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NATO STANDARD

AEP-4101

TOWING ATTACHMENTS

Edition A, Version 1

MAY 2021



NORTH ATLANTIC TREATY ORGANIZATION

ALLIED ENGINEERING PUBLICATION

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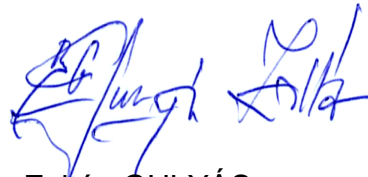
NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

18 May 2021

1. The enclosed Allied Engineering Publication AEP-4101, Edition A, Version 1, TOWING ATTACHMENTS, which has been approved by the nations in the NATO ARMY ARMAMENTS GROUP, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 4101.
2. AEP-4101, Edition A, Version 1, is effective upon receipt.
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4. This publication shall be handled in accordance with C-M(2002)60.



Zoltán GULYÁS
Brigadier General, HUNAF
Director, NATO Standardization Office

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
CZE	CZE will apply this STANAG only in selected newly implemented military systems.
DNK	Materiel already in use which do not meet the requirements of new STANAG 4101 will not necessarily be brought in compliance with the STANAG.
USA	The United States will implement this standard in all future designs of tactical land vehicles. Vehicle designs already in service may not meet this standard.

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 Document Database for the complete list of existing reservations.

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CHAPTER 1 INTRODUCTION

The aim of this agreement is to standardize towing attachments on new procurement of tactical land vehicles for use by the NATO armed forces.

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CHAPTER 2 AGREEMENT

Participating nations agree to adopt certain design features which will ensure interoperability of the towing attachments (towing hooks, pintle assemblies or other devices) on new procurement of tactical land vehicles. This Agreement is also applicable to lunettes or towing eyes on all trailers required to be towed by such vehicles, including guns and other specialized equipment.

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CHAPTER 3 DEFINITIONS

The following definition is used for the purpose of this agreement:

3.1. TACTICAL LAND VEHICLE

A military vehicle, whether designed primarily for military use or adapted from a commercial vehicle, which has specialized military characteristics to fit it for use by forces in the field in direct connection with, or in support of, combat operations or the training of troops for such operations.

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CHAPTER 4 DETAILS OF AGREEMENT
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4.1. SCOPE OF AGREEMENT

4.1.1. AEP-4101 is for use by the following NATO Forces:

1. NATO Army Forces
2. Those elements of NATO Naval and Air Forces operating in a ground role, e.g. marines, naval landing parties and Air Force ground personnel.

4.1.2. This Agreement applies to the following:

1. New procurement of tactical land vehicles, also trailers and towed gun equipment designed to be towed by these vehicles.
2. Tactical land vehicles including trailers and towed guns which could be modified at reasonable cost without major adverse changes to their military characteristics.
3. Future designs of tactical land vehicles.

4.2. GENERAL

4.2.1. Lunettes or towing eyes shall be in accordance with Annex A.

4.2.2. Towing devices (pintle assembly or hook, pin and jaw) shall be of such a size that they will accept the 76.2 mm x 41.2 mm lunette or towing eye.

4.2.3. The design of lunettes and pintle assemblies shall allow the maximum possible articulation of the connection. The minimum permissible articulation is shown in Annex B to this AEP (Tracked Vehicles) and Annex C to this AEP (Wheeled Vehicles). This articulation does not relate to the articulation between the vehicle and its trailer/towed gun.

4.2.4. Longitudinal springing if required by any type of trailer, shall be incorporated in the lunette or towing eye. The towing device need not be sprung.

4.2.5. To ensure full NATO interoperability between nations equipment provision must be made to enable the pintle assemblies to rotate, with the lunettes to be fixed to prevent them from revolving.

4.2.6. The pintle assemblies or tow hooks on tactical land vehicles shall be positioned using the coupling axis and heights specified in ISO 11406 as a guide to establish horizontal articulation of the truck/trailer unit. ISO 11406 does not take into account the requirement for vertical articulation.

4.2.7. Materials are to be acceptable to each national approving authority.

CHAPTER 5 IMPLEMENTATION OF THE AGREEMENT

This AEP is implemented when the necessary orders or instructions have been issued to ensure that the requirements covered by this agreement are applied to the new procurement of tactical land vehicles.

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ANNEX A STANDARD DIMENSIONS FOR TOWING EYE (LUNETTE)

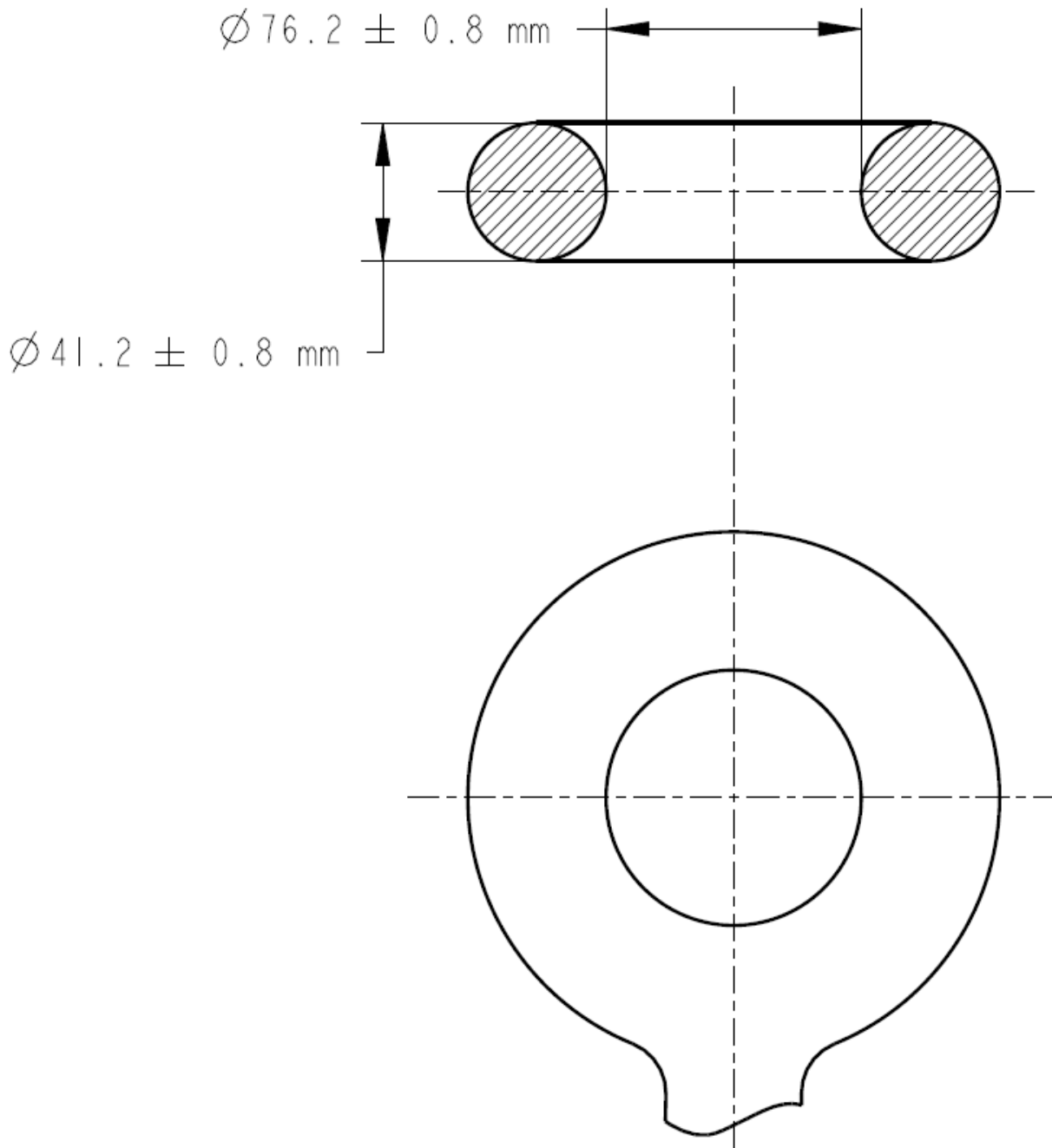
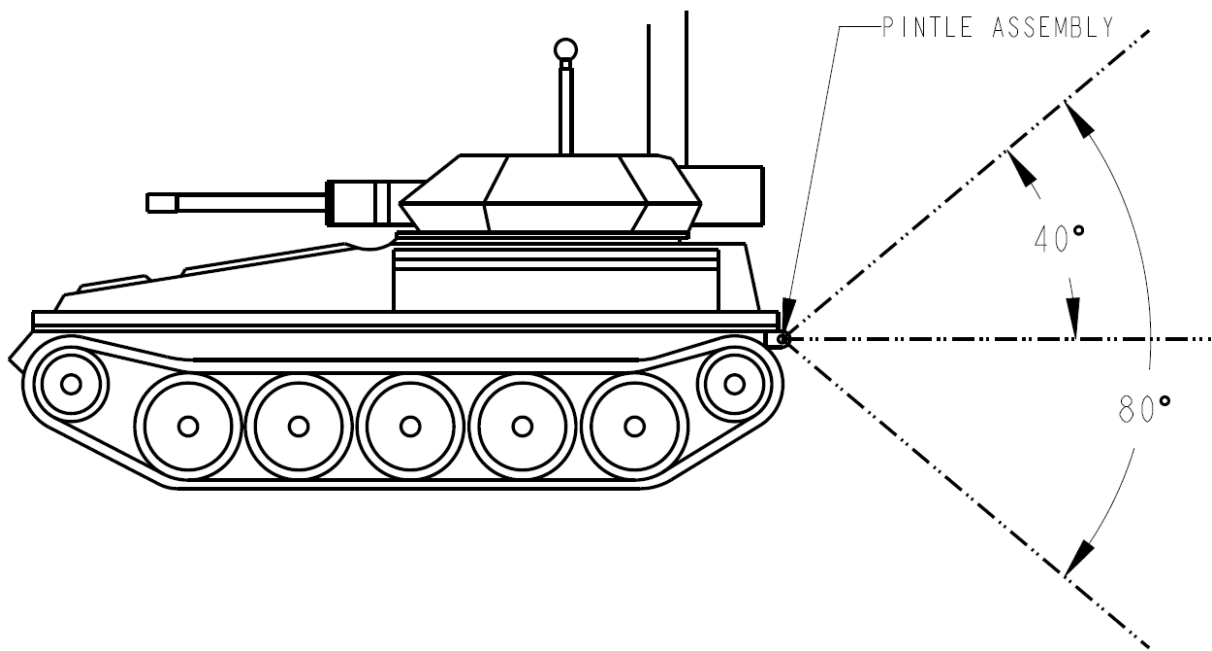


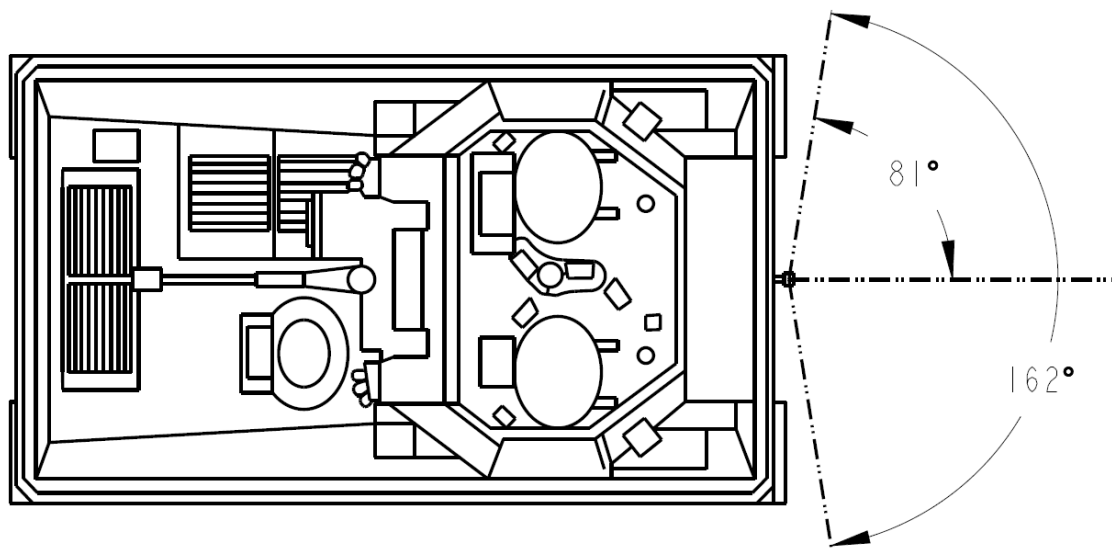
Figure1: Standard Dimensions for Towing Eye (Lunette)

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**ANNEX B MINIMUM DRAWBAR ARTICULATION ANGLES
(TRACKED VEHICLES)**



Vertical Articulation Angles

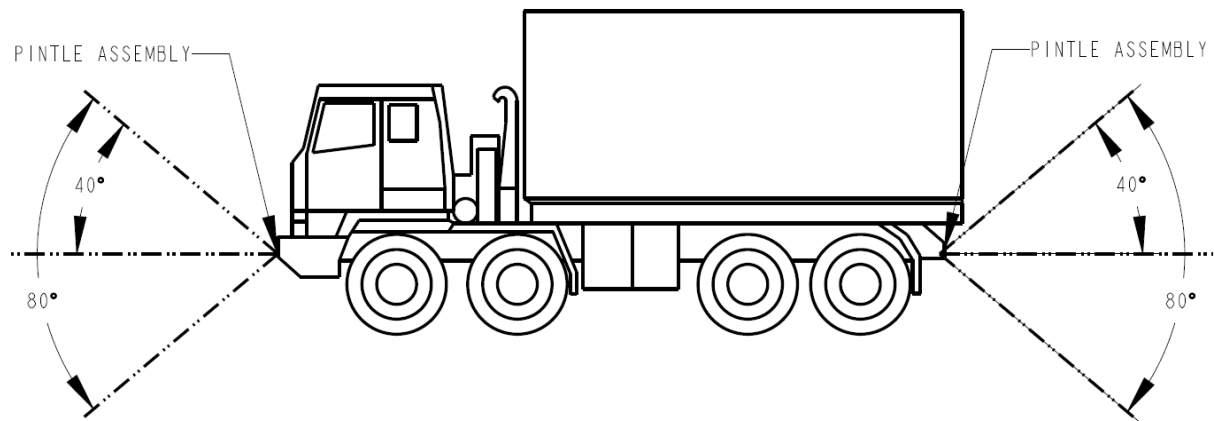


Horizontal Articulation Angles

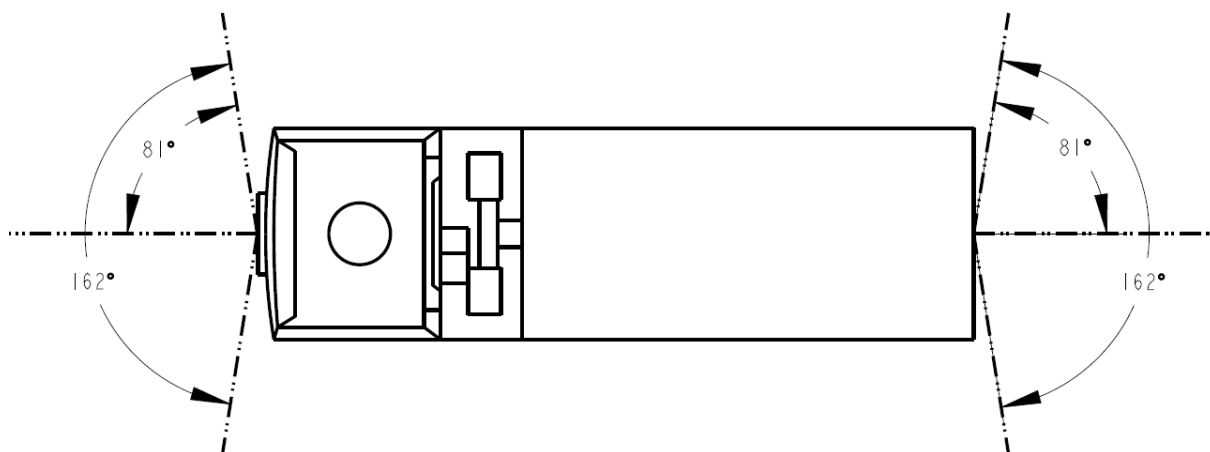
**Figure2: Minimum Drawbar Horizontal and Vertical Articulation Angles from
Central Towing Pintle to Facilitate Normal Towing Requirements
(Tracked Vehicles)**

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**ANNEX C MINIMUM DRAWBAR ARTICULATION ANGLES
(WHEELED VEHICLES)**



Vertical Articulation Angles



Horizontal Articulation Angles

**Figure3: Minimum Drawbar Horizontal and Vertical Articulation Angles from
Central Towing Pintle to Facilitate Normal Towing Requirements
(Wheeled Vehicles)**

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