

US ARMY ECBC
DESCRIPTION FOR PURCHASE (DFP)
Engineer Equipment Set, Urban Operations, Platoon (Urban Ops, Platoon)

1. SCOPE

1.1. Scope. This Purchase Description describes the Engineer Equipment Set, Urban Operations, Platoon.

2. APPLICABLE DOCUMENTS

2.1. General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in section 3 and 4 of this Description for Purchase (DFP), whether or not they are listed here.

2.2. Government Documents.

2.2.1. Specifications and Standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, as of the date of the solicitation.

FEDERAL STANDARDS

FED-STD-595	Colors Used in Government Procurement
A-A-59486	Padlock Set (individually Keyed or Keyed Alike)
A-A-50271	Plate, Identification

MILITARY STANDARDS

MIL-STD-1916	DOD Preferred Methods for Acceptance of Product
MIL-W-63150	Weapons And Support Materiel Standard Quality Assurance Provisions
MIL-STD-464	Electromagnetic Environmental Effects Requirements For Systems
MIL-STD-1472	Design Criteria Standard – Human Engineering
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-648	Specialized Shipping Containers

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2. Non-government standards. The following publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation/contract.

ASTM INTERNATIONAL STANDARDS

ASTM-D6039 Standard Specification for Open and Covered Wood Crates

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428.)

3. PRODUCT REQUIREMENTS

3.1. Preproduction verification. When specified in the contract, the contractor shall furnish one or more sets for preproduction verification inspection in accordance with Section 4 herein. The sets submitted shall be in accordance with the terms of the contract. Approval of the preproduction verification shall not relieve the contractor of the responsibility to furnish equipment in accordance with the requirements of this DFP. All items supplied under this contract shall be identical to the preproduction verification sample; including packaging requirements in Section D.

3.2. Industrial quality tools. All components supplied with this set shall be industrial quality. For the purposes of this procurement, the term “industrial quality tools” versus household-use tools or general purpose tools are defined as tools commercially marketed and manufactured for constant, rigorous, industrial or professional environment use. The items offered shall have either achieved industrial market acceptance (as defined in paragraph 3.3) or have been satisfactorily supplied to the Government under current or recent contracts for the same or similar requirements. Industrial quality tools are used primarily by skilled professionals and technicians in such areas as machine shops, automotive maintenance and repair facilities, aircraft maintenance and repair facilities, industrial automotive assembly plants, fleet maintenance facilities, and airline service facilities. The tools will be used for specialized applications in an environment of virtual constant use, (i.e. around-the-clock 8 hour shifts), with applications requiring high torque, low slippage, and strict tolerances.

3.3. Market acceptance. Market acceptance is demonstrated by the component having a higher percentage of sales to industrial/professional customers than to retail or government customers. Advertising or marketing literature that indicates “professional grade” or “industrial quality”, or merely stating that an item is “professional grade” or “industrial quality” is insufficient to establish industrial quality tools since these are terms for which there is no generally accepted

definition. A claim that an item is manufactured to an industry consensus standard is also insufficient to establish industrial quality tools. The contracting officer may require offerors to provide evidence of market acceptance in the professional or industrial market. Evidence of acceptance by industrial/professional customers includes sales to fleet operators, distributors, contractors, industrial and professional users, and sales to distributors who retail exclusively to the professional or industrial market.

3.4. **Item Requirement.** The item description is the controlling requirement. It is the responsibility of the suppliers and manufacturers to assure that each item offered meets all of the requirements related to the item, including the industrial quality portion.

3.5. **Brand Name Components.** The following components specified in Table 1 must be of the specified brand name called out in the long item descriptions. The particular brand name is essential to the Governments minimum requirements and other companies' similar products for these components do not meet the Government's needs and cannot be modified to meet the Government's needs.

Table 1. Brand Name Components

Paragraph Number	Item Nomenclature/ Description	Part Number
3.16.1	Bag, Deployment & Storage	2180-R648-2ACUB
3.16.2.1	Bit, Drill, Masonry, 1/4"	SDS2506
3.16.2.2	Bit, Drill, Masonry, 3/8"	SDS37510
3.16.2.3	Bit, Drill, Masonry, 1/2"	SDS50012
3.16.2.4	Bit, Drill, Masonry, 5/8"	SDS62512
3.16.2.5	Bit, Drill, Masonry, 3/4"	SDS75012
3.16.2.6	Bit, Drill, Masonry, 1"	SDS100010
3.16.2.7	Bit, Chisel, Bull Point	5705-14
3.16.2.8	Bit, Chisel, Flat	5701-14
3.16.2.9	Bit, Chisel, Scaling	5708-14
3.16.3	Can, Fuel, Combination Gas & Oil	05088
3.16.3.1	Carrier, Can, Fuel, Combination Gas & Oil	1192-GS-ACUB
3.16.5	Detector, Explosive, Kit	FN-12-MA
3.16.7.1	Detector, Multi-Gas, Hand Held, Yellow Boot, Kit	RDC21560U-Y-1110-0-127-1G2C
3.16.7.2	Detector, Multi-Gas, Hand Held, Black Boot, Kit	RDC21560U-B-2220-0-269B-1G3C
3.16.7.3	Detector, Multi-Gas, Hand Held, Green Boot, Kit	RDC21560U-G-3330-0-28AB-1G3C
3.16.7.4	Detector, Multi-Gas, Hand Held, Tan Boot, Kit	RDC21560U-T-3330-0-1245-1G3C
3.16.8	Hammer, Rotary, SDS, 36 Volt	DC233KL
3.16.10	Rescue Tool Kit	PHT-UO3-P16
3.16.11.2	Pulley Block	W10000PB
3.16.11.3	Anchor, Shackle	WM465
3.16.11.4	Nylon Strap, 2" x 6'	W2X6NS
3.16.11.5	Accessory Bag	WBAG-2
3.16.11.7	Anchor, Ground	RW6000

3.16.11.8	Block, Snatch, Pulley w/ Swivel Hook	7336624
3.16.11.9	Clamp, Cable Pulling	1604-20L
3.16.11.10	Extension Cable, 1/4" Dia x 50' lg w/ Hook	SO1124648/125-10
3.16.12.1	Fan, Ventilation, Forced Air, Electric	FAN8-12V
3.16.12.2	Canister Duct, 25 Feet, 8" Diameter	FAN-7004CL
3.16.13	Saw, Cut-Off, Concrete & Metal Cutting	K970 Ring
3.16.13.1	Blade, Ring Blade, Hard Material	ELR-20 / 531108058
3.16.13.2	Blade, Ring Blade, Medium- Hard Material	ELR-45 / 531108059
3.16.14	Saw, Reciprocating, 36 Volt Li-Ion Battery	DC305K
3.16.14.1	Blade, Carbide Grit	RCB6G-2
3.16.14.2	Blade, Carbide Grit	DW4844
3.16.14.3	Blade, Metal, 6" Lg	DW4808
3.16.14.4	Blade, Metal, 12" Lg	DW4838
3.16.14.5	Blade, Wood, 12" Lg	DW4849
3.16.14.6	Blade, Wood, 6" Lg	DW4847
3.16.15	Torch Kit, Tactical, Cutting	PC/TACMOD1
3.16.16	Kit, Welding, 24 VDC	GOWELDUSMC
3.16.16.2	Hammer, Welding	LHC-1
3.16.16.3	Apron, Welding	FS302
3.16.16.4	Pliers, Needle Nose w/ Side Cutter	J226G
3.16.18	Glasses, Safety	73921

3.6. Brand Name or Equivalent Components. The following components specified in Table 2 are not restricted to the identified manufacturer/part number however they are known sources of supply that meet the Governments minimum requirements. Where a source of supply for an item is given herein, this information is provided to assist in identifying acceptable components. The provision of this information does not imply the Government has a preference for a specific brand of item. Offerors may offer an equivalent component provided that the offered component has the same or better form, fit, function, quality, and warranty as the listed item or part number. All offered components shall be industrial quality as required in the following paragraphs. If an alternative part is offered, it is the contractor's responsibility to provide evidence as stated in the RFP.

Table 2. Brand Name or Equivalent Components

Paragraph Number	Item Nomenclature/ Description	Part Number
3.16.4	Chest, Tool Kit, Storage and Transport	5124-1011RMC-4XHLS/5124-1011RMC-V2S-4XHLS/AL5023-0911
3.16.8.1	Battery Charger	1006632-00
3.16.9	Tactical Inspection Kit	TIC-OPTIC

3.16.11.1	Winch/ Cradle	WS5000PH
3.16.11.6	Heavy-Duty Gloves	6959
3.16.11.11	Strap, Tow, Nylon	TS2-802 x 30'
3.16.12.3	Extension Cable, 16 ft	EC4-16
3.16.13.3	Water Hose, 50'	SNCCD34050
3.16.15.1	Hose Cover	PC/D-114US-20
3.16.16.1	Helmet, Welding, Auto Darkening	WH40 w/Professional
3.16.17	Plugs, Ear	310-1001
3.16.19	Scope, Reverse Peephole	PEEP

3.7. Evaluation criteria. All offers as a whole shall be technically evaluated according to the RFP. All individual items shall be evaluated according to the RFP.

3.8. Resale items. Some manufacturers sell their products only through resale distributors. Some of the items specified here for inclusion in this set may be from such manufacturers, however, no indications of this has been given here. Further, if offeror includes components obtained from distributors in this set, all offeror provided information about individual tools, including CAGE code and part number, shall reflect that of the original component manufacturer and not that of the resale distributor or offeror.

3.9. US Manufactured Items. The components list in this document provides the Federal Supply Classification of components to assist offerors in determining to which items the provisions of the Buy American Act and Berry Amendments apply. The Government has tried to ensure that the listed equivalent components reference only U.S. manufactured items where required by applicable laws. However, given the volatile nature of the market at this time and the unavailability of U.S. manufacturers of certain items, the Government cannot guarantee that all of the items on the list are U.S. made. If offerors find that a particular item is not available from a U.S. source, offerors shall inform the Government of this immediately, to allow the Government to address this issue.

3.10. Illustrations. Illustrations and photographs are provided as illustrations to aid in understanding the requirements described in the text. The products illustrated do not necessarily meet the stated requirements, nor are they intended to be an endorsement of a specific product or manufacturer. Offerors are cautioned that they are to meet all of the requirements stated in this purchase description. The presence or absence of figures has no bearing on the applicability of the stated requirement or practice.

3.11. Construction. Components supplied in this set shall be new and constructed of parts and materials that are without defects.

3.12. Workmanship. The quality of workmanship imparted to the tool set shall equal or exceed that typically provided in commercial products of this type. Tools presented for acceptance shall have been manufactured with skill and care; shall be uniform, neat, and clean; and shall be free from irregularities and anomalies which degrade form, fit, function, performance, or appearance.

3.13. Warranty. All components shall be supplied with the same or better warranties as stated in the components list in Table 4 below. The offeror shall state the length and terms of the manufacturers' warranties in response to the solicitation. Lifetime warranty shall be unconditional regardless of fault by either party.

3.14. Information. A human readable warranty information plate at least 5 inches wide and 2.5 inches high shall be furnished for each Engineer Equipment Set tool chest. The warranty information plate shall be located in a conspicuous location and shall conform to the current version of the following image. This image is always subject to change. The contractor shall contact PM-SKOT to ensure they have the current version prior to use.



Contact PM-SKOT for all Tool Replacement and Warranty Issues

1-877-4-PM-SKOT (1-877-476-7568)
DSN: 273-3667 / CM: 586-239-3667
E-MAIL:
USARMY.DETROIT.PEO-CS-CSS.MAIL.PM-SKOT@MAIL.MIL
Web Site: <https://tools.army.mil>

3.15. Components

3.15.1. Component List. The contractor shall provide a mylar or laminated component list that identifies the nomenclature, manufacturer's part number, NSN when known, type of warranty, warranty start date, a picture of the actual item and the location for each component in this equipment set. MSDS sheets mentioned in paragraph 3.19. shall be mylar or laminated and bound with the overall component list and each individual case component list. There shall be an overall component list provided with each set along with an individual list for each case or box within the set, which lists those items contained within. The lists shall contain a detailed breakdown of all components, even those that make up a kit. The components list shall contain all components, to include all components/subcomponents of each kit, and identifies nomenclature, manufacturer's part number and cage code, NSN when known, type of warranty, warranty start date, detailed location (box/case/layer/etc)

3.15.2. Technical Manuals. Two Technical Manuals per set shall be provided by the government to be packed in Tool Chest 1. The technical manuals shall be packed in a weather proof resealable bag.

3.15.3. Tool Sets: Identity and Consistency. Several of the components of this set are kits of related components that are designed to function together. Specific examples of this are the rotary hammer and hammer bit set, each component and its related battery packs and charger, the sub-kits contained within the Remote Viewing Instrument Module, the Rescue Tool Battery Kit, each saw and its associated blades, the tactical torch kit, the welding kit and the winch and associated components. Within each of these kits, all items shall be from a single source or manufacturer, when possible. This will ensure the interoperability of kit components. Offerors are encouraged to identify alternate equipment kits, but not individual kit components.

3.15.4. Component Cases. The following components listed in Table 3 are provided from the manufacturer in individual cases and shall remain in the manufacturer’s supplied case. The components shall be packed in its individual case, and that case shall be placed in a designated location in the tool chest, unless otherwise noted. Components not provided with their own case from the manufacturer or specified in Table 3 shall be placed directly in a designated location in the tool chest.

Table 3.

Paragraph Number	Item Nomenclature/ Description
3.16.5	ICX Technologies Detector, Explosive, Kit
3.16.6	Item Not Used
3.16.7	RAE Systems Detector, Multi-Gas, Hand Held, Kit (4 Cases)
3.16.8	Hammer, Rotary, SDS, 36 Volt, 7/8" Chuck
3.16.9.1	Tactical Inspection Kit
3.16.14	Saw, Reciprocating, 36 Volt Li-Ion Battery
3.16.15	Torch, Tactical, C/O
3.16.16	Welder Kit, 24 Volt

3.15.5. Tool Chest Configuration. The components shall be placed in tool chests in such a way that similar items are grouped together. Each tool chest shall have a data plate permanently and legibly marked at the top and on the base of the chest, to indicate which tool chest it is (e.g. Tool Chest 1 shall have the label “Chest 1 of 5”, Tool Chest 2 shall be “Chest 2 of 5”, etc.) and the major components of the chest (see 3.16.4.1.1). The following is a required tool chest configuration. See Table 4 for a complete component/case breakdown.

Tool Chest 1 – Winch

Tool Chest 2 - Rescue Tool, Ventilating Fan

Tool Chest 3 – Explosive Detectors, Hammer Drill, Drill Bits, Reciprocating Saw, Saw Blades, Deployment Bags, Ear Plugs, Safety Glasses, Fuel/Oil Container (when empty), Tactical Inspection Kit, Reverse Peephole Scope

Tool Chest 4 – Multi-Gas Detectors

Tool Chest 5- Concrete and Metal Saw (Vented Case) Welding Kit, Tactical Torch

3.16. Component Items. The Component List (CL), Table 4, identifies the components in this set by a short item description and a representative manufacturer and part number. Also provided in this table is the total quantity required in the equipment set, a warranty code, the federal supply class of the item and the tool chest that the item shall be stored in. In the CL, the quantity shown for an item which is a component of a set or kit is the total number of that item included in the Engineer Equipment Set. For these items, the quantity required in each set or kit is the quantity shown divided by the number of sets or kits of which it is a member. The warranty codes indicate whether the item is to have a lifetime (L), a manufacturer specified warranty (M), or no warranty required (N). The Federal Supply Classification (FSC) is provided to aid in the determination of applicability of Buy American and Berry Amendment laws. The components shall conform to the requirements of paragraph 3.16.1 through 3.16.18 below. Brand name components listed in paragraph 3.5 are identified by an asterisk in Table 4. For any component not identified by an asterisk in paragraph 3.5, the suggested brand name or an equivalent component can be offered. If an equivalent component is offered, it must meet or exceed the requirements listed for that component. In all cases, the offeror must be prepared to demonstrate, at no additional cost to the Government the equality of a supplied component to that listed below.

Table 4. Component List

Paragraph Number	Item Nomenclature/ Description	Cage	PN	Unit Issue	Qty	Wty	Tool Chest	FSC
*3.16.1	Bag, Deployment & Storage	79623	2180-R648-2ACUB	EA	4	M	3	84
3.16.2	Bit Set, Sds Hammer			ST	1		3	
*3.16.2.1	Bit, Drill, Masonry, 1/4" Dia x 6-5/8" Lg, SDS+	Galaxy	SDS2506	EA	1	M	3	51
*3.16.2.2	Bit, Drill, Masonry, 3/8" Dia x 10-5/8" Lg, SDS+	Galaxy	SDS37510	EA	1	M	3	51
*3.16.2.3	Bit, Drill, Masonry, 1/2" Dia x 12-5/8" Lg, SDS+	Galaxy	SDS50012	EA	1	M	3	51
*3.16.2.4	Bit, Drill, Masonry, 5/8" Dia x 12-3/4" Lg, SDS+	Galaxy	SDS62512	EA	1	M	3	51
*3.16.2.5	Bit, Drill, Masonry, 3/4" Dia x 12-3/4" Lg, SDS+	Galaxy	SDS75012	EA	1	M	3	51
*3.16.2.6	Bit, Drill, Masonry, 1" Dia x 10-3/4" Lg, SDS+	Galaxy	SDS100010	EA	1	M	3	51
*3.16.2.7	Bit, Chisel, Bull Point, 14" Lg, SDS+	50013	5705-14	EA	1	M	3	51
*3.16.2.8	Bit, Chisel, Flat, 1" Wide x 14" Lg, SDS+	50013	5701-14	EA	1	M	3	51
*3.16.2.9	Bit, Chisel, Scaling, 2" Wide x 14" Lg, SDS+	50013	5708-14	EA	1	M	3	51
*3.16.3	Can, Fuel, Combination Gas & Oil	36976	05088	EA	1	M	3	72
*3.16.3.1	Carrier, Can, Fuel, Combination Gas & Oil	79623	1192-GS-ACUB	EA	1	M	3	84
3.16.4	Chest, Tool Kit, Storage and Transport	00NS2/ 65442	5124-1011RMC-4XHLS/5124-1011RMC-V2S-4XHLS/AL5023-0911	EA	5	M		51
*3.16.5	Detector, Explosive, Kit	44B16	FN-12-MA	EA	1	M	3	66
	Main Body, FIDO X3C Controller Assy	44B16	FH-65-A	EA	1	M	3	66
	Battery Pack, FIDO X3	44B16	FH-66-A	EA	2	M	3	61
	Desorber, FIDO X3	44B16	FH-67-A	EA	1	M	3	66
	Cable, USB	44B16	FH-69-A	EA	1	M	3	66
	Cable, Power	44B16	FH-64-A	EA	1	M	3	61
	Case w/ Foam	44B16	16232251	EA	1	M	3	66
	Charger, FIDO X3	44B16	FH-57-A	EA	1	M	3	61
	Clean Spare Tip, X3	44B16	FH-71-A	EA	1	M	3	66
	Sack, Dry	44B16	FB-07-A	EA	1	M	3	66
	Maintenance Kit	44B16	FB-06-A	KT	1	M	3	66

	Sensing Element, Fido X3, 10 Pack	44B16	FE-08-C	PG	2	N	3	66
	Sampling Swipe, High Efficiency, X3, 50 Pack	44B16	FS-03-E	PG	4	N	3	66
	Reference Standard (vapor)	44B16	FC-08-A	EA	2	N	3	66
	M.E. Reference Standard (swipe)	44B16	FC-14-B	EA	2	N	3	66
	User Manual, FIDO X3	44B16	FM-30-A	EA	1	M	3	76
	Analyst Software and Manual	44B16	FM-28-A	EA	1	M	3	76
	Vapor Mode Guard Sleeve	44B16	FH-72-A	EA	1	M	3	66
	Molle Clip and Fido Lanyard	44B16	FH-74-A	EA	1	M	3	66

3.16.6	(ITEM NOT USED)							
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3.16.7	RAE Systems Detector, Multi-Gas, Hand Held Kits							
*3.16.7.1	MultiRAE Box 1	1Q3Z9	RDC21560U-Y-1110-0-127-1G2C	KT	1	M	4	66
	Transport Case, Yellow	1Q3Z9	RDC2-1560U-Y	EA	1	M	4	66
	RAE MultiRAE LEL/O2/H2S-CO/CL 10.6V Yellow Boot	1Q3Z9	MBB3-A1C1R6E-UB1	EA	3	M	4	66
	Travel Charger, MultiRAE Series	1Q3Z9	M01-3021-000	EA	3	M	4	61
	External Filter, Pack of 3	1Q3Z9	008-3022-003	PK	1	M	4	66
	Battery Adapter, Alkaline, 0.8W, MultiRAE Series	1Q3Z9	M01-3054-000	EA	3	M	4	61
	Gas inlet Adapter Assy., for Flexible Probe, MultiRAE	1Q3Z9	M01-3012-000	EA	3	M	4	66
	Flexible Inlet Probe, 3G-PID Sensor Module	1Q3Z9	023-3012-000	EA	3	M	4	66
	RAE Demand Flow Regulator CGA600	1Q3Z9	002-3051-000	EA	1	M	4	48
	RAE Demand Flow Regulator C10	1Q3Z9	008-3052-000	EA	2	M	4	48
	RAE Four-Gas Calibration Mix, 34L aluminum Cylinder (50% LEL /2.5% VOL CH4, 18% O2 10 ppm H2S, 50ppm CO, bal. N2) C-10	1Q3Z9	600-0050-007	EA	1	M	4	68
	RAE 34L cylinder of 100 ppm isobutylene calibration gas CGA-600	1Q3Z9	600-0002-000	EA	1	M	4	68
	RAE 34L cylinder of Chlorine, 10 ppm (balance nitrogen), C10	1Q3Z9	600-0056-100	EA	1	M	4	66
	Tool Kit, MultiRAE Series	1Q3Z9	081-0016-000	EA	1	M	4	51
	Cable, USB 2.0, Type A (Male) To Mini-B	1Q3Z9	410-0203-000	EA	1	M	4	61

	(Male), 1m, Black							
	PGM-50 Vapor Zero Gas Adapter	1Q3Z9	008-3024-000	EA	1	M	4	47
	Calibration Cap Assy., Pump, MultiRAE Series	1Q3Z9	M01-3011-000	EA	1	M	4	66
	Kit, Remote Teflon Sample Draw	1Q3Z9	008-3015-002	EA	1	M	4	66
	QuickStart Guide, Pump, MultiRAE Series	1Q3Z9	DOWNLOAD	EA	1	M	4	76
	CD, MultiRAE Series	1Q3Z9	008-4013-000	EA	1	M	4	70
	TN-106, Poster Size 33.58 x 27.08, Correction Factors, Ionization Energies and Characteristics	1Q3Z9	DOWNLOAD	EA	1	M	4	76
	Charcoal Filter	1Q3Z9	008-3006-005	PK	1	M	4	42
*3.16.7.2	MultiRAE Box 2	1Q3Z9	RDC21560U-B-2220-0-269B-1G3C	KT	1	M	4	66
	Transport Case, Black	1Q3Z9	RDC2-1560U-B	EA	1	M	4	66
	RAE MultiRAE PID/LEL/O2/NH3/NO2 10.6V Black Boot	1Q3Z9	MBB3-A1C158E-UB2	EA	3	M	4	66
	Travel Charger, MultiRAE Series	1Q3Z9	M01-3021-000	EA	3	M	4	61
	External Filter, Pack of 3	1Q3Z9	008-3022-003	PK	1	M	4	66
	Battery Adapter, Alkaline, 0.8W, MultiRAE Series	1Q3Z9	M01-3054-000	EA	3	M	4	61
	Gas inlet Adapter Assy., for Flexible Probe, MultiRAE	1Q3Z9	M01-3012-000	EA	3	M	4	66
	Flexible Inlet Probe, 3G-PID Sensor Module	1Q3Z9	023-3012-000	EA	3	M	4	66
	RAE Demand Flow Regulator CGA600	1Q3Z9	002-3051-000	EA	2	M	4	48
	RAE Demand Flow Regulator C10	1Q3Z9	008-3052-000	EA	2	M	4	48
	RAE Two-Gas Calibration Mix, 34L aluminum Cylinder (50% LEL CH4, 18% O2 balance N2) CGA600	1Q3Z9	600-1079-000	EA	1	M	4	68
	RAE 34L cylinder of 100 ppm isobutylene calibration gas CGA600	1Q3Z9	600-0002-000	EA	1	M	4	68
	RAE Ammonia, 50ppm, 34L C-10	1Q3Z9	600-0058-100	EA	1	M	4	66
	Nitrogen Dioxide, 5PPM, 34L C-10	1Q3Z9	600-0055-100	EA	1	M	4	66
	Tool Kit, MultiRAE Series	1Q3Z9	081-0016-000	EA	1	M	4	51
	Cable, USB 2.0, Type A (Male) To Mini-B (Male), 1m, Black	1Q3Z9	410-0203-000	EA	1	M	4	61
	PGM-50 Vapor Zero Gas Adapter	1Q3Z9	008-3024-000	EA	1	M	4	47
	Calibration Cap Assy., Pump, MultiRAE Series	1Q3Z9	M01-3011-000	EA	1	M	4	66
	QuickStart Guide, Pump, MultiRAE Series	1Q3Z9	DOWNLOAD	EA	1	N	4	76

	CD, MultiRAE Series	1Q3Z9	008-4013-000	EA	1	N	4	70
	TN-106, Poster Size 33.58 x 27.08, Correction Factors, Ionization Energies and Characteristics	1Q3Z9	DOWNLOAD	EA	1	N	4	76
*3.16.7.3	MultiRAE Box 3	1Q3Z9	RDC21560U-G-3330-0-28AB-1G3C	KT	1	M	4	66
	Transport Case, Green	1Q3Z9	RDC2-1560U-G	EA	1	M	4	66
	RAE MultiRAE PID/LEL/O2/HCN/PH3 10.6V Green Boot	1Q3Z9	MBB3-A1C179E-UB3	EA	3	M	4	66
	Travel Charger, MultiRAE Series	1Q3Z9	M01-3021-000	EA	3	M	4	61
	External Filter, Pack of 3	1Q3Z9	008-3022-003	PK	1	M	4	66
	Battery Adapter, Alkaline, 0.8W, MultiRAE Series	1Q3Z9	M01-3054-000	EA	3	M	4	61
	Gas inlet Adapter Assy., for Flexible Probe, MultiRAE	1Q3Z9	M01-3012-000	EA	3	M	4	66
	Flexible Inlet Probe, 3G-PID Sensor Module	1Q3Z9	023-3012-000	EA	3	M	4	66
	RAE Demand Flow Regulator CGA600	1Q3Z9	002-3051-000	EA	2	M	4	48
	RAE Demand Flow Regulator C10	1Q3Z9	008-3052-000	EA	2	M	4	48
	RAE Two-Gas Calibration Mix, 34L aluminum Cylinder (50% LEL CH4, 18% O2 balance N2) CGA600	1Q3Z9	600-1079-000	EA	1	M	4	68
	RAE Isobutylene, 100ppm, 34L steel cylinder CGA600	1Q3Z9	600-0002-000	EA	1	M	4	68
	Hydrogen Cyanide, 10 ppm, 34L C-10	1Q3Z9	600-0057-100	EA	1	M	4	66
	Phosphine, 5 ppm, 34L C-10	1Q3Z9	600-0059-100	EA	1	M	4	66
	Tool Kit, MultiRAE Series	1Q3Z9	081-0016-000	EA	1	M	4	51
	Cable, USB 2.0, Type A (Male) To Mini-B (Male), 1m, Black	1Q3Z9	410-0203-000	EA	1	M	4	61
	PGM-50 Vapor Zero Gas Adapter	1Q3Z9	008-3024-000	EA	1	M	4	47
	Calibration Cap Assy., Pump, MultiRAE Series	1Q3Z9	M01-3011-000	EA	1	M	4	66
	QuickStart Guide, Pump, MultiRAE Series	1Q3Z9	DOWNLOAD	EA	1	N	4	76
	CD, MultiRAE Series	1Q3Z9	008-4013-000	EA	1	N	4	70
	TN-106, Poster Size 33.58 x 27.08, Correction Factors, Ionization Energies and Characteristics	1Q3Z9	DOWNLOAD	EA	1	N	4	76
*3.16.7.4	MultiRAE Box 4	1Q3Z9	RDC21560U-T-3330-0-1245-	KT	1	M	4	66

			1G3C					
	Transport Case, Tan	1Q3Z9	RDC2-1560U-T	EA	1	M	4	66
	RAE MultiRAE PID/LEL/O2/NO/SO2 10.6V Tan Boot	1Q3Z9	MBB3-A1C134E-UB4	EA	3	M	4	66
	Travel Charger, MultiRAE Series	1Q3Z9	M01-3021-000	EA	3	M	4	61
	External Filter, Pack of 3	1Q3Z9	008-3022-003	PK	1	M	4	66
	Battery Adapter, Alkaline, 0.8W, MultiRAE Series	1Q3Z9	M01-3054-000	EA	3	M	4	61
	Gas inlet Adapter Assy., for Flexible Probe, MultiRAE	1Q3Z9	M01-3012-000	EA	3	M	4	66
	Flexible Inlet Probe, 3G-PID Sensor Module	1Q3Z9	023-3012-000	EA	3	M	4	66
	RAE Demand Flow Regulator CGA600	1Q3Z9	002-3051-000	EA	2	M	4	48
	RAE Demand Flow Regulator C10	1Q3Z9	008-3052-000	EA	2	M	4	48
	RAE Two-Gas Calibration Mix, 34L aluminum Cylinder (50% LEL CH4, 18% O2 balance N2) CGA-600	1Q3Z9	600-1079-000	EA	1	M	4	68
	RAE Isobutylene, 100 ppm, 34L steel cylinder, CGA-600	1Q3Z9	600-0002-000	EA	1	M	4	68
	Nitric Oxide, 25 ppm, 34L alum cylinder C-10	1Q3Z9	600-0054-100	EA	1	M	4	66
	Sulfur Dioxide, 5 ppm, 34L alum cylinder C-10	1Q3Z9	600-0053-100	EA	1	M	4	66
	Tool Kit, MultiRAE Series	1Q3Z9	081-0016-000	EA	1	M	4	51
	Cable, USB 2.0, Type A (Male) To Mini-B (Male), 1m, Black	1Q3Z9	410-0203-000	EA	1	M	4	61
	PGM-50 Vapor Zero Gas Adapter	1Q3Z9	008-3024-000	EA	1	M	4	47
	Calibration Cap Assy., Pump, MultiRAE Series	1Q3Z9	M01-3011-000	EA	1	M	4	66
	QuickStart Guide, Pump, MultiRAE Series	1Q3Z9	DOWNLOAD	EA	1	N	4	76
	CD, MultiRAE Series	1Q3Z9	008-4013-000	EA	1	N	4	70
	TN-106, Poster Size 33.58 x 27.08, Correction Factors, Ionization Energies and Characteristics	1Q3Z9	DOWNLOAD	EA	1	N	4	76

*3.16.8	Hammer, Rotary, SDS, 36 Volt, 7/8" Chuck	72617	DC233KL	KT	1	M	3	51
	Battery Charger,	72617	DC9000	EA	1	M	3	61
	Batteries, 36 Volt Rechargeable	72617	DC9360	EA	2	M	3	61
	360° Side Handle	72617	493687-00	EA	1	M	3	51
	Depth Rod	72617	580787-00	EA	1	M	3	51
	Kit Box	72617	574931-21	EA	1	M	3	51
3.16.8.1	Battery Charger	72617	1006632-00	EA	2	M	3	61

3.16.9	Tactical Inspection Kit	1QCD0	TIC-OPTIC	KT	1	M	3	67
3.16.9.1	Case and Accessories							
	3V Lithium Batteries	1QCD0	CR123A	EA	16	M	3	61
	Case with custom foam	1QCD0	TIC-OPTIC-CASE	EA	1	M	3	67
3.16.9.2	Under Door Camera	1QCD0	UDC PRO	EA	1	M	3	58
	Under door camera- Push pole	1QCD0	UDC PRO push pole	EA	1	M	3	67
	16GB SD card	1QCD0	16GB SD CARD	EA	1	M	3	67
3.16.9.3	IR Pole Camera	1QCD0	LPSS3	EA	1	M	3	67
	Black/white camera head	1QCD0	LPSS3-CHBW	EA	1	M	3	67
	Hard wire adapter/component	1QCD0	LPSS3-PILL	EA	1	M	3	67
	Pole camera transmitter/ telescoping long pole	1QCD0	LPSS3-TRAN	EA	1	M	3	67
	16GB SD card	1QCD0	16GB SD CARD	EA	1	M	3	67
3.16.9.4	Optic Fiberscope	1QCD0	FS2NET	EA	1	M	3	60
	White light source	1QCD0	VFSL3	EA	1	M	3	67
3.16.9.5	Hand Held Monitor	1QCD0	HHM	EA	1	M	3	67
	6' hard wire cable	1QCD0	HHM 6' cable	EA	1	M	3	60
	12V Power Adapter	1QCD0	HHM 12V DC adapter	EA	1	M	3	61
	12V DC Adapter	1QCD0	HHM 12V DC adapter	EA	1	M	3	61
3.16.9.6	Wrist Mounted Monitor	1QCD0	WMM	EA	1	M	3	67

*3.16.10	Rescue Tool Kit	3RTX5	PHT-UO3-P16	KT	1			
*3.16.10.1	Rescue Tool	3RTX5	P-16-BLK	EA	1	M	2	42
*3.16.10.2	Controller Unit	3RTX5	PC-100-BLK	EA	1	M	2	42
*3.16.10.3	Attachment Pin Set	3RTX5	AP-1600-BLK	ST	2	M	2	42
*3.16.10.4	Power Cable	3RTX5	CA-4M-BLK	EA	1	M	2	61
*3.16.10.5	Battery Pack, 12 Volt	3RTX5	PWR-12MP	EA	3	M	1, 2	42
*3.16.10.6	Jumper Cable	3RTX5	JC4-16	EA	2	N	2	61
*3.16.10.7	Battery Charger	3RTX5	BC-U1	EA	2	M	1, 2	42
*3.16.10.8	Spreader Arm Set	3RTX5	S-1601-BLK	PR	1	M	2	42
*3.16.10.9	Curved-Blade Cutter	3RTX5	C-1601-BLK	PR	1	M	2	42
*3.16.10.10	Power Blade	3RTX5	CS-1602-BLK	PR	1	M	2	42
*3.16.10.11	Backpack	3RTX5	BKPK-600	EA	2	M	1, 2	84
	Training Package	3RTX5	TP-U03	EA	1	N	2	42

3.16.11	Winch Kit, Electric			KT	1			
3.16.11.1	Winch	3RTX5	WS5000PH	EA	1	M	1	39
	Cradle, Winch	3RTX5	WCRDL-1	EA	1	M	1	39
*3.16.11.2	Pulley Block	3RTX5	W10000PB	EA	1	M	1	39
*3.16.11.3	Anchor Shackle	3RTX5	WM465	EA	1	M	1	39
	Anchor Bar with Pins	3RTX5	W2AB-1	EA	1	M	1	39
*3.16.11.4	Nylon Strap, 2" x 6'	3RTX5	W2X6NS	EA	1	M	1	53
*3.16.11.5	Accessory Bag	3RTX5	WBAG-2	EA	1	M	1	39
3.16.11.6	Heavy-Duty Gloves	6A525	6959	EA	1	M	1	84
*3.16.11.7	Anchor, Ground	Pull Pal	RW6000	EA	1	M	1	39
*3.16.11.8	Block, Snatch, Pulley, w/Swivel Hook	636D0	7336624	EA	1	M	1	39
*3.16.11.9	Clamp, Cable Pulling	75347	1604-20L	EA	1	M	1	51
*3.16.11.10	Extension Cable, ¼" Dia X 50' Lg W/Hook	3ECQ5	SO1124648/125-10	EA	1	M	1	40
3.16.11.11	Strap, Tow, Nylon, 2" Wd X 30' Lg	3ECQ5	TS2-802 x 30'	EA	1	M	1	39

*3.16.12	Ventilation Kit			KT	1			
*3.16.12.1	Fan, Ventilating, Forced Air Electric	3RTX5	FAN8-12V	EA	1	M	2	42
*3.16.12.2	Duct, 25 Feet, 8" Reinforced And Canister	3RTX5	FAN-7004CL	EA	1	M	2	42
3.16.12.3	Extension Cable, 16 ft	3RTX5	EC4-16	EA	1	M	2	42

*3.16.13	Saw, Cut-Off, Concrete & Metal Cutting,	S3669	K 970 Ring	EA	1	M	5	34
	Tool Kit	S3669	506 36 38-04	KT	1		5	34
	Lubrication Gun	S3669	506 38 49-02	EA	1		5	49
	Grease	S3669	544 08 04-02	EA	1	N	5	91
	Training DVD	S3669	-	EA	1	N	5	75
*3.16.13.1	Blade, Ring Blade, Hard Material	S3669	ELR-20 / 531108058	EA	3	N	5	51
*3.16.13.2	Blade, Ring Blade, Medium-Hard Material	S3669	ELR-45 / 531108059	EA	3	N	5	51
3.16.13.3	50' water hose	Swan Hose	SNCCD34050	EA	1	M	5	47

*3.16.14	Saw, Reciprocating, 36 Volt Li-Ion Battery	72617	DC305K	KT	1	M	3	51
	Battery Charger,	72617	DC9000	EA	1	M	3	61
	Battery, 36 Volt Rechargeable	72617	DC9360	EA	2	M	3	61

	Kit box	72617	648633-00	EA	1	M	3	51
*3.16.14.1	Blade, Carbide Grit, 6" Lg, 2 Per Pack	3PHX2	Bosch RCB6G-2	PK	5	N	3	51
*3.16.14.2	Blade, Carbide Grit, 6" Lg, 5 Per Pack	72617	DW4844	PK	2	N	3	51
*3.16.14.3	Blade, Metal 6" Lg, 5 Per Pack	72617	DW4808	PK	1	N	3	51
*3.16.14.4	Blade, Metal, 12" Lg, 5 Per Pack	72617	DW4838	PK	1	N	3	51
*3.16.14.5	Blade, Wood, 12" Lg, 5 Per Pack	72617	DW4849	PK	1	N	3	51
*3.16.14.6	Blade, Wood, 6" Lg, 5 Per Pack	72617	DW4847	PK	1	N	3	51

*3.16.15	Torch, Tactical, C/O	59491	PC/TACMOD1	KT	1	M	5	34
	Backpack Set, Molle, Modular, Black	59491	PC/ARC-BP-BK	ST	1	M	5	34
	Oxygen Cylinder Carrier	59491	LBT-6160A	EA	1	M	5	34
	Battery Pouch, Black	59491	LBT-6160B	EA	1	M	5	34
	Small Rod Holder, 18" L, Black	59491	LBT-6160C	EA	2	M	5	34
	Long Rod Holder, 36"L, Black	59491	LBT-6160D	EA	1	M	5	34
	Gear Pouch, Black	59491	LBT-6160E	EA	1	M	5	34
	Modular BackPack Platform, Black	59491	LBT-2711-C	EA	1	M	5	34
	Web Dominator Routing Clip	59491	BP-KH-WEB CLIP	EA	6	M	5	34
	Cable, Power, 20' Lg W/Connectors	59491	PC/TACPC20	EA	1	M	5	61
	Case, Hard Plastic Impact Resistant	59491	PC/C-1650	EA	1	M	5	81
	Cylinder, Aluminum, Oxygen Certified	59491	BOC-N045	EA	1	M	5	34
	Extender, Rod, 18" Lg	59491	PC/TACXT16	EA	1	N	5	34
	Glasses, Safety, #5 Shade	59491	PC/SG-5	EA	2	N	5	42
	Welding Gloves	59491	PC/WGTAC	PR	1	N	5	84
	Holder, Striker, Leather	59491	PC/LSH	EA	1	N	5	34
	Hose, Assembly, 5' Lg	59491	PC/TAC-H-5	EA	1	M	5	47
	Hose, Assembly, 15' Lg	59491	PC/TAC-H15	EA	1	M	5	47
	Ignition System, Lightweight, Battery	59491	PC/BISLW	EA	1	N	5	34
	Battery Charger Assembly, 110V Input	59491	PC/170A	EA	1	M	5	61
	Battery Assembly	59491	PC/BISBOX	EA	1	M	5	61
	Kit, Collet, 3/8"	59491	PCRP-305A	KT	1	N	5	34
	Kit, Collet, 1/4"	59491	PCRP-305B	KT	1	N	5	34
	Regulator, Submersible	59491	PC/TAC3105250	EA	1	M	5	48
	Rod, Cutting, Stix Pak, 1/4", 9 stick package	59491	1418PC-SPS	EA	1	N	5	34
	Rod, Cutting, Stix Pak, 3/8", 6 stick package	59491	3818PC-SPS	EA	1	N	5	34
	Shield, Leather, Small, Black, 6" X 6"	59491	PC/LSS	EA	1	N	5	34
	Striker Plate, 20" Lg W/Connectors	59491	PC/SP20TAC	EA	1	N	5	51

	Torch, Tactical W/3/8" Collet	59491	PC/TACDPT3	EA	1	N	5	34
	Battery Adapter Kit	59491	PC/BAK	EA	1	N	5	61
	Safety Goggles, #5 Shade	59491	PC/S&W GOGGLES	EA	1	N	5	42
	Manual, Operating Instructions	59491	PC/TACINFO	EA	1	N	5	76
	Regulator O-Ring	59491	V-011	EA	3	N	5	53
3.16.15.1	Hose Cover	59491	PC/D-114US-20	EA	1	M	5	84

*3.16.16	Welder Kit, 24 VDC, C/O	59491	GOWELDUSMC	ST	1	M	5	34
	Welder, Wire Feed, MIG/FCAW	59491	600120-F	EA	1	M	5	34
	Wire, Welding, Flux-Core,	59491	500124	SP	2	N	5	34
	Ground Cable assembly, 20' L	59491	600134	EA	1	M	5	61
	Jumper Cable Assembly	59491	600138	EA	1	M	5	61
	2' Battery Clamp Wiring Harness	59491	600135	EA	1	M	5	61
	Contact Tip Set, Copper, .035	59491	500117-1	EA	6	N	5	34
	Nozzle, 3" L, Copper	59491	500114	EA	1	N	5	34
	Gas diffuser	59491	500112	EA	1	N	5	42
	Nozzle insulator	59491	500113	EA	1	N	5	59
	Adapter, Gas Hose, Brass,	59491	100194-A	EA	1	M	5	47
	Slaveplug, with Cam-Lok plugs	59491	600143	EA	1	M	5	34
	Wiring Harness, Adapter, Cam-Lok	59491	600158	EA	1	M	5	61
	GOWELD, Operating instructions manual	59491	400053	EA	1	M	5	76
	Case, GOWELD	59491	BW/BAG-BK	EA	1	L	5	31
3.16.16.1	Helmet, Welding, Auto Darkening	0W2X7	WH40 w/Professional	EA	1	M	5	42
*3.16.16.2	Hammer, Welding	0A9J3	LHC-1	EA	1	N	5	51
*3.16.16.3	Apron, Welding	57256	FS302	EA	1	M	5	84
*3.16.16.4	Pliers, Needle Nose w/ Side Cutter	1CV05	J226G	EA	1	M	5	51

3.16.17	Plugs, Ear	76381	310-1001	BX	1		3	65
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*3.16.18	Glasses, Safety	77852	73921	EA	2		3	42
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3.16.19	Scope, Reverse Peephole	3KMC3	PEEP	EA	1	M	3	66
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*Brand Name Components

L - Lifetime Warranty

M - Manufacturer's stated warranty, N - No warranty required

3.16.1. *Bag, Deployment & Storage. The deployment bag shall be constructed of nylon yarn not less than 1000 denier weight, mildew resistant, or any stronger material. The bag shall match the color and pattern of the Army Combat Uniform (ACU). Inside bag dimensions: 30" long x 15" diameter. The bag shall utilize a heavy duty zipper for closure. The length of the zipper shall be the maximum allowable for a bag with the above dimensions (zipper length: 26" to 30"). The zipper shall be covered by an external flap with a Velcro style closure that runs the entire length of the zipper so that it may be covered and made abrasion and weather resistant. Each bag shall have reinforced carry handles on each end positioned such that the handles are in horizontal attitude when the zipper is facing up. Each bag shall include an adjustable carrying shoulder strap that can be clipped onto and off of the bag. The shoulder strap shall be clipped onto a D-ring positioned in-line with the zipper and sewn into the seam of the bag sleeve and bag end. Each D-ring shall be capable of holding 300 pounds. Each bag shall include four tie-down loops to aid in secure stowage. The loops shall be of 1" material (1000 denier) sewn to the bag sleeve with a loop size capable of accepting the 1" tie-down straps. Loops shall be positioned parallel to, and 3" from the zipper, 2 per side, centered 8" from the seam between bag sleeve and bag end. The loops shall be capable of holding against a horizontal pull of 300 pounds. Two tie-down straps shall be provided with each bag. The straps shall be at least 1" wide by 36" long with a quick release fastener (female) at one end and an insert tip (male) on the other end. The zipper and all metal hardware shall be black in color. The bag shown below is a commercial example of the required style. Brand Name Only: Estex Manufacturing Co. Inc., P/N 2180-R648-2ACUB. Quantity: 4 bags.



3.16.2. Bit Set, Hammer. The hammer bit set shall consist of the following 9 items; 6 masonry drill bits, and 3 chisels as described in the following paragraphs. All items must be compatible with the Special Direct System (SDS) style rotary hammer described in paragraph 3.16.8. All lengths nominal except drill diameters and chisel widths. Quantity: 1 set.

3.16.2.1. *Bit, drill. The masonry drill bit shall have a diameter of 1/4", a carbide tip, a nominal drilling length of 4" and a nominal overall length of 6". Brand Name Only: Galaxy Industries, Inc., P/N SDS2506. Quantity: 1 each.



3.16.2.2. *Bit, drill. The masonry drill bit shall have a diameter of 3/8", a carbide tip, a nominal drilling length of 8" and a nominal overall length of 10". Brand Name Only: Galaxy Industries, Inc., P/N SDS37510. Quantity: 1 each.



3.16.2.3. *Bit, drill. The masonry drill bit shall have a diameter of 1/2", a carbide tip, a nominal drilling length of 10" and a nominal overall length of 12". Brand Name Only: Galaxy Industries, Inc., P/N SDS50012. Quantity: 1 each.



3.16.2.4. *Bit, drill. The masonry drill bit shall have a diameter of 5/8", a carbide tip, a nominal drilling length of 10", and a nominal overall length of 12". Brand Name Only: Galaxy Industries, Inc., P/N SDS62512. Quantity: 1 each.



3.16.2.5. *Bit, drill. The masonry drill bit shall have a diameter of 3/4", a carbide tip, a nominal drilling length of 10", and a nominal overall length of 12". Brand Name Only: Galaxy Industries, Inc., P/N SDS75012. Quantity: 1 each.



3.16.2.6. *Bit, drill. The masonry drill bit shall have diameter of 1", a carbide tip, a nominal drilling length of 8", and a nominal overall length of 10". Brand Name Only: Galaxy Industries, Inc., SDS100010. Quantity: 1 each.



3.16.2.7. *Bit, chisel. The bull point chisel bit shall be have a Bull point, and a nominal overall length of 14". Brand Name Only: Ajax Tool Works, Inc., P/N 5705-14. Quantity: 1 each.



3.16.2.8. *Bit, chisel. The flat chisel bit shall be 1" wide and have a nominal overall length of 14". Brand Name Only: Ajax Tool Works, Inc., P/N 5701-14. Quantity: 1 each.



3.16.2.9. *Bit, chisel. The scaling chisel bit shall be 2" wide and have a nominal overall length of 14". Brand Name Only: Ajax Tool Works, Inc., P/N 5708-14. Quantity: 1 each.



3.16.3. *Container, Fuel, Oil, Combination. The container shall be a red plastic two sided fuel and oil container. The fuel side shall have a capacity of approximately 6.34 quarts (6 liters); the oil side shall have a capacity of approximately 2.64 quarts (2.5 liters). The fuel side shall have an integral plastic carrying handle. Both fuel and oil container lids shall have pouring spouts that are stored inside the container with the lid sealing the container/spout against spilling during storage or transport. Upon use, the spout shall be removed from the container, inserted through the lid, and sealed against the container for fuel/oil dispensing. The container shall withstand a drop from four feet full of fuel at 80 degree F. The fuel/oil container shall fit inside an open top carrier specified in paragraph 3.16.3.1. The fuel/oil container shall have a warning label displaying “Do not place in sealed transport case when fuel or oil are present”. The warning label shall be visible and unobstructed when stowed in the carrier. Brand Name Only: Scepter Corporation, P/N 05088. Quantity: 1 each.



3.16.3.1. *Carrier, Can, Fuel, Combination Gas & Oil. The carrier shall have a means to secure the container inside the carrier (such as a strap physically attached to one side of the bag is pulled across the container and attaches to the opposite side of the carrier with Velcro). The carrier shall be constructed of 1000 Denier olive drab CORDURA nylon, with reinforced seams, with a shoulder carrying strap with hooked ends attachable to the carrier by D-rings provided on the carrier. Brand Name Only: Estex Manufacturing Co. Inc., P/N 1192-GS-ACUB. Quantity: 1 each.

3.16.4. Chest, Tool Kit, Storage and Transport. The tool chest shall provide for storage and transportation of the tool load as specified in Table 4 and paragraph 3.15.5. All other items, devices, or characteristics necessary to meet the requirements set forth in this document are the responsibility of the contractor to determine and provide. The design of the tool chests shall provide for physical security, rapid inventory, and tool position retention during transportation and rough handling. The interior of each chest shall be large enough to hold all the designated components to be loaded. Each chest shall be constructed with a base and a lid that shall be entirely separable, and shall not utilize a hinge between the base and lid. The contractor has overall responsibility in determining layout of the tools within the tool chests while still meeting all other requirements including the maximum loaded weight restriction. The offeror shall develop, for Government approval, a packing plan that places, to the greatest extent possible, related components in the same tool chest. Brand Name or Equal to: Kipper Tool Company, P/N 5124-1011RMC-4XHLS (without vent), 5124-1011RMC-V2S-4XHLS (free breathing vent), Pelican Products Inc. AL5023-0911. Quantity: 5 each (1 free breathing vent, 4 non-vents).

3.16.4.1. Tool Chest Exterior. The chest minimum exterior dimensions shall be 53”L x 26”W x 22”D. Maximum exterior dimensions shall be 55”L x 27”W x 24”D. Each tool chest shall have a data plate identifying the major components of the chest. Each chest shall be clearly labeled, on the lid and on the base of the chest, to indicate which chest it is (e.g. Tool Chest 1 shall have the label “Chest 1 of 5”, Tool Chest 2 shall be “Chest 2 of 5”, etc.). The chest base shall have 2 handles on each side for a total of 8 handles. The handles shall be recessed into the chest base. Each handle shall be rated for a minimum 273 pounds lift and carry. The lid shall have a total of 4 handles, consisting of 2 handles on one side and 2 handles directly across on the opposite side along the width of the lid. The handles shall be recessed into the chest lid. Handles shall be affixed using mechanical fasteners that cannot be readily removed. The handle shall be rated as

pairs for not less than 273 lbs of weight. Handles shall be installed using mechanical fasteners that cannot be readily removed, i.e. rivets or screws that cannot be removed with a screwdriver. The tool chest shall be large enough to contain the components of the set and shall be compartmentalized. The chests, including the handles and latches/clasps, shall be designed so that the chests can be opened and closed by persons wearing work gloves. It shall require no more than 20 pounds of force to open or close the latch/clasp. Exterior finish of the chest shall be clean and corrosion resistant and shall have no sharp edges or projections. Any exposed elastomeric parts exposed to air shall be ozone and ultraviolet (UV) light resistant. Unless otherwise specified, the color of the exterior of the tool chest shall be olive drab green, color number 34064 or 34088, in accordance with (IAW) FED-STD-595.

3.16.4.1.1. Water Entry Resistance. The tool chest shall be designed to prevent water entry into the chest. If a rubberized seal is used to meet this requirement, then it shall be easily replaced when damaged in the field.

3.16.4.1.2. Pressure Differential Compensation. Each chest shall be designed to compensate for differential pressures that may develop as a result of changes in temperature or in altitude

3.16.4.1.3. Gas Vapors. The chest housing the gasoline powered tool shall have free breathing venting that prevents gasoline vapors from building up in the interior of the chest. The venting chest shall only be required to pass the rain procedure to meet the water resistance requirement.

3.16.4.1.4. Latches. The chest handles and latches/clasps shall be designed so that the chest can be opened and closed by persons wearing work gloves. Each latch/clasp shall be capable of being opened and closed using only one gloved hand. No more than 20 pounds of force shall be required to open or close the latch/clasp.

3.16.4.2. Tool Chest Interior. The tool chests' interior shall facilitate rapid inventory. Minimum interior dimensions shall be 50"L x 23" W x 20"D. Maximum interior dimensions shall be 54"L x 24"W x 24"D. Storage methods employed shall enable the operator to verify within ten minutes or less that all items are present and secured in their designated storage locations. In the event an item is absent from the kit, the user shall be provided with the means to identify the specific item by name and description. The organizing method shall provide contrasting color underneath the tools to aid in rapid inventory. If foam is used, it shall be closed cell and coated so that moisture is not retained in the pores. The materials used in the tool organizing method shall be resistant to water, refrigerants, automotive oils, greases, lubricants, fuels including gasoline, diesel fuel, JP-8 and JP-4, acids, bases, coolants, alcohols and cleaning agents. Each contoured retention feature shall securely hold the tool in place so that when the tool chest is dropped or the chest is turned over the tools will be retained in position. Each contoured retention feature shall allow easy removal of the tool and shall include as necessary pick holes, cut out or recessed areas or protrusion of tools above the tool organizing method. Each retention feature shall be smooth and free from rough edges. The tool chests shall be water and airtight, able to withstand an immersion or rain test.

3.16.4.3. Stackability Requirement.

3.16.4.3.1. Tool chests shall be capable of being stacked three (3) high using an integral interlock in the molded design. Tool chest shall be either fully loaded or have simulated weights for the Chest Stacking Test (paragraph 4.3.5). The design of the tool chests shall be such that the load of two chests on top of a chest does not cause damage to the bottom chest as well as provide for a stable stack. The contractor shall avoid the placement of handles, clasps, or other features in such a position as to interfere with stacking.

3.16.4.3.2. The shipping crates contain the correct number of tool chests (estimated to be 5-6) shall be capable of being stacked two (2) high. Tool chests will be either fully loaded or have simulated weights for testing the crate integrity (see paragraph 4.3.6 Crate Stacking Test). The combined weight of all tool chests shall equal approximately 1638 lbs per crate.

3.16.4.4. Rough Handling.

3.16.4.4.1. Rough Handling, Unloading. Each fully loaded chest shall withstand a drop test and low temperature test without damage to the chest and the tools. All metal hardware components of the chest shall be corrosion resistant stainless steel and shall be non-reflective. Hardware projecting into the chest shall not present a hazard to the user. Each fully loaded chest shall withstand being dropped on the bottom surface from a height of 60 inches onto a concrete floor and being rolled over on the floor, 360 degrees, four times, once over each lower edge without sustaining any damage that would affect operation of the tool chest or tool load.

3.16.4.4.2. Rough Handling, Lifting. The tool chest shall withstand MIL-STD-648D drop testing, Procedure B, using a test height of 36 inches without sustaining any damage that would affect operation. Three of the drops shall be conducted at the operating temperatures of -25°F on the top, back, and left sides. Three drops shall be conducted at the operating temperatures of 120°F on the bottom, front, and right sides. A total of 6 drops shall be conducted, no side shall be dropped more than once. Damage that would affect the operation of the tool chest or tool load shall be considered a failure to meet the requirement.

3.16.4.4.3. Impact Resistance. When fully loaded, closed, latched, and placed in its normal resting position in a room temperature environment each chest shall withstand impacts from dropped objects. The chest shall withstand an impact from a steel bar weighing a minimum of 3 lbs, with a cross section no larger than 3/16 inch x 1 inch, and with an edge radii no larger than 1/16 inch. The bar shall be dropped in free fall from a height of 96 inches and shall have landed narrow end down on the lid of the chest. The chest shall absorb the impact without permanent deformation to its overall configuration. The impact from the bar shall not cause penetration of the tool chest lid.

3.16.4.5. Environmental Conditions and Requirements. The chest shall withstand deployment in climatic design types: hot, basic, and cold as defined by MIL-STD-810G. The chest shall be capable of being operated and maintained in temperatures from 120° F to -25° F, and stored and transported in temperatures from -50°F to 160°F without deterioration to the configuration, operation and seal of the chest nor its contents.

3.16.4.5.1.1. Cold & Hot Temperature Operating. The chest shall be stored for 3 hours in a cold/hot temperature environment no warmer/no less than -25°F/120°F respectively. The chest

shall be removed from the temperature environment and examined for any physical damage to the chest or its tool load. Physical or operating damage shall constitute as failure to meet the requirement.

3.16.4.5.1.2. Cold & Hot Temperature Storage. The chest shall be stored at a temperature no warmer than -50°F and 160°F for no less than 4 hours. The chest shall then be removed and brought back to room temperature. The chest and its content shall be examined for any physical damage. Physical damage to the tool chest and its tool load shall constitute failure to meet the requirement.

3.16.4.6. Overall Security. Each tool chest shall include a locking feature for the entire chest. The locking feature shall utilize padlocks to prevent the separation of the tool chest top and base such that no tool can be removed. The tool chests shall utilize two padlocks. Locks shall be key-operated, tumbler type padlocks conforming to CID A-A-59486. Each chest shall be provided with a rust proof flexible aircraft cable not greater than 12 inches in length riveted under the hasp and with a loop to engage the hasp and retain the padlock when it is loose. All padlocks in a system shall be keyed alike across all the chests; however, no two Urban Ops sets shall utilize the same key. Two keys shall be furnished for each tool chest, and shall be clearly labeled with the serial PLT# of the corresponding set. The tool chest shall include a means to be tethered to a post, or pillar, by means of a chain that can be run from chest to chest, through the handles, or other tethering devices, and then locked with a padlock(s). The tool chests shall be water and airtight, able to withstand an immersion or rain test (see paragraph 4.3.3), made of a corrosion resistant non-reflective material and reinforced at corners and edges. If a rubberized seal is used to meet the water tightness requirement, then it shall be easily replaced when damaged in the field. The chest shall be designed with a pressure relief mechanism to compensate for differential pressures that may develop as a result of changes in temperature or in altitude. The chest housing the gasoline powered tool shall have free breathing venting that prevents gasoline vapors from building up in the interior of the chest. The chest with free breathing venting shall only be required to pass the rain procedure to meet the water resistance requirement.

3.16.4.7. Weight. The chests must be capable of being lifted and moved by manpower or by forklift without modification or use of an adapter on the chest. The weight limit of the fully loaded tool box shall be in accordance with MIL-STD—1472, Table XXXVIII Male and Female, 5.8.6.3.7 Carrying limit for distances up to 10 m (33 ft) (e.g. 273 lb limit for 8-person lift). A warning label shall be adhered to each tool chest requiring them to be mechanically lifted or lifted by the correct number of persons, IAW MIL-STD-1472.



3.16.5. *Detector, Explosive. The explosive detector shall be a handheld, Amplifying Fluorescent Polymer (AFP) based unit, and contain no radioactive source. The detector shall respond to explosive materials at levels as low as a few ppb (parts per billion), including PETN, TNT, Dynamite, Semtex, C4, RDX, etc. In addition the device shall detect three classes of homemade explosives to include nitro (nitrobenzene, nitrotoluene, nitromethane, etc.), nitrate (urea, ammonium, calcium ammonium nitrate, etc.) , and peroxide based (TATP, HPOM, MEKP, etc.) compounds. The detector shall be both trace/particle capable by surface wipes and be able to detect the vapor emanating from explosive materials without having to come into contact or direct line of sight with the explosive device itself. The detector shall have a reversible detection response, allowing it to be reused many times and only taking a few seconds before screening the next target. The results of the detection shall be displayed on a TFT Color LCD screen and through an audio signal along with selectable Haptic feedback. The unit shall be able to operate in temperatures ranging from -10 C° to 55° C, weigh less than 3.3 pounds, and have a battery life of at least 7 hours on a single charge. The detector unit shall withstand a 1m drop test, have a splash-proof shell, have an automated swipe desorber, and built-in flashlight. The detector will provide the ability to establish Administrator defined alerting thresholds and selective detection options (by explosives class). The entire explosives detection kit shall come in a watertight, molded plastic case with purpose designed storage locations for all components. Also included shall be 2 rechargeable batteries and a consumables kit, which shall contain all items necessary for regular use of the explosives detector. For ICX Fido X3, the consumables kit shall include the following ICX parts and consumables: sensing elements, sampling swipes, reference standards, and tips. Brand Name Only: ICX Technologies Inc., P/N FN-12-MA, Quantity: 1 kit



3.16.6. (ITEM NOT USED)

3.16.7. *Detector, Multi-Gas. The multi-gas detector shall be a battery operated handheld or pocket sized unit capable of being clipped onto the Soldier's Load Bearing Equipment (LBE). The detector shall include sensors to detect, at a minimum, the following gases with the ranges and resolutions listed in Table 5 The detector shall have a PID sensor and maintenance kit, large keys for ease of operation, shall be of rugged construction, resistant to dust and water, and support in-field calibration. The detector shall have display lighting for dim light/night or alarm conditions. The detector shall store a minimum of 80 hours of data at a rate of one sample per minute. The detectors shall be rechargeable from a 120/230 V AC/DC source, shall be operable

while recharging the battery, and shall operate for a minimum of 14 hours on a single charge. Also shall include spare external filters, as well as charcoal filters for the CO sensor. Detector weight including battery shall be a maximum of 31 ounces. The detector's audio and visual alarms shall be a minimum 90dB buzzer and flashing light to indicate exceeded preset limits, with a manual override. Shall have a "man down" alarm. The detector sampling pump shall have two speed operations and an auto shut-off under restricted flow conditions. Requirements specified shall apply to paragraphs 3.16.7.1 through 3.16.7.4 specified in Table 1 and Table 4. Band Name Only: Federal Resources Supply Company, P/Ns RDC21560U-Y-1110-0-127-1G2C, RDC21560U-B-2220-0-269B-1G3C, RDC21560U-G-3330-0-28AB-1G3C, RDC21560U-T-3330-0-1245-1G3C. Quantity: 1 each.



Table 5. Detection Ranges and Resolutions

Substance	Range	Resolution
Oxygen	0-30 %	0.1 %
Combustible Gas	0-100 % of LEL	1 %
VOC	0-200 ppm	.1 ppm
	200-2000 ppm	1 ppm
Carbon monoxide	0-500 ppm	1 ppm
Hydrogen Sulfide	0-100 ppm	1 ppm
Sulfur Dioxide	0-20 ppm	0.1 ppm
Nitric Oxide	0-250 ppm	0.5 ppm
Nitrogen Dioxide	0-20 ppm	0.1 ppm
Chlorine	0-50 ppm	0.1 ppm
Hydrogen Cyanide	0-50 ppm	0.5 ppm
Ammonia	0-100 ppm	1 ppm
Phosphine	0-20 ppm	0.1 ppm

3.16.8. *Hammer, Rotary. The hammer-drill shall be a heavy-duty, variable speed, portable, hand-held, 36 VDC battery powered drill-driver-hammer, weighing no more than thirty pounds. The hammer shall use a 7/8 inch, or preferably, a one inch industry standard SDS style chuck. The hammer battery shall be capable of not less than 2 hours of normal use under extreme conditions and shall be rechargeable from a 120 VAC supply to a full operational charge in no more than one hour. The batteries and charger shall be able to operate with the reciprocating saw, paragraph 3.16.14. The hammer shall operate with a no load speed of 0-1150 rpm and 0-4000 blows/minute. The hammer shall be supplied with 1 hour recharger and two battery packs, a 360 degree side handle, a depth rod, and a heavy duty kit box. Brand Name Only: Black and Decker Inc. DeWalt Div., P/N DC233KL, battery pack P/N DC9360, and charger P/N DC9000. Quantity 1 Kit.



3.16.8.1. Battery Charger. The battery charger shall provide one hour charging for 36 VDC rechargeable batteries used with the Rotary Hammer, paragraph 3.16.8 and Reciprocating Saw paragraph 3.16.14. The battery charger input voltage shall be 220 VAC. Brand Name or Equal to: Black and Decker Inc. DeWalt Div., P/N 1006632-00. Quantity 2 each.



3.16.9. Tactical Inspection Kit. The tactical inspection kit shall consist of the items described in paragraphs 3.16.9.1 thru 3.16.9.6. Tactical Inspection Kit shall meet MIL-STD-461 Radiated Emissions RE102 Procedures 5.17.3.4 and Figure RE102-4 for Navy Mobile & Army, and RS103 Radiated Susceptibility 5.20 and Table VII Ground, without any malfunction, degradation of performance, or deviation from specifications/limits when subjected to the electric fields.

3.16.9.1. Case and Accessories. The tactical inspection kit shall consist of the items described in paragraphs 3.16.9.2 thru 3.16.9.6. The entire tactical inspection kit shall weigh no more than 30 pounds and be able to fit in one custom case with foam. The tactical inspection kit shall have the ability to be used in both water and fuels. All components of the tactical inspection kit shall be compatible, battery powered utilizing CR123A type 3V Lithium batteries and shall be supplied by the same source. The tactical inspection kit when stowed shall withstand MIL-STD-648 drop testing. Quantity: 1 Kit.

3.16.9.2. Under Door Camera. The under door camera unit shall consist of a forward and upward (back towards door) facing .005 lux black and white cameras with an infrared LED flood illuminator and four forward facings direction infrared LEDs. IR illuminator shall provide 180° of illumination. The operator shall be able to switch between the forward and upward camera views. The under door camera shall weigh no more than 17.1 oz. The under door camera shall

have wireless capability with a transmission distance of up to 100 ft line of sight on 2.4 to 2.485 GHz frequency range. Maximum power output shall be 100mW. The under door camera shall include an internal DVR that is capable of recording real-time video to a 16GB SD card, microphone for audio recording and telescoping deployment pole. The under door camera shall be wireless compatible with both the handheld monitor, paragraph 3.16.9.5 and the wrist mounted monitor, paragraph 3.16.9.6. It shall also have the capability to be hard wired to the hand held monitor. When used in the hard wired configuration, wireless functionality must be completely disabled (i.e. no wireless transmissions will emanate from the under door camera). Camera resolution shall be 400 TV lines or greater, and have a battery life of 1.25+ hrs. Field of view of forward camera shall be a minimum 68°H, 47°V, and 46°H and 32°V for the upward camera. Brand Name or Equal to: Tactical Electronics, P/N UDC PRO. Quantity: 1 each.



3.16.9.3. IR Pole Camera. The IR pole camera shall consist of one black and white, 8 IR LED, flexible neck rotating camera head and telescoping long pole with integrated transmitter. The black and white camera head shall provide a light sensitivity of .2 lux, 92° camera field of view and resolution of 420 TV lines (black and white). The IR pole camera shall have wireless capability on a 2.4 to 2.485 GHz frequency range with a transmission distance of up to 400ft line of sight. Maximum power output shall be 100mW. The IR pole camera with camera head attached shall weigh no more than 4 lbs. The IR pole camera shall include an internal DVR that is capable of recording real-time video to a 16GB SD card. The IR pole camera shall be wireless compatible with both the handheld monitor, paragraph 3.16.9.5 and the wrist mounted monitor, paragraph 3.16.9.6. It shall also have the capability to be hard wired to the hand held monitor. When used in the hard wired configuration, wireless functionality must be completely disabled (i.e. no wireless transmissions will emanate from the IR pole camera). The IR pole camera shall be able to extend by telescoping to 20' with a collapsed length of 26". Brand Name or Equal to: Tactical Electronics, P/N LPSS3. Quantity: 1 each.



3.16.9.4. Optic Fiberscope. The optic fiberscope shall provide observation of internal cavities and spaces that cannot be viewed by direct line of sight. The optic fiberscope shall consist of a 6mm, two way, 120 degree articulating working probe that is 2 meters in length. The tip shall be non-conductive. The optic fiberscope shall include a separate white light source. Brand Name or Equal to: Tactical Electronics, P/N FS2NET. Quantity: 1 each.



3.16.9.5. Handheld Monitor. The handheld monitor shall have a built-in receiver allowing wireless capability with frequency range of 2.4 to 2.485 GHz to display real-time transmitted video from up to four camera systems. The handheld monitor shall consist of a 5 inch high resolution color LCD display screen and weigh less than 1.25 lbs. The handheld monitor shall be compatible with the underdoor camera and IR pole camera, paragraphs 3.16.9.2 and 3.16.9.3. The handheld monitor shall have the option to be hard-wired to the compatible camera systems and shall be powered by CR123A type 3V lithium batteries or 12VAC power adapter. A 6' hard wire cable shall be included with the handheld monitor. Brand Name or Equal to: Tactical Electronics, P/N HHM. Quantity: 1 each.



3.16.9.6. Wrist Mounted Monitor. The wrist mounted monitor shall have a built-in receiver allowing wireless capability with frequency range of 2.4 to 2.485 GHz to display real-time transmitted video from up to four camera systems. The wrist mounted monitor shall consist of a 3 inch high resolution color LCD display screen, weigh less than 0.5 lbs and must be capable of mounting to the operators arm allowing hands free operation. The wrist mounted monitor shall be compatible with the underdoor camera and IR pole camera, paragraphs 3.16.9.2 and 3.16.9.3 and shall be powered by CR123A type 3V lithium batteries. Brand Name or Equal to: Tactical Electronics, P/N WMM. Quantity: 1 each.



3.16.10. *Rescue Tool Kit. The rescue tool kit shall contain the rescue tool, two backpacks (holds battery), three battery packs, charger, jumper cables, and tools including a spreader arm set, curved blade cutter and straight blade cutter described in paragraphs 3.16.10.1 to 3.16.10.11.

All accessories in the kit shall be compatible with the Rescue Tool. The tool kit shall include interchangeable arms to spread, and cut. The battery pack shall be capable of powering the ventilating fan, paragraph 3.16.12.1, and the winch, paragraph 3.16.11.1. The rescue tool shall weigh a maximum of 75 lbs. Rescue tool typical dimensions are 17” long by 10” wide by 12 high. A training package including HMMWV extraction, MRAP extraction and Power Hawk training DVDs, powerpoint and printed materials shall be included with the rescue tool kit. Brand Name Only: Power Hawk Technologies Inc., P/N PHT-UO3-P16. Quantity: 1 kit.

3.16.10.1. * Rescue Tool. The rescue tool shall be a battery operated pinching, prying, spreading and cutting device and shall allow for interchangeable arms. The rescue tool shall operate in the rain. The rescue tool shall meet Gearbox output torque: 72,000 lbs-in, output/input ratio: 5,958:1, Variable gear box with 70° adjustable swivel head, 12 volt DC motor, no load motor current: 15 amps, max load motor current: 150 amps, 1’ pigtail cable. Unit shall be a gearbox design and contain no hydraulics. Brand Name Only: Power Hawk Technologies Inc., P/N P-16-BLK. Quantity: 1 each.



3.16.10.2. * Controller Unit. Shall be an electronic switching and regulating device that delivers 12 volt DC current from the power source to the Rescue Tool. Open and closes the tool and regulates maximum tool load. Brand Name Only: Power Hawk Technologies Inc., P/N PC-100-BLK. Quantity: 1 each.



3.16.10.3. * Attachment Pin Set. High-strength steel alloy ball-detent pins that secure spreading and cutting attachments to the rescue tool. The pins for the right side of the Rescue Tool shall be securely attached to each other and the pins for the left side shall be securely attached to each other. Brand Name Only: Power Hawk Technologies Inc., P/N AP-1600-BLK. Quantity: 2 sets.



3.16.10.4. * Power Cable. This power cable shall connect the controller unit to the Rescue Tool and be approximately 13' long. Brand Name Only: Power Hawk Technologies Inc., P/N CA-4M-BLK. Quantity: 1 each.



3.16.10.5. * Battery Pack. Portable 12 Volts DC power pack that contains a 33 AH Valve-Regulated Absorbent-Glass-Mat (AGM) Lead Acid Battery and shall be capable of a minimum of three hours operation from a fully charged state. Includes charge indicator, quick connectors, charger port, and built-in straps to attach the Controller Unit. Brand Name Only: Power Hawk Technologies Inc., P/N PWR-12MP. Quantity: 3 each.



3.16.10.6. * Jumper Cable. Cable shall enable the Rescue Tool to be powered by an alternate 12 volt DC power source with jumper cable style clamps. Brand Name Only: Power Hawk Technologies Inc., P/N JC4-16. Quantity: 2 each.



3.16.10.7. * Battery Charger. The battery charger shall be capable of recharging the 12 volt DC battery pack within 4 hours from a 110/220 VAC supply. The battery charger shall be designed for heavy vibration, Input: 90-230 VAC ($\pm 10\%$) auto-switch 50-60 Hz ($\pm 10\%$), Output: 12 VDC 4 amp max. Operating Temperature 32°F to 104°F and UL listed. Brand Name Only: Power Hawk Technologies Inc., P/N BC-U1. Quantity: 2 each.



3.16.10.8. * Spreader Arm Set. Set shall include left and right steel spreader arms for spreading and crushing. Arms shall be serrated to provide deeper engagement of the arms to provide mechanical advantage to increase spreading and crushing forces. Spreading force 1" from tip: 8000-11000 lbs and spreading forces measured at back of arms: 17000 to 45000 lbs. Brand Name Only: Power Hawk Technologies Inc., P/N S-1601-BLK. Quantity: 1 pair.



3.16.10.9. * Curved-Blade Cutter. Cutter shall be designed to capture material as they close for cutting pipes, bars, railings and door frames. Cutting force shall be 30,000 lbs at blade center. Opening distance: 5". Brand Name Only: Power Hawk Technologies Inc., P/N C-1601-BLK. Quantity: 1 pair.



3.16.10.10. * Power Blade. Shall provide for continuous cutting, have a notch for cutting solid steel bar. Blade shall close past center open tight seams and break locks. Cutting force at notch: 45,000 lbs, cutting force at blade center 21,000 lbs, spreading force 1" from tip 10,000 to 18,000 lbs (closed to open). Maximum open distance at tips 10", maximum open distance at cutter notch 1". Brand Name Only: Power Hawk Technologies Inc., P/N CS-1602-BLK. Quantity: 1 pair.



3.16.10.11. * Backpack. Designed to secure the Power Pack and Controller Unit or Rescue tool with attachments in a portable shoulder mounted configurations. Brand Name Only: Power Hawk Technologies Inc., BKPK-600. Quantity: 2 each.



3.16.11. Electric Winch Kit. The Winch kit shall include the following items described in paragraphs 3.16.11.1 to 3.16.11.2 and include ancillary accessories described in paragraphs 3.16.11.7 to 3.16.11.11 needed to utilize the ground anchor or to winch off of a stationary object (tree, truck, pole, etc). Quantity 1 kit.

3.16.11.1. Winch. Shall be a man portable, heavy duty electric winch configured to operate off of the same power supply as the Rescue Tool Kit, paragraph 3.16.10.5. The winch shall use 1/4" cable, have a minimum 5,000 pound peak single line pull capacity, and an 8' per minute (with 2,000 pound load) winching capacity. The winch shall be able to reach at least 50', weigh a maximum of 50 pounds, have a free spooling clutch, automatic braking, 30' handheld remote, and have a hook with keeper at the end of the cable. The winch shall include the winch cradle. Brand Name or Equal to: Power Hawk Technologies Inc., P/N WS5000PH. Quantity: 1 each.



3.16.11.2. *Pulley Block. Shall provide 10,000 lbs capacity and allow pulling direction changes without damaging the wire rope. Brand Name Only: Power Hawk Technologies Inc., P/N W10000PB. Quantity: 1 each.



3.16.11.3. *Anchor Shackle/Anchor Bar with Pins. Shall be compatible with the winch and allow the winch to be utilized as a ground anchor or to winch off stationary objects. The anchor shackle shall include anchor bar with pins. Brand Name Only: Power Hawk Technologies Inc., P/N WM465. Quantity: 1 each.



3.16.11.4. *Nylon Strap. Shall include a 2 inch by 6 foot nylon strap rated for a breaking strength of at least 11000 lbs. Brand Name Only: Power Hawk Technologies Inc., P/N W2X6NS. Quantity: 1 each.



3.16.11.5. *Accessory Bag. The accessory bag shall be capable of containing winch kit components. Brand Name Only: Power Hawk Technologies Inc., P/N WBAG-2. Quantity: 1 each.

3.16.11.6. Heavy-Duty Gloves. The heavy-duty gloves shall be a pair of leather palm gloves, material split leather/stripped cotton back, gauntlet cuff, and wing thumb. Brand Name or equal to: Knoxville Glove, PN 6959. Quantity: 1 each.



3.16.11.7. *Anchor, Ground. The ground anchor that shall be designed to safely anchor down the winch cable or winch described in paragraph 3.16.11. Typical anchor dimensions are 24" long by 17" wide. Brand Name Only: Pull Pal Inc., P/N RW6,000. Quantity: 1 each.



3.16.11.8. *Block, Snatch, Pulley. Pulley shall have a minimum 2 ton rating. The pulley shall consist of a steel, galvanized finish, swivel hook with latch, featuring a single steel sheave, size 6". Brand Name Only: Apex Tool Group LLC, P/N 7336624. Quantity: 1 each.



3.16.11.9. *Clamp/Lock, Cable Pulling. The cable pulling clamp shall be capable of pulling 1/8" to 1/2" cable. Brand Name Only: Klein Tools Inc., P/N 1604-20L. Quantity: 1 each.



3.16.11.10. *Cable, Extension. The extension cable shall be 1/4" diameter x 50' long with a snap hook on one end and a loop with sleeve and thimble on the other end. Brand Name Only: Ashley Sling Inc., P/N SO1124648/125-10. Quantity: 1 each.



3.16.11.11. *Strap, Tow. The tow strap shall be of nylon webbing, 2" wide by 30' long with loops at the each end with a 6,000 lb working load and 18,000 lb breaking strength. Brand Name or equal to: Ashley Sling Inc., P/N TS2-802 x 30'. Quantity: 1 each.



3.16.12. *Ventilating Kit. The ventilating kit shall include the following items described in paragraphs 3.16.12.1 to 3.16.12.3.

3.16.12.1. *Fan, Ventilating. The ventilating fan shall be a 12 VDC battery operated fan capable of delivering up to 862 CFM free air flow. The fan shall be compatible with a quick couple canister with a 25' long 8" diameter ventilating duct. The ventilating fan shall be configured to operate off the same battery pack as the rescue tool, paragraph 3.16.10.5, and the winch, paragraph 3.16.11. The fan and associated components shall be capable of operating in a hazardous environment (non-explosive). Brand Name Only: Power Hawk Technologies Inc., P/N FAN8-12V. Quantity: 1 each.



3.16.12.2. *Canister Duct. The canister shall be capable of mounting for either discharge or suction to the ventilation fan, paragraph 3.16.12.1. The duct shall be 25' long and 8" diameter. Brand Name Only: Power Hawk Technologies Inc., P/N FAN-7004CL. Quantity: 1 each.



3.16.12.3. Extension Cable. The extension cable shall be 16', 4 gauge cable with 175 A quick connect plug on each side to supply auxiliary power and operate accessories. The extension cable shall be compatible with the ventilating kit and rescue tool kit components paragraph 3.16.12 and 3.16.10. Brand Name or Equal to: Power Hawk Technologies Inc., P/N EC4-16. Quantity: 1 each.



3.16.13. *Saw, Concrete and Metal. The cut-off saw shall be a hand held, fuel powered, air-cooled saw used for cutting concrete blocks, reinforced concrete walls, and metal plate. It shall have a cutting depth of not less than 10 inches and weigh not more than twenty-eight pounds. The saw shall use a 14” diameter blade. The cut-off saw shall be taken out of the manufacturer’s supplied case and placed in a vented transport/storage chest. The cut-off saw shall include a tool kit for changing blades, grease gun, grease and training DVD. Brand Name Only: Husqvarna, Model K970 Ring Saw. Quantity: 1 each.



3.16.13.1. *Blade, Circular. The blade shall be designed for cutting hard material such as river rock, granite, heavily reinforced concrete, mica, precast panels, marble, quartz, trap rock, flint rock, and concrete over 6,000 psi tensile strength. The blade shall include a drive disk and must be compatible with the saw described in paragraph 3.16.13. Brand Name Only: Husqvarna, P/N ELR20 or 531108058. Quantity: 3 each.



3.16.13.2. *Blade, Circular. The blade shall be designed for cutting a wide range of materials: concrete less than 6,000 psi tensile strength, lightly reinforced concrete, concrete pipes and other precast concrete. The blade shall include a drive disk and must be compatible with the saw described in paragraph 3.16.13. Brand Name Only: Husqvarna, P/N ELR45 or 531108059. Quantity: 3 each.



3.16.13.3. Hose, Industrial. The hose shall be industrial style, 3/4" x 50', cover resists oil, chemicals and abrasions, withstands 160°F water. The industrial hose shall be compatible for use with the Concrete and Metal Saw specified in paragraph 3.16.13. Brand Name or Equal to: Swan Hose, P/N SNCCD34050. Quantity: 1 each.



3.16.14. *Saw, reciprocating, cordless. The saw shall be commercial grade compact, lightweight, and operate utilizing a 36V Li-Ion battery. The saw shall be variable speed, with a pivoting shoe and an electric brake, and shall have a keyless blade changing capability. It shall not weigh more than twenty-one pounds. The saw shall be provided with a kit including a 1 hour charger, two 36V Li-Ion batteries, and a heavy-duty kit box. The batteries and charger shall be able to operate with the hammer drill, paragraph 3.16.8. Brand Name Only: Black and Decker Inc, DeWalt Div., P/N DC305K, battery DC9360, and charger DC9000. Quantity: 1 kit.



3.16.14.1. *Blade, Carbide Grit. The blade shall be a commercial grade carbide grit blade, 6" long, coated with coarse carbide grit. The blade must be compatible for use with the saw described in paragraph 3.16.14. Brand Name Only: Robert Bosch Tool Corporation, P/N Bosch RCB6G-2. Quantity: 5 package, 2 blades per package.



3.16.14.2. *Blade, Carbide Grit. The blade shall be a commercial grade carbide grit blade, 6” long, coated with coarse carbide grit. The blade must be compatible for use with the saw described in paragraph 3.16.14. Brand Name Only: Black and Decker Inc. Dewalt Div., P/N DW4844. Quantity: 2 package, 5 blades per package.



3.16.14.3. *Blade, Metal, Cutting. The blade shall be a commercial grade metal cutting blade, 6” long, with a reinforced tooth design, 14 teeth per inch and anti-stick coating. Blades shall be supplied packed five blades to a package. The blade must be compatible for use with the saw described in paragraph 3.16.14. Brand Name Only: Black and Decker Inc. Dewalt Div., P/N DW4808. Quantity: 1 package, 5 blades per package.



3.16.14.4. *Blade, Metal Cutting. The blade shall be a commercial grade metal cutting blade, 12” long, with a reinforced tooth design, 14 teeth per inch and anti-stick coating. Blades shall be supplied packed five blades to a package. The blade must be compatible for use with the saw described in paragraph 3.16.14. Brand Name Only: Black and Decker Inc. Dewalt Div., P/N DW4838. Quantity: 1 package, 5 blades per package.



3.16.14.5. *Blade, Wood Cutting. The blade shall be a commercial wood cutting blade, 12” long, with a reinforced tooth design, 5/8 teeth per inch and anti-stick coating. Blades shall be supplied packed five blades to a package. The blade must be compatible for use with the saw described in paragraph 3.16.14. Brand Name Only: Black and Decker Inc. Dewalt Div., P/N DW4849. Quantity: 1 package, 5 blades per package.



3.16.14.6. *Blade, Wood Cutting. The blade shall be a commercial wood cutting blade, 6” long, with a reinforced tooth design, 5/8 teeth per inch and anti-stick coating. Blades shall be supplied packed five blades to a package. The blade must be compatible for use with the saw described in

paragraph 3.16.14. Brand Name Only: Black and Decker Inc. Dewalt Div., P/N DW4847.
Quantity: 1 package, 5 blades per package.



3.16.15. *Tactical Torch Kit. The kit shall be a lightweight breaching/entry torch kit. The torch kit shall consist of: an oxygen certified cylinder and backpack system including oxygen cylinder carrier, small and large rod holder, battery pouch and gear pouch, tactical torch, regulator system, ignition system, and charging system. The tactical torch shall be a submersible version containing a depth compensating oxygen regulator to facilitate underwater cutting operations to a depth of sixty feet of sea water (fsw). The fully loaded backpack system shall not exceed seventy-five pounds weight. Above water, the system shall provide the capability of cutting eight linear feet of one-inch thick steel in less than ten minutes. The system shall use hand-tightening fittings and quick-connects to facilitate fast and easy setup. The torch handle shall have an oxygen plug valve, rod holder, oxygen control lever, and quick connect fitting. The torch assembly shall handle ¼ inch and ⅜ inch collets. The torch shall meet the standards outlined in ANSI/ASC Z49.1-88 (T). It shall have a twenty-foot power cable with connectors. The oxygen cylinder shall have a minimum capacity of forty-five cubic feet at 2,200 pounds per square inch and shall have a CGA 540 outlet fitting. The tank shall be a standard type and shall meet U.S Department of Transportation (DOT), European Commission (EC) and Transport Canada (TC) standards for pressure equipment. The system shall be capable of igniting the rod above or below water. Battery ignition shall be used above water, while chemical ignition may be used for igniting the rod under water. The charging system shall be capable of charging the battery to full charge within 4 hours from a 115 VAC nominal, preferably a 24/115/220 VAC, source. The kit shall include an impact resistant hard plastic case, #5 safety glasses, leather rod shield, 5' long hose assembly, 15' long hose assembly, 1/4" cutting rod 9 stick pack, 3/8" cutting rod 6 stick pack, welding gloves, leather striker holder, 1/4" and 3/8" collet kit, submersible regulator, battery assembly, battery charger assembly, battery adapter kit, striker plate, regulator o-rings, manual and 18" rod extender. Brand Name Only: Broco Inc., P/N PC/TACMOD1 with additional items as specified. Quantity 1 kit.



3.16.15.1. Hose Cover. The hose cover material shall be leather. The cable covers shall be 20' and provide protection for the Tactical Torch Kit 5' and 15' long hose assemblies. Cover shall have clasp(s)/fastener for closure. Brand Name or Equal to: Broco Inc., P/N PC/D-114US-20. Quantity: 1 Each.

3.16.16. ***Welder Kit.** The welder shall be a wire feed type, Metal Inert Gas (MIG)/ Flux Core Arc Welding (FCAW) unit and shall operate on twenty-four volts using a NATO slave receptacle. The welder shall meet the standards outlined in ANSI/ASC Z 49.1-1988 Safety in Welding and Cutting Standards; NFPA 51B-1989, Cutting and Welding Processes; ANSI Z87.1-1989, The Practice for Occupational and Educational Eye and Face Protection; and other standards as applicable. The unit shall be able to handle wire from .023" though .045" at feed rates of 0 to 1000 inches/minute. The welder shall have control knobs for spool tension, voltage control, and wire feed control; it shall have interchangeable tips and nozzles; a trigger for turning wire feed on/off and LED indicator for power, polarity of voltage, voltage supply, and low battery. The welder shall have overheat and battery over discharge protection systems. Rated output shall be 200 Amps at 42VDC with 50% duty cycle. The welder kit shall include the 24VDC MIG/FCAW wire feed welder, 20' long ground cable assembly, 2' battery clamp wiring harness, 2 spools of .035 flux core welding wire, jumper cable assembly, 6 piece .035 contact tip set, 3" long copper nozzle, nozzle insulator, gas diffuser, gas hose adapter, slaveplug with CAM-LOK quick connects and CAM-LOK adapter harness. Welder kit shall be placed in a heavy duty nylon bag. Brand Name Only: Broco Inc., P/N GOWELDUSMC. Quantity 1 kit.



3.16.16.1. Helmet, Welding, Auto Darkening. Shall be an auto darkening hood-style welding helmet, with a #9-12 shade control lens. Brand Name or Equal: Jackson Safety., P/N WH40 w/Professional. Quantity: 1 each.



3.16.16.2. *Hammer, Welding. Shall be a welding hammer approximately 10” long, 16 oz weight with coil wire handle, and shall have a head with a cross chisel and pick. Brand Name Only: Lenco, P/N LHC-1. Quantity: 1 each



3.16.16.3. *Apron, Welding. Shall be a welding apron, approximately 24” wide by 36” long, resistant to heat and sparks generated by welding. Brand Name Only: Guard Line Inc., P/N FS302. Quantity: 1 each.



3.16.16.4. *Needle Nose Pliers with Side Cutters. The needle nose pliers shall include side cutters and be approximately 6-5/8” in length with a jaw length of approximately 1-7/8”. BrandName Only: Stanley Proto Industrial Tools, P/N J226G. Quantity: 1 each.



3.16.17. Plugs, Ear. Hearing protection shall be provided in the form of foam, uncorded, disposable earplugs. Earplugs shall have a Noise Reduction Rate (NRR) of approximately 29 dB. Shall come in a box of 200. Brand Name or Equal to: 3M, P/N 310-1001. Quantity: 1 box



3.16.18. *Glasses, Safety. Eye protection shall be provided in the form of plastic safety glasses. Safety glasses shall meet the requirements of ANSI Z87.1-2003. Brand Name Only: Sellstrom Manufacturing Co., P/N 73921. Quantity: 2 each.



3.16.19. Peephole Scope, Reverse. The reverse peephole scope shall be designed to reverse the view of a door peephole with a field of view of at least 10 degrees. The reverse peephole scope shall be handheld and less than 5”in length. Brand Name or Equal: Zistos, P/N PEEP. Quantity: 1 each.



3.17. Unique Item Identification (UII). In addition to the requirements stated above and those of DFARS clause 252.211-7003 incorporated elsewhere in the contract, any component of this set for which the cost to the Government will exceed \$5000 shall be marked with a unique item identifier that has machine-readable data elements that shall distinguish it from all other like and

unlike items. Each unique item identifier shall be globally unique and unambiguous. The UII data elements shall be contained in a Data Matrix ECC200 symbol in accordance with ISO/IEC 16022. Marking shall conform to MIL-STD-130. The required marking shall be applied to a label securely fastened to the item case. The identifier shall remain intact and readily human and machine readable for the expected life of the tool set. The unique item identifier shall not be repeated during the life of the contract. If construct number 2 is used (serialization within the original part number of the enterprise), the contractor shall maintain the original part number on the item for the life of the item. The contractor shall bear the responsibility to populate the UII registry with the parent UII and any children (components) relating to that parent UII. Further guidance on unique item identification may be found at <http://www.acq.osd.mil/dpap/pdi/uid/index.html>.

3.18. Data Plate. The data plate shall conform to Commercial Item Description A-A-50271 Composition A, Class 2 or Composition D. The data plate shall be placed in a plainly visible location on the exterior of each chest. The Data plate shall be permanently affixed. It shall be resistant to deterioration caused by heat, cold, solar radiation, water, and petroleum products to the extent that they will remain intact and readily legible for 5 years or the expected life of the Urban Ops Platoon set. The data plate shall be printed in the English language and may be supplemented by graphical symbols. Each chest shall have a data plate containing the following information, including all information required to be inserted in the blanks indicated.

- a. End Item Nomenclature: Urban Operations Platoon Set
- b. End Item LIN: U88092
- c. End item NSN: TBD
- d. End Item Serial No.: *
- e. Box __ of __
- f. Nomenclature of this Box: TBD
- g. Specification data: DFP ECB-048
- h. Weight____lbs, _____Person Lift, Volume____cu ft,
Length____in, Width____in, Height____in
- i. Manufacturer: CAGE or FSCM and PIN **
- j. Contract number #

* The first completed set End Item Serial No. shall be PLT300. The next completed set End Item Serial No. shall be PLT301. Each completed set after PLT301 shall increase by one number.

** Format optional

3.19. Material Safety Data Sheets (MSDS). A mylar or laminated MSDS for each hazardous material (including welding wire) shall be included in the set. All mylar or laminated MSDS sheets shall be assembled in a type of binder or booklet format and stored in the set. MSDS for all calibration gases used for the Multi-Gas Detector, paragraph 3.16.7, shall be stored in the same case as the calibration gases.

3.20. Warning Labels. A warning label displaying “Warning: Hearing Protection Required” shall be adhered to the following tools; Rotary Hammer, Concrete and Metal Saw, and Reciprocating Saw. The tool chest containing the Concrete and Metal Saw shall have a warning label displaying “Warning: Chest contains fueled gasoline powered ring saw. Flammable vapors may be present”. The combination fuel/oil can container shall have a warning lable displaying “Do not place in sealed transport case when fuel or oil are present”.

Also, all tools that weigh over 37 pounds shall be adhered with an appropriate warning label indicating the tool’s weight and the number of lifters required to carry the tool. The following table is a list of the tools in this set that meet this requirement:

Component	Weight (lbs)	Number of Lifters	Hazard Potentiator
Electric Winch (Powerhawk Portable Winch Model W-4000)	41	2 females or 2 mixed gender	Traversing slippery terrain
Concrete and Metal Saw (Partner K950 Gas Ring Saw)	61	2 females or 2 mixed gender	Traversing slippery terrain
Rescue Tool Kit (Powerhawk P-16 Rescue System)	41	2 females or 2 mixed gender	Traversing slippery terrain
Tactical Torch Kit (PC/TAC-A)	88	2 females or 2 mixed gender	Traversing slippery terrain
Portable Battery Pack 12 V 33 Amps w Control Box (powerhawk)	44	2 females or 2 mixed gender	Traversing slippery terrain
Portable Battery Pack 12 V 33 Amps (go welder)	38	2 females or 2 mixed gender	Traversing slippery

3.21. Logistical Support. Technical publications, supply support and training aides shall be addressed in separately provided SOWs.

4. QUALITY ASSURANCE PROVISIONS.

4.1. General provisions. The inspections (examinations and tests) herein shall be performed to determine conformance to Section 3 of this DFP.

4.1.1. Responsibility for inspection and product verification. Unless otherwise specified in the contract, the contractor is responsible for inspecting and verifying that product offered meets all requirements as specified herein. Except as otherwise specified in the contract, the contractor may use any facility suitable for the performance of the inspection and product verification in accordance with the requirements specified herein unless disapproved by the Government. The contractor shall provide certification and warranty that all inspection and product verification has been performed on the unit in accordance with the requirements specified herein and that the unit has successfully met all of the requirements. Failure of the contractor to provide this certification and warranty shall be cause for rejection. The Government reserves the right to witness any contractor performed inspections and product verifications or perform inspection and product verification as set forth in the requirements of this specification at any time where such inspection and product verification are deemed necessary to assure equipment and services conform to prescribed requirements.

4.1.2. Responsibility for compliance. All items must meet all requirements of Sections 3 and 4. The inspections set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products submitted to the government for acceptance comply with all requirements of the contract.

4.1.3. Verification. The product offered shall be demonstrated in such a manner to verify that it meets all of the contract requirements. Verifications consist of three basic types 1) visual inspections; 2) performance demonstration; and 3) Certificates of Conformance. Each requirement set forth in section 3 above shall be verified by one or more of the three types. All verification to assure that the products offered are properly designed to perform as required shall have been completed with satisfactory results before products are presented to Government personnel witnessing the demonstration of the product. Verification shall include conformance to design, adequacy of markings, proper cleaning, and freedom from identified defects. The verification provisions may be applied at the earliest practical point in manufacturing at which it is feasible to inspect for acceptance without risk of change in the characteristic by subsequent operation. Failure of the contractor to provide objective evidence that the item and its components have passed the examinations prescribed for them by the contractor's inspection system shall be cause for rejection. The required Certificates of Conformance (COC) shall be submitted to the Government with the product verification test report.

4.1.4. Classification of inspections. The inspection requirements specified herein are classified as follows:

- Product verification inspection (see Paragraph **4.2**)
- Conformance inspection (see Paragraph **4.4**)

4.1.5. Changes to materials, processes, or configuration. The Procurement Contracting Officer (PCO) shall be informed of any changes to the materials, processes, or configuration of any characteristic of the units. The contracting officer shall determine if the reported changes to materials, processes, or configuration shall require any of the verifications under paragraph 4.2 to be repeated.

4.1.6. COC format requirements. COCs shall contain the following information. Refer to MIL-W-63150.

Name of company providing the COC and the date of submittal.
Contract number and DFP paragraph number that the COC applies to.
A brief description of the item for which the COC is being provided.
The test standard used to certify the requirement.
The signature and title of the certifying official.

4.1.7. Calibration. All test equipment used to validate the requirements set forth in this document shall have current National Institute of Standards and Technology (NIST) traceable calibrations in place prior to use. Documentation shall be available for Government inspection prior to the start of any testing.

4.2. Product Verification Inspection.

4.2.1. Submission. The contractor shall submit a product verification sample(s) as designated by the Contracting Officer. The product verification inspection shall consist of a minimum of one complete Urban Operations Platoon Set.

4.2.2. Inspections to be performed. The product verification sample(s) shall be subjected to all of the verification methods specified in 4.3 and 4.4

4.3. Performance demonstrations. The performance demonstration procedures are specified in paragraphs 4.3.1 through 4.3.3.2 and may also be performed during conformance inspection. Failure of any sample unit to pass any of these verification procedures shall be construed as a failure to present a product that meets the contract requirements.

4.3.1. Rough handling demonstration. Load the chests from one production qualification Urban Operations Platoon Set with a full tool load, close and fasten. Drop one chest from a height of 60 inches onto a hard floor surface. Inspect the chest for cracks, breaks, dents or other damage that renders it less usable, including less transportable. The chest, hinges, handle, and cover shall function in the same manner as prior to the drop test. Roll the chest over on the floor, 360 degrees, and do so four times, in the four different directions, going over each of the four lower edges. Open the chest. Remove each tray, and inspect the tools to assure that all tools are still in their proper storage position. Document any cushions, restraints, or tools found out of place. Perform satisfactory functional check of each power tool. Failure of the chest to withstand being dropped without sustaining damage as described above, or failure of the tool organizing liner to

retain the tools such that no tools are damaged (visual and functional check) and any displaced tool which cannot be immediately replaced into its proper storage position shall constitute failure of this requirement. Repeat for each chest.

4.3.1.1. Tactical Inspection Kit Protective Case Demonstration. A fully loaded chest shall withstand drop testing IAW MIL-STD-648D, Appendix G, Procedure B, Level A. A total of 6 drops shall be conducted, no side shall be dropped more than once. Upon completion of the test the contents of the kit shall be removed demonstrated. Damage that would affect the operation of the tool chest or tool load shall be considered a failure to meet the requirement.

4.3.2. Low temperature test. A chest shall contain simulated weight of 273 lbs and stored for three hours in a cold temperature environment (no warmer than -25 degrees F). The chest shall then be removed from the cold temperature environment and all moving parts of the chest shall be operated. Within five minutes of being removed from cold temperature environment the fully loaded chest shall then be dropped from a height of 36 inches onto a hard floor surface. Each of the chests shall be tested. Failure of the latches, locks and handles to operate properly, or permanent deformation or breakage of the chest shall constitute failure of this requirement.

4.3.3. High temperature test. A chest shall contain simulated weight of 273 lbs and stored for three hours in a hot temperature environment (no colder than 160 degrees F). The chest shall then be removed from the hot temperature environment and all moving parts of the chest shall be operated. Within five minutes of being removed from hot temperature environment the fully loaded chest shall then be dropped from a height of 36 inches onto a hard floor surface. Each of the chests shall be tested. Failure of the latches, locks and handles to operate properly, or permanent deformation or breakage of the chest shall constitute failure of this requirement.

4.3.4. Water entry resistance demonstration. Water entry resistance demonstration may be performed using either of two methods. The first is a submersion method in which the chest is completely immersed in a tank of water. The second is a windblown rain procedure. The two methods are offered to take advantage of the various existing verification apparatus that may be available in the commercial market place. Each of the chests shall be tested.

4.3.4.1. Water immersion procedure. Close and fasten the chest, with or without the tool load in it. At the contractor's option, a weight may be placed in the chest to keep it from floating or any other tie down method may be used so long as it does not affect the operation of the seal. Immerse the chest in a tank of water to a depth at which the lid is under water and orient the chest with the closed lid in its upright position. Keep the chest under water for not less than 10 minutes. After ten minutes remove the chest from the tank and towel dry the exterior. Open the chest and conduct a visual inspection of the inside. Make note of any water found on the interior of the chest. Accumulation of moisture inside the chest shall constitute failure of this requirement.

4.3.4.2. Rain and wind blown rain procedure. Close and fasten the chest with or without the tool load in it. Submit the chest to the following verification procedure utilizing an apparatus that meets the requirements as stated.

- a. The rain making apparatus shall produce falling rain at the rate of 4 inches per hour. The water distribution device shall produce droplets having a diameter range predominantly between 0.5 mm and 4.5 mm. The rain shall be dispersed completely over the chest. Position the spray nozzles at a height sufficient to ensure the drops approach terminal velocity as if they had fallen through the atmosphere from the sky. Water used for this verification procedure can be from local water supply sources. It is not necessary to use de-ionized or distilled water for this verification procedure.
- b. Immediately prior to performing the test, verify the rainfall rate to be 4 inches per hour or more.
- c. Adjust the temperature differential between the water and the chest to be no less than 10 degrees C. The chest shall be the warmer value.
- d. Interruption of the water entry resistance verification procedure is unlikely to generate any adverse effects. Therefore, if an interruption occurs, the procedure may be continued from the point of interruption.
- e. Follow the 3 step procedure as outlined below. Accumulation of moisture inside the chest shall constitute failure of this requirement.
 1. With the chest in the apparatus and in its normal storage position, adjust the rainfall rate to 4 inches per hour.
 2. Continue the rain for a 30 minute period.
 3. Remove the chest from the test apparatus, towel dry the exterior, open the chest and conduct a visual inspection of the inside making note of any water found on the interior of the chest. Accumulation of moisture inside the chest shall constitute failure of this requirement.

4.3.5. Chest Stacking Test. The bottom chest shall contain a complete set of equipment. The additional two chests shall be stacked on top of the bottom chest and shall contain weight simulating the 273 lbs per chest. The tool chest mold shall interlock and provide for a stable environment that will not tip or collapse.

4.3.6. Crate Stacking Test. The bottom crate shall contain the correct number of tool chests comprising a complete set of equipment. An additional crate that will be stacked on top of the bottom crate shall contain the correct number of chests with weight simulating the 1638 lbs requirement. The crates shall be constructed of such quality that they provide for a stable environment that will not tip over or collapse.

4.3.7. Impact Resistance. To demonstrate the required ability to withstand impacts from falling objects a steel bar shall be dropped, in free fall, from a height of not less than 8 feet. The steel bar shall weigh not less than 3 pounds, shall have a cross section no larger than 3/16 X 1 inch and shall have an edge radii no larger than 1/16 inch. The bar shall land narrow end down on the chest. Each of the chests shall be tested. Any damage or effect beyond minor denting of the exterior, e.g. penetration, shall constitute failure of this requirement (see 3.16.4.4.3. Impact Resistance).

4.3.8. Environmental Conditions and Requirements. The chest shall be brought to hot and cold temperatures (minimum 3 hours operating and 4 hours storage) and then inspected for any physical damage in accordance with paragraph 3.16.4.5. Environmental Conditions and Requirements.

4.3.9. Handles. Each tool chest shall be lifted by two handle pairs until all eight handles have been tested. Permanent deformation to the handles or chests shall constitute failure to meet the requirement of paragraph 3.16.4.7. Weight. Verify the presence of the warning label.

4.3.10. Overall Security. Inspect chest IAW paragraph 3.16.4.6. Overall Security in regards to padlock, key and cable requirements.

4.3.11. Latches. Demonstrate that latches can be opened while wearing working gloves with 1 hand, IAW 3.16.4.1.4. Latches.

4.3.12. Toll Chest Interior. Verify that within ten minutes an operator can identify whether all items are present and identify which ones are not, IAW paragraph 3.16.4.2 Tool Chest Interior.

4.3.13. Component Protection. The tool chests shall protect the tool load during the performance demonstration testing. The tool chests shall also keep the contents of the tool chests in place during testing, IAW paragraph 3.16.4. Chest, Tool Kit, Storage and Transport.

4.3.14. Chest, Tool Kit, Storage and Transport. Verify that all of the tools in table 4 will fit in the chest, that the chest is not hinged and that the chest meets other requirements called out in paragraph 3.16.4. Chest, Tool Kit, Storage and Transport.

4.3.15. Tool Chest Exterior. Verify that the chests are the correct size, color, labeled, and meet the other requirements called out in paragraph 3.16.4.1 Tool Chest Exterior including the correct number of handles and location.

4.4. Conformance Inspection.

4.4.1. Compliance. Conformance inspection shall be applied to production units being offered for acceptance under the contract. Lot formation shall be in accordance with Section 4 of MIL-STD-1916. Inspections shall include all conformance inspections specified in 4.4.

4.4.2. Sampling plan determination. When required by contract or cited herein, attribute-sampling inspections shall be conducted in accordance with MIL-STD-1916 using Verification Level (VL) I.

4.4.3. Conformance of subsequent production quantity. All products offered for acceptance throughout the life of the contract shall conform to all of the requirements of the contract. The Government reserves the right to re-verify conformance with requirements, at its own facility

and at its own expense, at any time during the life of the contract and return to the contractor for warranty replacement such product that does not conform to the specified requirements.

4.4.4. Industrial quality tools. Provide a Certificate of Conformance to certify that the components supplied meet the requirements of paragraph 3.2.

4.4.5. Workmanship. Contractor shall provide certification that the Urban Operations Platoon Set has been manufactured with skill and care and free from irregularities and anomalies that degrade form, fit, function, performance or appearance. (See paragraph 3.12)

4.4.6. Warranty. Verify that warranties are provided in accordance with paragraph 3.13. The Government reserves the right to re-verify conformance with the requirements, at its own facility and at its own expense, at any time during the life of the contract and return to the contractor for warranty replacement such product that does not conform to specified requirements.

4.4.7. Warranty literature. Verify by visual inspection that warranty literature is provided in compliance with paragraph 3.13 and 3.14.

4.4.8. Bag, Deployment & Storage. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.1.

4.4.9. Bit Set, Hammer. Verify by visual inspection number and type of items and SDS compatibility required in paragraph 3.16.2. Verify by visual inspection requirements regarding size, length, and tip type of paragraphs 3.16.2.1 through 3.16.2.9.

4.4.10. Container, Fuel, Oil, Combination. A visual inspection shall verify requirements of paragraph 3.16.3 and 3.16.3.1.

4.4.11. Chest, Tool Kit, Storage and Transport. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.4. The tool chest may be subject to the testing methods noted in paragraphs 4.3.1 – 4.3.4 to verify conformance.

4.4.12. Detector, Explosive. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.5.

4.4.13. Detector, Multi-gas. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.7. A functional inspection shall also verify:

- a. On/Off function.
- b. Two speed operation.
- c. Data storage capability.
- d. Display lighting, flashing light and buzzer

4.4.14. Hammer, Rotary. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.8.

- 4.4.15. Tactical Inspection Kit. Third party test reports shall be submitted to verify conformance to the requirements of paragraph 3.16.9 and all sub-paragraphs (for non-equal product). The test report shall also verify conformance to MIL-STD-461F Radiated Emissions RE102 Procedures 5.17.3.4 and Figure RE102-4 for Navy Mobile & Army, and RS103 Radiated Susceptibility 5.20 and Table VII Ground. Failure to meet any of the requirements shall be cause for rejection.
- 4.4.16. Rescue Tool Battery Kit. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.10.1 through 3.16.10.11.
- 4.4.17. Winch. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.11.1 through 3.16.11.11.
- 4.4.18. Fan, Ventilating. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.12.1 through 3.16.12.3. A functional inspection shall also verify:
- a. On/Off function.
 - b. Variable speed operation.
 - c. Discharge and suction capability.
- 4.4.19. Saw, Concrete and Metal. A Certificate of Conformance shall verify paragraph 3.16.13. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.13.1 through 3.16.13.2.
- 4.4.20. Saw, Reciprocating, Cordless. A visual inspection shall verify requirements of paragraph 3.16.14. A visual inspection shall verify requirements of paragraph 3.16.14.1 through 3.16.14.6.
- 4.4.21. Tactical Torch Kit. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.15.
- 4.4.22. Welder Kit. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.16. A visual inspection shall verify requirements of paragraph 3.16.16.1 through 3.16.16.4.
- 4.4.23. Ear Plugs. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.17.
- 4.4.24. Glasses, Safety. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.18.
- 4.4.25. Scope Reverse Peephole. A Certificate of Conformance and visual inspection shall verify requirements of paragraph 3.16.19
- 4.4.26. Unique Item Identification. Visual inspection shall verify requirements of paragraph 3.17.
- 4.4.27. Data Plate. Verify data plate by visual inspection per paragraph 3.18 requirements. Failure to supply a data plate with required information shall be cause for rejection.

5. PRESERVATION AND PACKAGING

5.1. Packaging. The preservation, packaging and packing requirements shall be as specified in the contract or delivery order.