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NATO STANDARD

AATMP-33

**PERSONAL PROTECTIVE
AND FIREFIGHTING EQUIPMENT
REQUIREMENTS FOR FIRE
AND EMERGENCY OPERATIONS**

Edition A, Version 1

Date

RATIFICATION DRAFT 1



NORTH ATLANTIC TREATY ORGANIZATION

ALLIED AIR TRAFFIC MANAGEMENT PUBLICATION

Published by the
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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

date

1. The enclosed Allied Air Traffic Management Publication AATMP-33, Edition A, Version 1, PERSONAL PROTECTIVE AND FIREFIGHTING EQUIPMENT REQUIREMENTS FOR FIRE AND EMERGENCY OPERATIONS, which has been approved by the nations in the AIR TRAFFIC MANAGEMENT - COMMUNICATIONS, NAVIGATION AND SURVEILLANCE ADVISORY GROUP (ATM-CNS AG), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 7132.
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4. This publication shall be handled in accordance with C-M(2002)60.

Dimitrios SIGOULAKIS
Lieutenant General, GRC (A)
Director, NATO Standardization Office

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CHAPTER 1 INTRODUCTION

1.1. PURPOSE

1.1.1 AATMP 33 is to ensure that all Firefighters supporting NATO missions will have the necessary specialised personal protective equipment (PPE) to perform the duties of:

- a. Fire suppression,
- b. Rescue of endangered personnel,
- c. Mitigate hazardous material incidents, and
- d. Operate in a chemical, biological, radiological and nuclear (CBRN) environment or terrorism induced incident.

In addition, this standard establishes minimum and standard types of equipment to be carried on fire vehicles to enable Firefighters to perform aircraft firefighting and rescue operations.

1.2. SCOPE

1.2.1 Participating nations agree to provide their respective firefighters with appropriate PPE and vehicle mounted firefighting and rescue equipment to safely and effectively execute firefighting operations. Nations agree to carry the listed equipment, or their equivalent, on emergency response vehicles, or where operational limiting factors dictate, ensure the listed equipment is prioritized, and deployed within a reasonable period of time.

1.2.2 The highest priority must always be afforded to aircraft crash rescue and firefighting equipment that immediately provides force protection in support of military flying operations upon deployment. Compliance with STANAG 7132/AATMP 33 will require the training standards of Firefighters to be maintained at an appropriate level to enable effective and efficient use of PPE and equipment.

1.2.3 It is understood that all nations may not be capable of fully meeting the requirements of this STANAG/AATMP due to vehicle size and storage limitations. However, ratifying nations will endeavour to comply with this requirement with long-term planning for the refurbishment and/or replacement of CFR vehicles.

1.2.4 Participating nations agree to exchange information on the research and development of new PPE.

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CHAPTER 2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

2.1. PPE – GENERAL

Participating nations agree to equip and train Firefighters in the correct use of PPE for:

- a. Firefighting,
- b. Rescue Operations
- c. Hazardous Material mitigation.

Firefighters PPE must meet the nation's regulatory safety standards. As a minimum, NATO Firefighters will be provided and trained to inspect, maintain and utilize the following specialised firefighting PPE:

2.1.1. Helmet and Face Shield

A helmet with face shield combination to protect the head and face of the Firefighter from flying solid particles or liquids.

2.1.2. Shroud/Fire hood

A protective layer to prevent the penetration of heat to the throat, ear, or neck area.

2.1.3. Protective Coat, Trousers, and Gloves

These pieces of protective clothing are designed to protect the Firefighter from heat radiation and heat convection. Additionally, hand protection is provided to prevent injury from cuts, burns and puncture wounds.

2.1.4 Safety Shoes or Boots

Foot protection is provided to prevent trauma and injury from heat and sharp objects.

2.1.5 Eye Protection

This may be part of the helmet or separate (consideration being given to Foreign Object Damage (FOD)). Eye goggles or face shields are designed to protect the Firefighter from flying solid particles or liquids.

2.1.6 Hearing Protection

These devices are to limit noise-induced damage to the Firefighter's ears when loud noise situations cannot be avoided.

2.1.7 Self Contained Breathing Apparatus (SCBA)

SCBA will be provided to protect Firefighters from contaminated environments. Firefighters must be trained to operationally maintain and utilise SCBA equipment and its associated devices.

2.2. PPE - SPECIALIST

2.2.1 CBRN Environments

In some instances, normal crash and/or structural firefighting garments as stated above may not be suitable for all CBRN environments. In these instances, and based on risk assessment, participating nations agree to provide Firefighters with a set of the above necessary firefighting clothing and a clothing ensemble and respiratory protection suitable for use in CBRN environments.

2.2.2 Hazard Material Incidents

Each participating nation, based on risk assessment, will provide and maintain appropriate specialised PPE and equipment for use in the mitigation of hazardous materials incidents which could occur on an airbase. It is not necessary for each Firefighter to be provided with these specialised suits; moreover, it is the intent that each department formulates a team concept and equip the team with resources designed for mitigating such incidents. For composite material related incidents, consult STANAG 3896/AATMP 21 (Chapter 3 of T.O. 00-105E-9).

CHAPTER 3	STANDARD EQUIPMENT ON FIREFIGHTING VEHICLES
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3.1. REGULATION

Firefighter equipment must meet the nation's regulatory safety standards for design, use, and safety. Nations may expand the minimum levels of equipment by quantity and or uniqueness of missions.

3.1.1 Training

As a minimum, NATO Firefighters will be trained to inspect, maintain and utilise specialised firefighting equipment carried on vehicles.

3.2 MINIMUM EQUIPMENT INVENTORY

Participating nations agree to provide, as a minimum, the tools and equipment listed in Annex A or their equivalent. Annex A depicts the type of equipment and its intended function. Since many different names may apply to specific and similar equipment, items are listed generically. This generic nomenclature will allow participating nations to provide an equivalent piece of equipment that meets the purpose and intent to achieve firefighting and rescue services.

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ANNEX A. MINIMUM LEVELS OF CFR EQUIPMENT

Ancillary Support Equipment	
Item	Purpose
Forcible Entry Equipment:	Provide forcible entry capability
• Crash (rescue) axe	
• Prying tool	
• Crowbar(s)	
• Cutter bolt	
• Reciprocating/Oscillating /Chain saw	
Ropes:	Provide safety, hoisting & securing
• Rope line rescue	
• Rope line general	
• Life line	
• Hoisting line	
Rescue tool kit:	Assist in rescue operations
• Hammer, mallet, maul	
• Cold chisel	
• Wire cutters	
• Hacksaw and spare blades	
• Pliers	
• Screwdrivers (assorted)	
• Wrench (various)	
Portable or fixed vehicle lighting	Provide scene illumination

Handheld flashlight (intrinsically safe)	Provide illumination
Thermal Imaging Camera	Provide heat source recognition
Portable fire extinguisher(s)	
ladder(s)	Provide aircraft access (various sizes depend upon aircraft assigned or deployed)

Communications Equipment	
Item	Purpose
Vehicle/Mobile Radio System	Provide inter-vehicle and control centre communications
Portable Radios	Provide Crew member to crew member communications
Inter-agency radio communications capability	Provide communications with the dispatch centre, Air Traffic Control tower, medical and security centres or vehicles, host nation emergency services
Ground to Air Communications	Provide direct link communication with aircrew (subject to national authority)
Aircraft marshalling aids/signals	Provide signals for ground to aircraft communications
Intercom headset	Provide ground to aircraft communications
Aural protection	Provide hearing protection
Crash map and incident checklist	Provide on-scene incident management

Firefighting and Associated Equipment	
Item	Purpose
Fire hose	
<ul style="list-style-type: none"> • Supply lines 	Provide water supply to vehicle
<ul style="list-style-type: none"> • Attack lines 	Provide firefighting capability
<ul style="list-style-type: none"> • Soft/Hard suction 	Provide hydrant/external water sources
<ul style="list-style-type: none"> • Hose reels (if installed on vehicle) 	
Spare firefighting agent supply	Provide sustained operations (Note: Agent may be stored in a central location for immediate delivery to the incident scene)
Fire stream appliances (nozzles, hose connectors adapters, strainers, pick up tubes, etc.)	Provide agent application
Water system operating tools (hydrant wrench hose wrench, turn keys, standpipes, couplings, hose clamps, hose jackets, etc.)	Provide for operation of water distribution systems

Hazardous Materials Response Equipment	
Item	Purpose
<p>Chemical Protection Clothing (CPC)</p> <ul style="list-style-type: none"> • It is important that the correct CPC is selected when dealing with incidents involving hazardous substances. Selecting the appropriate CPS should be based on the hazardous material and/or the condition present and should be appropriate for the hazards encountered. It is essential that the wearer is adequately protected, trained in its use and limitations and 	To prevent exposure through skin, contact and penetration

that the manufactures instructions are followed.	
Detection, Identification and Monitoring (DIM) equipment	To provide a system and method for detecting, identifying, and monitoring of hazardous material substances
Decontamination equipment	To provide decontamination capability
Specialist Equipment	To provide clean up capability

Medical/First Aid Equipment	
(If medical services are provided by a military or civilian medical care provider on a full-time basis first aid equipment may be reduced accordingly based on national author)	
Item	Purpose
Vehicle First Aid Kit	Provide First Aid capability
Automated External Defibrillator (AED)	
Operational Medical Kit:	Provide First Responder level of care
<ul style="list-style-type: none"> CPR Equipment (pocket mask/resuscitator, aspirators) 	Provide patient CPR
<ul style="list-style-type: none"> Surgical gloves and masks 	Provide infectious disease control
<ul style="list-style-type: none"> Field dressings and bandages 	Provide patient wound treatment
<ul style="list-style-type: none"> Stabilizing/Immobilization splints (for Example: Cervical supports, 	Provide patient stabilization

SamSplint, Ked System, Spine Board, etc.)	
• Wound wash solution	Provide cleansing of wounds
• Blankets (cotton/wool/thermal)	Provide patient warmth/modesty
• Stretchers	Provide patient transport/movement
• Burn blankets	Provide burn victim sterile coverage
• Casualty/Mortuary Bags	Provide discreet remains containment

Self-Contained Breathing Apparatus (SCBA) and Associated Equipment

Item	Purpose
Complete SCBA Unit	Provide self-contained air for Firefighters in an oxygen deficient atmosphere
Personal Alert Safety System/Distress Signal Unit	Provide audible and visual alarm to signify a Firefighter is in a dangerous situation and is not moving
Spare SCBA air tanks/cylinders	Provide additional breathing air
Air supply unit	Capability to refill air tanks/cylinders
Accountability/Entry Control Board	Provide accountability for Firefighters within the risk area
Respirator – full face	Provide post fire particulate protection

(If medical services are provided by a military or civilian medical care provider on a full-time basis medical equipment may be reduced accordingly based on national authority)

Specialised Rescue Equipment

Item	Purpose
Hydraulic/Electrical (or combination) of portable rescue equipment:	Provide ability to cut, lift, and separate aircraft materials to aid in victim removal
• Power supply unit	

• Cutter, spreader, telescopic ram	
• Hydraulic supply hoses/Spare batteries	
• Chains and hooks (Optional)	
• Hydraulic hand pump	
Cribbing	Provide stability
Wedges/plugs	Provide stability/stop leaks
Powered rescue saw with spare blades	Provide cutting capability for access
Lifting bags/air bags	Provide stability
Winch and cable (mounted/portable)?	Provide pulling capability
Safety goggles	Provide eye protection
Safety gloves	Provide hand protection
Ejection seat hose cutting tool?	Provide seat de-arming
Aircraft ejection seat safety pins	Provide seat safety
Rescue knife	Provide cutting of harnesses
Arresting hook safety pin	Provide security of arresting hook

ANNEX B. SAFETY CONSIDERATIONS

Safety Considerations Implementing STANAG 7132/AATMP 33 - Personal Protective and Firefighting Equipment Requirements for Fire and Emergency Operations**Introduction:**

This Annex is intended for NATO Led Service Providers in implementing this STANAG/AATMP at existing or planned airfields as well as during deployed operations.

It includes general considerations such as the suitability of the STANAG/AATMP for the required operations, currency with regard to edition number and amendments, applicability of related documents, nations ratifying and reservations.

Specific safety considerations are identified by the custodian of the STANAG/AATMP and national SMEs along with consequences and possible mitigations.

Custodian POC. For users to provide any comments and lessons learned: **Barry Lewis (GBR)** barry.lewis912@mod.gov.uk

General:

In the implementation of any STANAG/AATMP, the NATO Led Service Provider should verify the items listed below using the NATO Standardization Office (NSO) password protected Website <https://nso.nato.int/nso/>.

A. Suitability	Review STANAG 7210/AATMP-50 (AEP-68) <i>Guidance in the Selection of STANAGs/AATMPs for Deployed Operations</i> , to determine if the STANAG/AATMP is suitable for the type of operation required.
B. Currency	Ensure that STANAG/AATMP Edition and any Amendments are the most current as shown on the NSO Website.
C. Related Documents	Obtain related documents cited in the STANAG/AATMP and, in particular, review those documents where criteria as been adopted. STANAGs/AATMP are available on the NSO Website whereas civilian documents, such as ICAO, may be available from your Aviation or Engineering Commands.
D. Implementation Status	Review the ratification status along with any reservations to the STANAG/AATMP on the NSO Website and, in particularly, the status for those for nations taking part in the operation.
E. Compliance	For existing airfield facilities and procedures, determine if they are in compliance with the criteria and standards specified in the STANAG/AAMTP.

Specific:

The safety considerations, consequences and possible mitigations listed below by the STANAG/AATMP Custodian assisted by Subject Matter Experts are by no means exhaustive or fully applicable to all environments or situations.

Full safety surveys in accordance with STANAG 4720/AATMP-1 *NATO Standard for Air Traffic Management (ATM) Safety Management System (SMS)*, shall still be carried out.

Safety Considerations	Consequences	Possible Mitigations
Firefighter Personal Protective Equipment (PPE) not provided.	1) Firefighter safety will be severely compromised. 2) CFR operations will be limited to defensive operations (not entering the risk area). 3) Firefighters will not be able to work in CBRN environments.	1) Provide all Firefighters suitable PPE that meets the nation's regulatory standards.
Minimum recommended types of equipment not provided.	CFR response, intervention and operations may be delayed and/or ineffective leading to loss of life or assets.	1) Conduct a Risk Assessment to determine risk critical equipment commensurate with the type of flying operations being supported. 2) Liaise with external emergency services organizations to establish that their equipment inventory will meet the minimum recommendations.
Equipment not manufactured to recognised standards.	1) Potential of equipment failure causing injury to Firefighters, casualties and other emergency services personnel. 2) Ineffective performance of equipment which may lead to firefighting tasks/operations being delayed or failing.	1) Ensure that all equipment procured meets regulatory standards for its purpose. 2) Ensure that CFR personnel only use approved equipment.
Equipment not inspected and properly maintained.	Potential of equipment failure causing injury to Firefighters, casualties and other emergency services personnel.	1) Ensure that all equipment is regularly maintained and periodically inspected in accordance with the manufacturer's instructions. 2) Implement a robust system to record equipment maintenance, repair and inspections.
Competency of CFR personnel.	Firefighters not able to use the equipment effectively and efficiently, potential for loss of life or loss of military assets.	1) Ensure that STANAG 7145/AATMP-36 is complied with and regularly audited and inspected to confirm compliance. 2) Ensure that STANAG 7162/AATMP-37 is complied with and regularly audited and inspected to confirm compliance. 3) Develop and implement a robust recurring training programme.

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