Irish Standard
I.S. EN 16330:2013

# Winter and road service area equipment - Power system and related controls - Power hydraulic system and electric

# I.S. EN 16330:2013

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces:*

*This document is based on:*
EN 16330:2013

*Published:*
2 May, 2013

This document was published under the authority of the NSAI and comes into effect on:
2 May, 2013

ICS number:
43.160

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

I.S. EN 16330:2013

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 16330

April 2013

ICS 43.160

English Version

# Winter and road service area equipment - Power system and related controls - Power hydraulic system and electric

Matériels de viabilité hivernale et d'entretien des dépendances routières - Organes de puissance et commandes associées - Organes de puissance hydrauliques et interfaces électriques

Winterdienst- und Straßenbetriebsdienstausstattung - Antrieb und Steuerung von Anbaumaschinen - Leistungshydraulik und elektrische Schnittstellen

This European Standard was approved by CEN on 7 March 2013.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**



Ref. No. EN 16330:2013: E

# Contents

Page

# Foreword

This document (EN 16330:2013) has been prepared by 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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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

# 1 Scope

This European Standard applies to power systems equipped for operation and to drive implements and attachments such as hydraulic driven front sweepers, mowers or suction sweepers on winter service vehicles or road service vehicles equipped with front-mounting plates according to EN 15432-1.

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 and the size of the connecting elements between the vehicle and the implement, are specified in the standard.

Clause 3 of this standard does not cover applications where the implements need a continuous hydraulic oil flow less than 45 l/ min.

Clause 4 is dealing with the electrical connection between vehicle and implement to drive an electrically driven hydraulic pump, used in trucks without hydraulic systems.

Clause 5 is dealing with a universal electrical connection used for front mounted mowers, spreaders and other road service area equipment with the following functions: power supply and transmitting CAN BUS signals.

# 2 Normative references

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

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: Electrical interface with recording unit*

# 3 Power hydraulic system for municipal vehicles – requirements

## 3.1 Classification of power hydraulic systems

In this document, two different power hydraulic systems are standardized:

— class 1: medium power system;

— class 2: high power system.

## 3.2 Drive of the oil pump

The oil pump shall be driven directly by the vehicle engine and independently from the vehicle drive train. A clutch or a coupling between the engine and the pump is permissible. A drive ratio between the engine and the pump is allowed.

## 3.3 Hydraulic system

The hydraulic system consists of one open type circuit.

The hydraulic system consists in either one variable displacement pump or one or two constant pumps.

If there are two constant pumps, the flow rates shall be added (parallel circuits).