

**Winter and road service area maintenance
equipments - Power system and related
controls - Interchangeability and
performance requirements**

Winter and road service area maintenance
equipments - Power system and related controls
- Interchangeability and performance
requirements

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 15431:2008 sisaldab Euroopa standardi EN 15431:2008 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 15431:2008 consists of the English text of the European standard EN 15431:2008.</p>
<p>Standard on kinnitatud Eesti Standardikeskuse 27.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
<p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.01.2008.</p>	<p>Date of Availability of the European standard text 15.01.2008.</p>
<p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>The standard is available from Estonian standardisation organisation.</p>

ICS 43.160

Võtmesõnad:

Standardite reprodutseerimis- ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

ICS 43.160

English Version

Winter and road service area maintenance equipments - Power system and related controls - Interchangeability and performance requirements

Matériels de viabilité hivernale et d'entretien des dépendances routières - Organes de puissance et commandes associées - Interchangeabilité et exigences de performance

Winterdienst- und Straßenbetriebsdienstausstattung - Antrieb und Steuerung von Anbaumaschinen - Anforderungen an Austauschbarkeit und Leistung

This European Standard was approved by CEN on 21 October 2007.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword	3
1 Scope	4
2 Normative references	4
3 Power System and related controls	5
3.1 Hydraulic system for municipal vehicles - Specifications	5
3.1.1 Drive of the oil pump.....	5
3.1.2 Hydraulic Circuits.....	5
3.1.3 Connection between the hydraulic system of the vehicle and the implements.....	5
3.1.4 Flow Rates.....	5
3.1.5 Pressure	5
3.1.6 Power.....	6
3.1.7 Capacity of the oil tank	6
3.1.8 Maximum oil temperature, cooling capacity test procedure	6
3.1.9 Line cross sections.....	8
3.1.10 Couplings and functions	9
3.1.11 Hydraulic Fluid.....	10
3.2 Mechanical Front-Mounted Power Take Off PTO, shaft profile and Performance.....	10
3.2.1 General.....	10
3.2.2 Profile A: $n = 540 \text{ min}^{-1}$ $P_{\text{max}} = 60 \text{ kW}$	10
3.2.3 Profile B: $n = 540 \text{ min}^{-1}$ or $n = 1\,000 \text{ min}^{-1}$ $P_{\text{max}} = 150 \text{ kW}$	10
3.2.4 Power take-off shaft profile.....	11
3.3 Electrical Connectors.....	13
3.3.1 Connector 24 V, 7 pins, at the front of the vehicle, socket design according to ISO 1185	13
3.3.2 Connector 12 V, 7 pins, at the front of the vehicle, socket design based on ISO 1724.....	14
3.3.3 Electrical Connectors in the cabine, 24 V, 3 pin	15
3.3.4 Electrical Connectors in the cabin, 12 V, 3 pin.....	16
Bibliography	18

Foreword

This document (EN 15431: 2008) has been prepared by CEN/TC 337/WG 3 "Interface between tools and vehicle", the secretariat of which is held by UNI-CUNA, under the direction of Technical Committee CEN/TC 337 "Winter maintenance and road service area maintenance equipment", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2008, and conflicting national standards shall be withdrawn at the latest by July 2008.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This document applies to power systems equipped for the operation and able to drive implements and attachments such as snow ploughs and/or spreaders on winter service vehicles or mowers on road service area maintenance vehicles, equipped with front-mounting plates according to EN 15432.

The purpose of this standard is to ensure interchangeability of vehicles and implements. The minimum requirements on the performance and the components of the hydraulic system as well as the kind, the size and the location of the connecting elements between the vehicle and the implement are specified in this standard.

This standard does not deal with airport equipment.

This standard does not cover applications, where the implements need a continuous hydraulic oil flow exceeding 45 l/min.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references the latest edition of the referenced document (including any amendments) applies.

ISO 1185, *Road vehicles – Connectors for the electrical connection of towing and towed vehicles – 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage*

ISO 1724, *Road vehicles – Connectors for the electrical connection of towing and towed vehicles – 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage*

ISO 16028, *Hydraulic fluid power – Flush-face type, quick-action couplings for use at pressures of 20 MPa (200 bar) to 31,5 MPa (315 bar) – Specifications*

ISO 16844-2, *Road vehicles – Tachograph systems – Part 2: Recording unit, electrical interface*