

**TM 10-8415-237-10**

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**TECHNICAL MANUAL**

**OPERATOR MANUAL  
FOR**

**FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**



**SUPERSEDURE NOTICE:** TM 10-8415-237-10 dated 1 November 2014 supersedes TM 10-8415-237-10 dated 30 July 2011, including all changes.

**DISTRIBUTION STATEMENT A.** Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**1 NOVEMBER 2014**



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## WARNING SUMMARY

This warning summary contains general safety warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

For first aid information, refer to FM 4-25.11.

### EXPLANATION OF SAFETY WARNING ICONS



FIRE – flame shows that a material may ignite and cause burns.

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## WARNING DESCRIPTIONS

### WARNING



All zippers must be fully zipped for garments to provide flame protection.

### WARNING

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The underlayer (1) is worn at all times.

### WARNING

Seam sealant is flammable. Do not use it for repair. Failure to follow this warning may result in injury or death to the user.

### WARNING

Remove lint from the dryer before drying FREE components. Lint can be flammable and may create a fire hazard for FREE garments.

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**WARNING**



Do not use any type of adhesive or pressure-sensitive tape for repair. Failure to follow this warning may result in injury or death to the user.

**WARNING**

Pressing, starching, dry cleaning, or the use of fabric softener, bleach, or soap will degrade the fabrics used in the FREE system. Failure to following these instructions could result in harm to the Soldier.

**WARNING**

Do not use the Laundry Advanced System (LADS) to wash FREE components.



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HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 1 NOVEMBER 2014

TECHNICAL MANUAL  
OPERATOR MANUAL  
FOR  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms) through the Internet on the TACOM Unique Logistics Support Applications (TULSA) Web site. The Internet address is <https://tulsa.tacom.army.mil>. Access to all applications requires CAC authentication, and you must complete the Access Request form the first time you use it. The DA Form 2028 is located under the TULSA Applications on the left-hand navigation bar. Fill out the form and click on SUBMIT. Using this form on the TULSA Web site will enable us to respond more quickly to your comments and to better manage the DA Form 2028 program. You may also mail, e-mail, or fax your comments or DA Form 2028 directly to the U.S. Army TACOM Life Cycle Management Command. The postal mail address is U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-MPP / TECH PUBS, MS 727, 6501 E. 11 Mile Road, Warren, MI 48397-5000. The e-mail address is [tacomlcmc.daform2028@us.army.mil](mailto:tacomlcmc.daform2028@us.army.mil). The fax number is DSN 786-1856 or Commercial (586) 282-1856. A reply will be furnished to you.

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## HOW TO USE THIS MANUAL

### HOW TO OBTAIN TECHNICAL MANUALS

When a new system is introduced to the Army inventory, it is the responsibility of the receiving units to notify and inform the Unit Publications Clerk that a Technical Manual is available for the new system. Throughout the life cycle of the new system, the Distribution Center DOL-W will also provide updates and changes to the Technical Manual.

To receive new Technical Manuals or change packages to fielded Technical Manuals, provide the Unit Publications Clerk the full Technical Manual number, title, date of publication, and number of copies required. The Unit Publications Clerk will then justify the request through the Unit Publications Officer. When the request is approved, DA Form 12-R is used to order the Technical Manual from the Army Publishing Directorate (APD).

### Instructions for the Unit Publications Clerk

Obtain DA Form 12-R and request a publications account from the APD Web site at <http://www.apd.army.mil>. Once on the Website, click on the "Orders/Subscriptions/Reports" tab. From the dropdown menu, select "Establish an Account," then select "Tutorial" and follow the instructions in the tutorial presentation.

Complete information for obtaining Army publications can be found in DA PAM 25-33.

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## ORGANIZATION OF THIS MANUAL

This manual contains operating instructions for the Fire Resistant Environmental Ensemble (FREE). Primary chapters appear in upper case/capital letters; work packages are presented in numeric sequence, e.g., 0001, 0002; paragraphs within a work package are not numbered and are presented in a titled format. For a first-level paragraph, titles are in all upper case/capital letters and bold – for example, **HOW TO OBTAIN TECHNICAL MANUALS**. Subordinate paragraph titles appear in bold with only the first letter of each work capitalized – for example, **I**nstructions for the **U**nit **P**ublications **C**lerk. The location of additional material that must be referenced is clearly marked. Illustrations supporting procedures/text are located underneath, or as close as possible, to their referenced paragraph. **NOTES**, **CAUTIONS**, and **WARNINGS** are located directly above the procedure to which they apply.

## MAJOR SECTIONS IN THIS MANUAL

**Front Matter** — Front matter consists of front cover, Warning Summary, title block, Table of Contents, and How to Use This Manual section.

**Chapter 1. General Information, Equipment Description and Data, and Theory of Operation.** Provides descriptions, equipment data, and theory of operation information.

**Chapter 2. Operator Instructions.** Provides sizing information, donning information, and operating instructions.

**Chapter 3. Troubleshooting Procedures.** Provides troubleshooting procedures for the FREE.

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**Chapter 4. Operator Maintenance Instructions.** Provides Preventive Maintenance Checks and Services (PMCS) and instructions on cleaning the FREE components.

**Chapter 5. Supporting Information.** Provides reference information, Components of End Items (COEI)/ Basic Issue Items (BII) Lists, and Expendable and Durable Items List for the FREE.

## **WORK PACKAGES AND PAGE NUMBERING**

This technical manual (TM) is in work package format. All of the work packages contained within the TM are listed in the Table of Contents in the order they appear by chapters. The work package number (e.g. WP 0001) is listed for each work package in the Table of Contents. The work package number appears at the top of each page of the work package and is also a part of the page number (e.g., 0001-1) located at the bottom of each page.

## **Finding Information**

The Table of Contents permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The Table of Contents lists the topics, figures, and tables contained within each chapter and the work package sequence number where it can be found.

A list of abbreviations and acronyms and a nomenclature cross reference list appear in WP 0001. There is no glossary or index.

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## **OPERATION AND MAINTENANCE**

Before you use the FREE, familiarize yourself with the fitting and use instructions (Chapter 2). Perform maintenance procedures (Chapter 3) on a regular basis. Always follow the WARNINGS and CAUTIONS.

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## **CHAPTER 1**

### **GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION FOR FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**





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## **FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE) GENERAL INFORMATION**

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### **SCOPE**

This manual covers basic use and care instructions for the Fire Resistant Environment Ensemble (FREE).

### **MAINTENANCE FORMS, RECORDS, AND REPORTS**

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751, or AR 700-138, Army Logistics Readiness and Sustainability.

### **REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your Fire Resistant Environmental Ensemble needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you do not like the design or performance. All non-Aviation/Missile EIRs and PQDRs must be submitted through the Product Data Reporting and Evaluation Program (PDREP) Web site. The PDREP site is: <https://www.pdrep.csd.disa.mil/>. If you do not have internet access, you may submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using email, regular mail, or fax using the addresses/fax numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

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## **CORROSION PREVENTION AND CONTROL (CPC)**

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form SF 368, Product Quality Deficiency Report. Use of keywords such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

## **OZONE DEPLETING SUBSTANCES**

There are no ozone depleting substances in the FREE.

## **DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE**

Not applicable to the FREE system.

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## PREPARATION FOR STORAGE AND SHIPMENT

Not applicable to the FREE system.

## NOMENCLATURE CROSS-REFERENCE LIST

**Table 1. Nomenclature Cross-Reference List.**

<b>Common Name</b>	<b>Official Nomenclature</b>
Duty Uniform, Service Uniform or Layer 4	Army Aircrew Combat Uniform (A2CU) or Improved Combat Vehicle Crewman (iCVC)
Fleece shirt and drawers or Layer 3	Midweight Layer
Intermediate weather jacket, trousers, or Layer 5	Intermediate Weather Outer Layer (IWOL)
Parka and trousers, or Layer 6	Extreme Weather Outer Layer (EWOL)
Undershirt, Short Sleeve, Drawers or Layer 1	Next to Skin Layer
Undershirt and drawers or Layer 2	Base Layer
Zipper	Slide Fastener

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## LIST OF ACRONYMS AND ABBREVIATIONS






**Table 2. List of Acronyms and Abbreviations.**

<b>Abbreviation/ Acronym</b>	<b>Definition</b>
A2CU	Army Aircrew Combat Uniform
AAL	Additional Authorization List
AR	Army Regulation
BII	Basic Issue Items
CAGEC	Commercial and Government Entity Code
CIF	Central Issue Facility
COEI	Components of End Item
CPC	Corrosion Prevention and Control
CTA	Common Table of Allowances
DA	Department of the Army
EWOL	Extreme Weather Outer Layer
FM	Field Manual
FR	Fire Resistant
FREE	Fire Resistant Environmental Ensemble
iCVC	Improved Combat Vehicle Crewman
IFF	Identification Friend or Foe
IWOL	Intermediate Weather Outer Layer
JTA	Joint Table of Allowances
MTOE	Modified Table of Organization and Equipment

**Table 2. List of Acronyms and Abbreviations — Continued.**

<b>Abbreviation/ Acronym</b>	<b>Definition</b>
NBC	Nuclear, Biological, and Chemical
NSN	National Stock Number
OCP	Operation Enduring Freedom Camouflage Pattern
PAM	Pamphlet
PMCS	Preventive Maintenance Checks and Services
SF	Standard Form
TA	Table of Allowances
TAMMS	The Army Maintenance Management System
TDA	Table of Distribution and Allowances
TM	Technical Manual
TOC	Table of Contents
TOE	Table of Organization and Equipment
UCP	Universal Camouflage Pattern
U/I	Unit of Issue
UOC	Usable on Code
UV	Ultra Violet
WP	Work Package

**Table 3. Weather Icons.**

<b>Icon</b>	<b>Weather Condition</b>
 A square icon with rounded corners containing a sun with rays.	Full Sun
 A square icon with rounded corners containing a sun partially obscured by a cloud.	Partial Sun
 A square icon with rounded corners containing a cloud with wind lines and a windmill.	Windy
 A square icon with rounded corners containing a cloud with rain falling from it.	Rain
 A square icon with rounded corners containing a cloud with snow falling from it.	Snow

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## **SAFETY, CARE, AND HANDLING**

### **WARNING**



Seam sealant is flammable. Do not use it for repair. Failure to follow this warning may result in injury or death to the user.

### **WARNING**

Remove lint from the dryer before drying FREE components. Lint can be flammable and may create a fire hazard for FREE garments.

Be sure to review the laundering and maintenance procedures in this manual carefully. Follow all Warnings and Cautions.

**END OF WORK PACKAGE**





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**FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
EQUIPMENT DESCRIPTION AND DATA**

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**EQUIPMENT CHARACTERISTICS, CAPABILITIES AND  
FEATURES**

The FREE is a multi-layered clothing system for cold and wet weather. Soldiers can tailor their wear and adapt to changing mission and climate conditions by configuring and reconfiguring the under layers and outer garments.

The FREE provides flame resistant properties designed for use by for air and mounted crewmembers in maneuver, maneuver support, and maneuver sustainment roles involved in missions ranging from Major Combat Operations, Stability Operations, Homeland Security, and Strategic Deterrence.

One FREE ensemble will be authorized to each Air and Mounted Soldier.

**Physical Description**

The FREE system is a multi-component clothing ensemble that allows Soldiers to tailor their clothing to specific mission and climate conditions. Insulating under layers provide warmth and moisture management properties, while outer layers provide protection from windy, wet, and cold conditions. These properties improve comfort and fit, increasing Soldier endurance and combat effectiveness.

---

## Functional Description

### WARNING



All zippers must be fully zipped for garments to provide flame protection.

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

The FREE protects the Soldier by providing flame resistance. FREE components are NOT fire proof, but provide enhanced protection and injury reduction through their flame-resistant capabilities. FREE components will not melt or drip when exposed to heat or flames.

The FREE is designed to provide 120 days of use in a combat environment consisting of 12 hours of daily wear, including mission time.

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## Layering FREE Components

### WARNING



All zippers must be fully zipped for garments to provide flame protection.

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

FREE system components are worn in layers. The base layer provides insulation under the iCVC or A2CU Duty Uniform. Intermediate Weather Outer Layer (IWOL) can be worn as stand-alone garments over the Duty Uniform or in conjunction with the Extreme Weather Outer Layer (EWOL) in extreme cold or wet conditions.

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## **Layer 1 — Next-to-Skin Layer**

Layer 1 is worn at all times and consists of an undershirt and drawer briefs. All items are made of a non-melting, fiber blend, jersey knit. Layer 1 is worn next to the skin and is designed to absorb moisture.



*Figure 1. Next-to-Skin Layer: Undershirt and  
Drawer Briefs.*

---

## Layer 2 — Base Layer

### WARNING



All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

Layer 2 is a form-fitting layer consisting of an undershirt and drawers. These garments are made of an aramid and spandex blended knit with insulating, flame-resistant, and moisture management properties. Thumb-hole openings keep the sleeves from riding up, providing flame protection for the arms if gaps in coverage occur between gloves and the Duty Uniform.



*Figure 2. Base Layer Undershirt and Drawers.*

---

## Layer 3 — Midweight Layer

### WARNING



All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

### NOTE

The shirt and drawers are designed to fit over the next-to-skin layer and still allow movement.

Layer 3 is a set of shirt and drawers designed to supply warmth and comfort for the Soldier. The aramid fleece knit fabric in Layer 3 provides flame resistance, moisture absorption, insulation, and is quick to dry.



*Figure 3. Midweight Fleece Layer Shirt.*



*Figure 4. Midweight Fleece Layer Drawers.*

#### **Layer 4 — Duty Uniform**

##### **WARNING**



All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

FREE components are designed to be used with the iCVC and A2CU. The IWOL and EWOL fit comfortably over an iCVC or A2CU.

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## Layer 5 — Intermediate Weather Outer Layer (IWOL)

### WARNING



All zippers must be fully zipped for garments to provide flame protection.

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

Layer 5 includes a midweight jacket and trousers made from a flame-resistant fiber blend with a waterproof breathable membrane and an aramid fleece inner lining. The set offers insulation from extreme cold and wet weather. The three-layer stretch laminate fabric enables the IWOL to fit comfortably over an A2CU or iCVC.

The IWOL jacket is ergonomic, featuring arm gussets for increased range of motion. The back of the jacket contains an extraction strap access flap with a pull tab, which is secured with a hook and loop closure. Two front zippered pockets are located on the wearer's right and one zippered shoulder pocket is located on the wearer's left.

The trousers feature knee-length boot zippers for easy donning and doffing over boots. Other features include two hip pockets and a back pocket with a zipper, as well as two lower-leg cargo pockets with hook and loop closures. The waist contains an integrated, flame-resistant web belt and a buckle adjustment to size the waist to fit.





*Figure 5. Intermediate Weather Outer Layer (IWOL)  
Jacket and Trousers.*

---

## Layer 6 — Extreme Weather Outer Layer (EWOL)

### WARNING



All zippers must be fully zipped for garments to provide flame protection.

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

Layer 6 has a parka, a midweight shirt, and trousers which are designed to be worn over a Duty Uniform or Layers 4 or 5, as the environment dictates. The components are flame resistant, waterproof, and windproof, providing protection in extreme wet or extreme cold and windy environments. The tri-laminate shell fabric is designed to offer moisture vapor permeability while also dissipating electrostatic charges that may be generated on the shell and liner side.

The parka features a removable roll-and-stow hood. A pen pocket is located on the forearm of the left sleeve. The parka includes an extraction-strap access flap.

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Snaps and zipper attachments enable the parka to be integrated with a liner for additional warmth in extreme cold/wet conditions. A midweight shirt acts as the parka liner. It is a flame-resistant aramid fleece knit fabric. It can be worn as a stand-alone garment.



*Figure 6. EWOL Midweight Shirt.*

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EWOL trousers feature an adjustable waistband with elastic cord, as well as seven belt loops and four internal suspender loops. The lower legs have zippers to allow for easy donning or doffing over boots.



*Figure 7. Boot Zippers on EWOL Trousers.*



*Figure 8. Extreme Weather Outer Layer (EWOL)  
Parka and Trousers.*

**0002-13**

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## Accessories

Additional authorized items include socks, neck gaiter, and a riggers belt.

The socks shown in Figure 9 are made from a non-melting, moisture wicking fiber blend with an antimicrobial finish.



*Figure 9. Socks.*

The riggers belt is made of flame-resistant, heavy-duty fiber webbing, as shown in Figure 10. It comes equipped with a reversible, quick-fit slide buckle for easy fitting.



*Figure 10. Riggers Belt.*

---

The neck gaiter and protective hoods shown in Figures 11 and 12 add cold weather protection.



*Figure 11. Neck Gaiter.*



*Type I*



*Type II*

*Figure 12. Lightweight Protective Hood.*

## **EQUIPMENT DATA**

Table 1 summarizes the characteristics of FREE layers. Layer 1 comes in six sizes. Layers 2 through 6 are offered in 18 sizes, from extra small short (XSS) to extra, extra, large, long (XXLL).

**Table 1. Equipment Data.**

<b>Layer</b>	<b>Features</b>	<b>Properties</b>	<b>Color/ Pattern</b>	<b>Sizes</b>	<b>Approx. Weight (Medium Size)</b>
<b>1 Next-to- Skin</b>	Jersey knit blend; Worn next to skin and under Layers 2 and 3	Non-melting; Moisture wicking; Absorptive	Foliage Green 504 or Desert Sand	XS – XXL	Undershirt Short Sleeve: 5.4 oz Drawers: 3.4 oz
<b>2 Base</b>	Light weight; Thumb-hole openings	Flame resistant; Moisture wicking	Foliage Green 504	XSS –XXLL	Undershirt: 8.4 oz Drawers: 8 oz
<b>3 Midweight</b>	Midweight fleece knit	Flame resistant; Quick drying; Moisture wicking	Foliage Green 504 or AF Tan	XSS –XXLL	Shirt: 12.4 oz Drawers: 10.2 oz

0002-16



**Table 1. Equipment Data — Continued.**

Layer	Features	Properties	Color/ Pattern	Sizes	Approx. Weight (Medium Size)
4 iCVC/ A2CU	Duty Uniform: Either or both the base layer (2) and midweight layer (3) are worn under the Duty Uniform for flame protection. The next-to-skin layer (1) is worn at all times.				
5 IWOL	3-layer stretch laminate fabric with fleece backing; Cold insulation and moderate wet weather protection; Jacket has extraction strap access flap; Trousers don/doff over boots	Flame resistant; Water resistant ; Wind resistant; Breathable; Anti-static	Universal or OCP	XSS–XXLL	Jacket: 1 lb, 15.8 oz Trousers: 1 lb, 15.2 oz
6 EWOL	Wind/wet weather protection; Midweight shirt adds warmth; Trousers have pass-through pockets for access to under layers; Parka has extraction strap access flap; Trousers don/doff over boots	Flame resistant; Waterproof; Windproof; Breathable; Anti-static	Universal or OCP for parka and trousers; solid green for mid- weight shirt	XSS–XXLL	Parka: 2 lb, 2.6 oz Midweight shirt: 1 lb Trousers: 2 lb, 3.4 oz

**Table 2. Accessories.**

<b>Item</b>	<b>Features</b>	<b>Properties</b>	<b>Color/Pattern</b>	<b>Sizes</b>
Lightweight Protective Hood II	Knit blend	Flame Resistant	Foliage Green	One Size
Neck Gaiter	Stretch knit blend	Flame resistant; Moisture wicking; Quick drying; Cold weather protection	Foliage Green	S/M or L/XL
Riggers Belt	Heavy-duty fiber webbing; Reversible quick-fit slide buckle	Flame resistant	Foliage Green	XS, S, M L, XL, XXL
Socks	Two types: Moisture wicking/anti-microbial or Cold weather	Flame resistant	Foliage Green	XS, S, M, L XL

**END OF WORK PACKAGE**

## **FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE) THEORY OF OPERATION**

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The Fire Resistant Environmental Ensemble (FREE) is a versatile, multilayered system designed for cold and wet weather. FREE components are constructed of insulating materials that reduce weight and bulk but offer increased moisture management properties and better comfort and fit. In addition, the FREE system provides enhanced protection through fire resistant fabrics that will not melt or drip when exposed to heat or flames. These improvements will minimize fatigue and injury, increasing endurance and combat effectiveness both in and out of aircraft and armored vehicles.

By configuring and reconfiguring the under layers and outer garments of the FREE system, you can adapt to changing mission and climate conditions. It is important to layer the FREE components, as this is what keeps you warm and comfortable. When you layer your clothes, warm air is trapped close to your body, so several thin layers worn together work better than one thick layer. But the layers also work in reverse to help you avoid overheating. Just add or remove items to adjust to changing climate conditions or an increase or decrease in mobility.

**END OF WORK PACKAGE**





## **CHAPTER 2**

# **OPERATOR INSTRUCTIONS FOR FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**



**OPERATOR INSTRUCTIONS  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
DESCRIPTION AND USE OF OPERATOR CONTROLS  
AND INDICATORS**

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There are no operator controls and indicators for the FREE.

**END OF WORK PACKAGE**





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**OPERATOR INSTRUCTIONS  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
OPERATION UNDER USUAL CONDITIONS**

---

**INITIAL SETUP:****Tools**

N/A

**References**

WP 0002

WP 0010

**Materials/Parts**

N/A

---

**ASSEMBLING THE FREE**

You can tailor your FREE to meet mission and climate conditions, as described in this work package.

**WARNING**

All zippers must be fully zipped for garments to provide flame protection.

All configurations use one or both the base layer (2) and midweight layer (3) under the Duty Uniform for flame protection.

The next-to-skin layer (1) is worn at all times.

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## ASSEMBLING THE FREE — CONTINUED

1. Check the temperature and weather conditions for your assigned location.
2. Consider the requirements of the mission, the level of mobility you need, and variety of climates/temperatures you'll encounter during your assignment.
  - *Will you be outside or in a vehicle?*
  - *Will you be moving, or stationary, or both?*
  - *Will you be outside part of the time and in a vehicle part of the time?*
3. Review the illustrations in the section “Adjusting FREE Layers” for suggestions on the many ways you can configure FREE components.
4. Create your own layered ensemble to ensure warmth, moisture control, and comfort for your specific mission requirements.

## END OF TASK

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## ADJUSTING FREE LAYERS

This section provides suggestions on how to layer your FREE components in a variety of weather conditions.

**Sample Configurations.** Figures 2-4 show sample layering configurations in a box like this:



**Figure 1. Sample Configuration Legend.**

### NOTE






All configurations include the next-to-skin layer (1): Undershirt and Drawers. Note that Layer 1 is not shown in the sample configurations.

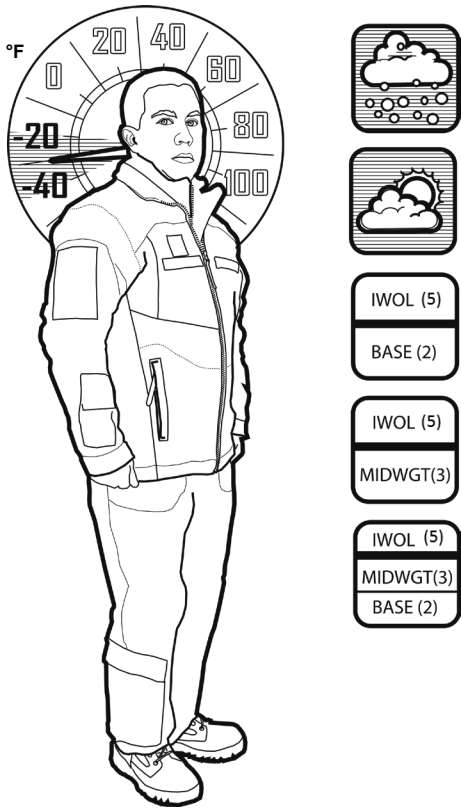
The layer numbers (2-6) in each box correspond with the layers described in WP 0002. The Duty Uniform (4) is indicated by the heavy bar between the base and outer layers. In the example above, both the base layer (2) and the midweight layer (3) are worn under the Duty Uniform. The IWOL (5) is worn over the Duty Uniform (4).

Figures 2-4 also include weather icons to show some of the conditions in which you would wear a particular layer. Refer to Table 1 to identify the icons.

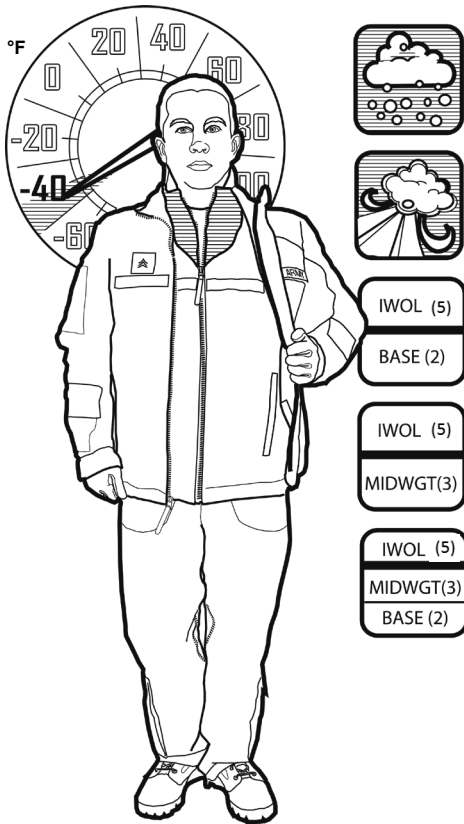
---

**ADJUSTING FREE LAYERS—CONTINUED****Table 1. Weather Icons.**

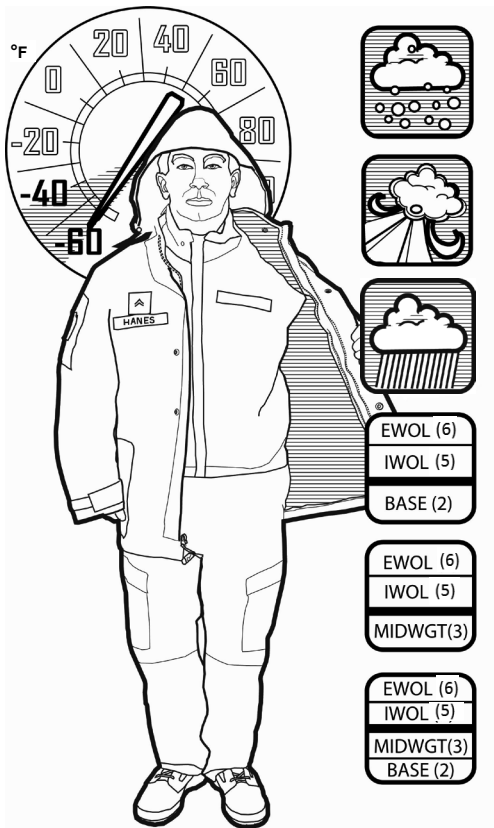
Icon	Weather Condition
 A square icon with rounded corners containing a sun with rays.	Full Sun
 A square icon with rounded corners containing a sun partially obscured by a cloud.	Partial Sun
 A square icon with rounded corners containing a cloud with wind lines and a windmill.	Windy
 A square icon with rounded corners containing a cloud with rain falling from it.	Rain
 A square icon with rounded corners containing a cloud with snow falling from it.	Snow



**Figure 2. Dry Moderate Cold to Dry Extreme Cold Weather.**



**Figure 3. Dry Extreme Cold Weather.**



**Figure 4: Wet/Dry Extreme Cold Windy Weather.**

---

## **DECALS AND INSTRUCTION PLATES**

Care and Maintenance information tags are located on each item. Following the cleaning and laundering directions on these tags will help ensure your FREE remains clean and serviceable. Refer also to WP 0010.

**END OF WORK PACKAGE**



**OPERATOR INSTRUCTIONS  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
OPERATION UNDER UNUSUAL CONDITIONS**

---

**CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND  
NUCLEAR (CBRN) DECONTAMINATION PROCEDURES**

If the FREE is exposed to any chemical, biological, radiological or nuclear (CBRN) contamination, dispose of the system in accordance with FM 3-3.

**END OF WORK PACKAGE**





## **CHAPTER 3**

# **TROUBLESHOOTING PROCEDURES FOR FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**



---

**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
TROUBLESHOOTING**

---

**TROUBLESHOOTING PROCEDURES**

This work package lists troubleshooting tasks for FREE components, along with the appropriate corrective action.

**NOTE**

The proper combination of sizes per component is incorporated into the general size of the system itself. There is no mixing and matching necessary.

**SYMPTOM**

I feel drafts.

**MALFUNCTION**

Unwanted rips or gaps will allow air to penetrate outer garment.

**CORRECTIVE ACTION**

Use fire-resistant thread to hand-sew rips or tears that are smaller than a dime. See WP0011.

**SYMPTOM**

I feel drafts.

**MALFUNCTION**

Clothing is too big.

**CORRECTIVE ACTION**

Replace system with a smaller size or don additional layers.

---

**SYMPTOM**

I feel cold, though I have layered the system as suggested.

**MALFUNCTION**

There is not enough air trapped between layers.

**CORRECTIVE ACTION**

Replace system with a larger size.

**SYMPTOM**

The inside of my EWOL parka and trousers feels wet or clammy.

**MALFUNCTION**

Water-repellant finish is worn on the EWOL garments.

**CORRECTIVE ACTION**

Wash the garments and dry them on the COTTON/STURDY or HIGH setting (140°F to 160°F) to restore the finish.

**SYMPTOM**

Zippering/unzippering is impossible.

**MALFUNCTION**

Zipper is damaged.

**CORRECTIVE ACTION**

Turn the garment into the central issue facility (CIF) and obtain a replacement.

**END OF TASK**

**END OF WORK PACKAGE**



## **CHAPTER 4**

# **MAINTENANCE INSTRUCTIONS FOR FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**





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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
PREVENTIVE MAINTENANCE CHECKS AND SERVICES**

---

## **INTRODUCTION**

Preventative maintenance checks and services (PMCS) are performed to keep all FREE components in operating condition. The checks are used to find, correct, and report problems. The operator is to perform the tasks listed in Table 1 of WP 0009 before, during and after use.

## **PMCS TABLE COLUMN DESCRIPTIONS**

Column (1) ITEM NUMBER. Lists the order the PMCS should be performed.

Column (2) INTERVAL. Identifies when the check should be performed.

Column (3) ITEM TO BE INSPECTED. Contains the common name of the item to be inspected.

Column (4) PROCEDURE. Describes which procedures should be performed.

Column (5) EQUIPMENT NOT READY/AVAILABLE IF. Tells what conditions render the FREE unfit to perform the mission.

## **CORROSION PREVENTION AND CONTROL (CPC)**

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes.

The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

## **END OF WORK PACKAGE**

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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
PREVENTIVE MAINTENANCE CHECKS AND SERVICES  
(PMCS)**

---

**INITIAL SETUP:****Tools and Special Tools**

N/A

**Personnel Required**

N/A

**Equipment Condition**

N/A

**References**

WP 0011

---

**GENERAL**

This work package describes PMCS procedures for the operator level. The PMCS table has been provided to ensure FREE components are in proper operating condition.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES****Table 1. PMCS for FREE.**

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/ AVAILABLE IF:</b>
1	Before During After	Undershirt, Drawer Briefs, Base Layer Top, Base Layer Trousers, Midweight Trousers	Check for cuts, frays, or other damage to the fabric or stitching.  Hand-sew rips and tears smaller than a dime with fire resistant (FR) thread (WP 0011).  For rips or tears larger than a dime or for other repairs, turn garment into Central Issue Facility (CIF).	Garment has excessive cuts, frays, or other damage to the fabric/stitching which could cause a loss of protection from cold or wet conditions.
2	Before During After	Midweight Top, Parka Liner (EWOL)	Check for cuts, frays, or other damage to the fabric or stitching.  Hand-sew rips and tears smaller than a dime with FR thread (WP 0011).  For rips or tears larger than a dime or for other repairs, turn garment into the CIF.	Garment has excessive cuts, frays, or other damage to the fabric/stitching which could cause a loss of protection from cold or wet conditions.

**Table 1. PMCS for FREE—Continued.**

<b>ITEM NO.</b>	<b>INTER-VAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/ AVAILABLE IF:</b>
2 cont.	Before During After	Midweight Top, Parka Liner (EWOL)	Look for damaged zipper. Turn item into CIF.	Zipper is cracked, worn, or damaged.
<p><b>WARNING</b></p> <p>Do not use adhesive or pressure-sensitive tape for repair. Failure to follow this warning may result in injury or death.</p> <p>Seam sealant is flammable. Do not use it for repair. Failure to follow this warning may result in injury or death.</p>				
3	Before During After	IWOL Jacket IIWOL Trousers Riggers Belt	<p>Check for cuts, frays, or other damage to the fabric or stitching.</p> <p>Hand-sew rips and tears smaller than a dime with FR thread (WP 0011).</p> <p>For rips or tears larger than a dime or for other repairs, turn garment into the CIF.</p> <p>Check for damage to elastic cord. Turn item into CIF when possible.</p>	<p>Item has excessive cuts, frays, or other damage to the fabric/stitching which could cause a loss of protection from cold or wet conditions.</p> <p>Elastic cord is broken or the cover is frayed.</p>

Table 1. PMCS for FREE—Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3 cont.	Before During After	IWOL Jacket IIWOL Trousers Riggers Belt	Look for cracked, worn, or otherwise damaged hardware such as fasteners, zippers, tape hook and loop, barrel lock and cannon clip, and belt buckle. Turn item into CIF.	Hardware is cracked, worn, or otherwise damaged.
4	Before During After	EWOL Parka EWOL Trousers	<p>Check for cuts, frays, or other damage to the fabric or stitching. <b>Do not repair.</b> Turn garment into CIF.</p> <p>Look for cracked, worn, or damaged hardware such as fasteners, zippers, tape hook and loop, barrel lock and cannon clip, and belt buckle. Turn item into CIF.</p> <p>Check for damage to elastic cord. Turn item into CIF when possible.</p>	<p>Garment has cuts, frays, or other damage to the fabric or stitching which could decrease protection from wet conditions.</p> <p>Hardware is cracked, worn, or otherwise damaged.</p> <p>Elastic cord is broken or the cover is frayed.</p>

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**Table 1. PMCS for FREE—Continued.**

<b>ITEM NO.</b>	<b>INTER-VAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/ AVAILABLE IF:</b>
5	Before During After	Socks	Check for cuts, frays, or other damage to the fabric or stitching. Hand-sew with FR thread (WP 0011) or turn into CIF.	Garment has excessive cuts, frays, or other damage to the fabric/stitching could decrease protection from wet conditions.

**END OF WORK PACKAGE**





**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
CLEANING**

---

**INITIAL SETUP:****Tools**

N/A

**Personnel Required**

N/A

**Materials/Parts**

Detergent, powdered, mild  
(WP 0015, Item 1)

**References**FM 10-16

---

**INTRODUCTION**

This work package provides instructions for cleaning the FREE components. Clean FREE clothing items regularly when in use. Dirty clothes wear out quickly because dirt cuts textile fibers and retains moisture from perspiration.

---

## CLEANING

### WARNINGS



Remove lint from the dryer before drying FREE components. Lint can be flammable and may create a fire hazard for FREE garments.

Do not use soap, bleach, fabric softener, or starch on FREE items.

Do not press or dry clean.

Do not use the Laundry Advanced System (LADS) to wash FREE components.

### NOTES

For best results when laundering:

Make sure all the draw-cords are tied together, all zippers are zipped, and all snaps and hooks are fastened.

Turn all garments inside out before washing, unless directed otherwise.

Wash all FREE items separately from other kinds of clothing.

---

## **Undershirt and Drawer Briefs**

1. Machine wash in cold or warm water (101 °F-120 °F) with mild detergent.
2. Empty lint trap, then tumble dry on LOW.

### **END OF TASK**

## **Base Layer**

### **NOTE**

Launder the base layer items separately for best results.

1. Machine wash in cold water.
2. Empty lint trap, then tumble dry on DELICATE or LOW (<140 °F). May also line dry.

### **END OF TASK**

## **Midweight Layer**

1. Hand or machine wash in warm water (101 °F-120 °F).
2. Empty lint trap, then tumble dry on DELICATE or LOW (<140 °F). May also line dry out of direct sunlight.

### **END OF TASK**

---

## **CAUTION**

Do not dry IWOL items at high temperatures.

### **IWOL**

1. Turn items inside out before washing.
2. Machine wash in cold water with mild detergent.
3. Empty lint trap, then air tumble dry on DELICATE or LOW (<140 °F). May also lay flat to dry.

### **END OF TASK**

### **EWOL**

#### **Parka and Trousers**

1. Close all zippers, hook and loop fasteners, and snap fasteners before washing.
2. Machine wash in warm water (101 °F-120 °F) with powdered detergent.
3. Rinse thoroughly.
4. Empty lint trap, then tumble dry on COTTON/STURDY or HIGH (140°F - 160°F) to replenish water-repellant finish.

### **END OF TASK**

---

### **Parka Liner**

1. Hand or machine wash in warm water (101 °F-120 °F).
2. Empty lint trap, then tumble dry on DELICATE or LOW (<140 °F) or line dry out of direct sunlight.

### **END OF TASK**

### **Socks**

1. Turn socks inside out before washing.
2. Machine wash on GENTLE using warm water (101-120 °F) and mild detergent.
3. Empty lint trap, then tumble dry on DELICATE or LOW (<140 °F).

### **END OF TASK**

### **Rigger's Belt**

1. Hand wash in cold water.
2. Hang or lay flat to dry out of direct sunlight.

### **END OF TASK**

### **END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
FABRIC REPAIR**

---

**INITIAL SETUP:****Tools**

N/A

**References**

N/A

**Materials/Parts**

Thread, fire resistant  
(WP 0015, Item 2, 3, or 4)

---

**EMERGENCY FABRIC REPAIR****WARNING**

Do not use any type of adhesive or pressure-sensitive tape for repair. Failure to follow this warning may result in injury or death to the user.



Seam sealant is flammable. Do not use it for repair. Failure to follow this warning may result in injury or death to the user.

---

## EMERGENCY FABRIC REPAIR — CONTINUED

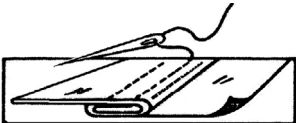

1. Use fire-resistant (FR) thread to hand sew rips or tears that are smaller than a dime. Be sure to sew the material together tightly. See Table 1.

### NOTE

Return EWOL items to Central Issue Facility (CIF) for repair.

2. Turn item into the CIF as soon as possible.

**Table 1. Suggested Stitches.**

<p><b>To mend a ripped seam:</b> Overlap the two edges and sew with straight and small stitches.</p>	 <p>Straight Stitch</p>
<p><b>To repair a tear:</b> Place the two edges together on the inside and sew together.</p>	 <p>Sew Edges Together</p>

**END OF TASK**

**END OF WORK PACKAGE**



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**CHAPTER 5**

**SUPPORTING INFORMATION**  
**FOR**  
**FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**



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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
REFERENCES**

---

**SCOPE**

This Work Package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in this manual.

**ARMY REGULATIONS**

AR 700-138            Army Logistics Readiness and  
Sustainability

**DA PAMPHLETS**

DA PAM 25-33        User's Guide for Army Publications and  
Forms  
DA PAM 750-8        The Army Maintenance Management  
System (TAMMS) User's Manual  
DA PAM 738-751     Army Logistics Readiness and  
Sustainability

**FIELD MANUALS**

FM 3-3                NBC Element Disposal  
FM 4-25.11          First Aid for Soldiers  
FM 10-16             General Fabric Repair

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## **FORMS**

DA Form 12-R	Army Publishing Directorate Order Form
DA Form 2028	Recommended Changes to Publications and Blank Forms
SF 368	Product Quality Deficiency Report (PQDR)

## **MISCELLANEOUS PUBLICATIONS**

CTA 50-909	Field and Garrison Furnishings and Equipment
CTA 8-100	Army Medical Department Expendable/Durable Items

## **END OF WORK PACKAGE**

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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE  
ITEMS (BII)**

---

## **INTRODUCTION**

### **Scope**

This work package lists COEI and BII for the FREE, which will help you inventory items and ensure safe and efficient operation of the equipment.

### **General**

The COEI and BII information is divided into two lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the FREE. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the FREE in operation, operate it and to do emergency repairs. Although shipped separately packaged, BII must be with the FREE during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Graphics are included to help you find and identify the items.

---

## **Explanation of Columns in the COEI List and BII List**

Column (1) Illus No. Gives you the reference number of the item listed.


Column (2) National Stock Number (NSN) and Illustration. Identifies the stock number of the item to be used for requisitioning purposes and provides a graphic of the item.

Column (3) Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

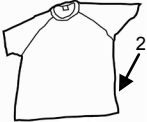
Column (4) U/I. Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (5) Qty Rqr. Indicates the quantity required.

**Table 1. Components of End Item (COEI) List.**

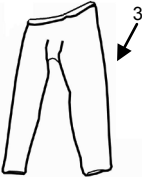
(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
1	 8415-01-577-0411 8415-01-577-0412 8415-01-577-0413 8415-01-577-0414 8415-01-577-0416 8415-01-577-0445  8420-01-588-0490 8420-01-588-0618 8420-01-588-0623 8420-01-588-0635 8420-01-588-0643 8420-01-588-0651	DRAWERS BRIEF FR, MODEL F-BRIEF-M/ (1CAY9), FOLIAGE GREEN 504  X-SMALL SMALL MEDIUM LARGE X-LARGE XX-LARGE  DRAWERS, MOISTURE WICKING, NATICK PD 10-02/(1CAY9) DESERT SAND  X-SMALL SMALL MEDIUM LARGE X-LARGE XX-LARGE	EA	1

**Table 1. Components of End Item (COEI) List — Continued.**

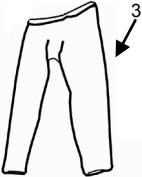
(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
2		<p>UNDERSHIRT FR, MODEL F-T SHIRT-M/ (1CAY9) FOLIAGE GREEN 504</p> <p>X-SMALL</p> <p>SMALL</p> <p>MEDIUM</p> <p>LARGE</p> <p>X-LARGE</p> <p>XX-LARGE</p> <p>UNDERSHIRT, MOISTURE WICKING, NATICK PD 10-01/ (1CAY9) DESERT SAND</p> <p>X-SMALL</p> <p>SMALL</p> <p>MEDIUM</p> <p>LARGE</p> <p>X-LARGE</p> <p>XX-LARGE</p>		



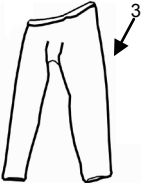
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
3		DRAWERS, FLAME RESISTANT, F-BL- BOTTOM-MR/(1CAY9), FOLIAGE GREEN 504  XS-SHT XS-REG XS-LNG SM-SHT SM-REG SM-LNG MED-SHT MED-REG MED-LNG LGE-SHT LGE-REG LGE-LNG XLG-SHT XLG-REG	EA	1

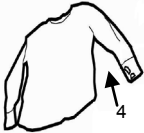
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
3 cont.		DRAWERS, FLAME RESISTANT, F-BL- BOTTOM-MR/(1CAY9), FOLIAGE GREEN 504	EA	1
	8415-01-577-4387	XLG-LNG		
	8415-01-577-4390	XXLG-SHT		
	8415-01-577-4392	XXL-REG		
	8415-01-577-4404	XXL-LNG		
		DRAWERS, FLAME RESISTANT, NATICK PD 10-04/(1CAY9)		
	8415-01-588-3029	XS-SHT		
	8415-01-588-3039	XSM-REG		
	8415-01-588-3052	XSM-LNG		
	8415-01-588-3070	SM-SHT		
	8415-01-588-3074	SM-REG		
	8415-01-588-3082	SM-LNG		
	8415-01-588-3127	MED-SHT		

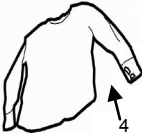
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
3 cont.		DRAWERS, FLAME RESISTANT, NATICK PD 10-04/(1CAY9)	EA	1
	8415-01-588-3134	MED-REG		
	8415-01-588-3140	MED-LNG		
	8415-01-588-3150	LGE-SHT		
	8415-01-588-3186	LGE-REG		
	8415-01-588-3195	LGE-LNG		
	8415-01-588-3202	XLG-SHT		
	8415-01-588-3247	XLG-REG		
	8415-01-588-3260	XLG-LNG		
	8415-01-588-3339	XXL-SHT		
	8415-01-588-3344	XXL-REG		
	8415-01-588-3353	XXL-LNG		

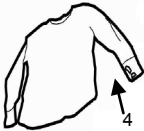
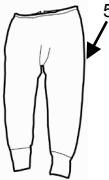
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
4	 8415-01-577-4071 8415-01-577-4994 8415-01-577-4998 8415-01-577-5030 8415-01-577-5071 8415-01-577-5107 8415-01-577-5111 8415-01-577-5115 8415-01-577-5124 8415-01-577-5304 8415-01-577-5317 8415-01-577-5318 8415-01-577-5331 8415-01-577-5340 8415-01-577-5348	UNDERSHIRT FLAME RESISTANT, F-BL-TOP- MR/(1CAY9), FOLIAGE GREEN 504  XS-SHT XS-REG XS-LNG SM-SHT SM-REG SM-LNG MED-SHT MED-REG MED-LNG LGE-SHT LGE-REG LGE-LNG XLG-SHT XLG-REG XLG-LNG	EA	1


**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
4 cont.		UNDERSHIRT FLAME RESISTANT, F-BL-TOP- MR/(1CAY9), FOLIAGE GREEN 504	EA	1
	8415-01-577-5351	XXLG-SHT		
	8415-01-577-5394	XXL-REG		
	8415-01-577-5405	XXL-LNG		
		UNDERSHIRT FLAME RESISTANT, NATICK PD 10-03/(1CAY9)		
	8415-01-588-3518	XS-SHT		
	8415-01-588-3537	XSM-REG		
	8415-01-588-3539	XSM-LNG		
	8415-01-588-3544	SM-SHT		
	8415-01-588-3555	SM-REG		
	8415-01-588-3584	SM-LNG		
	8415-01-588-3589	MED-SHT		
	8415-01-588-3602	MED-REG		
	8415-01-588-3619	MED-LNG		
	8415-01-588-3622	LGE-SHT		

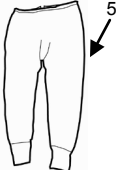
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
4 cont.	 8415-01-588-3634 8415-01-588-3651 8415-01-588-3768 8415-01-588-3777 8415-01-588-3797 8415-01-588-3799 8415-01-588-3826 8415-01-588-3878	UNDERSHIRT FLAME RESISTANT, NATICK PD 10-03/(1CAY9)  LGE-REG LGE-LNG XLG-SHT XLG-REG XLG-LNG XXL-SHT XXL-REG XXL-LNG	EA	1
5	 8415-01-577-6735 8415-01-577-6751	DRAWERS, FLAME RESISTANT, F-MWL- BOTTOM-MR/(1CAY9) GL-PD-12-15/(81337), FOLIAGE GREEN 504  XS-SHT XS-REG	EA	1

**Table 1. Components of End Item (COEI) List — Continued.**

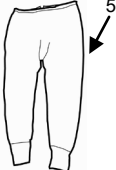
(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
5 cont.		DRAWERS, FLAME RESISTANT, F-MWL- BOTTOM-MR/(1CAY9) GL-PD-12-15/(81337), FOLIAGE GREEN 504	EA	1
	8415-01-577-6784	XS-LNG		
	8415-01-577-6904	SM-SHT		
	8415-01-577-6909	SM-REG		
	8415-01-577-6922	SM-LNG		
	8415-01-577-7131	MED-SHT		
	8415-01-577-7134	MED-REG		
	8415-01-577-7139	MED-LNG		
	8415-01-577-7142	LGE-SHT		
	8415-01-577-7144	LGE-REG		
	8415-01-577-7147	LGE-LNG		
	8415-01-577-7150	XLG-SHT		
	8415-01-577-7154	XLG-REG		
	8415-01-577-7163	XLG-LNG		

**Table 1. Components of End Item (COEI) List — Continued.**


(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
5 cont.		DRAWERS, FLAME RESISTANT, F-MWL- BOTTOM-MR/(1CAY9) GL-PD-12-15/(81337), FOLIAGE GREEN 504	EA	1
	8415-01-577-7164	XXLG-SHT		
	8415-01-577-7169	XXL-REG		
	8415-01-577-7173	XXL-LNG		
		DRAWERS, FLAME RESISTANT, NATICK PD 10-06/(1CAY9) AF TAN		
	8415-01-587-9853	XS-SHT		
	8415-01-587-9855	XSM-REG		
	8415-01-587-9858	XSM-LNG		
	8415-01-587-9863	SM-SHT		
	8415-01-587-9866	SM-REG		
	8415-01-588-0254	SM-LNG		
	8415-01-588-0259	MED-SHT		




**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
5 cont.		DRAWERS, FLAME RESISTANT, NATICK PD 10-06/(1CAY9) AF TAN	EA	1
	8415-01-588-0261	MED-REG		
	8415-01-588-0269	MED-LNG		
	8415-01-588-0270	LGE-SHT		
	8415-01-588-0273	LGE-REG		
	8415-01-588-0283	LGE-LNG		
	8415-01-588-0290	XLG-SHT		
	8415-01-588-0292	XLG-REG		
	8415-01-588-0300	XLG-LNG		
	8415-01-588-0308	XXL-SHT		
	8415-01-588-0313	XXL-REG		
	8415-01-588-0315	XXL-LNG		



**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
6	 8415-01-577-3710 8415-01-577-4009 8415-01-577-4025 8415-01-577-4031 8415-01-577-4038 8415-01-577-4514 8415-01-577-4516 8415-01-577-4531 8415-01-577-4544 8415-01-577-4555 8415-01-577-4628 8415-01-577-4673 8415-01-577-4777 8415-01-577-4791 8415-01-577-4793	SHIRT, FLAME RESISTANT, F-MWL- TOP-MR/(1CAY9) FOLIAGE GREEN 504  XS-SHT XS-REG XS-LNG SM-SHT SM-REG SM-LNG MED-SHT MED-REG MED-LNG LGE-SHT LGE-REG LGE-LNG XLG-SHT XLG-REG XLG-LNG	EA	1


**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
6 cont.		SHIRT, FLAME RESISTANT, F-MWL- TOP-MR/(1CAY9) FOLIAGE GREEN 504	EA	1
	8415-01-577-4794	XXLG-SHT		
	8415-01-577-4795	XXL-REG		
	8415-01-577-4796	XXL-LNG		
		SHIRT, FLAME RESISTANT, NATICK PD 10-05/(1CAY9)		
	8415-01-588-1045	XS-SHT		
	8415-01-588-1101	XSM-REG		
	8415-01-588-1261	XSM-LNG		
	8415-01-588-1263	SM-SHT		
	8415-01-588-1267	SM-REG		
	8415-01-588-1271	SM-LNG		
	8415-01-588-1383	MED-SHT		
	8415-01-588-1388	MED-REG		
	8415-01-588-1391	MED-LNG		
	8415-01-588-1403	LGE-SHT		


**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
6 cont.	 8415-01-588-1416 8415-01-588-1424 8415-01-588-1426 8415-01-588-1429 8415-01-588-1431 8415-01-588-1436 8415-01-588-1437 8415-01-588-1438	SHIRT, FLAME RESISTANT, NATICK PD 10-05/(1CAY9)  LGE-REG LGE-LNG XLG-SHT XLG-REG XLG-LNG XXL-SHT XXL-REG XXL-LNG	EA	1
7	 8415-01-577-4526 8415-01-577-4534	JACKET, FLAME RESISTANT, F-IWOL- JACKET-MR/(1CAY9), UCP  XS-SHT UCP XS-REG UCP	EA	1


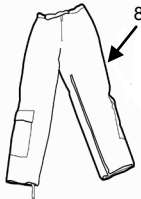
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
7 cont.		JACKET, FLAME RESISTANT, F-IWOL- JACKET-MR/(1CAY9), UCP	EA	1
	8415-01-577-4542	XS-LNG UCP		
	8415-01-577-4552	SM-SHT UCP		
	8415-01-577-4557	SM-REG UCP		
	8415-01-577-4565	SM-LNG UCP		
	8415-01-577-4571	MED-SHT UCP		
	8415-01-577-4574	MED-REG UCP		
	8415-01-577-4577	MED-LNG UCP		
	8415-01-577-4579	LGE-SHT UCP		
	8415-01-577-4654	LGE-REG UCP		
	8415-01-577-4662	LGE-LNG UCP		
	8415-01-577-4668	XLG-SHT UCP		
	8415-01-577-4674	XLG-REG UCP		
	8415-01-577-4682	XLG-LNG UCP		
	8415-01-577-4703	XXLG-SHT UCP		

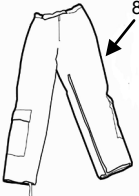
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
7 cont.		JACKET, FLAME RESISTANT, F-IWOL- JACKET-MR/(1CAY9), UCP/OCP  XXL-REG UCP  XXL-LNG UCP  XS-SHT OCP  XS-REG OCP  XS-LNG OCP  SM-SHT OCP  SM-REG OCP  SM-LNG OCP  MED-SHT OCP  MED-REG OCP  MED-LNG OCP  LGE-SHT OCP  LGE-REG OCP  LGE-LNG OCP	EA	1

**Table 1. Components of End Item (COEI) List — Continued.**

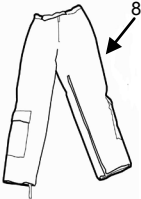
(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
7 cont.	 8415-01-583-9451 8415-01-583-9453 8415-01-583-9454 8415-01-583-9455 8415-01-583-9456 8415-01-583-9458	JACKET, FLAME RESISTANT, F-IWOL- JACKET-MR/(1CAY9), OCP  XLG-SHT OCP XLG-REG OCP XLG-LNG OCP XXLG-SHT OCP XXL-REG OCP XXL-LNG OCP	EA	1
8	 8415-01-577-2782 8415-01-577-2792 8415-01-577-2807	TROUSERS, CAMOUFLAGE PATTERN, F-IWOL- TROUSER-MR/(1CAY9) UCP  XS-SHT UCP XS-REG UCP XS-LNG UCP	EA	1

**Table 1. Components of End Item (COEI) List — Continued.**

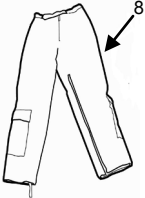

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
8 cont.		TROUSERS, CAMOUFLAGE PATTERN, F-IWOL- TROUSER-MR/(1CAY9) UCP	EA	1
	8415-01-577-3211	SM-SHT UCP		
	8415-01-577-3215	SM-REG UCP		
	8415-01-577-3226	SM-LNG UCP		
	8415-01-577-3272	MED-SHT UCP		
	8415-01-577-3285	MED-REG UCP		
	8415-01-577-3293	MED-LNG UCP		
	8415-01-577-3302	LGE-SHT UCP		
	8415-01-577-3320	LGE-REG UCP		
	8415-01-577-3433	LGE-LNG UCP		
	8415-01-577-3435	XLG-SHT UCP		
	8415-01-577-3436	XLG-REG UCP		
	8415-01-577-3437	XLG-LNG UCP		
	8415-01-577-3440	XXLG-SHT UCP		




**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
8 cont.		TROUSERS, CAMOUFLAGE PATTERN, F-IWOL- TROUSER-MR/(1CAY9) UCP/OCP  8415-01-577-3442    XXL-REG UCP 8415-01-577-4093    XXL-LNG UCP 8415-01-584-1635    XS-SHT OCP 8415-01-584-1637    XS-REG OCP 8415-01-584-1639    XS-LNG OCP 8415-01-584-1640    SM-SHT OCP 8415-01-584-1641    SM-REG OCP 8415-01-584-1642    SM-LNG OCP 8415-01-584-1643    MED-SHT OCP 8415-01-584-1644    MED-REG OCP 8415-01-584-1645    MED-LNG OCP 8415-01-584-1648    LGE-SHT OCP 8415-01-584-1649    LGE-REG OCP	EA	1


**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
8 cont.	 8415-01-584-1654 8415-01-584-1655 8415-01-584-1656 8415-01-584-1663 8415-01-584-1665 8415-01-584-1672 8415-01-584-1674	TROUSERS, CAMOUFLAGE PATTERN, F-IWOL- TROUSER-MR/(1CAY9) OCP  LGE-LNG OCP XLG-SHT OCP XLG-REG OCP XLG-LNG OCP XXLG-SHT OCP XXL-REG OCP XXL-LNG OCP	EA	1
9	 8415-01-577-1054 8415-01-577-1085	PARKA, EXTREME COLD WEATHER F-EWOL-PARKA-MR/ (1CAY9); GL/PD 12-20/ (81337) UCP  XS-SHT UCP XS-REG UCP	EA	1


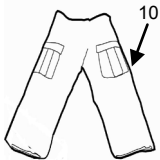
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
9 cont.		PARKA, EXTREME COLD WEATHER F-EWOL-PARKA-MR/ (1CAY9); GL/PD 12-20/ (81337) UCP	EA	1
	8415-01-577-1115	XS-LNG UCP		
	8415-01-577-1146	SM-SHT UCP		
	8415-01-577-1167	SM-REG UCP		
	8415-01-577-1183	SM-LNG UCP		
	8415-01-577-1198	MED-SHT UCP		
	8415-01-577-1216	MED-REG UCP		
	8415-01-577-1220	MED-LNG UCP		
	8415-01-577-1225	LGE-SHT UCP		
	8415-01-577-1257	LGE-REG UCP		
	8415-01-577-1260	LGE-LNG UCP		
	8415-01-577-1261	XLG-SHT UCP		
	8415-01-577-1263	XLG-REG UCP		
	8415-01-577-1265	XLG-LNG UCP		
	8415-01-577-1266	XXLG-SHT UCP		

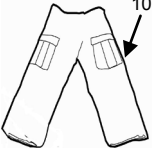
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
9 cont.		PARKA, EXTREME COLD WEATHER F-EWOL-PARKA-MR/ (1CAY9) UCP/OCP  XXL-REG UCP XXL-LNG UCP XS-SHT OCP XS-REG OCP XS-LNG OCP SM-SHT OCP SM-REG OCP SM-LNG OCP MED-SHT OCP MED-REG OCP MED-LNG OCP LGE-SHT OCP LGE-REG OCP LGE-LNG OCP	EA	1

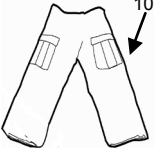
**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
9 cont.	 8415-01-584-1899 8415-01-584-1900 8415-01-584-1901 8415-01-584-1904 8415-01-584-1905 8415-01-584-1921	PARKA, EXTREME COLD WEATHER F-EWOL-PARKA-MR/ (1CAY9) OCP  XLG-SHT OCP  XLG-REG OCP  XLG-LNG  XXLG-SHT OCP  XXL-REG OCP  XXL-LNG OCP	EA	1
10	 8415-01-577-2225 8415-01-577-2248 8415-01-577-2250 8415-01-577-2266	TROUSERS, EXTREME COLD WEATHER, F-EWOL-TROUSERS- MR/(1CAY9), GL/PD 12- 21/(81337), UCP  XS-SHT UCP  XS-REG UCP  XS-LNG UCP  SM-SHT UCP	EA	1


**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
10 cont.		TROUSERS, EXTREME COLD WEATHER, F-EWOL-TROUSERS- MR/(1CAY9), GL/PD 12- 21/(81337), UCP	EA	1
	8415-01-577-2312	SM-REG UCP		
	8415-01-577-2316	SM-LNG UCP		
	8415-01-577-2320	MED-SHT UCP		
	8415-01-577-2332	MED-REG UCP		
	8415-01-577-2391	MED-LNG UCP		
	8415-01-577-2405	LGE-SHT UCP		
	8415-01-577-2431	LGE-REG UCP		
	8415-01-577-2628	LGE-LNG UCP		
	8415-01-577-2633	XLG-SHT UCP		
	8415-01-577-2643	XLG-REG UCP		
	8415-01-577-2653	XLG-LNG UCP		
	8415-01-577-2657	XXLG-SHT UCP		
	8415-01-577-2664	XXL-REG UCP		
	8415-01-577-2685	XXL-LNG UCP		

**Table 1. Components of End Item (COEI) List — Continued.**

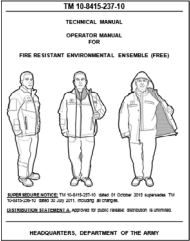
(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
10 cont.		TROUSERS, EXTREME COLD WEATHER, F-EWOL-TROUSER- MR/(1CAY9), OCP	EA	1
	8415-01-584-1403	XS-SHT OCP		
	8415-01-584-1405	XS-REG OCP		
	8415-01-584-1406	XS-LNG OCP		
	8415-01-584-1407	SM-SHT OCP		
	8415-01-584-1408	SM-REG OCP		
	8415-01-584-1409	SM-LNG OCP		
	8415-01-584-1410	MED-SHT OCP		
	8415-01-584-1414	MED-REG OCP		
	8415-01-584-1415	MED-LNG OCP		
	8415-01-584-1416	LGE-SHT OCP		
	8415-01-584-1417	LGE-REG OCP		
	8415-01-584-1419	LGE-LNG OCP		
	8415-01-584-1422	XLG-SHT OCP		
	8415-01-584-1423	XLG-REG OCP		

**Table 1. Components of End Item (COEI) List — Continued.**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/(CAGEC)	(4) U/I	(5) Qty Rqr
10 cont.	 <p>10</p>	<p>TROUSERS, EXTREME COLD WEATHER, F-EWOL-TROUSER- MR/(1CAY9), OCP</p> <p>8415-01-584-1424 XLG-LNG OCP</p> <p>8415-01-584-1425 XXLG-SHT OCP</p> <p>8415-01-584-1426 XXL-REG OCP</p> <p>8415-01-584-1428 XXL-LNG OCP</p>	EA	1



**Table 2. Basic Issue Items (BII).**

(1) Illus No.	(2) National Stock Number (NSN) and Illustration	(3) Description, Part Number/ (CAGEC)	(4) U/I	(5) Qty Rqr
1		Technical Manual, TM 10-8415-237- 10, Operator Manual for Fire Resistant Environmental Ensemble (FREE)	EA	1

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE  
FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)  
ADDITIONAL AUTHORIZATION LIST (AAL)**

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## **INTRODUCTION**

### **Scope**

This work package lists additional items you are authorized for the support of the FREE.

### **General**

This list identifies items that do not have to accompany the FREE and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

### **Explanation of Columns in the AAL**

Column (1) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) Description, Part Number/(CAGEC). Identifies the FIRE RESISTANT ENVIRONMENTAL ENSEMBLE followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

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Column (3) U/I. Unit of Issue (U/I) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (4) Qty Recm. Indicates the quantity recommended.

**Table 1. Additional Authorization List (AAL).**

(1) National Stock Number (NSN)	(2) Description, Part Number/ (CAGEC)	(3) U/I	(4) Qty Recm
8415-01-576-9708	Belt, Riggers FR, X-Small, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-576-9712	Belt, Riggers FR, Small, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-576-9715	Belt, Riggers FR, Medium, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-576-9729	Belt, Riggers FR, Large, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-576-9744	Belt, Riggers FR, X-Large, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-576-9884	Belt, Riggers FR, XX-Large, Model F Rigger's Belt-M/(1CAY9) Foliage Green	EA	1
8415-01-613-7855	Gaiter, Neck, One Size GL-PD-12-24/ (81337), Foliage Green	EA	1
8415-01-605-0219	Hood, Lightweight Protective, PD 08-78/(81337), Foliage Green	EA	1

**Table 1. Additional Authorization List (AAL) — (Continued).**

<b>(1)</b> <b>National Stock Number (NSN)</b>	<b>(2)</b> <b>Description, Part Number/ (CAGEC)</b>	<b>(3)</b> <b>U/I</b>	<b>(4)</b> <b>Qty Recm</b>
8440-01-617-8505	Socks, Cold Weather, X-Small, GL/PD-12-22/(81337), Foliage Green 504	4-PK	1
8440-01-617-8516	Socks, Cold Weather, Small, GL/PD-12-22/(81337), Foliage Green 504	4-PK	1
8440-01-617-8525	Socks, Cold Weather, Medium, GL/PD-12-22/(81337), Foliage Green 504	4-PK	1
8440-01-617-8527	Socks, Cold Weather, Large, GL/PD-12-22/(81337), Foliage Green 504	4-PK	1
8440-01-617-8532	Socks, Cold Weather, X-Large, GL/PD-12-22/(81337), Foliage Green 504	4-PK	1
8440-01-577-0379	Socks, X-Small, Moisture Wicking, Anti-Microbial, Model F-Woolsock-M/(1CAY9), Foliage Green	PR	1
8440-01-577-0390	Socks, Small, Moisture Wicking, Anti-Microbial, Model F-Woolsock-M/(1CAY9), Foliage Green	PR	1
8440-01-577-0401	Socks, Medium, Moisture Wicking, Anti-Microbial, Model F-Woolsock-M/(1CAY9), Foliage Green	PR	1
8440-01-577-0403	Socks, Large, Moisture Wicking, Anti-Microbial, Model F-Woolsock-M/(1CAY9), Foliage Green	PR	1

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**Table 1. Additional Authorization List (AAL) — (Continued).**

<b>(1) National Stock Number (NSN)</b>	<b>(2) Description, Part Number/ (CAGEC)</b>	<b>(3) U/I</b>	<b>(4) Qty Recm</b>
8440-01-577-0406	Socks, X-Large, Moisture Wicking, Anti-Microbial, Model F-Woolsock- M/(1CAY9), Foliage Green	PR	1

**END OF WORK PACKAGE**





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**SUPPORTING INFORMATION**  
**FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**  
**EXPENDABLE AND DURABLE ITEMS LIST**

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**EXPENDABLE AND DURABLE ITEMS LIST**  
**INTRODUCTION**

**Scope**

This work package lists expendable and durable items that you will need to operate and maintain the FREE. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

**Explanation of Columns in Expendable/Durable Items List**

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item5)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (*C = Crew*).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

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**EXPENDABLE AND DURABLE ITEMS LIST  
INTRODUCTION — CONTINUED**

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

**Table 1. Expendable and Durable Items List.**

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	C	7930-00-929-1220	Detergent, Laundry (P-D-245) Mild, powdered	CO
2	C	A-A-55217 Type I; COLORS: 498, 499, 504	Fire Resistant Thread Coats North America 3430 Toringdon Way #301 Charlotte, NC 28277-2446	TU
3	C	A-A-55217 Type I; COLORS: 498, 499, 504	Fire Resistant Thread Coats North America US Highway 64 West Box 130 Hendersonville, NC 28739 828-693-4200	TU
4	C	A-A-55217 Type I; COLORS: 498, 499, 504	Atlantic Thread & Supply Co. 8515 Kelsoe Drive, Unit G&H Baltimore, MD 21221-3140 800-287-4624 410-687-9424	TU

**END OF WORK PACKAGE**

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**SUPPORTING INFORMATION**  
**FIRE RESISTANT ENVIRONMENTAL ENSEMBLE (FREE)**  
**ADDITIONAL ITEMS LIST**

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This work package lists items you will need to operate and maintain the Fire Resistant Environmental Ensemble (FREE). This list is for information purposes only and is not authority to requisition replacements.

**Table 1. Additional Items List.**

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	C	Local Purchase	Detergent, Laundry, for Cold Water No optical brighteners	EA

**END OF WORK PACKAGE**



By Order of the Secretary of the Army:

RAYMOND T. ODIERNO  
*General, United States Army*  
*Chief of Staff*

Official:

A handwritten signature in black ink, appearing to read "Gerald B. O'Keefe". The signature is stylized and written in a cursive-like font.

GERALD B. O'KEEFE  
*Administrative Assistant to the*  
*Secretary of the Army*  
1406915

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