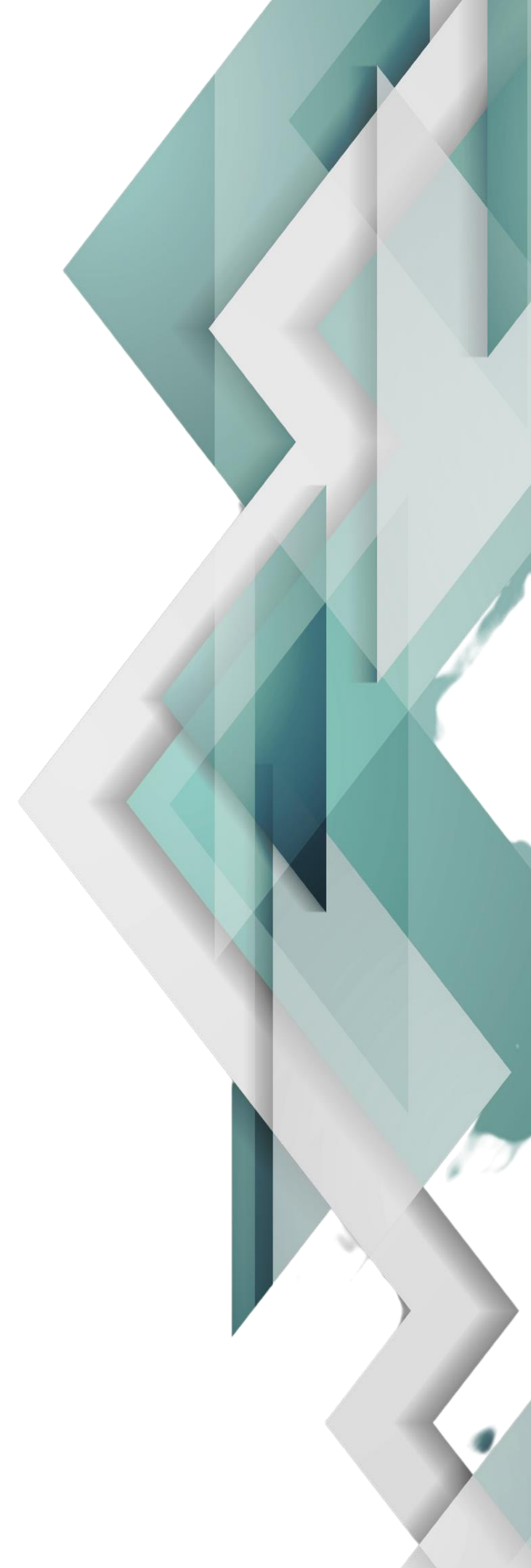


Per Hedetoft
Dansk Maskinhandlerforening
working for CLIMMAR



October 11-14, 2023
Gdańsk/Poland

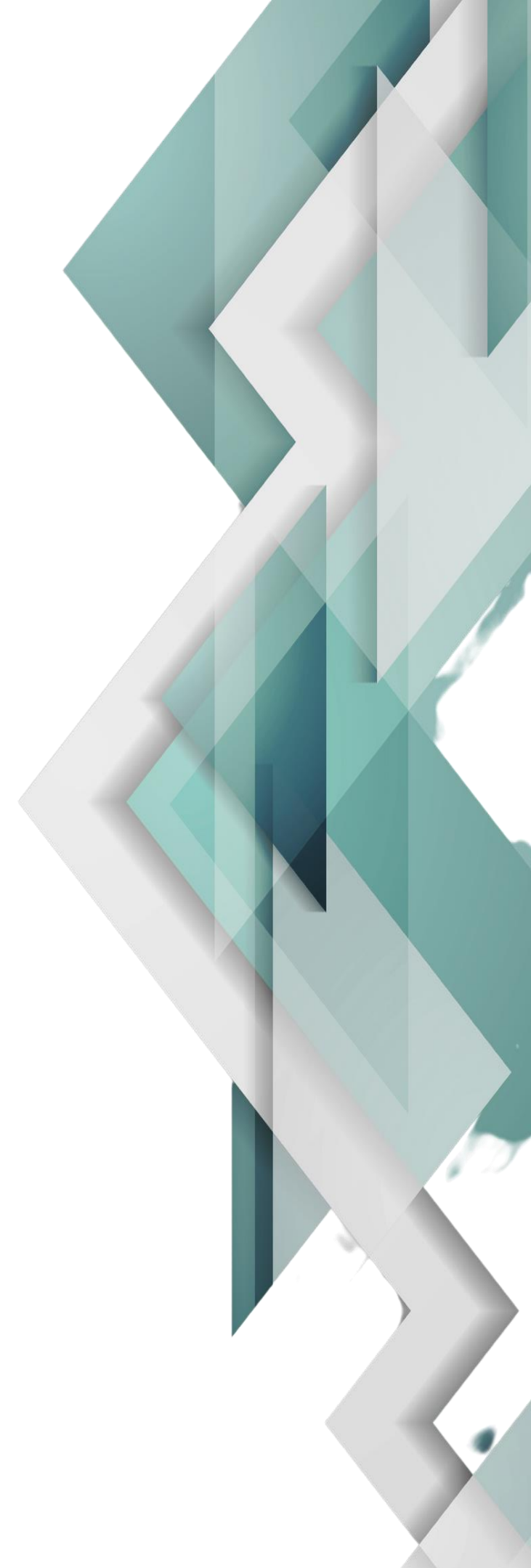


3 OECD SWG (Sub Working Groups)

Tractor codes

Electric tractors

Robot tractors



WGAT – EU Working Group Agricultural Tractors –

Like OECD these WG`s give knowledge, advice and opinions to help the Commission make the right decisions, when making EU regulations – in this case it`s the TRM 167/2013-EU type approval



NRMM – EU Non Road Mobile Machinery



FKA and TRL are currently working on a project to support the future development of a European type-approval scheme for non-road mobile machinery (NRMM).

The proposed type approval scheme is not intended to replace the requirements of the Machinery Directive,

but is instead intended to replace the need for national approval by each European member state of NRMMs intended to circulate on the public road.

As part of this project TRL/FKA have prepared a draft proposal for the content of a potential future NRMM technical regulation.

ISO work – here I also represent EMU/SBS

ISO TC23 SC19 “Agricultural electronics”

ISO TC23 SC19 WG 8 “Safety and security”

ISO TC23 SC19 JWG 10 “Common work between agricultural and earth moving machines”

WG 8:

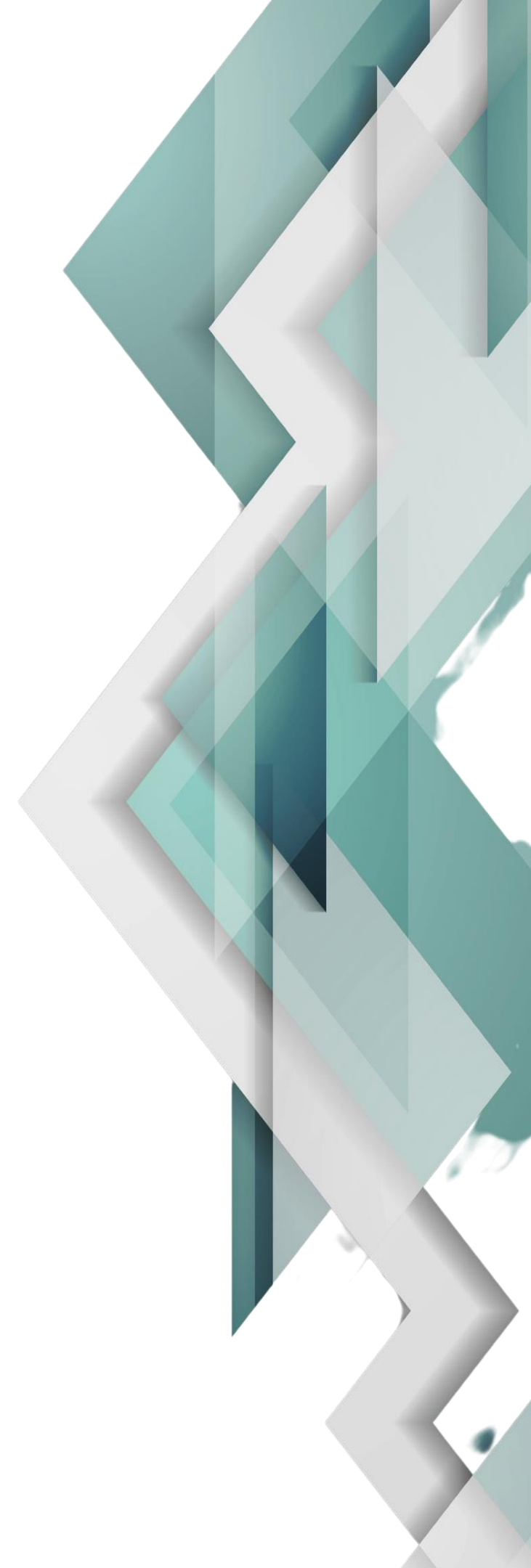
ISO 10975 (ed 2) Agricultural machinery and tractors — Auto-guidance systems for operator-controlled tractors and self-propelled machines — Safety requirements.

ISO 18497-1 Machine design principles and vocabulary.

ISO 18497-2 Design principles for obstacle protective systems.

ISO 18497-3 Autonomous operating zones.

ISO 18497-4 Verification methods and validation principles



JWG 10: 23285 “Agricultural machinery, tractors, and earth-moving machinery— Safety of electrical and electronic components and systems operating at 32 to 75 V DC and 21 to 50 V AC.”

This document primarily specifies both general design requirements and guidelines for protection of operators and bystanders against electric shock and electrically induced fire, for voltage classes A2 (32 to 60 V DC and 21 to 30 V AC) and B1 (60 to 75 V DC and 30 to 50 V AC), including waveforms synthesized by power electronic converters.

This standard is limited to addressing hazards that are not as commonly found in 12 and 24 V DC systems, including those related to higher power converters and drive motors.

Although protection against electrically induced fire hazards is addressed sparingly, compliance to content of this document will have the impact of reducing the occurrence and hazards associated with fire.

This document is applicable to electric systems used on:

- tractors, self-propelled ride-on machines, interchangeable towed implements, semi-mounted implements, and mounted implements used in or with agriculture and forestry;
- earth-moving machinery (EMM) as defined in ISO 6165 and attachments.

For machinery with multiple rated voltages, with at least one system rated greater than VC-B1, this document addresses the risks associated with the interactions between VC-A2 and VC-B1 systems and those systems which are nearby and rated greater than VC-B1

MB/ NC ¹	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment ²	Comments	Proposed change	Observations of the secretariat
		Part 1					
Ge	all 4 parts	3	dashes	ed	— ISO Online browsing ... — IEC Electropedia: ...	add missing "," and "."	Not accepted Template from ISO editor
Ge	all 4 parts				Wording: unify the wording? safe state / different safe state / defined safe state		Accepted Removed "defined" from all four parts for clarity.
Ge		3.5 3.12	EXAMPLES	ed	EXAMPLES ..., etc.	delete ",etc"	Not Accepted WG preferred to keep.
Ge		3.14	Note 1	ed	similar wording within the standard: animal is used in several other places of the standard Note 1 to entry: Examples of objects which can cause harm: tree, rock, etc. Examples of objects which can be harmed: persons or other living beings .	Note 1 to entry: Examples of objects which can cause harm: tree, rock, etc. Examples of objects which can be harmed: persons or animals .	Accepted
Ge		3.14	Note 1 Note 2	ed	Examples ..., etc.	delete all three ",etc"	Not Accepted WG preferred to keep.
Ge		3.15	Note 1	ed	e.g., etc.	delete both ",etc"	Not Accepted WG preferred to keep.
Ge		4.2.2.1	second line	ed		remove indentation	Accepted
Ge		4.3.2.1	third dash	ed	— red or blue (error)	add missing "."	Accepted
Ge		4.3.3.1	third dash	ed	— error	add missing "."	Accepted
US		4.3.2.2	first sentence	te	The current wording regarding visual signalling seems to imply that there be a stack of lights to indicate the state of autonomy, and agricultural machines of various form factors may not be able to provide good visibility of these (especially in	Add "or blue-green" after "amber": "...shall use flashing amber or blue-green colour at a rate of 60 to 85 flashes per minute."	Not Accepted Significant technical change. Understand the idea to use a single light to for a visual alarm for

Template for comments and secretariat observations

MB/ NC ¹	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment ²	Comments	Proposed change	Observations of the secretariat
		Part 2					
		Foreword	dash	ed	— Obstacle protective ...	add missing "."	Accepted
Ge		A.2.4	last dash	ed	Use similar wording as in 4.2.2 a.) 9); — cannot distinguish persons at high ambient temperatures (e.g. 37 °C).	— cannot detect persons that have the same temperature as the environment (e.g. 37 °C).	Accepted
Ge		A.3.1		ed	signal -> plural: signals and similar wording within the standard: human - person System that uses electromagnetic or ultrasonic signal emitted by an electronic tag worn by humans or animals.	change humans to persons: System that uses electromagnetic or ultrasonic signals emitted by an electronic tag worn by persons or animals.	Accepted
Ge		A.4.4 A.5.4		ed	similar wording within the standard: human - person	change humans to persons	Accepted
Ge		A.7.2		ed		use "." instead of "," in numbers	Accepted
US		4.3.2.1	last sentence	te	Propose to clarify allowance of the same light position for autonomy state (blue-green), and autonomy error state (red/blue); see comment and associated proposed change to 4.3.2.2 above.	Remove the following sentence: "It is also not permitted for the same red/blue visual alarm colour light source be used for other functional purposes in autonomous or manual mode of operation."	Not accepted See previous comment.

1 MB = Member body / NC = National Committee (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by **)
2 Type of comment: ge = general te = technical ed = editorial



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