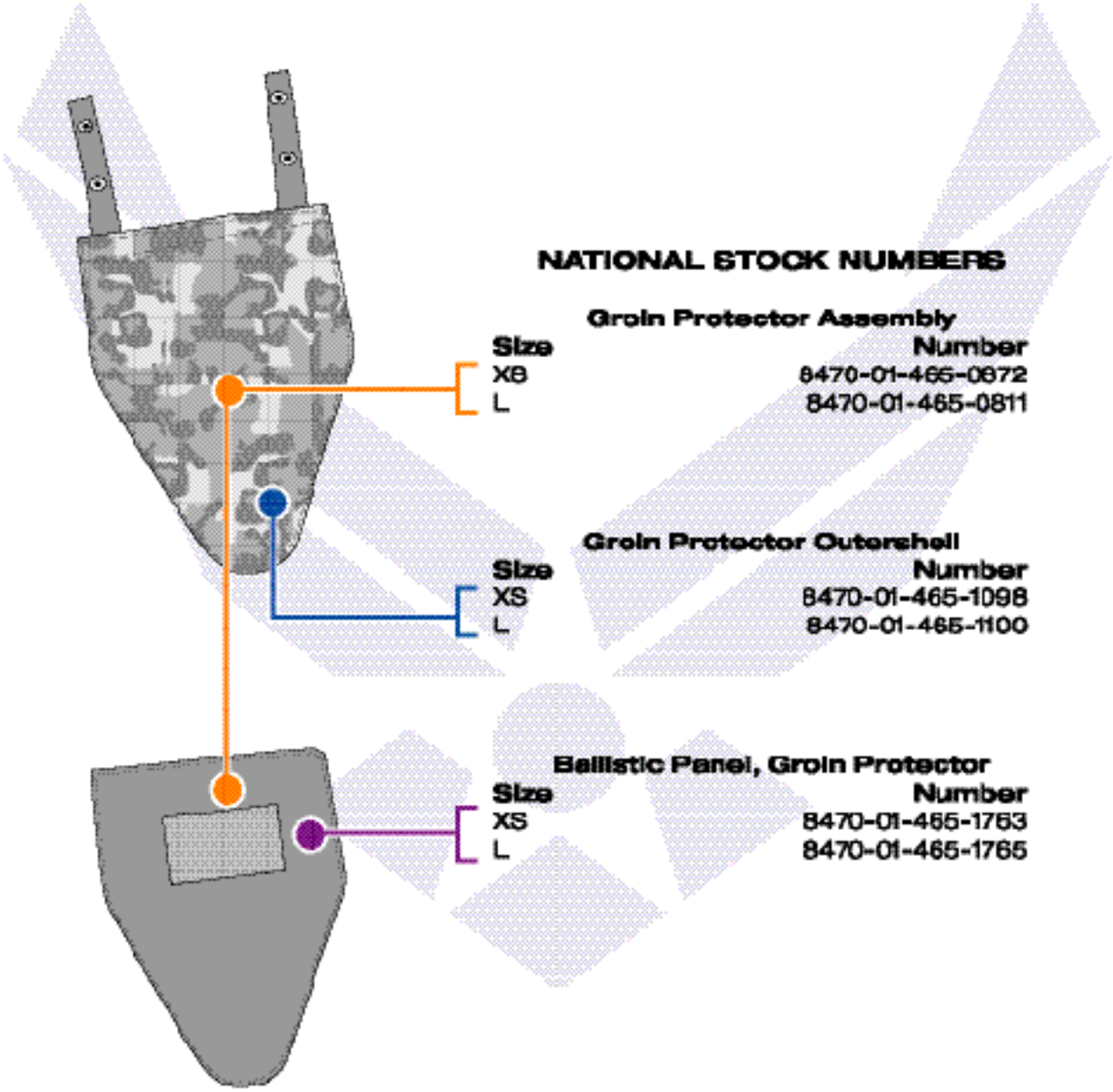


A. OTV (Outer Tactical Vest)

1. Parts

a. Illustrations with NSNs

Groin Protector Assembly



A. OTV (Outer Tactical Vest)

2. Modularity

a. Configurations

Level 1

Threat/Risk
- High probability: 9mm
- Low probability: fragmentation
- Extremely hot environment

Protection
Torso only protection from fragmenting munitions and 9mm.

Level 2

Threat/Risk
- High probability: 9mm
- Medium to high probability: fragmentation

Protection
Torso and neck protection from fragmenting munitions and 9mm.

Level 3

Threat/Risk
- High probability: 9mm
- High probability: fragmentation

Protection
Maximum body protection against fragmentation and 9mm.

Level 4

Threat/Risk
- High probability: rifle rounds

Protection
Maximum body protection against fragmentation, 9mm, and assault rifle rounds (not armor piercing).

A. Materials

1. Ballistic Materials

Alpha Interceptor is composed of 28 plies of KEVLAR (KM2) Style 706, 600 Denier, Water Repellent treated. The yoke is composed of 10 plies of Kevlar (KM2) Style 706, 600 Denier, Water Repellent treated. The aerial densities and thicknesses are compared with the requirements, in the table below.

Point Blank has completed extensive testing to confirm the ballistic and fragmentation performance of the Interceptor ballistic system. Thorough analysis of the test results indicates that the Point Blank Interceptor System meets or exceeds ALL ballistic and fragmentation requirements. The CASRED curve shown in Section D was plotted using the data gathered in these same tests.

2. Reasoning

Briefly, the rationale for the selection of the Alpha System is that:

- KM2 706 exceeds the basic requirements by up to 5% in ballistic performance.
- KM2 706 is more flexible (OTV Performance Requirement paragraph 3.6.1.1.2. in terms of wearability and comfort).
- KM2 706 outperforms the KM2 705 that was identified in the Performance Specification.
- KM2 706 provides the desired performance level for the 9mm.
- Raw materials costs are similar to that of KM2 705.
- KM2 706 is cost competitive

Ballistic Insert Requirements Comparison

	Baseline	Alpha	Results
Ballistic Insert	Maximum Weight 1.10 lbs sq.ft.	PointBlank PDS Weight 1.04 lbs sq.ft.	Exceeds Requirements
	Maximum Thickness 0.35 inches	PointBlank PDS Thickness 0.27 inches	Exceeded Requirements
	Maximum Flexibility	More flexible	Better wearability & comfort
	.325 cm-mg	.177 cm-mg	Superior wearability & comfort

B. Ballistic Performance – 124 gr. 9mm FMJ

Projectile	Required V50 @ 0° (ft/sec.) minimum	Actual V50 @ 0° (ft/sec.)	Required V50 @ 0°+ 30° (ft/sec.)	Actual V50 @ 0°+ 30° (ft/sec.)	Maximum Deformation inches	Act. Def. (in.)
Required	1525 ft/sec	Exceeded	1400 + 50/-0	Exceeded	1.73"	< 1.73"
Desired	1625 ft/sec	Exceeded	1500 + 50/-0	Exceeded	1.73"	< 1.73"

C. Fragmentation

Interceptor Fragmentation Protection Base Vest & Collar
28 plies, KM2, 600 denier, style 706, Water Repellent Treated

Fragment Projectile	Required V50 Dry 0° (ft./sec.)	Point Blank V50 Dry 0° (ft./sec.)	Required V50 Wet 0° (ft./sec.)	Point Blank V50 Wet 0° (ft./sec.)	Required V50 Dry 45° (ft./sec.)	Point Blank V50 Dry 45° (ft./sec.)
2 gr. RCC	2530	Exceeds Requirements	2400	Exceeds Requirements	2730	Exceeds Requirements
4 gr. RCC	2240	Exceeds Requirements	2125	Exceeds Requirements	2370	Exceeds Requirements
16 gr. RCC	1900	Exceeds Requirements	1800	Exceeds Requirements	1970	Exceeds Requirements
64 gr. RCC	1575	Exceeds Requirements	1495	Exceeds Requirements	1660	Exceeds Requirements

Interceptor Fragmentation Protection Base Vest & Collar
28 plies, KM2, 600 denier, style 706, Water Repellent Treated

16 gr. Alternate Conditions	Required V50 Dry 0°, (ft./sec.)	Point Blank V50 Dry 0°, (ft./sec.)
@ 160°	1900	Exceeds Requirements
@ -60°	1900	Exceeds Requirements
After Accelerated Aging	1900	Exceeds Requirements
Gasoline	1800	Exceeds Requirements
Motor Oil	1800	Exceeds Requirements
Weapons Lubricant	1800	Exceeds Requirements

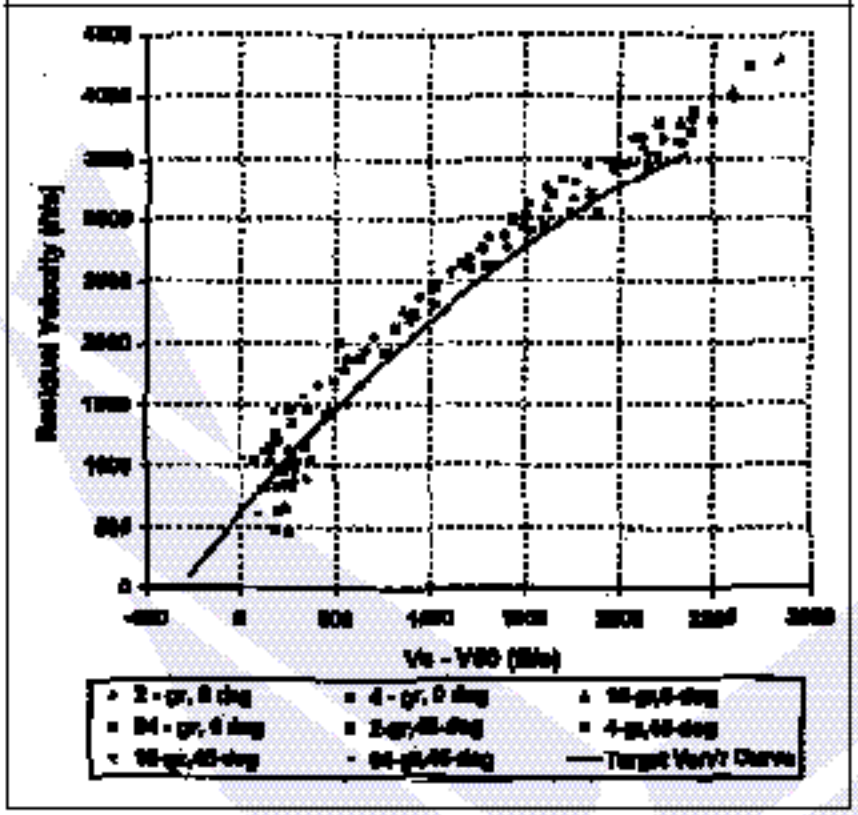
Interceptor Fragmentation Protection Yoke
10 plies, KM2, 600 denier, style 706, Water Repellent Treated

Fragment Projectile	Required V50 Dry 0° (ft./sec.)	Point Blank V50 Dry 0° (ft./sec.)	Required V50 Wet 0° (ft./sec.)	Point Blank V50 Wet 0° (ft./sec.)	Required V50 Dry 45° (ft./sec.)	Point Blank V50 Dry 45° (ft./sec.)
2 gr. RCC	1675	Exceeds Requirements	1550	Does not apply	1700	Does not apply
4 gr. RCC	1525	Exceeds Requirements	1425	Does not apply	1550	Does not apply
16 gr. RCC	1325	Exceeds Requirements	1225	Does not apply	1350	Does not apply
64 gr. RCC	1250	Exceeds Requirements	1150	Does not apply	1275	Does not apply

D. CASRED

V_S/V_T CASRED Curve

28 Plies Kevlar KM2 600 Denier Water Repellent



E. Weight

1. Interceptor vs. PASGT

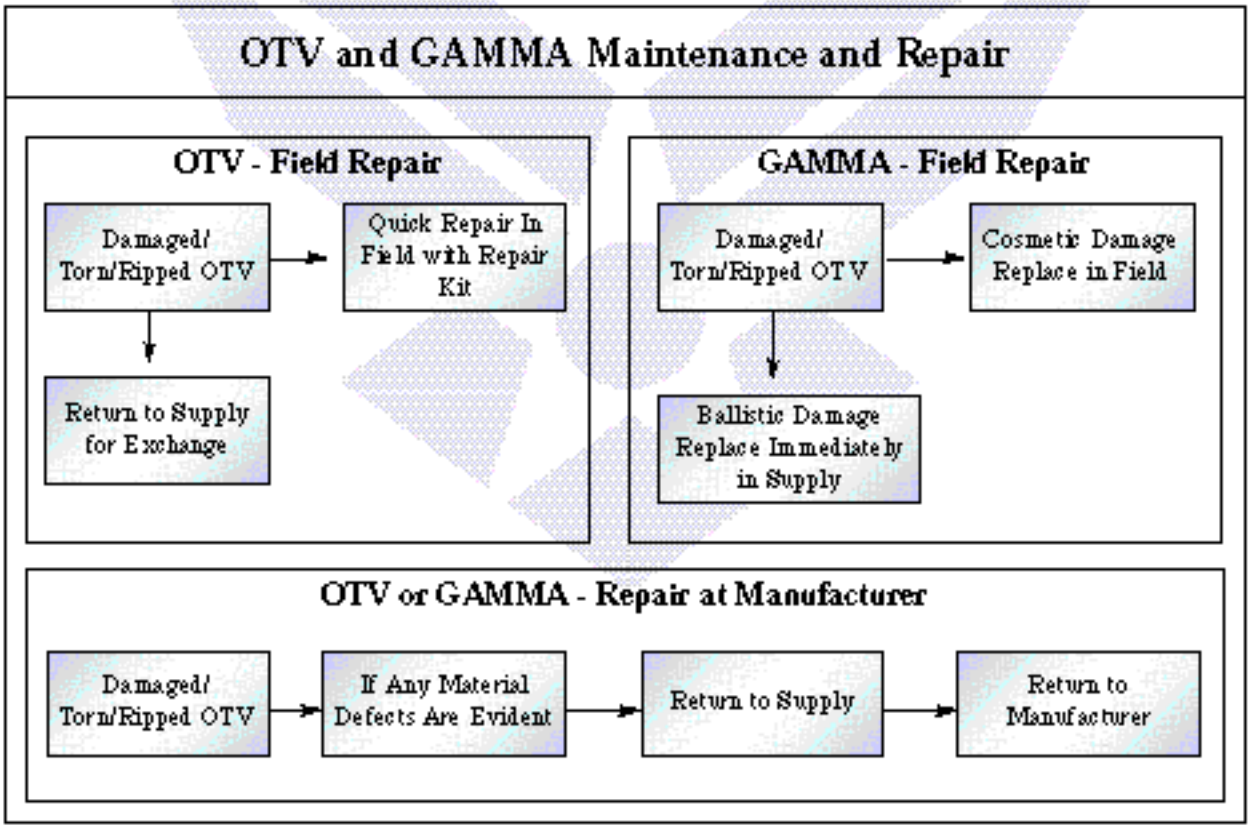
Interceptor with 2 GAMMA Plates	PASGT with 2 Plates
18 lbs.	**31 lbs.**

III. Q.C. and Manufacturing

A. Q.C. and Q.C. Program

Point Blank Quality System

- Established to control the manufacturing process
- Setup to provide information for continuous improvement
- Setup to provide the customer with world-class quality products
- Provides quality inspections at all manufacturing points:
  - Purchasing
  - Receiving
  - Cutting
  - Sewing
  - Interceptor Assembly
  - Shipping
- Includes:
  - All elements of ISO 9002 compliant by federal Government
  - Independence from production to assure quality decisions are not influenced by production needs
  - All required testing and monitoring procedures
  - Procedures for continuous improvement
- Enhances
  - Cooperation with the customer's needs
  - Cooperation between the Company and the Government QAR
  - The ease of product enhancements
  - The delivery of world-class quality products to the customer



GAMMA Repair Kit List

- Resealable bag
- Mixing surface
- 2-1/2" X 4-1/2" medium sand paper (2)
- 2-1/2" X 4-1/4" coarse sand paper (2)
- Heavy duty wipe
- 1" paint sponge
- 1.5 oz. epoxy paste
- Nitrile gloves
- Mix and spread paddles (4)
- Cardboard spreader (2)
- 2 oz. black paint
- White paint marker
- Instructions

OTV Repair Kit List

- Resealable bag
- Needle and Thread
- Various sizes 1,000 denier nylon
- Two buckles
- Three pads hook & loop
- Rigger's tape

Requirements and instructions for repairing the Interceptor System are included in the Use and Care Manual. The video provides additional visual instruction for standard military training schedules. There are no additional training materials or devices required to properly utilize, maintain, and repair the Interceptor System.

Point Blank can simplify the process for the Government to procure the Interceptor System, based on an approved form, fit, and function re-procurement specifications. As prime contractor, we can assure the Government that our technical documentations will describe how to assemble, operate, maintain and repair Interceptor.

Point Blank's approach to Interceptor ensures that we achieve Design to Unit Price. This approach includes:

- Procure to Price Strategy
- Assemble to Price Strategy

The strategies require that we and our suppliers work proactively from the program's inception to design, integrate, qualify, and produce the Interceptor System that will meet or exceed our program target price. This affordability strategy has been effectively used by Point Blank to reduce costs of systems for both commercial and military customers.

To provide the path to successful achievement of the Interceptor System target prices, Point Blank has tailored and will continue to emphasize and apply the dynamic affordability strategies to each program.

The bottom line is that Point Blank operates on a Firm Fixed Price basis, has the tools, the technologies, and most importantly the demonstrated performance to implement an effective, long-term, approach to achieving the unit price based on our producibility strategy.

B. Manufacturing

1 Receiving

2 Ballistic Range and Lot Testing

3 Accumark Design Department

4 Ply Count & Quality Insp. No. 1

5 GERBERcutter®

6 Ply Count & Quality Insp. No. 2

7 Pattern Marking

8 Ply Count & Assembly

9 Quality Inspection No. 3

10 Trimming

11 Component Assembly

12 Quality Insp. No. 4

13 Quality Insp. No. 5 Shipping

C. Delivery

DELIVERY SCHEDULE*	INTERCEPTOR*	GAMMA*
1st month	1,000	0
2nd month	2,000	1,000
Each month thereafter	2,000	2,000

* units no forecasting

D. Traceability

Serial Numbers: A F # # # # # #

Lot Number: # # # #

Information Retained:

- Who
- Where
- When
- QC Lot Test
- Ballistic Material Lot

E. Logistics

- Shipping
- Training:
  - Video
  - Use & Care Manual
- Repair
- Replacement
- Warranty: 120 days continuous field use

B. Sizing

Interceptor
Tactical Body Armor System

Sizing

Body Armor, Interceptor, Outer Tactical Vest

Size	Measurements	% Tariff
X-Small	Chest: 29-33	0.4%
Small	Chest: 33-37	12.3%
Medium	Chest: 37-41	52.7%
Large	Chest: 41-45	31.1%
X-Large	Chest: 45-49	3.5%

C. Ordering
1. Process

Ordering Interceptor and Gamma

Vehicle: GSA Schedule
GS-07F-8942D, effective July 1997

Order Form

Receiving Orders - Fax Confirmation

Order Entry

Tracking Orders

Shipping Orders - Advance Notification

C. Ordering
2. Process

Ordering Information – P.O.C.

Primary Point of Contact:	**Dave Stahl** GSA & Military Program Coordinator
Phone:	215-348-1022 800-506-9077
Fax:	215-348-1955
Email:	gsaavedave@aol.com

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Phone:	301-490-4788 (Office) 301-404-2076 (Mobile)
Fax:	301-490-4788
Email:	rickpbba@home.net

Third Point of Contact:	**Ronda Graves** Chief Operations Manager Point Blank Body Armor, Inc.
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