

NATO STANDARD

AMedP-1.14

**MINIMUM MEDICAL DESIGN
REQUIREMENTS FOR MILITARY
MOTOR AMBULANCES**

Edition B, Version 1

JANUARY 2025



NORTH ATLANTIC TREATY ORGANIZATION

ALLIED MEDICAL PUBLICATION

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NATO LETTER OF PROMULGATION

21 January 2025

1. The enclosed Allied Medical Publication AMedP-1.14, Edition B, Version 1, MINIMUM MEDICAL DESIGN REQUIREMENTS FOR MILITARY MOTOR AMBULANCES, which has been approved by the nations in the MILITARY COMMITTEE MEDICAL STANDARDIZATION BOARD, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2872.
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Thierry POULETTE
Major General, FRA (A)
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS
BEL	Needle decompression equipment will be foreseen in the individual medical kit of the skilled personnel, not by default in the medical kit of the motor ambulance.
CAN	Use of a ventilator is not in the scope of practice of standard ambulance personnel. Canadian Forces Health Services specific protocol in an operational environment dictates whether or not a ventilator is required in an ambulance.
FIN	The required capability is partially existing, but full implementation requires additional equipment and the procurement timetable remains open at the moment.
<p>Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Documents Database for the complete list of existing reservations.</p>	

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
BEL	Needle decompression equipment will be foreseen in the individual medical kit of the skilled personnel, not by default in the medical kit of the motor ambulance.
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SUMMARY OF CHANGES

1. The title of the STANAG is changed to MINIMUM MEDICAL DESIGN REQUIREMENTS FOR MILITARY MOTOR AMBULANCES.
2. There are conducted changes in the Cover letter in accordance with AAP-03.
3. There are conducted changes in the following chapters and Annex`:
 - 3.1. Aim: The aim of this STANAG is to introduce categories for various types of military motor ambulances being used on multinational military operations, and the minimum essential medical equipment and supplies they carry.
 - 3.2. Reference list is changed, and there are both removed and added references. The references in the text are corrected accordingly.
 - 3.3. The Reference list is to be found before Chapter 1.
 - 3.4. Chapters and sub-chapter numbers: The chapter numbers are changed according to the template.
 - 3.5. The chapter contents are changed to obtain a more fluent text.
 - 3.6. The ANNEX A has changes in the table.
 - 3.7. Annex B and C are removed and reference to supporting standards are made.

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REFERENCES

- a. MC 0326/4 – NATO PRINCIPLES AND POLICIES OF MEDICAL SUPPORT
- b. AD 83-1 – MEDICAL SUPPORT TO OPERATIONS
- c. STANAG 2228 – ALLIED JOINT DOCTRINE FOR MEDICAL SUPPORT – AJP-4.10
- d. STANAG 2542 – ALLIED JOINT MEDICAL PLANNING DOCTRINE – AJMedP-1
- e. STANAG 2546 – ALLIED JOINT MEDICAL DOCTRINE FOR MEDICAL EVACUATION - AJMedP-2
- f. STANAG 2561 - ALLIED JOINT MEDICAL FORCE HEALTH PROTECTION DOCTRINE - AJMedP-4
- g. STANAG 2560 – EVALUATION OF NATO MEDICAL TREATMENT FACILITIES - AMedP-1.6, AMedP-1.7, AMedP-1.8
- h. STANAG 2121 – CROSS-SERVICING OF MEDICAL GAS CYLINDERS – AMedP-1.19
- i. STANAG 2178 – COMPATIBILITY OF MEDICAL TUBING AND CONNECTORS IN THE FIELD – AMedP-1.15
- j. STANAG 2126 – FIRST AID DRESSINGS, FIRST AID KITS AND EMERGENCY MEDICAL CARE KITS - AMedP-8.7
- k. STANAG 2040 – STRETCHERS, BEARING BRACKETS AND ATTACHMENT SUPPORTS – AMedP-2.1
- l. STANAG 4569 – PROTECTION LEVELS FOR OCCUPANTS OF ARMoured VEHICLES- AEP 55, AVPP-01, AVPP-02
- m. STANAG 2873 – COMMANDER'S GUIDE ON MEDICAL SUPPORT TO CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR (CBRN) DEFENSIVE OPERATIONS - AMedP-7.6
- n. NATOTerm – THE OFFICIAL NATO TERMINOLOGY DATABASE
- o. EN-1789:2020 - CORRIGENDUM 1 - MEDICAL VEHICLES AND THEIR EQUIPMENT – ROAD AMBULANCES

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CHAPTER 1 INTRODUCTION

1.1. INTRODUCTION

1. NATO forces in international operations are increasingly becoming more multinational. This is also relevant within the area of medical support to NATO forces in international operations.¹ Combined or multinational staffs and force structures are some of the crucial aspects of the most likely types of future operations, seen from the medical point of view.² The benefit of this is clear, minimizing the logistical and medical footprints, utilizing available resources and preventing medical shortfalls.

2. An effective medical evacuation (MEDEVAC) system³ requires the ability to evacuate casualties to or between Medical Treatment Facilities (MTF) at all times of day and night, in all weather conditions, across all terrain, and in any operational scenario.⁴

1.2. AIM

The aim of this AMedP is to introduce categories for various types of military motor ambulances being used on multinational military operations, and the minimum essential medical equipment and supplies they carry.

1.3. SCOPE

1. This AMedP provides a categorization system for military motor ambulances based on medical capability. It will not deal with other types of ambulances (e.g. air ambulances).

2. This edition of AMedP-1.14 concerns the medical design requirements only and does not address details of non-clinical vehicle requirements, apart from the minimum requirements for the vehicles medical compartment.

3. This AMedP covers the minimum medical design. However, as it states in the cover letter on interoperability requirements, this standard does not put restrictions to the addition of further equipment as may be mandated by national requirements.

1 STANAG 2542 – AJMedP-1

2 STANAG 2228 – AJP-4.10

3 STANAG 2546 – AJMedP-2

4 STANAG 2542 – AJMedP-1

4. Where they exist, NATO standards for vehicle requirements including crew safety⁵, cross-terrain mobility and protection⁶ must be applied.
5. It is assumed throughout this AMedP that the personnel crewing the individual ambulance will be trained and capable of using the equipment and materiel on the vehicle. This AMedP does not therefore cover the training requirements or medical education standards for the ambulance crew.
6. This edition of AMedP will not cover requirements for CBRN as this AMedP address minimum medical requirements. For the medical planning of the use of military motor ambulances in evacuation of CBRN patients it must be considered according to the relevant NATO standards.^{7,8}

5 STANAG 2561 – SRD AJMedP -4-8

6 STANAG 4569 - AEP 55 Ed.D & AVPP-01 Ed B & AVPP-02 Ed A

7 STANAG 2560 – AMedP-1.7

8 STANAG 2873 – AmedP-7.6

CHAPTER 2 MOTOR AMBULANCES ON OPERATIONS
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2.1. MOTOR AMBULANCES ON OPERATIONS

1. Military motor ambulances form an important part of the ground assets available for the Medical Evacuation (MEDEVAC) system.^{9,10}
2. Motor ambulances¹¹ are often the most common type of ground evacuation transportation assets. Within the range of ambulances available, there is considerable variation in terms of respective capabilities and patient capacity. At the top of the scale are advanced support units, staffed with trained personnel who can provide resuscitative care, administer basic drugs, and begin administration of intravenous fluids in addition to providing basic first aid. Others, usually a greater number, are equipped for basic patient treatment only. The choice of ambulance is essential to the operational planning of timelines¹² and the ability to evacuate casualties to or between Medical Treatment Facilities (MTF) 24 hours a day in all weather, over all terrain and in any operational scenario,^{13,14}.

2.2. OPERATIONAL CONSIDERATIONS

1. When determining which type of ambulance to employ, the main medical considerations are the medical capacity and capability. This should be balanced against the limitations of the operational context. When determining which type of vehicle is suitable, the vehicle must have the same mobility and protection as the force they are supporting.¹⁵
2. In a mass casualty (MASCAL) situation¹⁶, ambulance buses may be used to convey large numbers of slightly or moderately injured casualties. Ambulance buses may be used for sitting and litter casualties.

9 STANAG 2228 — AJP-4.10

10 STANAG 2546 — AJMedP-2

11 NATOTerm

12 MC 0326/4

13 MC 0326/4

14 AD 83-1

15 STANAG 2546 — AJMedP-2

16 NATOTerm

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CHAPTER 3 CATEGORIES OF MOTOR AMBULANCE
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3.1. DEFINITION OF MOTOR AMBULANCE

1. A motor ambulance is a specially designed, manned, equipped and powered ground vehicle for the conveyance of treated and untreated patients. A military motor ambulance can be wheeled or tracked.
2. As such the term “motor ambulance” is defined in NATOTerm¹⁷ as “A vehicle equipped for the transport of sick or injured people”
3. Railway is not covered under this term.

3.2. MOTOR AMBULANCE TYPES

1. There is a wide variety of motor ambulances in terms of medical capability.
2. Military Motor ambulances are classified in four types:
 - a. Type A - Transport ambulance¹⁸: Ambulance designed and equipped for the transport of patients who are **not** expected to become emergency patients.
 - b. Type B - Multifunction ambulance¹⁹: A multifunction ambulance, optimized to deliver Primary Health Care (PHC) and MEDEVAC.
 - c. Type C - Emergency ambulance²⁰: Ambulance primarily designed and equipped for the Specialist MEDEVAC, for the full spectrum of trauma and other medical emergencies, up to consultant led care.
 - d. Type D - Mobile intensive care ambulance: Ambulances primarily designed and equipped for Specialist MEDEVAC, able to provide in-transit care for high and medium dependency ill or injured patients.

¹⁷ NATOTerm

¹⁸ EN 1789:2020

¹⁹ EN 1789:2020

²⁰ EN 1789:2020

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ANNEX A MINIMUM REQUIREMENTS FOR AMBULANCES

A.1. OVERVIEW OF MINIMUM REQUIREMENTS FOR AMBULANCE

Nos	Equipment/Capabilities/Capacity	Ambulance type				Comments
		A	B	C	D	
1	<u>Interior</u>					
	Height/Headspace in patient compartment	X	X	X	X	Sufficient space for access to the patient during transit.
	Mountings for infusion fluid		X	X	X	Mountings or similar
	Seating	X	X	X	X	The incorporation of a seat/seating within the patient compartment for use by medical attendant carrying out procedures while in transit. The patient and attendants must be secured safely within the platform.
	Stretcher (s)	X	X	X	X	Corresponding ambulance capacity in accordance with Ref. I.
	Stretcher Loading System (SLS)	X	X	X	X	Ambulances should be equipped with an appropriate means to load and unload stretchers

Nos	Equipment/Capabilities/Capacity	Ambulance type				Comments
		A	B	C	D	
2	<u>Communication</u>					
	Communication possible between patients' compartment and the drivers cabin	X	X	X	X	
	Radio communication with the supported force element/parent medical unit	X	X	X	X	
3	<u>Air condition/Heating/Temperature control</u>					
	Temperature control – ability to keep an adequate temperature for the patient(s), also while vehicle is stationary	X	X	X	X	Air condition/Heating system <i>should</i> be independent of the engine
4	<u>Lighting</u>					
	Lighting – adequate for observation and treatment of patient(s)	X	X	X	X	<i>Should</i> take reference from Ref.o. 4.4.8 Table 8
5	<u>Noise</u>					
	Overall interior noise level should not exceed 80 dB ²¹	X	X	X	X	Ref.f
6	<u>Electrical power</u>					

²¹ STANAG 2561, SRD AJMedP 4-8

Nos	Equipment/Capabilities/Capacity	Ambulance type				Comments
		A	B	C	D	
	Power supply adequate for the type of ambulance and its electrical equipment	X	X	X	X	
7	<u>Storage of Equipment</u>					The ambulance shall be capable of stowing internally its general and medical equipment without detriment to patient transport, supervision and treatment Ref. g
	Ability to control the temperature of infusion fluid		X	X	X	Ref. g
	Automated External Defibrillator (AED)		X	X	X	Or Semi-Automated External Defibrillator (SAED) Or have means of safely securing an AED provided by the clinical team.
	Bag valve mask		X	X	X	
	Blankets	X	X	X	X	Heat reflective blankets
	Cervical and spine immobilization equipment		X	X	X	
	Chest seal dressing		X	X	X	
	Dressings	X	X	X	X	
	Emergency blankets	X	X	X	X	
	Fracture splints		X	X	X	
	Infusion fluid and giving sets		X	X	X	Must comply with Ref.i

Nos	Equipment/Capabilities/Capacity	Ambulance type				Comments
		A	B	C	D	
	Needle de-compression kit		X	X	X	
	Oxygen, (at National discretion)		X	X	X	If carried in fixed gas cylinders servicing must comply with Ref.h. Ref i
	Protective gloves	X	X	X	X	
	Protective face mask	X	X	X	X	
	Suction		X	X	X	Must comply with Ref.i.
	Tourniquets		X	X	X	
	Ventilator			X	X	Must comply with Ref.h and Ref.i. Or may have means of safely securing a ventilator provided by the clinical team.
	Vital signs monitoring		X	X	X	
	CBRN (at National discretion)					Ref.m.

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