

Checklist_Evaluation_Module PCA en220801

Guidance on using this workbook

When is this workbook applicable?

For the certification of *Recreational Craft* in Module "Post Construction Assessment (PCA)", only.

Who shall fill in the sheets in this workbook?

Each sheet name and on top of each sheet you find a colour indication by whom it shall be filled in:

The applicant

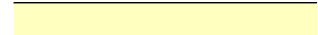
The inspector

The IMCI / IMCI (UK) office

Note: the checklists shall be prefilled by the manufacturer but can also be used by the inspector.

Which cells shall be fill in?

All cells that need to be filled in are indicated by this colour:



Terminology used in the checklists

Yes: the requirement is fulfilled

NA: the requirement is not applicable

Rpt: the fulfillment of the requirement needs follow-up and is taken over to the IMCI Variation Report

Anything else to pay attention to?

The submitted data will appear on the certificate. Therefore, due care shall be taken that the data are the final ones and correct. In case that data are changing after the workbook has been submitted, please contact the inspector and IMCI / IMCI (UK) office.

Overview of the workbook with links to the sheets:

Pages to be filled in by the applicant

Main data

Engine

Components

Essential requirements

Signature, Applicant

Checklists related to specific ISO Standards

Pages to be filled in by the inspector:

Report of Conformity

Signature, INSP

Checklists related to specific ISO Standards

Pages to be filled in by the IMCI / IMCI (UK) office:

Office internal

1 - Main data

To be filled in by the applicant

Checklist_Evaluation_Module PCA en220801

Responsible person:	
Signatory, Name:	
Signatory, Title:	
Phone:	
Email:	
Original boat manufacturer:	
Original boat model name:	
Original WIN:	
New boat model name:	
New WIN issued by IMCI:	

Final data of the recreational craft as to appear on the certificate

Item	Data
PCA applied due to (private import; major conversion; built for own use)	
Craft type (Power <u>OB</u> , Power <u>IB</u> , Power <u>SD</u> , <u>Sail</u> , <u>Sail Multihull</u> ; <u>Jet</u> ; <u>Manual</u> ; specify if other)	
Design category (A, B, C or D)	
Module (PCA)	PCA
Length of the hull (L_H) [m]	
Waterline length (L_{WL}) [m]	
Beam of the hull (B_H) [m]	
max. Beam of the craft (B_{max}) for multihulls only [m]	
Maximum draught (T_{max}) [m]	
Draught of the canoe body (T_c) [m]	
Loaded displacement mass (m_{LC}) [kg]	
Maximum declared speed of craft (v) [knots]	
Maximum rated engine power [kW]	
Maximum number of recommended persons	
Maximum load for the builder's plate (m_{MBP}) [kg]	
Light craft condition mass (m_{LC}) [kg]	
Mass in the minimum operation condition (m_{MO}) [kg]	
STIX (only sailing craft if applicable)	
AVS (only sailing craft if applicable)	

2 - Engine information**To be filled in by the applicant**

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Applicant: _____

Boat model name: _____

Engine package (if applicable)	
Combustion, Electrical	
Fuel type (if applicable)	Petrol, Diesel, LPG, CNG, other
Drive type	Inboard engine with shaft; Sterndrive engine with integral exhaust; Sterndrive engine without external exhaust; Jet; Pod drive; Outboard
Engine Manufacturer:	
Model designation:	
Maximum power:	
Mass per engine:	
Number of engine(s) installed:	
Engine(s) serial number(s):	

Calculation of Froude number and Power to Displacement ratio as per RCD II, Annex I, C:

Input Performance test mass, m_p [kg]:	
Output for F_n :	#DIV/0!
Output for P/D :	#DIV/0!
If non-integral exhaust, compliance achieved by $F_n \leq 1,1$ and Power to Displacement of ≤ 40:	#DIV/0!

Any other comments

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3 - Component information

To be filled in by the applicant

Checklist_Evaluation_Module PCA en220801

Applicant: _____
Boat model name: _____

Please indicate all Annex II components and check the copy of the DoC.

Note 1: if components are built by the boat manufacturer, fill in the applicable application form

Note 2: for windows, portlights, hatches deadlights and doors submit application and calculation

	Manufacturer's model(s)	DoC
Steering wheel		
Steering mechanism		
Fuel tank		
Fuel hose		
Prefabricated hatches and portlights		
Ignition protected components		
Other, describe		

Any other comments

4 - Applicable essential requirements

To be filled in by the applicant

Checklist_Evaluation_Module PCA en220801

Applicant: _____

Boat model name: _____

Indicate the applicable essential requirements and method used for the assessment

Reference	Essential requirement	Indicate
Annex. I A.[2.1]	Watercraft identification	Yes
Annex. I A.[2.2]	Watercraft builder's plate	Yes
Annex. I A.[2.3]	Protection from falling overboard and means of reboarding	Yes
Annex. I A.[2.4]	Visibility from main steering position	Yes
Annex. I A.[2.5]	Owner's manual	Yes
Annex. I A.[3.1]	Structure	Yes
Annex. I A.[3.2]	Stability and freeboard	Yes
Annex. I A.[3.3]	Buoyancy and flotation	Yes
Annex. I A.[3.4]	Openings in hull, deck and superstructure	
Annex. I A.[3.5]	Flooding	Yes
Annex. I A.[3.6]	Manufacturer's maximum recommended load	Yes
Annex. I A.[3.7]	Life raft stowage	
Annex. I A.[3.8]	Escape	
Annex. I A.[3.9]	Anchoring, mooring and towing	Yes
Annex. I A.[4]	Handling characteristics	
Annex. I A.[5.1.1]	Inboard engine	
Annex. I A.[5.1.2]	Ventilation, petrol engine and tank compartments	
Annex. I A.[5.1.3]	Exposed parts, engine	
Annex. I A.[5.1.4]	Outboard propulsion engine starting	
Annex. I A.[5.1.6]	Tiller controlled outboard propulsion engine	
Annex. I A.[5.2.1]	Fuel system, General	
Annex. I A.[5.2.2]	Fuel system, Fuel tanks	
Annex. I A.[5.3]	Electrical system	
Annex. I A.[5.4.1]	Steering system, General	
Annex. I A.[5.4.2]	Steering system, Emergency arrangements	
Annex. I A.[5.5]	Gas system	
Annex. I A.[5.6]	Fire protection	
Annex. I A.[5.7]	Navigation lights	
Annex. I A.[5.8]	Discharge prevention and installations facilitating the delivery ashore of waste	

5 - Report of Conformity**To be filled in by the inspector**

Checklist_Evaluation_Module PCA en220801

Applicant: _____

Boat model name: _____

PCA Report of Conformity**Addendum to Post Construction Certificate**

* **Note:** if equivalent conformity is obtained by methods other than the application of a harmonised standard, please provide the information on the method and results on separate documents.

Essential Requirements	n.a.	(X)	In compliance with harmonised standard (X) or equivalent conformity obtained* by
Directive 2013/53/EU-Annex I & II			
2 General Requirements – Annex I A.2			
2.1 Watercraft identification			
EN ISO 10087		()	
RCD, Annex V, cl. 3		()	
2.2 Builders plate			
EN ISO 14945		()	
EN ISO 11192		()	
2.3 Protection from falling overboard and means of re-boarding			
EN ISO 15085		()	
2.4 Visibility from main steering position (power boats)			
EN ISO 11591		()	
2.5 Owner's manual			
EN ISO 10240		()	
3 Integrity and Structural Requirements			
3.1 Structure			
EN ISO 12215		()	
3.2 Stability and freeboard			
EN ISO 12217		()	
3.3 Buoyancy and flotation			
EN ISO 12217		()	
3.4 Openings in deck, hull and superstructure			
EN ISO 12216		()	
EN ISO 11812		()	
EN ISO 9093		()	
EN ISO 9093-1, ISO 9093-2		()	
3.5 Flooding			
EN ISO 11812		()	
EN ISO 15083		()	
3.6 Manufacturer's maximum recommended load			
EN ISO 14945		()	
EN ISO 14946		()	
3.7 Life-raft stowage			
RCD Annex I, cl. 3.7		()	
3.8 Escape			
EN ISO 9094		()	

5 - Report of Conformity**To be filled in by the inspector**

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Applicant:

Boat model name:

EN ISO 12216		()	
3.9 Anchoring, mooring and towing			
EN ISO 15084		()	
4 Handling Characteristic			
EN ISO 11592-1		()	
EN ISO 11592-2		()	
5 Installation Requirements			
5.1 Engine and engine space			
5.1.1 Inboard engine			
EN ISO 15584		()	
EN ISO 16147		()	
5.1.2 Ventilation			
EN ISO 11105		()	
5.1.3 Exposed parts			
RCD Annex I, cl. 5.1.3		n.a.	
5.1.4 Outboard engine starting			
EN ISO 11547		()	
5.2 Fuel system			
5.2.1 General			
EN ISO 10088		()	
5.2.2 Fuel tanks			
EN ISO 21487		()	
5.3 Electrical system			
EN ISO 10133		()	
EN ISO 13297		()	
EN IEC 60092-507		()	
EN ISO 8846		()	
EN ISO 9097		()	
EN ISO 8849		()	
EN ISO 15584		()	
EN ISO 16147		()	
5.4 Steering system			
5.4.1 General			
EN ISO 8847		()	
EN ISO 8848		()	
EN ISO 10592		()	
EN ISO 9775		()	
EN ISO 13929		()	
EN ISO 15652		()	
5.4.2 Emergency arrangements			
RCD, Annex I, cl. 5.4.2		n.a.	
5.5 Gas system			
EN ISO 10239		()	
5.6 Fire protection			
5.6.1 General			

5 - Report of Conformity**To be filled in by the inspector**

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Applicant: _____

Boat model name: _____

EN ISO 9094

()

5.6.2 Fire-fighting equipment

EN ISO 9094

()

5.7 Navigation lights

EN ISO 16180

()

1972 COLREGS or CEVNI as amended

()

5.8 Discharge prevention

EN ISO 8099-1

()

EN ISO 8099-2

()

Exhaust Emissions – Propulsion engine – Annex I B**Regulation Comparison for CI Engines**

- () - EU 97/68/EC [stage II, P<37 kW] compl. shown acc to Annex I cl. 3 & type approval certificate
- () - EU 97/68/EC as amended by 2004/26/EC [stage IIIA/B, IV, P>37 kW] compl. shown acc to Annex I cl. 3 & type approval certificate
- () - EU 595/2009 as amended (Heavy Duty Vehicles) compl. shown acc. to 582/2011, Annex I, section 3
- () - US EPA Commercial Marine 1999, P<37kW compl. shown by label acc to 40 CFR 94.212
- () - US EPA Recreational Marine 2002 (40 CFR 94.212), P<37 kW compl. shown by label acc. to 40 CFR 94.212
- () - US EPA Marine Engine Rule 2008 Cat I & II, SV < 7 compl. shown by label acc. to 40 CFR 94.212

Regulation Comparison for SI Engines

- () - US EPA Non Road SI 2008 (40 CFR part 1045) compl. shown by label acc, to 40 CFR part 1045.135
- () - CARB 13, division 3, chapter 9, art. 4.7 SI engines. Section 2440-2448 SD/I Rule (4 star). Compl. Shown by label acc to 13 CA ADC § 2443.1 cl. C

OB/PWC Engines

- () - Lake Constance Shipping Ordinance compl. shown by type certificate (BSO stage 2, Annex C)
- () - US Environmental Protection 2008 Non Road SI Rule compl. shown by label acc to 40 CFR part 1045.135

5 - Report of Conformity**To be filled in by the inspector**

Checklist_Evaluation_Module PCA en220801

Applicant: _____

Boat model name: _____

	()	- CARB 13, division 3, chapter 9, art. 4.7 SI engines. Section 2440-2448 OB/PWC Rule (3 star). Compl. shown by label acc to 13 CA ADC § 2443.1 cl. Cf
EN ISO 18854	()	CE Marking on engine and declaration of conformity
	()	Actual test in accordance with the harmonised standard
	()	Documentation, linked to the specific units under assessment, showing emissions below limits prescribed within Directive
	()	Engine excluded from RCD, placed on market or in service in EEA before 1 st of January 2006
Noise Emissions – Outboard engine and stern drive engine with integral exhaust – Annex I C, cl. 1.1-1.5		
EN ISO 14509	()	
Noise Emissions – Craft with inboard engine or stern drive engine without integral exhaust – Annex I C, cl. 1.1-1.5		
EN ISO 14509	()	
Components – Annex II, Annex XV		
Are components CE-marked and Declaration of Conformity available for :		
Ignition protected equipment for inboard and stern drive engines		
Start in gear protection devices for outboard engines		
Steering wheels, steering mechanism and cable assemblies		
Fuel tanks intended for fixed installations and fuel hoses		
Prefabricated hatches and port lights		

Date of order: _____

Assessment period: _____

Location of assessment: _____

Assessment performed by: _____

6 - Signature by applicant

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Applicant: _____
Boat Model Name: _____

Comments, if any:

As the manufacturer or his authorised representative or private importer, I declare under sole responsibility that the above product(s) to which this documentation relates is in conformity with the referenced requirements. I confirm that the data filled in the following sheets is correct:

- Main data
- Engine
- Components
- Essential requirements
- Standard used
- Applicable Checklists

Date (yymmdd):

Signature:



7 - Signature by the inspector

To be filled in by the inspector

Checklist_Evaluation_Module PCA en220801

Applicant: _____

Boat Model Name: _____

Evaluation by IMCI / IMCI (UK) Inspector:

I declare under our sole responsibility that the above product(s) has (have) been developed without my involvement.
The content of the documentation has been checked.

Date (yymmdd) and place of inspection: _____

Inspector: clear name (surname, first name): _____

Inspector: Stamp, Signature: _____

Comments on the Evaluation by Inspector:

8 - This page is only for IMCI / IMCI (UK) office use

Checklist_Evaluation_Module PCA en220801

Applicant: _____

Boat Model Name: _____

Routeing #:

Certificate number:

Evaluation activity by office staff member(s), if applicable

Evaluation staff member 1: clear name (surname, first name):

Date of evaluation (yymmdd):

Evaluation staff member 1: Signature

Comments on evaluation by staff member 1:

Evaluation staff member 2: clear name (surname, first name):

Date of evaluation (yymmdd):

Evaluation staff member 2: Signature

Comments on evaluation by staff member 2:

Applicant: _____

Boat Model Name: _____

Applicant: _____
Boat Model Name: _____

Review activity by office staff member(s)

Review staff member 1: Surname, first name:

Date of review (yymmdd):

Review staff member 1: Signature

Comments on review by staff member 1:

Review staff member 2: Surname, first name:

Date of review (yyymmdd):

Review staff member 2: Signature

Comments on review by staff member 2:

Applicant: _____
Boat Model Name: _____

Certification decision by office staff member(s)

Certification decision by staff member 1: Surname, first name:

Date of certification decision (yyymmdd):

Certification decision by staff member 1: Signature

Comments on certification decision by staff member 1:

Certification decision staff member 2: Surname, first name:

Date of certification decision (yyymmdd):

Certification decision staff member 2: Signature

Comments on certification decision by staff member 2:

9 - Checklist overview

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Applicant:

Boat model name:

Standard	Standard Titel
EN ISO 8099-1:2018	Waste Systems - Part 1: Waste water retention [ISO 8099-1:2018]
EN ISO 8099-2:2022	Waste Systems - Part 2: Sewage treatment systems [ISO 8099-2:2020]
EN ISO 8847:2017	Steering gear - Cable and pulley systems [ISO 8847:2004]
EN ISO 8847:2021	Steering gear - Cable and pulley systems [ISO 8847:2021]
EN ISO 8848:2017	Remote steering systems [ISO 8848:1990]
EN ISO 9093:2021	Seacocks and through-hull fittings [ISO 9093:2020]
EN ISO 9093-2:2018	Seacocks and through-hull fittings - Part 2: Non-metallic [ISO 9093-2:2002]
EN ISO 9094:2017	Fire protection [ISO 9094:2015]
EN ISO 10087:2019	Craft identification - Coding system [ISO 10087:2019]
EN ISO 10088:2017	Permanently installed fuel systems [ISO 10088:2013]
EN ISO 10133:2017	Electrical systems - Extra-low-voltage d.c. installations [ISO 10133:2012]
EN ISO 10239:2017	Liquefied petroleum gas (LPG) systems [ISO 10239:2014]
EN ISO 10240:2004/A1:2015	Owner's Manual [ISO 10240:2004]
EN ISO 10240:2020	Owner's Manual [ISO 10240:2020]
EN ISO 10592:2017	Hydraulic steering systems [ISO 10592:1994]
EN ISO 11105:2020	Ventilation of petrol engine and/or petrol tank compartments [ISO 11105:2020]
EN ISO 11591:2011	Field of vision from helm position [ISO 11591:2011]
EN ISO 11591:2020	Field of vision from steering position [ISO 11591:2020]
EN ISO 11592-1:2016	Determination of maximum propulsion power rating - less than 8 m [ISO 11592-1:2016]
EN ISO 11592-2:2021	Determination of maximum propulsion power rating - between 8 m - 24 m [ISO 11592-2:2021]
EN ISO 11812:2018	Watertight cockpits and quick-draining cockpits [ISO 11812:2001]
ISO 11812:2019	Watertight or quick-draining recesses and cockpits [ISO 11812:2019]
EN ISO 12215 General	Verified items and list of submitted documents/plans
EN ISO 12216:2018	Windows, portlights, hatches, deadlights and doors [ISO 12216:2002]
EN ISO 12216:2021	Windows, portlights, hatches, deadlights and doors [ISO 12216:2021]
EN ISO 13297:2018	Electrical systems - Alternating current installations [ISO 13297:2014]
EN ISO 13929:2017	Steering gear - Geared linked systems [ISO 13929:2001]
EN ISO 14895:2016	Liquid-fuelled galley stoves [ISO 14895:2016]
EN ISO 14945:2021	Builder's plate [ISO 14945:2021]
EN ISO 14946:2021	Maximum load capacity [ISO 14946:2021]
EN ISO 15083:2018	Bilge-pumping systems [ISO 15083:2003]
EN ISO 15083:2020	Bilge-pumping systems [ISO 15083:2020]
EN ISO 15084:2018	Anchoring, mooring and towing - Strong points [ISO 15084:2003]
EN ISO 15085:2003/A2:2018	Man-overboard prevention and recovery [ISO 15085:2003/A2:2017]
EN ISO 16180:2018	Navigation lights - Installation, placement and visibility [ISO 16180:2013]
EN ISO 16315:2016	Electric propulsion systems [ISO 16315:2016]
EN ISO 21487:2018	Permanently installed petrol and diesel fuel tanks [ISO 21487:2012/A2:2015]
EN ISO 25197:2018	Electrical/electronic control systems for steering, shift and throttle [ISO 25197:2012/A1:2014]

Note:

For calculation checklists regarding ISO 12217, ISO 12216 and ISO 11812, please see IMCI / IMCI (UK) website.

CHECKLIST**SMALL CRAFT - WASTE SYSTEMS - PART 1: WASTE WATER RETENTION****Ref.: EN ISO 8099-1:2018 (ISO 8099-1:2018)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Any toilet in a retention system is connected solely to a holding tank.	4.1	[Yes ?]	
2 There shall be no Y-valve placed between the toilet and the holding tank.	4.1	[Yes ?]	
3 Craft with permanently installed holding tanks are fitted with a discharge connection as specified in Annex A.	4.2	[Yes ?]	
4 Any through-hull fittings for sewage are fitted with valves which are capable of being secured in the closed position.	4.2	[Yes / NA ?]	
5 Connecting hoses and pipings are securely fastened in position to prevent damage by abrasion or vibration.	6.1	[Yes ?]	
6 Piping or hose between the toilet and holding tank, and between the tank and the pump-out fitting, are as short as practicable.	6.1	[Yes ?]	
7 Retention systems with the possibility of overboard discharge are fitted with a seacock at the through-hull fitting.	6.2	[Yes / NA ?]	
8 Any seacock used for overboard discharge in accordance with ISO 9093:2021 or ISO 9093-1 and ISO 9093-2 are capable of being secured in the closed position.	6.2	[Yes / NA ?]	
9 Signage: If a manual relief valve is fitted for the tank venting a sign is installed in the vicinity of the pump out fitting. Symbols or working in language acceptable in the country of use to indicate that the relief valve must be opened prior to pump out.	7.2.2	[Yes / NA ?]	
10 The holding tank is securely fastened and located independently of any connecting piping.	8.1.1	[Yes ?]	
11 The minimum level of holding-tank content is observable when the holding tank is 3/4 full by volume, when the tank is viewed in a readily accessible location, or indicated by other means.	8.1.2	[Yes ?]	
12 Holding-tank fittings and connections are accessible for inspection and maintenance.	8.1.3	[Yes ?]	
13 Holding tanks of capacity > 40 l have an accessible sealable (i.e. gastight and watertight) minimum opening of 75 mm diameter for flushing, cleaning and maintenance.	8.1.4	[Yes / NA ?]	
14 Holding tanks does not have common walls, tops or bottoms with fuel or portable-water tanks.	8.1.5	[Yes ?]	
15 If portable holding tank(s) on the craft, it is not connected to any through-hull fitting.	8.3.1	[Yes / NA ?]	
16 If portable toilets are equipped with a discharge fitting the tank shall be considered as a permanently installed holding tank.	8.3.1	[Yes / NA ?]	
17 Label: How to disconnect, transport and empty portable holding tank(s). Affixed: on the tank.	8.3.5	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



18	Dimension of pump-out fitting as shown in figure A.1.	9.1	[Yes ?]
19	Label: Pump-out fitting identified by marking, with at least the symbol:	9.3	[Yes ?]



Affixed: on the fitting or in its vicinity.

20	The fittings have a sealing cap.	9.4	[Yes ?]
21	If a cap retention system is used, it not impede the proper function of the pump-out.	9.4	[Yes / NA ?]
22	Pump-out fittings are readily accessible with access for pump-out connections.	9.5	[Yes ?]
23	Pump-out fittings are located as far as practicable from the fuel tank fill and potable water fittings.	9.5	[Yes ?]
24	Label: Prefabricated holding tanks legibly marked with: -name or trademark of the manufacturer; -name/model number of the system; -symbol (see 9.3) or text "Toilet waste tank" in language acceptable in the country of use; -tank capacity (litres).	10	[Yes ?]

Affixed: on the holding tank.

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
25 The system prevent the emission of vapour and liquids within the craft.	4.3	[Yes ?]	
26 The system is capable of operation throughout an ambient temperature range of +1 °C to +60 °C and withstand, when empty, an ambient temperature range of -40 °C to +60 °C.	4.4	[Yes ?]	
27 The system is capable of operation, i.e. discharge of sewage from the toilet to the retention system, when the boat is heeled at all angles up to 20 ° for monohull sailing craft and 7 ° for other craft.	4.5	[Yes ?]	
28 Back siphoning is prevented from raw water intakes and discharge outlets up to a heel angle to either side of at least 30° for monohull sailing craft, 20° for other craft and a trimmed condition at the bow or stern of at least 10°.	4.6	[Yes ?]	
29 Back siphoning of the contents and escape of gas from the holding tank back through the toilet fixture shall be prevented when the boat is heeled at all angles up to 30° for monohull sailing craft, 20° for other craft and a trimmed condition at the bow or stern of at least 10°.	4.7	[Yes ?]	
30 Escape of sewage from the holding tank to the exterior of the craft shall be prevented when the boat is heeled at all angles up to 30° for monohull sailing craft, 20° for other craft, at 90 % of tank capacity and to the interior of the craft under maximum anticipated conditions of heel or trim, i.e. 45° for monohull sailing craft, 30° for other craft.	4.8	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



31	If permanently installed the retention system including all tanks, connecting piping, hoses, and fittings, is tested to withstand a pressure of 20 kPa for a period of 5 min without leaking.	4.10	[Yes ?]
32	The tank withstand a negative pressure of 20 kPa for a period of 5 min without permanent deformation.	4.10	[Yes ?]
33	Materials are resistant to the effects, listed in Clause 5.	5	[Yes ?]
34	Hoses and piping suitable for use in sewage systems.	6.1	[Yes ?]
35	Piping or hose between the toilet and holding tank, and between the tank and the pump-out fitting inner surface be smooth and without convolutions to permit free flow of sewage.	6.1	[Yes ?]
36	Piping or hose between the toilet and holding tank, and between the tank and the pump-out fitting inner surface have an inside diameter in conformity with the toilet manufacturer's recommendations, or have a minimum inside diameter of 38 mm, if no recommendations are provided.	6.1	[Yes ?]
37	The system provide for venting of gases within the system to the exterior of the craft at heel angles up to 20° at 90 % of tank capacity.	7.1.1	[Yes ?]
38	The inside diameter of fittings to which vent piping is connected is not be less than 75 % of the inside diameter of the piping.	7.1.2	[Yes ?]
39	The design and construction of the vent system minimize clogging due to the contents of the tank or as a result of weather conditions.	7.1.3	[Yes ?]
40	The vent is capable of resisting, without damage, a negative pressure of 20 kPa.	7.1.3	[Yes ?]
41	The minimum flow area through vent screens and equivalent flow resistance of any filters installed in the vent system are not be less than the smallest flow area in either the vent pipe or its fittings.	7.1.4	[Yes ?]
42	Vent pipe complies with standard and documentation is available by the manufacturer.	7.2	[Yes ?]
43	If rigid tanks with capacity of less than 400 l are used, the minimum inside diameter of the vent pipe amount 19 mm.	7.2.1	[Yes / NA ?]
44	If rigid tanks with capacity of less than 400 l and the vent pipe inside diameter of not less than 16 mm are used, the tank is fitted with an automatic (vacuum operated) or manual relief valve with a minimum combined area of 1 100 mm ² .	7.2.1	[Yes / NA ?]
45	If rigid tanks with capacity of 400 l and greater are used, the minimum inside diameter of the vent pipe amount 38 mm.	7.2.2	[Yes / NA ?]
46	If rigid tanks with capacity of 400 l and greater and multiple vent pipes with at least 19 mm diameter are used the combined cross sectional flow area is at least equivalent to that of a single vent pipe with an area of 1100mm ² .	7.2.2	[Yes / NA ?]
47	If rigid tanks with capacity of more than 400 l and vent pipe inside diameter of not less than 16 mm are used, the tank is fitted with an automatic (vacuum operated) or manual relief valve with a minimum combined area of 1100 mm ² .	7.2.2	[Yes / NA ?]
48	Flexible (collapsible) tanks have at least one vent of inside diameter minimum 16 mm.	7.2.3	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



49	The permanently installed holding tank provide removal of at least 90 % of its contents through the pump out fitting.	8.2.1	[Yes / NA ?]
50	Baffles in permanently installed holding tanks have openings to allow sewage and vapour to flow freely across the top and bottom.	8.2.2	[Yes / NA ?]
51	Fittings of permanently installed holding tanks, including the covers of clean-out openings, are designed and constructed to ensure a gastight and watertight closure.	8.2.3	[Yes / NA ?]
52	The internal diameter of the vent line for portable holding tanks is not less than 16mm.	8.3.2	[Yes / NA ?]
53	Portable holding tank installed with quick disconnect at the tank opening with a closing device permanently attached to the tank, to ensures a watertight seal during transport of the tank.	8.3.2	[Yes / NA ?]
54	All portable holding-tank openings are sealed with watertight and gastight closing devices.	8.3.3	[Yes / NA ?]
55	Threads are in accordance with ISO 228-1.	9.2	[Yes ?]

Instructions/Warnings to be included in the owner's manual

57	Operating and maintainance.	11	[Yes ?]
58	Y-valve use (securing, avoidance of inadvertend discharge).	11	[Yes / NA ?]
59	Capacity of the holding tank [litres].	11	[Yes ?]
60	Chemical acceptance for use; cleaning materials;additives;anti-freeze solutions.	11	[Yes ?]
61	Pump-out procedure.	11	[Yes ?]
62	Instruction that the system shall be empty during storage at freezing temperatures.	11	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - WASTE SYSTEMS - PART 2: SEWAGE TREATMENT SYSTEMS****Ref.: EN ISO 8099-2:2021 (ISO 8099-2:2020)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Toilets are connected solely to a sewage holding tank system or a waste treatment system.	4.1	[Yes ?]	
2 The sewage treatment system prevents the emission of vapour and liquids within the craft.	4.2	[Yes ?]	
3 The sewage treatment unit include a visible or audible alarm from within the habitable space notify.	4.8	[Yes ?]	
4 A readily accessible means to disable discharge is capable of being secured in the closed position to avoid accidental discharge.	4.9	[Yes ?]	
5 Each part to be serviced routinely accessible in the as installed position of the unit.	4.10	[Yes ?]	
6 Hoses and piping are securely fastened in position.	6.1	[Yes ?]	
7 All hoses, pipes and fittings are safely accessible for visible inspection.	6.1	[Yes ?]	
8 Piping and hose between toilet and sewage treatment are as short as practicable.	6.1	[Yes ?]	
9 The inner surface of pipe/hoses between toilet and sewage treatment unit is: -smooth and without convolutions to permit free flow of sewage; -have an inside diameter of 38 mm or in accordance with manufacturers recommendations.	6.1	[Yes ?]	
10 Vent system equipped with a means to minimise odour.	7	[Yes ?]	
11 Vent system is self-draining.	7	[Yes ?]	
12 Vent system terminate on the exterior of the craft and outside of weather enclosures.	7	[Yes ?]	
13 Vent system prevent water ingress.	7	[Yes ?]	
14 Sewage units marked clearly visible with the following, if applicable; Label: -name/trademark of manufacturer; -name, model, serial number; -date of manufacture; -ISO 8099-2; -power supply, characteristics; -system treatment capacity [Litres]; -system flow rate [l/min]; -maximum allowable unit pressure; -maximum allowable head of water; -maximum accumulated biological charge in 24h; -maximum accumulated hydraulic charge in 24h; Affixed: Clearly visible after the sewage treatment system has been fitted. Note: a supplementary label may be used.	10	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
15 The sewage treatment system is capable of operation throughout an temperature range of +1°C and +50°C.	4.3	[Yes ?]	
16 The system withstand an temperature of -40°C to +60°C for storage.	4.3	[Yes ?]	
17 The system is capable of operation when the craft is heeled at angles up to 20° for monohull sailing craft and 7° for other craft.	4.4	[Yes ?]	
18 Back siphoning is prevented from raw water intakes and discharge outlets up to a heel angle to either side of at least 30° for monohull sailing craft, 20° for other craft and a trimmed condition at the bow or stern of at least 10°.	4.5	[Yes ?]	
19 Back siphoning of the contents and escape of gas from the treatment system back through the toilet fixture shall be prevented when the boat is heeled at all angles up to 30° for monohull sailing craft, 20° for other craft and a trimmed condition at the bow or stern of at least 10°.	4.5	[Yes ?]	
20 Back siphoning from the escape of sewage from the treatment system to the exterior of the craft shall be prevented when the boat is heeled at all angles up to 30° for monohull sailing craft, 20° for other craft and a trimmed condition at the bow or stern of at least 10°.	4.5	[Yes ?]	
21 The sewage treatment system withstand a pressure of 20 kPa for 5 min without leakage.	4.7	[Yes ?]	
22 Sewage treatment unit is tested by a recognized laboratory against the discharged limits.	4.11	[Yes ?]	
23 The materials used are in accordance with the standard.	5	[Yes ?]	
24 Vent system is installed as per sewage treatment unit manufacturers requirements.	7	[Yes ?]	
25 The sewage treatment unit installation, operation and maintenance manual is in accordance with the standard.	11	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

26 Location of the overcurrent protection device for the power supply.	12	[Yes ?]	
27 Location of by-pass valves in the plumbing system.	12	[Yes ?]	
28 Location of all thru-hull fittings.	12	[Yes ?]	
29 Warning labels, if applicable.	12	[Yes / NA ?]	
30 Location of the sewage treatment units control panel.	12	[Yes ?]	
31 Installation, operation and maintenance manual		[Yes ?]	

Comments:

CHECKLIST**SMALL CRAFT - STEERING GEAR - CABLE AND PULLEY SYSTEMS****Ref.: EN ISO 8847:2017 (ISO 8847:2004)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 All components are fastened securely to the structure of the boat, reinforced where necessary, especially at the bulkhead mounting, pedestal and at pulleys. The steering arm connection to the rudder shaft is capable of transmitting the steering torque to the rudder.	4	[Yes ?]	
2 No component except rudder stop limits rotation.	7.2	[Yes ?]	
3 Stops suitable fixed to the structure of the craft to limit over-rotation of steering arm.	7.2	[Yes ?]	
4 Materials used does not effect accuracy and reliability of compasses or navigational instruments, whatever the steering angle may be.	7.3	[Yes ?]	
5 Components are accessible.	7.4	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
6 The whole system withstands, without loss of steering, a 670 N single push-pull load which was applied for 10 cycles of 5 s each at any single location on the outer wheel rim or the centre of the handgrip of an external spoke in a direction parallel to the centreline of the wheel shaft.	7.1.1	[Yes ?]	
7 The whole system withstands, without loss of steering, with the rudder shaft locked and not against a stop, a 450 N single push-pull load which was applied for 10 cycles of 5 s each to the external rim or the centre of the handgrip of an external spoke of the steering wheel.	7.1.2	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

8 Routine maintenance procedures.	8	[Yes ?]	
9 Specific precautions critical for correct operation, if relevant.	8	[Yes / NA ?]	
10 Reference to Installation manual.	9	[Yes ?]	

Comments:

CHECKLIST**SMALL CRAFT - STEERING GEAR - CABLE AND PULLY SYSTEMS****Ref.: EN ISO 8847:2021 [Note: not harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



	Subject to check	Clause	Requirements	Checked ?
1	Craft equipped with outboard engine(s) up to and including 37 kW total power?	1	[Yes / NA ?]	
2	All components are fastened securely to the structure of the boat, reinforced where necessary, especially at the steering mechanism bulkhead/pedestal mounting and at pulleys.	4.1	[Yes ?]	
3	For sailing boats: The steering arm connection to the rudder shaft is capable of transmitting the steering torque to the rudder.	4.2	[Yes / NA ?]	
4	Cable over pully steering system is not used to steer craft having outboard engine(s) in excess of 37 kW power.	4.3	[Yes ?]	
5	Threaded fasteners whose integrity affects safe operation of the steering system are provided with a locking means.	4.4	[Yes / NA ?]	
6	Threaded fasteners that can be expected to be disturbed by installation or adjustment procedures are locked by a device or incorporate an integral locking means.	4.4.1	[Yes / NA ?]	
7	Loose lock washers, distorted thread nuts or separately applied adhesives are not used.	4.5	[Yes ?]	
8	Components of the steering system are accessible.	4.10	[Yes ?]	
9	Steering system requirements			
10	Outboard engine: Steering stops permit at least 30° of angular movement either side of centre.	5.1	[Yes / NA ?]	
11	Steering wheels and helm shafts fit each other.	5.3	[Yes ?]	
12	Label: Permanently marking of the steering mechanism with largest diameter and deepest dish steering wheel. Affixed: Visible on steering mechanism, even when wheel is removed.	5.3.1	[Yes ?]	
13	All steering components are of sufficient strength.	5.3.2	[Yes ?]	
14	Cables used for steering system on sailing boats:			
15	- are flexible.	5.5.1	[Yes / NA ?]	
16	- meet the wire characteristics given in ISO 2408:2017.	5.5.1	[Yes / NA ?]	
17	- the wire rope tensioner is adjustable by means of an appropriate tensioner.	5.5.1	[Yes / NA ?]	
18	- are aligned with the grooves when leaving a steering arm.	5.5.1	[Yes / NA ?]	
19	- the cable termination is appropriate to transfer the cable load.	5.5.1	[Yes / NA ?]	
20	Cables used on steering system of craft with outboard engine:			
21	- are flexible.	5.5.2	[Yes / NA ?]	
22	- meet the wire characteristics given in ISO 2408:2017.	5.5.2	[Yes / NA ?]	
23	Pulleys used for steering system on sailing boats:			
24	- pulley thread diameter and groove width suitable for cable used.	5.6.1	[Yes / NA ?]	
25	- means to secure the swivel pulley in the correct position.	5.6.1	[Yes / NA ?]	

26	- pulleys are fitted with a means to guide the cables into and out of the sheaves.	5.6.1	[Yes / NA ?]
27	Pulleys used on steering system of craft with outboard engine:		
28	- the steering cable pulleys shall be located so that the cable comes off the steering cable drum at $90^{\circ} \pm 5^{\circ}$ to the steering axis at the centre of travel. Clear space shall be provided behind the dash or pedestal to route the steering cables to pulleys.	5.6.2	[Yes / NA ?]
29	- angle formed between the pulley pin axis and the axis of both cable are $90^{\circ} \pm 5^{\circ}$.	5.6.2	[Yes / NA ?]
30	- all pulleys, mounting and cable straps are bolted or solid riveted.	5.6.2	[Yes / NA ?]
31	- no swivel pulley are used at the outboard engine connection or where the pulley changes the cable direction more than 135° .	5.6.2	[Yes / NA ?]
32	Conduit used on sailing boat systems:		
33	Conduit used on sailing boat steering system are of sufficient flexibility to permit a minimum bend radius of 50 times the smallest diameter of cable for use.	5.7	[Yes / NA ?]
34	Conduit used on sailing boat steering system are finished at each end with a conduit fitting.	5.7	[Yes / NA ?]
35	Cable drums used on steering systems of craft with outboard engine have a minimum cable travel of 760 mm.	5.8	[Yes / NA ?]
36	Cable and pulley steering system		
37	Cable routing openings in the craft structure whos edges can contact the cable during operation have anti-chafe protection.	6.1	[Yes / NA ?]
38	Clearance provisions to operate free of interference.	6.1	[Yes / NA ?]
39	There is no open S-hook used.	6.1	[Yes / NA ?]
40	Sailing boat steering application with or without propulsion engine(s)		
41	The position of the steering stops consider the possibility of dynamic overloading of the system due to shock.	6.2	[Yes / NA ?]
42	Only the rudder stop(s) shall limit the rotation of the steering system.	6.2	[Yes / NA ?]
43	The steering arm rotation is installed with one or two stops, suitable fixed to the structure of the craft to limit over-rotation of the steering arm.	6.2	[Yes / NA ?]
44	Steering systems of craft with outboard engine(s):		
45	The pulleys, mountings and cable end straps are bolted or solid-riveted with at least 5 mm diameter fasteners.	6.3	[Yes / NA ?]
46	The pulleys, fairleads and end fittings are mounted as indicated in Figure 8 and Figure 9 in the standard.	6.3	[Yes / NA ?]
47	The craft structure is reinforced at the component mounting fasteners to withstand a minimum force of 3340 N.	6.3	[Yes / NA ?]
48	Rigging provide a minimum of 760 mm of cable travel. The change of angle in cable at any fairlead does not exceed 5° .	6.3	[Yes / NA ?]
49	The pulleys and end fittings for the cable clamps are located on the transom face as far from the engine as practicable.	6.3	[Yes / NA ?]
50	Spring(s) are compressed to one-half their relaxed length after connection of the steering system.	6.3	[Yes / NA ?]
51	Each spring shall have a minimum of 50 mm of travel and a minimum spring rate of 8,8 N/mm (50 lb/in) to prevent engine shimmy.	6.3	[Yes / NA ?]
52	Steering cable clearance requirements are determined according to the standard.	6.3	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked ?
53	Plastics and elastomers are resistant against salt water, hydrocarbons, Ozone and ultraviolet radiation.	4.7	[Yes ?]	

54	Components of the steering system are resistant to corrosion and galvanically compatible with adjoining components	4.8	[Yes ?]
55	Components are sized to prevent derailling or jamming of the cables.	4.9	[Yes ?]
56	Materials used does not effect accuracy and reliability of compasses or navigational instruments, whatever the steering angle may be.	4.11	[Yes ?]
57	Radius of the steering arm is designed that the cable load is less than 25 % of the cable breaking strength.	5.4	[Yes / NA ?]
58	The arc generated by the steering arm radius shall be concentric with the rudder shaft centre. The radius at the end of the groove where the cable is led out shall be at least 5 times the diameter of the cable used.	5.4	[Yes / NA ?]
59	The components of the steering system on a sailing boat transmit the tangential force of 450 N at the standard diameter for the application of loads on the steering wheel or at the maximum torque necessary to steer the rudder without loss of steering function.	7.1.1	[Yes / NA ?]
60	The components of the steering system of outboard engine(s) withstand 100 000 cycles of operation through 200 mm of cable travel in each direction under a cable load of 110 N without loss of function.	7.1.2	[Yes / NA ?]
61	Covered steering cables used in outboard engine cable over pulley steering systems have a breaking strength of not less than 4000 N.	7.1.2	[Yes / NA ?]
62	Covered steering cables used in outboard engine cable over pulley steering systems as installed, the cable covering shall not crack or otherwise expose the cable core under a cable load of 4000 N for 1 min.	7.1.2	[Yes / NA ?]
63	Covered steering cables used in outboard engine cable over pulley steering systems, the cable covering not strip from the core of a 130 mm sample under a static load of 450 N for 15 min.	7.1.2	[Yes / NA ?]
64	Outboard engine pulley assemblies are capable of sustaining a 3340 N pulley pin load without permanent deformation.	7.1.2	[Yes / NA ?]
65	As installed tests - The steering system as installed in a sailing craft pass the axial load test.	7.2.1	[Yes / NA ?]
66	As installed tests - The steering system as installed in a sailing craft pass the tangential load test.	7.2.1	[Yes / NA ?]
67	As installed test - The steering system in a craft with outboard engine(s), the cable over pulley system withstand a static cable tension load of 1668 N.	7.2.2	[Yes / NA ?]
68	As installed test - The steering system in a craft with outboard engine(s), the cable over pulley system withstand a single tangential load in either direction of 267 N.	7.2.2	[Yes / NA ?]
69	As installed test - The steering system in a craft with outboard engine(s) pass a separte single axial load of 670 N push-pull force.	7.2.2	[Yes / NA ?]
70	Test reports are submitted to this document.	7	[Yes ?]

Instructions/Warnings to be included in the owner's manual

71	Routine maintainance procedures.	8	[Yes ?]
72	Specific precautions critical for correct operation, if relevant.	8	[Yes / NA ?]
73	Reference to Installation and Instruction manual.	9	[Yes ?]
74	Largest diameter and deepest dish steering wheel that can be used.	8	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - REMOTE STEERING SYSTEMS****Ref.: EN ISO 8848:2017 (ISO 8848:1990)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	

**[Note: Harmonization will be withdrawn until 27/02/2023]**

Subject to check	Clause	Requirements	Checked ?
1 Boat suitable and designated for twin outboard motors.	3.3	[Yes / n.a. ?]	
2 Threaded fastener with locking means.	3.4	[Yes ?]	
3 Adjustment fastener with locking means.	3.5	[Yes ?]	
4 No loose lock-washers, distorting threads or adhesive.	3.5.1	[Yes ?]	
5 No jam nuts, except if no failure occurs if loose.	3.5.2	[Yes ?]	
6 Locking devices visible or can be felt.	3.5.3	[Yes ?]	
7 No connections relying on spring.	3.6	[Yes ?]	
8 Label: Steering cables marked with steering system length Affixed: at the engine end.	5.3	[Yes ?]	
9 Cable correctly attached to boat.	6.3	[Yes ?]	
10 No interference between boat and jet or inboard-outboard drive.	6.4	[Yes ?]	
11 No tight bends in steering cables.	6.5	[Yes ?]	
12 Steering wheel and helm shaft fit.	6.6	[Yes ?]	
13 Cable openings sealed if below static float plane.	6.8	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
14 Outboard motor and inboard-outboard requirements tested.	4	[Yes ?]	
15 Steering system requirements tested.	5	[Yes ?]	
16 Steering ram at least 270 mm beyond motor centreline.	6.2	[Yes ?]	
17 Steering system to withstand 3300 N axial test.	7.1.1	[Yes ?]	
18 Steering system to withstand 450 N tangential test.	7.1.2	[Yes ?]	

Comments:

CHECKLIST**SMALL CRAFT - REMOTE MECHANICAL STEERING SYSTEMS****Ref.: EN ISO 8848:2022 [Note: not harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



	Subject to check	Clause	Requirements	Checked ?
1	Is a standard duty steering system installed?	1	[Yes / NA ?]	
2	Is a light duty steering system installed?	1	[Yes / NA ?]	
3	Is a mini-jet steering system installed?	1	[Yes / NA ?]	
4	Craft suitable and designated for twin outboard engines.	4.3	[Yes / NA ?]	
5	Threaded fastener with locking means.	4.5	[Yes ?]	
6	No loose lock-washers, distorting threads or separately applied adhesive.	4.6.1	[Yes ?]	
7	Jam nuts are prohibited except if no failure occurs if loose.	4.6.2	[Yes ?]	
8	Locking devices visible or can be felt.	4.6.3	[Yes ?]	
9	No connections relying on spring.	4.7	[Yes ?]	
10	All applicable dimensional requirements for the outboard engine steering system are met.	5.2	[Yes / NA ?]	
11	The steering system is capable of unobstructed movement throughout its full range of intended cable travel without interference.	6.2.4	[Yes ?]	
12	Ball joints used to connect the steering system to the rudder, sterndrive, outboard and water jet drives are installed so that total loss of steering does not occur if the ball separates axially from its socket.	6.2.5	[Yes / NA ?]	
13	The ball joints used in mini-jet craft installations have redundancy such that axial failure of the ball-to-socket connection does not result in total loss of steering.	6.2.5	[Yes / NA ?]	
14	Label: Steering cables permanently marked with steering system length from steering wheel shaft centre to the hole centre in the steering output ram at the mid-travel position Affixed: At the output end.	6.3.1	[Yes ?]	
15	The cable or steering output device for standard duty and light duty steering systems amount 100 mm to 115 mm on each side of mid-travel.	6.3.2	[Yes / NA ?]	
16	The cable or steering output device for mini-jet steering systems amount 98 mm to 95,4 mm on each side of mid-travel.	6.3.2	[Yes / NA ?]	
17	Label: Steering cable for light duty steering systems permanently marked that the maximum power permissible is 40 kW. Affixed: At the steering cable.	6.3.3	[Yes / NA ?]	
18	Label: Steering mechanisms that use a steering wheel are permanently marked with manufacturer's recommendation of the largest steering wheel diameter and deepest steering wheel dish that may be used. Affixed: On the helm assembly, visible when steering wheel is removed.	6.4.2	[Yes / NA ?]	

19	Label: Steering mechanisms that are intended for a handlebar are permanently marked with largest handlebar width and greatest effective offset that may be used. Affixed: At the steering mechanism.	6.4.3	[Yes / NA ?]
20	Label: Steering mechanisms that are intended for a joystick are permanently marked with the largest stick allowed. Affixed: At the steering mechanism.	6.4.4	[Yes / NA ?]
21	Steering mechanisms for mini-jet craft incorporate travel stops to eliminate overloading of the steering cable.	6.4.6	[Yes / NA ?]
22	Label: Helm assemblies for light duty steering systems are permanently marked stating that the maximum power permissible is 40 kW. Affixed: At the helm assemblies.	6.4.7	[Yes / NA ?]
23	Declaration of conformity for the steering system checked and submitted?	8.3	[Yes ?]
24	Label: Steering system marked with the following: -ISO 8848; -name of manufacturer; -model type; Affixed: At the steering system.	9.1	[Yes ?]
25	Installation manual provided.	9.3	[Yes ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked ?
26	Components are resistant to corrosion and galvanically compatible with adjoining components	4.4	[Yes ?]	
27	Steering stops of outboard engine(s) permit at least 30° of angular movement to either side of the centerline.	5.1	[Yes / NA ?]	
28	Outboard engines ensures a static load of 3300 N for a standard duty steering system.	5.6	[Yes / NA ?]	
29	Outboard engines ensures a static load of 2200 N for a light duty steering system.	5.6	[Yes / NA ?]	
30	Sterndrives designed for remote mechanical steering systems ensure a torque of 680 Nm.	5.8	[Yes / NA ?]	
31	Plastics and elastomers which can be exposed to sunlight shall be chosen to resist degradation by ultraviolet radiation.	6.2.7	[Yes / NA ?]	
32	Plastics and elastomers which can be installed in engine compartments shall be chosen to resist degradation by saline atmospheres, fuel, oil, ozone and heat.	6.2.8	[Yes / NA ?]	
33	The output of a mini-jet craft steering system follow the requirements of figure 5.	6.3.4	[Yes / NA ?]	
34	Light duty and standard duty steering cables are not interchangeable with steering cables for mini-jet craft steering systems.	6.3.5	[Yes / NA ?]	
35	Ferrous metals used for the core of a steering cable, installed below the maximum load waterline, are corrosion-resistant and equivalent to 300 series stainless steel.	6.3.6	[Yes / NA ?]	
36	For engine-mounted steering system in outboard engine-craft, the output ram or equivalent connection point reach at least 270 mm beyond the engine centerline.	7.2	[Yes / NA ?]	
37	For craft-mounted steering systems in outboard engine-craft, the output ram or equivalent connection pint reaches at least to the engine centerline.	7.3	[Yes / NA ?]	
38	Steering system installed to avoid damaging with any part of the craft steering system.	7.4	[Yes ?]	

39	Minimum steering manufacturer's recommendation for the cable radius is take into account.	7.5	[Yes ?]
40	Steering wheel hubs and helm shafts fit each other.	7.6	[Yes ?]
41	At least 65 mm of clearance between the shift and throttle control levers and control element under all possible positions.	7.7	[Yes ?]
42	If cable passes through the side of an outboard engine well below the downflooding height, the cable opening meet the right degree of watertightness according to ISO 12217.	7.8	[Yes / NA ?]
43	Steering system meet the as-installed tests, test report attached to this document.	8.2	[Yes ?]

Instructions/Warnings to be included in the owner's manual

44	Type of steering system(s) used with installation instruction.	5.4	[Yes ?]
45	General description of the principle of operation and identification of major components.	9.2	[Yes ?]
46	Exploded or sectioned diagram showing parts with identification numbers and description.	9.2	[Yes ?]
47	Maintenance procedures and permissible adjustments.	9.2	[Yes ?]
48	Specific precautions critical for correct operation.	9.2	[Yes ?]
49	Reference of the model type.	9.2	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - SEACOCKS AND THROUGH-HULL FITTINGS - PART 2: NON-METALLIC****Ref.: EN ISO 9093-2:2018 (ISO 9093:2002)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	

**[Note: Harmonization will be withdrawn until 27/02/2023]**

Subject to check	Clause	Requirements	Checked ?
1 Where the fitting of a seacock, through-hull fitting or drain plug impairs the required strength of the hull, a local reinforcement compensates for the loss of strength.	10.1.1	[Yes ?]	
2 Attachment of through-hull fittings, seacocks and drain plugs to the hull are watertight and installed as to prevent loosening under normal operating conditions.	10.1.2	[Yes ?]	
3 Metallic components and fastening elements such as screws are corrosion resistant and do not act galvanically with each other, with the boat or any other fitting with which they are in contact.	10.1.3	[Yes ?]	
4 Seacocks are directly fitted to the hull or a through-hull fitting.	10.2.1	[Yes ?]	
5 Seacocks are readily accessible.	10.2.1	[Yes ?]	
6 The seacock assembly ensures that no part will come loose under any operating conditions.	10.2.2	[Yes ?]	
7 Seacocks and through-hull fittings are located so as to minimise the likelihood of damage to them or inadvertent operation.	10.2.3	[Yes ?]	
8 Sizes of hoses is compatible with the hose fitting and allows for a tight fit.	10.3	[Yes ?]	
9 Metallic hose clamps are made entirely of stainless steel, type Cr18 Ni8 or other material with equal or higher strength and corrosion resistance, and they are reusable.	10.4	[Yes ?]	
10 Clamps depending on spring tension are not used.	10.4	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
11 Seacocks, through-hull fittings and hose fittings installed below the heeled waterline fulfil the requirements of the strength test.	10.2.4	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

12 Location of the seacocks.	12	[Yes ?]	
13 Operating instructions, if relevant.	12	[Yes / NA ?]	
14 Warning notice as to keeping seacocks closed when not needed for operation to minimize the risk of flooding.	12	[Yes ?]	

CHECKLIST**SMALL CRAFT - SEACOCKS AND THROUGH-HULL FITTINGS****Ref.: EN ISO 9093:2021 (ISO 9093:2020)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



	Subject to check	Clause	Requirements	Checked ?
1	Through-hull fittings, seacocks, hose connections and fittings below the maximum load waterline are corrosion-resitant.	4.1	[Yes / NA ?]	
2	Through-hull fittings, seacocks, hose connections and fittings above the maximum load waterline are corrosion-resitant or are protected against corrosion.	4.1	[Yes / NA ?]	
3	In case of material combinations the possibility of galvanic interaction has been taken into account. If necessary they are galvanically isolated.	4.2	[Yes / NA ?]	
4	If swelling and/or seizure of material combinations is possible it is taken into account. The material combination does not prevent any device or system from functioning.	4.2	[Yes / NA ?]	
5	If aluminum is used in the system, non-ferros metals are not used.	4.2	[Yes / NA ?]	
6	Any through-hull fitting cannot be dislodged by outside forces due to operation of the fitting and components attached.	5.2	[Yes / NA ?]	
7	The design of the seacock allows operation under any condition to be encountered under normal service condition.	6.1	[Yes / NA ?]	
8	The design of the seacock allows a visual check of the open and closed position for the seacock.	6.1	[Yes / NA ?]	
9	Easy operation of the seacock is given by the length of the handle and clear distance between handle and attached hose.	6.1	[Yes / NA ?]	
10	The seacock is designed so that no part can come loose under normal service conditions.	6.1	[Yes / NA ?]	
	Clamping lenght:	7.1	[Yes / NA ?]	
11	- not less 25 mm for hoses of less than 25,4 mm (1 in); - not less 35 mm for hoses above 25,4 mm (1 in).			
12	Where the centerline of the through-hull fitting is lower than the heeled waterline: Hoses of more than 25,4mm are fastened through double clamps or a single T bolt clamp.	7.2.1	[Yes / NA ?]	
13	Where the centerline of the through-hull fitting is lower than the heeled waterline: Hoses of 25,4 mm and below are fastened through double clamps.	7.2.1	[Yes / NA ?]	
14	Plain pipe ends are always secured with double clamps.	7.2.2	[Yes / NA ?]	
15	Clamps depending on spring tension are not used.	7.2.4	[Yes ?]	
16	Where water scoops and outboard strainers are fitted and the intake pipe and through-hull connection cannot be cleaned, they shall be removable.	8	[Yes / NA ?]	
17	Where the fitting of a seacock or through-hull fitting impairs the required strength of the hull, a local reinforcement compensates for the loss of strength.	9.1	[Yes / NA ?]	

18	For hulls that are build in sandwich construction, the area around the fitting needs to be made as single-shell construction with local reinforcement, or an appropriate core material is used.	9.1	[Yes / NA ?]
19	Through-hull fittings and seacocks are watertight and installed as to prevent loosening under normal operating conditions.	9.2.1	[Yes ?]
20	Seacocks are accessible for inspection.	9.2.2	[Yes / NA ?]
21	Seacocks below the maximum load waterline are readily accessible for inspection and operation.	9.2.3	[Yes / NA ?]
22	Any seacock is securely fastened to the hull so that easy operation is possible without destroying the hull structure, the seacock itself or water integrity.	9.2.4	[Yes / NA ?]
23	Seacocks and through-hull fittings are located so as to minimise the likelihood of damage to them or inadvertent operation.	9.2.6	[Yes ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked ?
24	Metallic components are corrosion resistant and tested as per Annex B of ISO 9093 with approval.	4.3	[Yes / NA ?]	
25	Non-metallic parts are stabilized against oxidation and UV and tested as per Annex C of ISO 9093 with approval.	4.3	[Yes / NA ?]	
26	Seacocks and through-hull fittings fulfil the requirements of the strength test. Proof by the supplier has been submitted.	4.4	[Yes ?]	
27	The range of operating temperatures has been verified for seacocks and through-hull fittings. Proof of compliance has been submitted.	4.5	[Yes ?]	
28	The detailed design requirements of the trough-hull fitting for the stem, flange diameter and finish are met.	5.3	[Yes ?]	
29	The seacock assembly has a minimum threaded length for attachment to through-hull fittings.	6.2	[Yes ?]	
30	Hose fitting ends are either ribbed, serrated or if nominal size 31,75 mm (1 1/4 in) and above, plain pipe end.	7.1	[Yes ?]	
31	Metallic hose clamps are made entirely of stainless steel, type Cr18 Ni8 or other material with equal or higher strength and corrosion resistance, and they are reusable.	7.2.3	[Yes ?]	
32	The boat manufacturer has tested the assembly as installed as per Annex A of ISO 9093 and a test report has been submitted.	9.2.5	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

33	Location of the seacocks.	11	[Yes ?]
34	Operating instructions, if relevant.	11	[Yes / NA ?]
35	Maintanance and servicing instructions.	11	[Yes ?]
36	Annual visual inspections.	11	[Yes ?]
37	Physical test of seacocks functionallity.	11	[Yes ?]
38	Warning notice as to keeping seacocks closed when not needed for operation to minimize the risk of flooding.	11	[Yes ?]

CHECKLIST**SMALL CRAFT - FIRE PROTECTION****Ref.: EN ISO 9094:2017 (ISO 9094:2015)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Cooking and heating appliances			
2 Any cooking and/or heating appliance is secured against accidental or unintended movement.	4.1.1	[Yes / NA ?]	
3 Gimballed appliances include a retaining mechanism.	4.1.1	[Yes / NA ?]	
4 If appliances with flues are installed they shall be routed directly to the open air so that no exhaust gases can enter the interior of the craft.	4.1.2	[Yes / NA ?]	
5 Permanently installed fuel systems:			
6 - fuel tanks shall be installed outside Zone II according to Figure 1;	4.1.3	[Yes / NA ?]	
7 - filler openings for tanks shall be prominently identified to indicate the type of fuel to be used with the system;	4.1.3	[Yes / NA ?]	
8 - have a readily accessible shut-off valve as defined per 4.1.3, unless covered by ISO 14895.	4.1.3	[Yes / NA ?]	
9 Materials near cooking or heating appliances			
10 In the vicinity of open flame device within the ranges as defined in Figure 1 (Zone I & Zone II), materials and finishes comply with 4.2.2. taking into account the movement of the burner up to a heel angle of 20° for monohull sailing boats and 10° for monohull motorboats & multihull, where gimballed stoves are fitted.	4.2.1	[Yes / NA ?]	
11 Free hanging curtains or other fabrics adjacent to open flame devices shall not be fitted in Zone I and Zone II according to Figure 1.	4.2.2	[Yes / NA ?]	
12 Radiated heat devices meet the requirements of 4.2.3, see documentation.	4.2.3	[Yes / NA ?]	
13 If solid fuel appliance, following requirements under clause 4.2.4 are fulfilled:			
14 - Appliance stands on and is secured to a hearth, designed and constructed of suitable robust non-combustion material, supporting the weight of the appliance and preventing ignition of the floor coverings.	4.2.4.1	[Yes / NA ?]	
15 - The distance of combustible fixtures, fittings or furniture other than flooring and its covering shall not be less from solid fuel appliance than specified by the manufacturer <u>or</u> , if no distance is specified, within 600 mm of the closest point to the appliance.	4.2.4.2	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



16	- Free-hanging combustible material, such as curtains or blinds adjacent to solid fuel appliance shall be fitted not less than the minimum distance specified by the manufacturer or, if no distance is specified, not within 600 mm of the closest point to the appliance and any uninsulated flue pipe.	4.2.4.3	[Yes / NA ?]
17	If electrical appliance, following requirements under clause 4.2.5 are fulfilled:		
18	- Free hanging curtains or other fabrics adjacent to electrical cooking hobs shall not be fitted in Zone I according to Figure 1.	4.2.5.1	[Yes / NA ?]
19	- Electrical heating appliances shall not be fitted with an element so exposed that clothing, curtains, or other similar materials can be scorched or set on fire by heat from the element.	4.2.5.2	[Yes / NA ?]
20	Engine and fuel compartments and exhausts		
21	Engine compartment insulation materials shall present a non-fuel absorbent surface towards the engine.	4.3.1.1	[Yes / NA ?]
22	Bilge and other spaces that can contain petrol and diesel shall be accessible for cleaning and must have a non-fuel absorbent floor surface.	4.3.1.3	[Yes / NA ?]
23	If a non-metallic component or flexible hose is part of a water-cooled exhaust system, a means to indicate a loss of cooling water obvious from steering position to prevent a failure shall be provided. A temperature or flow alarm may suffice.	4.3.1.4	[Yes / NA ?]
24	Petrol engine and/or permanently installed petrol fuel tank compartments are separated from habitable spaces by fulfilling following requirements: - boundaries are continuously sealed; - penetrations for cables, piping etc. are closed by fittings, seals and/or sealants; - access openings (doors, hatches etc.) can be secured to minimize the flow of vapours in the closed position. Proof by documentation or visual inspection.	4.3.2.1	[Yes / NA ?]
25	Petrol tanks shall be insulated from the engine or other heat source by either:		
26	a) a physical barrier between tank and engine, engine-mounted components including fuel and water supply lines and any source of heat.	4.3.2.4	[Yes / NA ?]
27	b) an air gap to prevent contact between the tank and engine, engine-mounted components and any source of heat. The gap must be wide enough to allow for servicing the engine and related components. The air gap is at least: - 100 mm between petrol engine and fuel tank; - 250 mm between dry exhaust and fuel tank.	4.3.2.4	[Yes / NA ?]
28	Compartments containing portable petrol engine equipment and portable petrol tanks or container shall meet: 4.3.1.3 for bilge cleaning, 4.3.2.1 for separation of habitable space, 4.3.2.2 for ignition protection and clause 5 of ISO 11105:1997. This requirements includes spaces used for storage of OB-motors, portable generators with integral petrol tanks and garage spaces for PWC's.	4.3.3	[Yes / NA ?]
29	Liquefied petroleum gas (LPG) systems.		

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



30	LPG system is not installed in engine compartments unless the location is in accordance to manufacturer recommendations.	4.5.1	[Yes / NA ?]
31	The clearance of LPG cylinders, pressure regulator device and safety device is at least 250 mm to any dry exhaust and/or other heat source unless a thermal barrier is provided.	4.5.1	[Yes / NA ?]
32	Decklights		
33	Decklights that may provide a focal point: exposed materials within 300 below such a deck light shall be fireproof like ceramics, metal etc.	4.7	[Yes / NA ?]
34	Fire detection		
35	Craft with more than one habitable space have a means to alert occupants to the outbreak of fire. Shower and toilet compartments are not included as an additional habitable space.	5	[Yes / NA ?]
36	The fire detection device (e.g. smoke or heat detector) shall fulfil following: - constructed according to international standards; - suitable for the space it is monitoring; - provide an audible alarm; - be connected to on-board electric or be independently powered.	5	[Yes / NA ?]
37	Fire escape routes and fire exits		
38	Habitable spaces are fitted at least with one fire escape route leading to the open air or to the next habitable space, or the bottom step of a staircase leading to the next habitable space or open air.	6.1.1	[Yes / NA ?]
39	The fire escape route shall have a passage through doorway or hatches complying with 6.2 and shall have a passage way minimum width and height of 500 mm and shall not be obstructed by fixtures, fittings or furniture.	6.1.1	[Yes / NA ?]
40	The distance to the nearest fire exit does not exceed the greater of: 6 m, or $L_H/2.5$ (L_H = length of hull).	6.1.1	[Yes / NA ?]
41	The distance is measured in a horizontal plane, following along the escape route between the nearest part of the exit and the farthest: - point where a person can stand (minimum height 1.6 m), or - the midpoint of a bunk, whichever is greater.	6.1.1	[Yes / NA ?]
42	In addition the fire escape route for enclosed habitable space for sleeping shall have: - its middle line passing not less than 500 mm from the centre of the closest burner/open flame device, or a distance measured along the middle line from cabin threshold to bottom of stair leading to the outside not less than 2 m. - a fire detection device (acc. clause 5) installed between any open flame device and cabin exit along the distance of the escape route; - a portable fire extinguisher located in the escape route prior reaching the appliance. Alternatively or where these conditions do not met, a second fire escape route shall be provided.	6.1.1	[Yes / NA ?]


compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X


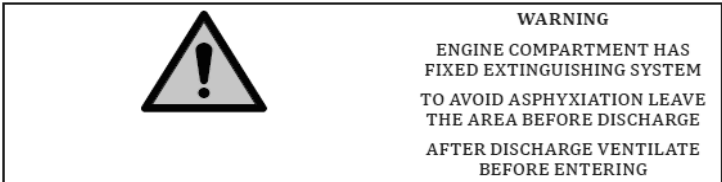
Applicant:	
Boat Model Name:	



43	Where there are two escape routes required only one can pass through, over or beside an engine compartment.	6.1.2	[Yes / NA ?]
44	No escape route shall pass directly over an open flame appliance or a radiated heat device.	6.1.3	[Yes / NA ?]
45	If the requirements in 6.2.2 to 6.2.6 are fulfilled, an exit may be considered as a fire exit.	6.2.1	[Yes / NA ?]
46	Any fire exit from a habitable space complies with following minimum clear opening:		
47	- 450 mm diameter for circular shape.	6.2.2	[Yes / NA ?]
48	- 380 mm and 0,18 m ² area for non-circular shapes. The dimension is large enough to allow for a circle with 380 mm can be inscribed to the opening, taking any restriction into account.	6.2.2	[Yes / NA ?]
49	Fire exits are positioned in an unobstructed and readily accessible location.	6.2.3	[Yes / NA ?]
50	Fire exits are capable of being opened without the use of tool from the inside and outside when unlocked. Port lights of sufficient size are exempted. Note: winch handles and similar equipment are considered as tools.	6.2.4	[Yes / NA ?]
51	Deck hatches designated as fire exits shall have means to reach the upper foothold whose vertical distance shall not exceed 1,2 m (mattress being compressed). If footholds, ladders, steps etc. are provided to meet this requirement, they shall be permanently installed, only removable with tools.	6.2.5	[Yes / NA ?]
52	If folding or deploying devices are installed, their stowage location shall be clearly indicated affixed by a label. Information for folding devices do comply with Annex B.	6.2.5	[Yes / NA ?]
53	Fire fighting equipment		
54	Fire fighting equipment as per clause 7 provided, see documentation.	7	[Yes / NA ?]
55	Fire ports shall be: sized to accept the nozzle, openable for ready access for a complete discharge, sealed to the habitable space when closed and not in use and located that the required size of extinguisher can be operated.	7.4.2.2	[Yes / NA ?]
56	Label: Fire port identified with "Fire port" or an appropriate pictogram which is noted in the Owners' manual. Affixed: In the vicinity.	7.4.2.2.	[Yes / NA ?]
57	Portable fire extinguisher(s) are readily accessible in their designated positions (quickly and safety use under emergency conditions).	7.5.2.2	[Yes / NA ?]
58	Label: Portable extinguisher(s) stored in a locker or other protected or enclosed space carry the appropriate symbol:  White symbol, red background Affixed: On the locker or the enclosed space door.	7.5.2.4	[Yes / NA ?]
59	Carbon dioxide extinguisher [CO ₂] is only located in habitable spaces where energized equipment is located (battery space, electric motor, etc) or flammable liquids are present (e.g. galley).	7.5.3	[Yes / NA ?]
60	Any CO ₂ extinguisher has a maximum capacity of 2 kg.	7.5.3	[Yes / NA ?]
61	Not more than one CO ₂ in each habitable space.	7.5.3	[Yes / NA ?]

Applicant:	
Boat Model Name:	

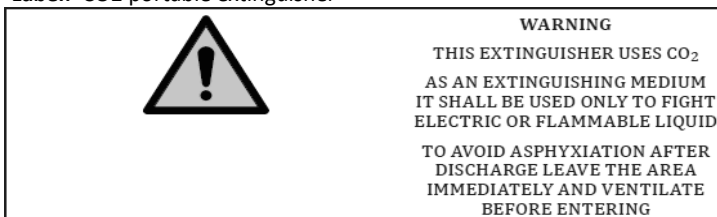


62	Label: CO ₂ extinguisher in habitable space are provided with a warning note. Affixed: Near the location of the extinguisher and a warning included in the OM.	7.5.3	[Yes / NA ?]
63	Location and capacity of portable fire extinguishers: A portable fire extinguisher is located:		
64	- within 2 m unobstructed distance from the main helm position;	7.5.4.1	[Yes / NA ?]
65	- within 2 m from any permanently installed cooking and heating appliance or open-flame device, accessible in a event of fire of such a device/appliance.	7.5.4.1	[Yes / NA ?]
66	- within 5 m unobstructed distance from the centre of a bunk, measured in horizontal plane.	7.5.4.1	[Yes / NA ?]
67	- within 3 m from outboard engines or fire ports where required.	7.5.4.1	[Yes / NA ?]
68	The capacity of portable fire extinguisher shall meet following, taken into account that one extinguisher may meet more than one requirement:		
69	- at least one 5A/34B located within each 20 m ² of habitable spaces.	7.5.4.2	[Yes / NA ?]
70	- where habitable spaces are protected by a fixed system only one portable need to be provided.	7.5.4.2	[Yes / NA ?]
71	Displayed information NOTE: Subjects 72-75 shall be indicated in the appropriate language of intended use.		
72	Label: Fixed system warning for non-asphyxiant medium	8	[Yes / NA ?]
			
Background: Yellow			
Affixed: Near the manual release device.			
73	Label: Fixed system warning for asphyxiant medium	8	[Yes / NA ?]
			
Background: Yellow or orange			
Affixed: At any entrance to the protected spaces with an asphyxiate medium.			

Applicant:	
Boat Model Name:	



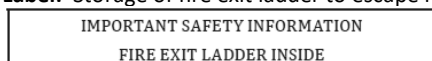
74 **Label:** CO2 portable extinguisher 8 [Yes / NA ?]



Background: Yellow or orange

Affixed: Near any CO2 portable fire extinguisher.

75 **Label:** Storage of fire exit ladder to escape hatch 8 [Yes / NA ?]



White letters/green background

Affixed: Near to the storage area.

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
76 Cooking and heating appliances			
77 Cooking and heating appliances suitable for use in marine environment.	4.1.1	[Yes / NA ?]	
78 Appliance is installed according to manufacturer instructions.	4.1.1	[Yes / NA ?]	
79 Appliances with flues shall be installed in according to manufacturer's instructions.	4.1.2	[Yes / NA ?]	
80 Appliances with flue shall be insulated or shielded in accordance with 4.2.3.1 where necessary to avoid overheating or damage to adjacent material or to the structure of the craft.	4.1.2	[Yes / NA ?]	
81 Materials near cooking or heating appliances			
82 Exposed materials adjacent to open flame devices installed in Zone I and Zone II shall not support combustion and accordingly shall have an oxygen index (OI) of at least 21 according to ISO 4589-3 at an ambient temperature of 60 °C, or be tested as meeting an equivalent standard.	4.2.2	[Yes / NA ?]	
83 Exposed materials adjacent to open flame devices installed in Zone I and Zone II shall be thermally insulated from the supporting structure to prevent combustion of the supporting structure, if the surface temperature exceeds 80 °C during the fire test described in Annex A. Thermal insulation may be achieved by an air gap or the use of a suitable material.	4.2.2	[Yes / NA ?]	
84 If the surface of a radiated heat device can exceed 85 °C, combustible materials adjacent to radiated heat devices and other appliances shall be thermally insulated to ensure that the surface temperature of the combustible material does not exceed 85 °C with the appliance operating at its maximum nominal output.	4.2.3.1	[Yes / NA ?]	
85 The thermal insulation may be achieved by an air gap a radiation shielding surface or suitable material. Shielded surfaces shall use non-combustible materials or similar.	4.2.3.2	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



86	If the appliance has been temperature tested as per EN 12815, EN 13240 or UL 1100, the appliance instructions may be followed to meet protection from the radiated heat device.	4.2.3.2	[Yes / NA ?]
87	Solid appliance: if it has been temperature tested as per EN 12815, EN 13240 or UL 1100, the appliance instructions may be followed to meet protection from the radiated heat device.	4.2.4.1	[Yes / NA ?]
88	Engine and fuel compartments and exhausts		
89	Engine compartment insulation materials do not support combustion (OI at least 21 or test to equivalent standard).	4.3.1.1	[Yes / NA ?]
90	The engine manufacturer's specific system recommendations have been followed when specific system recommendations are existing.	4.3.1.4	[Yes / NA ?]
91	Petrol engine and/or permanently installed petrol fuel tank compartments: all electrical equipment shall be ignition protected as specified in 4.6.	4.3.2.2	[Yes / NA ?]
92	Liquefied petroleum gas (LPG) systems		
93	LPG system complies with: EN 15609 if used for propulsion systems.	4.5.3	[Yes / NA ?]
94	Fire fighting equipment		
95	Craft with habitable spaces containing sleeping bunks shall be equipped with at least one portable fire extinguisher 5A/34B.	7.2	[Yes / NA ?]
96	Habitable spaces containing cooking or heating appliance are equipped with following depending on the type of device according to Table 1: - without open flame device: portable fire extinguisher 5A/34B <u>or</u> a fixed system; - with open flame device: portable fire extinguisher 8A/68B <u>or</u> a fire blanket plus one portable fire extinguisher 5A/68B <u>or</u> a fixed system.	7.3	[Yes / NA ?]
97	The engine compartment is protected according to Table 2 of the standard (P is the power rating of engine or engines combined in kW) as following:.		
98	Outboard engines: P up to 25 kW: no extinguisher P > 25 and < 220 kW: 1 portable extinguisher 34B P > 220 kW: total B capacity of 0,3 x P.	7.4.1	[Yes / NA ?]
99	Petrol inboard engine: - located in engine box above the deck: portable with fire port <u>or</u> fixed fire extinguishing system; - located below deck: fixed fire extinguishing system.	7.4.1	[Yes / NA ?]
100	Diesel engine compartment: - net volume < 3,5 m³ or P < 120 kW: portable with fire port <u>or</u> fixed system; - net volume > 3,5 m³ or P > 120 kW: fixed fire extinguishing system.	7.4.1	[Yes / NA ?]
101	Fire ports are positioned for properly discharge without opening the primary access and be marked; the OM shall comply with Annex B.	7.4.2	[Yes / NA ?]
102	Portable fire extinguisher is marked in accordance to EN 3-7 and ISO 7156 or equivalent.	7.5.2.1	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



103	If the portable fire extinguisher is located in exposed position to splashed or sprayed water, the nozzle and triggering device is shielded or the extinguisher is certified for marine use.	7.5.2.3	[Yes / NA ?]
104	In the space where it is discharged the extinguishing media shall not result in toxic concentrations. Media containing Halon 1211, 1301, 2402 and per-fluorocarbons shall not be used.	7.5.2.5	[Yes / NA ?]
105	The fixed system is an "approved system", see also Annex D.	7.6.2.1	[Yes / NA ?]
106	Fixed system is suitable sized and installed according to manufacturer's instructions, including any requirement for dampers.	7.6.2.2	[Yes / NA ?]
107	Fixed system uses a total flooding medium which is not used so that it results in toxic concentrations. Media containing Halon 1211, 1301, 2402 and per-fluorocarbons is not used. CO ₂ is not used for fixed fire systems on recreational craft.	7.6.2.3	[Yes / NA ?]
108	Fixed system operation temperature is higher than 0 °C.	7.6.2.4	[Yes / NA ?]
109	If multiple fixed systems shall discharge simultaneously or each individual system shall be capable to protect the space.	7.6.2.5	[Yes / NA ?]
110	Cylinders, distribution lines and controls are located to comply with designated so that they will not be subject to temperatures outside the system's designated operation range, while the craft is in service.	7.6.4.2	[Yes / NA ?]
111	Solder or brazing material used for metallic lines or fittings shall have a melting temperature of not less than 600 °C.	7.6.4.6	[Yes / NA ?]
112	Label: How to discharge the manual release device, with the protected space(s) identified. Affixed: Immediately adjacent to the release device.	7.6.5.2	[Yes / NA ?]
113	Fixed systems using gas: means is provided to ensure the minimum design concentration to extinguish the fire.	7.6.5.4	[Yes / NA ?]
114	Fixed systems using gas: prior to or during system discharge, the manual and/or automatic shutdown of engines, generators, forced ventilation, or other permanent installed equipment shall be provided if those could comprise the level of extinguishing medium. If equipment shutdown cannot be guaranteed to maintain the design concentration, shut-off dampers closing the ventilation ducts shall be installed.	7.6.5.4	[Yes / NA ?]
115	Shut-off dampers, where required in 7.6.5.4 are capable of being closed before or during the discharge to maintain the minimum media concentration.	7.6.5.5	[Yes / NA ?]
116	Shut-off dampers of automatic fixed systems, where required in 7.6.5.4, shall be automatic. Manual fixed systems may use manual or automatic damper.	7.6.5.5	[Yes / NA ?]
117	Fire blanket: if required acc. to Table 1, it shall be accordance with EN 1869.	7.7	[Yes / NA ?]
<u>Instructions/Warnings to be included in the owner's manual</u>			
118	Necessary information for portable fire extinguisher. For example number, location, type, capacity.	Annex B	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



119	Information about asphyxiation hazards of CO2 extinguisher. Sentence to leave the area immediately after discharge and to ventilate prior to re-entering the area.	Annex B	[Yes / NA ?]
120	Location, use and information of any installed fire port.	Annex B	[Yes / NA ?]
121	Information that it is the responsibility of the owner to select an effective portable fire extinguisher for use with any installed fire port, if a portable fire extinguisher is not supplied.	Annex B	[Yes / NA ?]
122	Location, use and informations about fire blanket.	Annex B	[Yes / NA ?]
123	Information concering safe operation of any fixed system. Instructions shall indicate the operation to be performed before, during, and after discharge. These shall contain instruction on evacuation of the protected space, stopping the engine and fuel feed, stopping of forced ventilation, activating shut off dampers. If the extinguishing medium is an asphyxiant these shall include directions to ventilate the space prior to entering for damage assessment and subsequent engine restart.	Annex B	[Yes / NA ?]
124	Servicing on fire-fighting equipment: -checked at intervals indicated on the equipment; -replace portable fire-extinguisher if expired/discharged, by identical or greater fire-fighting capacity; -refilled or replaced fixed systems when expired/discharged; -fixed system: maintainance schedule.	Annex B	[Yes / NA ?]
125	Location, function, maintainance and replacement regimes of fire detection, alarm equipment and smoke alarms.	Annex B	[Yes / NA ?]
126	Identifying escape routes and the location of fire exits.	Annex B	[Yes / NA ?]
127	Information about location and operating of any device used to aid escape through a fire exit.	Annex B	[Yes / NA ?]
128	Information shall be included concerning the responsibility of the craft owner/operator to: a) ensure that fire-fighting equipment is in serviceable condition and readily accessible; b) unlock any deck hatches, or any other locked escape openings; c) unlock any locked storage containing any folding or deployable device used to aid escape through a fire exit; d) inform craft occupants about: - the location and operation of fire-fighting equipment; - the location of any fire port discharge openings into the engine compartment; - the location of escape routes and fire exits and to plan what to do in the event of fire.	Annex B	[Yes / NA ?]
129	Keep the bilges clean and check for fuel and gas vapours or fuel leaks at regular intervals and before starting the engine.	Annex B	[Yes / NA ?]
130	When replacing parts of the fire-fighting installation only matching components shall be used, bearing the same designation or being equivalent in their technical and fire resistant capabilities.	Annex B	[Yes / NA ?]
131	NEVER - Obstruct passageways to fire exits and hatches.	Annex B	[Yes / NA ?]
132	NEVER - Obstruct access to safety controls, e.g. fuel shut-off valves, gas shut-off valves, isolation switches of the electrical system or fire ports.	Annex B	[Yes / NA ?]

Applicant:	
Boat Model Name:	



133	NEVER - deliberately or inadvertently block ventilation for compartments or spaces, particularly those containing fixed petrol engines, fixed petrol tanks and batteries.	Annex B	[Yes / NA ?]
134	NEVER - Obstruct access to portable fire extinguishers or fire ports.	Annex B	[Yes / NA ?]
135	NEVER - Leave the craft unattended when cooking and/or heating appliances are in use unless the appliance is designed to operate unattended.	Annex B	[Yes / NA ?]
136	NEVER - Modify any of the craft's systems unless competent to do so.	Annex B	[Yes / NA ?]
137	NEVER - Fill any fuel tank or replace gas bottles when engines are running or open flame appliances or radiant heat devices are in use.	Annex B	[Yes / NA ?]
138	NEVER - Smoke while handling fuel or gas.	Annex B	[Yes / NA ?]
139	NEVER - Store petrol containers or equipment containing petrol in any area not designated for the specific storage of petrol.	Annex B	[Yes / NA ?]
140	Do not install free hanging curtains or other fabrics in the vicinity of or above open flame appliances, radiant heat devices or electrical heating and cooking elements.	Annex B	[Yes / NA ?]
141	Do not stow combustible material in the engine compartment. If non-combustible materials are stowed in the engine compartment they shall be secured against falling into machinery and shall cause no obstruction to access in or from the space.	Annex B	[Yes / NA ?]

Comments:

CHECKLIST**SMALL CRAFT - CRAFT IDENTIFICATION - CODING SYSTEMS****Ref.: EN ISO 10087:2019 (ISO 10087:2019)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



	Subject to check	Clause	Requirements	Checked ?
1	The craft identification consists of 14 consecutive characters plus a hyphen as specified without intervening spaces, slashes or dashes.	4.1	[Yes ?]	
2	The first two characters, followed by a hyphen, designate the code of the country of the manufacturer as specified in the Alpha-2 code in ISO 3166-1.	4.2	[Yes ?]	
3	The next three characters are the unique manufacturer's identification code.	4.3	[Yes ?]	
4	The following five characters indicate the unique serial number for each individual craft.	4.4	[Yes ?]	
5	The serial number shall consist of numerals and/or letters, except for the letters I, O and Q.	4.4	[Yes ?]	
6	The last four characters designate the month and year of manufacture, and the model year.	4.5	[Yes ?]	
7	The month and year of manufacture date shall be no earlier than the date of construction or when assembly began and no later than the date the craft leaves the place of manufacture or assembly or is placed on the market.	4.5	[Yes ?]	
8	The model year indicates the year when the specific craft is intended to be placed on the market.	4.5	[Yes ?]	
9	The characters shall be at least 6 mm high.	5.1	[Yes ?]	
10	Each craft identification number shall be carved, burned, stamped, embossed, moulded, or otherwise permanently affixed, so that alteration, removal, or replacement will be obvious.	5.2	[Yes ?]	
11	If the number is on a separate plate, the plate shall be fastened in such a manner that its removal would normally cause some scarring of or damage to the surrounding hull area.	5.2	[Yes / NA ?]	
12	The identification number shall be visible on the starboard outboard side of the transom, or near the stern within 50 mm of the transom top, gunwale, hull/deck joint or its capping, whichever is lowest.	5.3.1	[Yes ?]	
13	On craft with a transom, the identification number shall be located on the starboard side of the transom.	5.3.2	[Yes / NA ?]	
14	On craft without a transom or with a transom on which it is impractical to locate the identification number, it shall be affixed within 300 mm of the stern.	5.3.3	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



15	On catamarans, the identification number shall be located as follows. a) Hulls structurally permanently connected: on the starboard hull. b) Hulls detachable but regarded as the primary structure: on both hulls. c) Hulls readily removable and/or replaceable: on the aft cross-beam within 300 mm of the starboard hull; this also applies to catamaran-type pontoon boats.	5.3.4	[Yes / NA ?]
16	On trimarans, the identification number shall be located on the centre hull.	5.3.5	[Yes / NA ?]
17	On inflatable boats, the identification number shall be affixed on the rigid aft cross-beam or motor bracket within 300 mm of the starboard hull attachment. If the identification number is not readily visible due to the construction of the boat, it may be applied additionally to some other suitable structure of the boat, such as the console assembly.	5.3.6	[Yes / NA ?]
18	Rails, fittings or other accessories shall not obscure the identification number located as specified above. If the design of the craft would result in this, the identification number shall be located as near as possible to the required location to be visible.	5.3.7	[Yes / NA ?]
19	The identification number shall be displayed in alphanumerical characters (Arabic numerals and uppercase letters) and shall read from left to right.	5.6	[Yes ?]
20	If additional information is displayed on the craft within 50 mm of the identification number, it shall be separated by means of borders or it shall be on a separate label so that it will not be interpreted as part of the identification number.	6	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked ?
21	A duplicate identification number shall be affixed to a non-removable part of the craft in a location only known by the manufacturer. The duplicate identification number shall be located in the interior or beneath a fitting or item of hardware. Catamarans shall have this identification number in or on both hulls. The identification number should be located so that it is extremely difficult to reach and modify.	5.4	[Yes ?]	
22	The identification number shall be affixed to the craft during the construction or assembly of the craft. In no case shall the craft be put on the market without it being affixed.	5.5	[Yes ?]	

Comments:

CHECKLIST**SMALL CRAFT - PERMANENTLY INSTALLED FUEL SYSTEMS****Ref.: EN ISO 10088:2017 (ISO 10088:2013)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Fuel type.		[Petrol / Diesel]	
2 Petrol engine compartments and petrol tank compartments shall have ventilation and ignition protection in accordance with ISO 11105 and ISO 8846.	4.1.4	[Yes / NA ?]	
3 If petrol, the only outlets for drawing fuel from the fuel system are plugs in petrol filter bowls for the purpose of servicing filter.	4.1.5	[Yes / NA ?]	
4 If diesel, the only outlets for drawing fuel from the fuel system are plugs or valves in diesel filter bowls for the purpose of servicing filter.	4.1.5	[Yes / NA ?]	
5 If petrol, each metal or metallic plated component of fill system and tank is grounded. Resistance measured, see testing checklist.	4.1.6	[Yes / NA ?]	
6 Grounding wires are not clamped between a hose and its pipe or spud.	4.1.6	[Yes / NA ?]	
7 If copper-base alloy fittings are used for aluminium tanks: Protection by a galvanic barrier ?	4.1.10	[Yes / NA ?]	
8 Means to determine fuel quantity is provided.	4.1.11	[Yes ?]	
9 Fuel system is permanently installed.	4.3.1	[Yes ?]	
10 All parts, except small connectors, fittings and short sections of flexible hoses, are independently supported.	4.3.1	[Yes ?]	
11 All components intended to be operated or observed during normal operation of the craft, or for emergency purposes, are readily accessible.	4.3.2	[Yes ?]	
12 All fittings and connections are at least accessible.	4.3.2	[Yes ?]	
13 Clearance between petrol fuel tank and combustion engine > 100 mm.	4.3.3	[Yes / NA ?]	
14 Clearance between petrol tank and dry exhaust component(s) > 250 mm if no thermal barrier is provided.	4.3.4	[Yes / NA ?]	
15 Fuel tank(s) and components of petrol fuel systems are not installed directly above batteries unless the batteries are protected against fuel leakage.	4.3.6	[Yes / NA ?]	
16 Minimum inside diameter of the fill pipe system is 28,5 mm.	5.1.1	[Yes ?]	
17 Minimum inside diameter of fuel filling hoses is 38 mm.	5.1.1	[Yes ?]	
18 Fuel filling hoses in the engine compartment are of fire resistant type A1 or A2 as per ISO 7840.	5.1.2	[Yes / NA ?]	
19 Fuel fill hoses outside the engine compartment are of type A1 or A2 as per ISO 7840, or of type B1 or B2 as per ISO 8469.	5.1.2	[Yes / NA ?]	
20 Fuel filling lines are self-draining to the tank, craft being in static floating position.	5.1.3	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



21	Distance between compartment ventilation openings and fuel fill openings are at least 380 mm. Acceptance if craft's coaming, superstructure or hull creates a barrier to prevent fuel vapour entering the craft through ventilation opening.	5.1.5	[Yes ?]
22	Label: Fuel filling point marked with "petrol" or "diesel" and/or with a symbol as per ISO 11192. Affixed: on the fuel filling point.	5.1.6	[Yes ?]
23	Each fuel tank has separate vent line.	5.2.1	[Yes ?]
24	Vent hoses in the engine compartment are of fire resistant type A1 or A2 in accordance with ISO 7840.	5.2.2	[Yes / NA ?]
25	Vent hoses outside engine compartment are of type A1 or A2 as per ISO 7840, or type B1 or B2 as per ISO 8469.	5.2.2	[Yes / NA ?]
26	Vent lines are self-draining when craft in static floating position.	5.2.5	[Yes ?]
27	Distance between compartment ventilation openings and fuel vent openings is at least 400 mm. Acceptance if craft's coaming, superstructure or hull creates a barrier to prevent fuel vapour entering the craft through ventilation opening.	5.2.6	[Yes ?]
28	Vent line minimizes intake of water without restricting the release of vapour or intake of air.	5.2.7	[Yes ?]
29	Vent line arrangement minimizes the intake of water without restricting the release of vapour or intake of air and does not allow the vapour overflow to enter the craft.	5.2.7	[Yes ?]
30	Vent-line termination or gooseneck in the vent-line routing is at sufficient height to prevent spillage of fuel through the vent line during filling and entry of water under normal operating conditions.	5.2.8	[Yes ?]
31	If mono-hull sailing craft: Vent line minimizes the risk of fuel spillage or entry of water through the vent when sailing at heel angle of up to 30°.	5.2.8	[Yes / NA ?]
32	Vent lines on all petrol fuel installations incorporate a flame arrester.	5.2.9	[Yes / NA ?]
33	Metal fuel distribution and return lines are of seamless annealed copper or copper-nickel or equivalent metal with nominal wall thickness of at least 0,8 mm. Aluminium lines may be used for diesel fuel.	5.3.1	[Yes / NA ?]
34	Rigid fuel distribution and return lines are connected to the engine by a flexible hose section.	5.3.2	[Yes / NA ?]
35	Support of rigid fuel distribution and return lines are provided within 100 mm of the connection to the metal supply line on the rigid side of the connection.	5.3.2	[Yes / NA ?]
36	Connections in rigid fuel distribution or return lines are made with efficient screwed, compression, cone, brazed or flanged joints.	5.3.3	[Yes / NA ?]
37	Flexible fuel hoses are used where relative movement of the craft structures supporting the fuel lines would be anticipated during normal operating conditions.	5.3.4	[Yes / NA ?]
38	Flexible fuel hoses are accessible for inspection and maintenance.	5.3.5	[Yes ?]

Applicant:	
Boat Model Name:	



39	Petrol distribution and return hoses are of fire-resistant type A1 as per ISO 7840, except hoses entirely within splash well at stern of craft connected directly to outboard engine by type B1 or B2 hoses as per ISO 8469 or A1 or A2 hoses as per ISO 7840. Hoses to SAE J1527 satisfy the requirements of ISO 7840.	5.3.6	[Yes / NA ?]
40	Diesel-fuel distribution and return hoses are of fire-resistant type A1 or A2 as per ISO 7840.	5.3.7	[Yes / NA ?]
41	Fuel lines are properly supported and secured to craft structure above bilge water level, unless specifically designed for immersion or protected from the effects of immersion.	5.3.8	[Yes ?]
42	There are no joints in fuel distribution and return pipes or hoses other than those required to connect required fuel-line components, e.g. filters and bulkhead connections.	5.3.9	[Yes ?]
43	Fuel distribution lines to petrol engine(s) prevent fuel siphoning out of the tank following a failure in the system.	5.3.10	[Yes / NA ?]
44	Fuel distribution lines to diesel engine(s) prevent fuel siphoning out of the tank following a failure in the system or are fitted with a manual shut-off valve.	5.3.11	[Yes / NA ?]
45	Diverting valves in diesel return lines ensure that the return line flow is not restricted.	5.3.12	[Yes / NA ?]
46	Fuel hoses are secured to the pipe, spud or fitting by metal hose clamps or are equipped with permanently attached end fittings.	5.4.1	[Yes ?]
47	Pipes, spuds (except fuel-tank spud) or other fittings for hose connection with hose clamps have a bead, flare, series of annular grooves or serrations.	5.4.2	[Yes ?]
48	Spuds or other fittings for hose connection with hose clamps have a nominal outer diameter being the same as the nominal inner diameter of the hose.	5.4.3	[Yes ?]
49	Hose connections designed for a clamp connection have a spud at least 25mm long.	5.4.4	[Yes ?]
50	Hose connections having a nominal diameter of more than 25mm shall have two hose clamps. The spud is at least 35mm long.	5.4.5	[Yes / NA ?]
51	Spuds for hose connection are free from sharp edges.	5.4.6	[Yes ?]
52	Hose clamps are of CrNi 18-8 stainless steel, or equivalent, and reusable.	5.4.7	[Yes ?]
53	Clamps depending solely on spring tension are not used.	5.4.7	[Yes ?]
54	Nominal clamp band width is at least 8 mm for nominal outside hose diameters up to and including 25 mm and at least 10mm for bigger hoses.	5.4.7	[Yes / NA ?]
55	Clamps are installed to fit directly on the hose and do not overlap each other.	5.4.8	[Yes ?]
56	Clamps are installed behind the bead, if any, or fully on the serrations on spuds with at least one clamp width from the end of the hose.	5.4.8	[Yes ?]
57	Manually operated valves have positive stops in the open and closed positions or clearly indicate their open and closed positions.	5.5.1	[Yes / NA ?]
58	The integrity and tightness of a valve does not depend solely on spring tension.	5.5.2	[Yes ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



59	Threaded valve housing covers that can be exposed to an opening torque when the valve is operated are secured against unintentional opening by a device that can be reused.	5.5.3	[Yes / NA ?]
60	If transparent sight gauge is installed on diesel tank, it is mounted as close as practical to the tank, minimizing the risk of physical damage. It has a self-closing device on the bottom and a valve at the top.	5.5.4	[Yes / NA ?]
61	Petrol fuel systems is equipped with a fuel filter.	5.6.1	[Yes / NA ?]
62	Diesel fuel systems is equipped with at least one fuel filter and one water separator or being combined into one device.	5.6.2	[Yes / NA ?]
63	Each filter is independently supported on the engine or craft structure.	5.6.3	[Yes ?]
64	All system components that fulfil ISO 10088 shall be marked or labelled: - manufacturer's name or trademark; - ISO 10088 - fire resistant; - type of fuel or fuels for which the component is suitable.	5.7	[Yes ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked ?
65	Individual components of the fuel system, and the fuel system as a whole, shall be designed to withstand the combined conditions of pressure, vibration, shocks, corrosion and movement encountered under normal operating conditions and storage.	4.1.1	[Yes ?]	
66	Each component and system as whole operates throughout ambient temperature range of -10 °C and +80 °C.	4.1.2	[Yes ?]	
67	Each component and system as whole withstands throughout storage temperature range of -30 °C and +80 °C.	4.1.2	[Yes ?]	
68	Each component and system as whole is resistant to deterioration to all liquids or compounds with which it may come into contact.	4.1.3	[Yes ?]	
69	If petrol, each metal or metallic plated component of fill system and tank is grounded with less resistance than 1 ohm.	4.1.6	[Yes / NA ?]	
70	Provision is made to prevent fuel overflow from the vent opening from entering the craft or the environment.	4.1.8	[Yes ?]	
71	All fuel system components in the engine compartment, except permanently installed fuel tanks and fasteners supporting metal fuel lines, withstanding a 2,5 min fire test as specified in ISO 7840 (individually or as installed).	4.1.9	[Yes / NA ?]	
72	The whole fuel system passes after installation the pressure test as specified.	4.2.1	[Yes ?]	
73	Blow back test conducted.	4.1.7 / 4.2.3	[Yes ?]	
74	Fuel filling system prevents accidental fuel spillage from entering the craft when in static floating position.	5.1.4	[Yes ?]	
75	Cross-sectional area of any vent component > 95 mm ² or ventilation opening designed to prevent tank pressure from exceeding 80% of max. test pressure as marked on the tank label.	5.2.3	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



76	Vent lines do not have valves other than those that permit free flow of air and prevent flow of liquid (fluid) both in and out of the tank.	5.2.4	[Yes ?]
77	Vent-line components in engine compartments, able to capture fuel, fulfil test requirements of 4.1.9.	5.2.10	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - ELECTRICAL SYSTEMS - EXTRA-LOW-VOLTAGE D.C. INSTALLATIONS****Ref.: EN ISO 10133:2017 (ISO 10133:2012)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked?
1 Indicate the type of the system: - fully insulated two-wire [TWFI], or - two-wire with negative ground [TWNG].	4.1	[TWFI / TWNG]	
2 If d.c. system with negative ground, main ground/earthing is the negative terminal or main ground bus.	4.1	[Yes / NA ?]	
3 The hull is not used as a current-carrying conductor.	4.1	[Yes ?]	
4 Multiple battery banks have a common negative connection, if not excepted as dedicated isolated system, e.g. electric propulsion system.	4.1	[Yes / NA ?]	
5 If fitted, the equipotential bonding conductor is connected to the craft's grounding/earthing point.	4.2	[Yes / NA ?]	
6 Switches and controls are marked to indicate their use, unless purpose is obvious and mistaken operation will not cause a hazardous condition.	4.3	[Yes ?]	
7 Protective devices are provided at the source of power.	4.4	[Yes ?]	
8 Batteries are installed in dry and vented location above bilge water level.	5.1	[Yes ?]	
9 Metal objects can not come into contact with battery terminal.	5.4	[Yes ?]	
10 Batteries are protected against mechanical damage by location or enclosure.	5.5	[Yes ?]	
11 Batteries are not installed directly above or below a fuel tank or fuel filter.	5.6	[Yes ?]	
12 Metallic components of the fuel system within 300 mm above battery top are electrically insulated.	5.7	[Yes / NA ?]	
13 Connected battery cable terminals do not depend on spring tension.	5.8	[Yes ?]	
14 Battery disconnect switch in the positive conductor if earthed negative system.	6.1	[Yes / NA ?]	
15 Battery disconnect switch in the positive and negative conductor if fully insulated two-wire d.c. system.	6.1	[Yes / NA ?]	
16 Battery disconnect switch can be reached quickly and safely without use of tools, positioned as close as practical to the battery / group of batteries. See exceptions.	6.1	[Yes ?]	
17 Remote controlled battery disconnect switch permits safe manual operation.	6.3	[Yes / NA ?]	
18 Electrical distribution uses correct stranded-copper conductors.	7.1	[Yes ?]	
19 Conductors and cables are supported, in conduits, trunking, trays or individual support every 450 mm.	7.3	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



20	Sheathed and battery conductors to the disconnect switch are supported every 300 mm. First support less than 1 m from terminal. (see exception for OB).	7.4	[Yes ?]
21	Conductors exposed to physical damage are protected.	7.5	[Yes / NA ?]
22	Conductors through bulkhead and structural members are protected against chafing.	7.5	[Yes / NA ?]
23	The d.c. circuit is separated from the a.c. circuit if contained in the same wiring system by: - an earthed metal screen for multicore cables; or - insulation for their voltage and installed in separate conduit/trunking; or - installing with physical separation on tray or ladder; or - separated conduits, sheatings or trunking systems are used; or - a.c. & d.c. fixed directly to a surface with 100 mm separation.	7.8	[Yes / NA ?]
24	Insulated equipotential bonding conductors are green or green/yellow striped or uninsulated.	7.9	[Yes / NA ?]
25	Conductors with green (or green with a yellow stripe) insulation are not used for current carrying conductors.	7.9	[Yes ?]
26	Means of identification other than colour for d.c. positive conductors is used and properly identified on the craft wiring diagrams of the electrical system(s).	7.10	[Yes / NA ?]
27	Colour identification of d.c. negative conductors is yellow or black.	7.11	[Yes / NA ?]
28	If an a.c. circuit is installed, yellow is used for the negative d.c. conductor if black is used for a.c. live conductor.	7.11	[Yes / NA ?]
29	Black or yellow is not used for d.c. positive conductors.	7.11	[Yes / NA ?]
30	Conductors are routed above bilge water level or at least 25 mm above automatic bilge pump switch or as exception conductors routed in the bilge area are in an IP 67 enclosure, in accordance with IEC 60529.	7.12	[Yes ?]
31	If not protected by thermal barrier, conductors are routed away from exhaust pipes and other heat sources: - 50 mm from water-cooled exhaust components; - 250 mm from dry exhaust components.	7.13	[Yes / NA ?]
32	A manual reset trip-free circuit breaker or fuse is installed within 200 mm of the power source, for each conductor (see exception).	8.1	[Yes / NA ?]
33	If the battery conductor is contained in a sheath or enclosure, the overcurrent protection may be placed up to 1,8 m from the battery.	8.1	[Yes / NA ?]
34	If the conductor is connected to a source of power other than a battery terminal, and contained in a sheath or enclosure, the overcurrent protection may be placed up to 1 m from the power source. See exemption for self-limited devices.	8.1	[Yes / NA ?]
35	Control elements, indicating instruments, circuit breakers and fuses on panel boards can be reached quickly and safely without the use of tools.	9.1	[Yes ?]
36	Terminals of panel boards are accessible.	9.1	[Yes ?]
37	Panel-boards are permanently marked with the nominal system voltage.	9.3	[Yes ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



38	Separation or partition of a.c. & d.c. distribution at panel board if craft is equipped with both systems.	9.4	[Yes / NA ?]
39	All conductors have suitable terminals, i.e. no bare wires to stud or screw connections.	10.3	[Yes ?]
40	No twist-on connectors (wire nuts) are used.	10.6	[Yes ?]
41	Exposed shanks of terminals are protected against accidental shorting except those for the grounding systems.	10.7	[Yes ?]
42	No more than 4 conductors are secured to one terminal stud.	10.9	[Yes ?]
43	Receptacles/sockets and plugs for the d.c. system are not interchangeable with a.c. system.	11.1	[Yes / NA ?]
44	Electrical components in compartment with LPG systems are ignition protected according to ISO 8846 as required in ISO 10239, see testing checklist.	12.2	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked?
45	Selection, arrangement and performance of protective devices are as required for a maximum continuity and service to healthy circuits and protection from damage due to overcurrents.	4.5	[Yes / NA ?]	
46	Voltage ranges of d.c. equipment functions within voltage range (75% - 133%) at battery terminals; exception for equipment requiring a higher minimum is fulfilled.	4.6	[Yes ?]	
47	Calculated voltage drop does not exceed 10% of nominal voltage for conductors.	4.7	[Yes ?]	
48	If required, voltage drop does not exceed 3%.	4.7	[Yes / NA ?]	
49	Movement of batteries is less than 10 mm at force twice the battery weight.	5.2	[Yes ?]	
50	Installed batteries are capable of inclinations of 30° without leakage.	5.3	[Yes ?]	
51	Monohull sailing craft: spilled electrolyte is contained up to 45° without leakage.	5.3	[Yes / NA ?]	
52	Minimum continuous rating of battery switch is equal to maximum current of main circuit breaker.	6.2	[Yes ?]	
53	For engine-starting circuits, the battery switch is rated for the engine starter it serves.	6.2	[Yes / NA ?]	
54	Insulation of conductors is from fire retardant material.	7.1	[Yes ?]	
55	Conductor insulation in engine spaces is minimum 70 °C, oil resistant or protected with conduit or sleeving.	7.2	[Yes / NA ?]	
56	Minimum conductor dimensions comply with Table A.2.	7.6	[Yes ?]	
57	Area of separately installed conductors longer than 200 mm is at least 1 mm ² .	7.7	[Yes / NA ?]	
58	Area of the individual sheathed multi conductor is at least 0,75 mm ² . It extends out of the sheath less than 800 mm (see exception).	7.7	[Yes / NA ?]	
59	Voltage rating of fuses and circuit breakers are not less than the nominal circuit voltage.	8.2	[Yes ?]	
60	Current rating of fuses and circuit breakers are not higher than the value for the conductor of smallest diameter.	8.2	[Yes ?]	
61	Output circuits of self-limiting generators and battery chargers do not require a fuse or circuit breaker.	8.3	[Yes / NA ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



62	IP ratings of connections and components on panel boards are fulfilled.	9.2	[Yes ?]
63	Wiring diagrams identifying circuits, components and conductors are supplied.	9.4	[Yes ?]
64	Conductor connections are located protected from weather or minimum IP 55.	10.1	[Yes ?]
65	Connections above deck exposed to intermittent immersion are IP 67.	10.1	[Yes / NA ?]
66	Studs, nuts and washers are corrosion resistant and galvanically compatible.	10.2	[Yes ?]
67	Aluminium and unplated steel are not used for studs, nuts or washers.	10.2	[Yes / NA ?]
68	Screw clamp and screwless terminal blocks ensure reliable mechanical linkage. Other terminals are ring or captive spade (self-locking) types.	10.4	[Yes / NA ?]
69	Friction type connectors used only in circuits not exceeding 20 A and with separation force > 20 N.	10.5	[Yes / NA ?]
70	Crimp-on terminals and connectors were attached with a suitable crimping tool.	10.8	[Yes / NA ?]
71	The smallest conductor to connector and conductor to terminal withstands a tensile force equal to at least the value of Table 1.	10.8	[Yes / NA ?]
72	Protection of receptacles/sockets with: - IP 55 when subjected to rain, splash, spray when not in use; - IP 67 when subjected to flooding, momentary submersion, even when not used.	11.2 11.3	[Yes / NA ?]
73	Electrical components in compartments which may contain explosive vapour and gases are ignition protected according to ISO 8846 (see note).	12.1	[Yes / NA ?]
74	Conductor requirements of normative Annex A are met.	Annex A	[Yes ?]

Instructions/Warnings to be included in the owner's manual

75	Circuit diagram(s) with location of electrical devices in the craft and identification of conductors by colour and other mean.	Annex B	[Yes ?]
76	Location and description of components installed on the panel board	Annex B	[Yes ?]
77	WARNING - Never: -work on the electrical installation while the system is energized; -modify the craft's electrical system or relevant drawings. Installation, alteration and maintenance should be performed by a competent marine electrical technician; -alter or modify the rated current amperage of overcurrent protective devices; -install or replace electrical appliances or devices with components which exceed the rated current amperage of the circuit; -leave the craft unattended with the electrical system energized, except automatic bilge pump, fire protection and alarm circuits.	Annex B	[Yes ?]

Comments:

Applicant:	
Boat Model Name:	



CHECKLIST**SMALL CRAFT - LIQUEFIED PETROLEUM GAS (LPG) SYSTEMS****Ref.: EN ISO 10239:2017 (ISO 10239:2014)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Note: The scope does not cover devices used for LPG-fuelled propulsion engines or LPG-driven generators.

Subject to check	Clause	Requirements	Checked ?
1 The system is of a vapour withdrawal type, i.e. LPG released only under gas phase conditions.	4.2	[Yes ?]	
2 All appliances installed on a single LPG system shall be designed for use at the same operating pressure and the same LPG type, e.g. propane, butane, or a mixture of the two.	4.3	[Yes ?]	
3 Label: Operating pressure. Affixed: In the vicinity of the cylinder shut-off valve.	4.3	[Yes ?]	
4 The cylinder(s) selected and other supply equipment has sufficient capacity to ensure safe and satisfactory operation of all appliances simultaneously. Cylinder locker or cylinder housing is capable of accommodating the capacity of cylinders needed.	4.3	[Yes ?]	
5 Where an additional LPG system is installed there is no connection between each of the LPG supplies. The cylinder(s) for each gas supply may be installed in the same cylinder locker or cylinder housing.	4.4	[Yes / NA ?]	
6 Label: Warning sign that there is an additional LPG supply, if applicable. Affixed: In each cylinder locker or cylinder housing.	4.4	[Yes / NA ?]	
7 Label: Indication which appliance are supplied by each LPG supply, if applicable. Affixed: Inside the cylinder locker or cylinder housing.	4.4	[Yes / NA ?]	
8 Each LPG system is fitted with simple means to test the LPG system for leakage before use of any appliances (e.g. a pressure gauge, bubble leak tester).	4.5	[Yes ?]	
9 Where a bubble leak detector is fitted in the LPG system, it shall be securely mounted in the low pressure side of the LPG system and in the cylinder housing or cylinder locker.	4.5	[Yes / NA ?]	
10 If pressure gauges are used, they shall read the cylinder pressure side of the pressure regulation device. The gauge scale shall have a pressure range from 0 kPa to a maximum of between 1000 kPa and 1600 kPa to be able to show pressure drops during the LPG system check.	4.5	[Yes / NA ?]	
11 System is equipped with, or have provision for the installation of a pressure regulation system.	5.1	[Yes ?]	
12 Label: Working pressure of the LPG appliances Affixed: In the vicinity of the LPG cylinder installation	5.1	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



13	The LPG system has a provision for an installation of a pressure regulation device or the installed LPG pressure reduction system has an overpressure device to prevent uncontrolled pressure increase in the low pressure side to a value above 5 kPa.	5.2	[Yes ?]
14	Any gas discharge of the LPG pressure reduction system is inside the cylinder locker or housing or separately vented outside the craft.	5.2	[Yes ?]
15	The pressure regulator indicates the nominal working pressure.	5.3	[Yes ?]
16	The pressure regulator is not of the external manual adjustment type.	5.4	[Yes ?]
17	The pressure regulator is located within the cylinder locker or housing.	5.5	[Yes ?]
18	Pressure regulator, not supported by the cylinder connection, is separately secured within the cylinder locker or cylinder housing for protection, dirt and water. It is mounted above the cylinder valve for a continuous rise from the cylinder valve to the regulator.	5.6	[Yes / NA ?]
19	The LPG supply line system is either a solid piping system (except for short hose connection to gimbaled stoves) or continuous hose in accordance with 6.3.	6.1.1	[Yes ?]
20	Hoses are used to connect gimbaled stove(s) with their LPG supply.	6.1.2	[Yes / NA ?]
21	Hoses are used to connect supply piping to the pressure regulation device within the cylinder locker or cylinder housing.	6.1.2	[Yes ?]
22	If piping installed, only solid drawn copper or drawn stainless steel piping is used. Materials are galvanically compatible when connected.	6.2.1	[Yes / NA ?]
23	There shall be no joints or fittings in piping passing through engine compartments.	6.2.2	[Yes / NA ?]
24	LPG supply piping routed through engine compartments shall be protected by conduit or trunking, or supported by non-abrasive attachments which are no more than 300 mm apart.	6.2.3	[Yes / NA ?]
25	Piping is installed as high as practical above bilge water level.	6.2.5	[Yes / NA ?]
26	Piping has as few fittings as practical. Joints and fittings are readily accessible.	6.2.6	[Yes / NA ?]
27	Hoses are routed through the engine compartment.	6.3.2	[No ?]
28	Hoses have a minimum practical length.	6.3.2	[Yes ?]
29	Hoses shall have permanently attached end fittings.	6.3.3	[Yes ?]
30	Hoses are capable of being reached for inspection, removal or maintenance without removal of a permanent craft structure.	6.3.3	[Yes ?]
31	Hoses shall be installed so as to avoid stress or tight radius turns.	6.3.3	[Yes ?]
32	Hose connections shall be readily accessible and stress free, i.e. not subjected to tension or kinking under any conditions of use.	6.3.4	[Yes ?]
33	Hoses used for LPG supply line are continuous from within the cylinder locker or cylinder housing to the appliances, or the readily accessible shut off valve near the appliance (see 6.6.3), except where metallic supply piping is connected to flexible hose leading to a movable appliance, such as a gimbaled stove.	6.3.5	[Yes / NA ?]

Applicant:	
Boat Model Name:	



34	Piping does not have direct contact with metallic parts of craft structure of higher galvanic nobility than the piping.	6.5.1	[Yes / NA ?]
35	Supply lines and components are routed 30 mm away from electrical conductors unless the LPG line is run jointless through a conduit, or the conductors are sheathed in conduit or trunking according to ISO 10133 and ISO 13297.	6.5.2	[Yes ?]
36	Metallic supply lines are at least 100 mm from engine exhaust system.	6.5.2	[Yes / NA ?]
37	LPG lines are at least 100 mm from exposed electrical terminals.	6.5.3	[Yes / NA ?]
38	Support of LPG supply lines in order to prevent damage from chafing or vibration: - copper or stainless steel piping, spaced at intervals not exceeding 0,5 m; - for hoses, the intervals shall not exceed 1 m.	6.5.4	[Yes ?]
39	LPG supply line fixing devices are corrosion-resistant, non-abrasive, designed to prevent cutting or other damage to the lines and galvanically compatible with the supply line material. In the case of conduit it shall be vented and non-metallic. All joints shall have at least one fixing device per line no more than 150 mm away from the joint.	6.5.4	[Yes ?]
40	No undue stress is created at the fittings at joints and connections.	6.5.5	[Yes ?]
41	Penetrations through watertight bulkheads maintain watertight integrity.	6.5.6	[Yes / NA ?]
42	Line is protected from abrasion at through-bulkhead or wall penetrations.	6.5.7	[Yes / NA ?]
43	A readily accessible manually operated main shut off valve is provided in the high pressure side. This may be the cylinder valve.	6.6.1	[Yes ?]
44	Dual cylinder system is provided with an automatic or manual change over device (selector valve), with non-return valves fitted, in addition to each cylinder shut-off valve, to prevent the escape of gas when either cylinder is disconnected.	6.6.2	[Yes / NA ?]
45	A shut-off valve is installed in the low pressure supply line to each appliance. This may be a solenoid valve located within the cylinder locker or cylinder housing on the high or low pressure side of the pressure regulation device, operable from the vicinity of the appliance. Solenoid valves shall be closed in cases of lack of tension, i.e. loss of electrical actuating energy.	6.6.3	[Yes ?]
46	Each shut-off valve is in vicinity of the appliance and operable without reaching over the top of open flames.	6.6.3	[Yes ?]
47	Identification of open/closed position of shut-off valves are clearly identified.	6.6.4	[Yes ?]
48	Label: Identification of controlled appliance at shut-off valve that is placed away from the appliance. Affixed: At shut-off valve.	6.6.5	[Yes / NA ?]
49	Label: Location of a shut-off valve for an appliance if directly visible. Affixed: At the appliance.	6.6.5	[Yes / NA ?]
50	Taper plug valves are only used in low pressure side and are spring loaded.	6.6.6	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



51	Shut off valves are located to avoid inadvertent or accidental operation.	6.6.7	[Yes ?]
52	All unattended appliances are of the room sealant type with air intake ducting and flues for outgoing combustion products to outside the craft.	7.4	[Yes / NA ?]
53	All unattended appliances shall have a combustion system in which either: - incoming combustion air passes through sealed ductwork connected to the enclosed combustion chamber and terminating outside the craft, including any areas that can be enclosed by canopies, or - mechanisms are incorporated in the appliance to prevent back drafting from the exhaust and oxygen depletion in interior spaces.	7.4	[Yes / NA ?]
54	Label: Type of LPG (e.g. "Butan", "Propan") and notice "see owner's manual". Affixed: At the appliance	7.5	[Yes ?]
55	Warning label: Permanent, legible "DANGER — Avoid asphyxiation. Provide ventilation when the cooking appliance is in use. Do not use for space heating". Affixed: at in a conspicuous position on or adjacent to the cooking appliance. Size: Character height 4 mm Lanugage: Acceptable in the country of intended use.	7.6	[Yes / NA ?]
56	The exposed hot working surfaces of space heaters and water heaters are located to prevent risk of injury.	7.8	[Yes / NA ?]
57	Manufacturers instructions are provided preventing overheating of surfaces and allowing inspection/servicing.	7.9	[Yes ?]
58	For monohull sailing craft: Sliding of cooking utensils across the stove is prevented up to 15° pitch and 30° roll.	7.10	[Yes / NA ?]
59	For monohull engine driven and multihull sailing craft: Sliding of cooking utensils across the stove is prevented for 15° pitch and roll.	7.10	[Yes / NA ?]
60	Cylinders, regulators and safety devices are secured for marine environment.	8.1	[Yes ?]
61	Cylinders, regulators and safety devices are installed in lockers or housings.	8.1	[Yes ?]
62	Cylinders, pressure regulators, regulation devices and safety devices located below decks or in cockpits shall be mounted in cylinder lockers.	8.1	[Yes / NA ?]
63	Craft design and openings of cylinder lockers and cylinder housings shall be such that escaping vapours can only flow to the outside of the craft.	8.2	[Yes ?]
64	Cylinder lockers inside enclosed cockpits are only be accessible from the top. In case of a cockpit with open transoms it may also be accessible from the side.	8.3	[Yes / NA ?]
65	A cylinder locker shall be vented at the bottom by a drain with not less than 19 mm internal diameter; flanges or welded joints 30 mm above the lowest point of the locker are accepted.	8.3	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



66	The locker drain runs outboard without sumps which can retain water.	8.3	[Yes / NA ?]
67	The locker drain runs outboard with outlet lower than locker bottom, not less than 75 mm above waterline at fully loaded condition.	8.3	[Yes / NA ?]
68	All hoses and metal piping penetrating the locker wall are sealed vapour tight.	8.4	[Yes / NA ?]
69	Locker drains and housing vents are located at least 500 mm away from any opening to the interior of the craft.	8.5	[Yes / NA ?]
70	No store for loose storage or components is provided in the locker.	8.6	[Yes ?]
71	Cylinders, valves and pressure regulators are readily accessible and secured rigidly allowing only withdrawal of gas in vapour condition.	8.7	[Yes ?]
72	All electrical devices in cylinder lockers, housings or compartments comply with ISO 8846 for ignition protection.	11	[Yes / NA ?]
73	Flues are routed and sized to ensure complete discharge outside craft, including areas that maybe enclosed by canopies and as not to be obstructed by water.	13.2	[Yes / NA ?]
74	The flue and air-intake duct system is continuous and vapour tight from the appliance to its terminal outside the craft.	13.3	[Yes / NA ?]
75	Dampers (shut-off valves) are not used in the flue system.	13.4	[Yes / NA ?]
76	The entire flue system is accessible for inspection.	13.5	[Yes / NA ?]
77	Flue terminals for exhaust discharge are not within 500 mm of a ventilator, opening port, window, refuelling fitting or fuel tank vent.	13.6	[Yes / NA ?]
78	Flue terminals are constructed with guard to prevent damage and injury by accidental contact with hot surfaces.	13.7	[Yes / NA ?]
79	If cooking appliances with integral LPG cartridges, capacity of 225 g or less.	Annex D	[Yes / NA ?]
80	Cartridge has a self-closing device to enable its removal for storage when not in use.	D.2	[Yes / NA ?]
81	Operating controls shall be readily accessible, and located to minimize possible injury from burners or elements when being used.	D.4	[Yes / NA ?]
82	Burner controls shall be equipped or designed to require two-stage operation when going from the "off" to "on" position to prevent unintentional or accidental opening of valves during handling and storage.		[Yes / NA ?]
83	Cooking appliances in use shall have a positive means of mechanical retention and be secured in a location designated by the boat manufacturer.	D.7	[Yes / NA ?]
84	Means shall be provided on or adjacent to stove top cooking surfaces to prevent both deep and shallow cooking pans from sliding across or off the stove during craft motion; see also 7.9.	D.7	[Yes / NA ?]
85	Alternatively, guidance shall be provided to use the cooking appliance only when safe to do so.	D.7	[Yes / NA ?]

Applicant:	
Boat Model Name:	



86	Reserve or empty cartridges are not stored inside the boat but only on the boat exterior, protected from the weather and mechanical damage, and where escaping vapours can only flow towards the outside.	D.8	[Yes / NA ?]
87	Printed instructions are provided with each cooking appliance.	D.9	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check	Clause	Requirements	Checked?
88	The system and all components withstand storage from -30 °C to +60 °C.	4.1	[Yes ?]	
89	Regulating system is designed to provide a fixed nominal pressure suitable for the consuming appliances, but not more than 5 kPa.	5.1	[Yes ?]	
90	LPG pressure reduction system is a pressure relief governor, a pressure relief valve or an automatic safety shut off valve.	5.2	[Yes ?]	
91	The pressure regulator and its fastener are made of corrosion-resistant metallic material or have an effective coating against external corrosion.	5.7	[Yes ?]	
92	The piping and hose are sized not to drop working pressure below required operating pressure at any appliance below that required by the appliance manufacturer when all appliances are operating simultaneously.	6.1.3	[Yes ?]	
93	The minimum wall thickness for piping with outside diameter ≤ 12 mm is 0,6 mm, and 0,9 mm for diameters > 12 mm.	6.2.1	[Yes / NA ?]	
94	Semi-rigid, pliable corrugated stainless steel tubing (PCT) shall conform to EN 15266, or equivalent.	6.2.1	[Yes / NA ?]	
95	Fittings for connections and joints in piping shall be metallic and of a proper type in accordance with the standard.	6.2.4	[Yes ?]	
96	Jointing compound for flared fittings or flared rings and gas tightness by compression of ductile joints (except connections in accordance with EN 16129:2013, Annex M) shall not be used.	6.2.4	[Yes / NA ?]	
97	Materials and components of hose assemblies are designed to be suitable for LPG and to withstand the stresses and exposures found in the marine environment.	6.3.1	[Yes ?]	
98	Permanently attached end fittings of hoses are swaged sleeve or sleeve and threaded insert.	6.3.3	[Yes ?]	
99	The melting point of materials at welded or brazed connections is below 450 °C.	6.4.1	[Yes / NA ?]	
100	Fittings through which LPG passes are compatible with LPG and galvanically compatible with the metallic piping to which they are connected.	6.4.2	[Yes ?]	
101	Hose clamps, if used to secure cylinder locker vent hoses, are corrosion resistant and reusable.	6.4.3	[Yes / NA ?]	
102	End connection fittings are corrosion resistant.	6.4.4	[Yes ?]	
103	Where cutting ring fittings are used in conjunction with copper piping, a brass insertion sleeve and brass cutting ring shall be fitted. All components match to avoid galvanic corrosion.	6.4.5	[Yes / NA ?]	
104	Threaded gas tight connections are of the taper pipe thread type conforming to ISO 7-1, or fittings conforming to EN 1949.	6.5.8	[Yes / NA ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



105	For threaded gas tight connections sealants are used conforming to EN 751-2 or EN 751-3.	6.5.8	[Yes / NA ?]
106	Only appliances for use in marine environment are used in the LPG system.	7.1	[Yes ?]
107	The appliances are fitted in accordance with the manufacturers instructions.	7.1	[Yes ?]
108	Each appliance is securely fixed as to eliminate undue stress to piping, hoses and fittings.	7.2	[Yes ?]
109	Each appliance has a flame supervision devices for each burner and/or pilot lights.	7.3	[Yes / NA ?]
110	Needle valves are used as shut-off valves in low pressure side of system and gate valves are not used as shut-off valves.	6.6.8	[Yes ?]
111	If the incoming air is not delivered through sealed ductwork terminating outside the craft, and if the appliance is installed in interior spaces, ventilation shall be provided that allows outside air to pass through fixed openings (Annex B).	7.4	[Yes / NA ?]
112	Ventilation is provided in accommodation spaces where open flame unflued appliances are used or to which compartments containing such appliances are connected by open passageways. Minimum sizing and locations of ventilation openings complies with Annex B.	9	[Yes / NA ?]
113	Prior to charging the system with LPG, the supply line and fittings have been tested with air; test pressure three times the nominal pressure but not more than 15 kPa.	10.	[Yes ?]
114	No pressure drop was indicated after a period of 10 min; in case that any leakage has been indicated by a drop in pressure, the entire LPG system has been checked.	10.	[Yes ?]
115	If the pressure regulating device is not rigidly connected to, and supported by, the cylinder connection, high pressure side components are checked for leakage.	10.	[Yes / NA ?]
116	Flue components are installed with the manufacturer's instructions.	13.1	[Yes / NA ?]
117	The minimum effective area of ventilation is given.	Annex B	[Yes ?]
118	Cooking appliances is suitable for use with LPG in a marine environment and installed in accordance with the manufacturer's instructions.	D.1	[Yes / NA ?]
119	ISO 9094 is meet regarding the proximity and flammability of materials.	D.1	[Yes / NA ?]
120	The cooking appliance is complies with the design specifications.	D.3.	[Yes / NA ?]
121	Appliance has a continuously burning pilot light.	D.6	[Yes / NA ?]
Instructions/Warnings to be included in the owner's manual			
122	WARNING — Never leave craft unattended when open flame LPG consuming appliances are in use.	Annex C	[Yes ?]
123	WARNING — Do not smoke or use open flame when replacing LPG cylinders. Close cylinders before disconnecting for replacement.ylinder valves on empty cylinders.	Annex C	[Yes ?]
124	WARNING — Never use a flame to check for leaks.	Annex C	[Yes ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



125	WARNING — Fuel burning open flame appliances consume cabin oxygen and release products of combustion into the craft; Do not use the stove or oven for space heating. Ventilation is required when appliances are in use. Open designated vent and openings while appliances are in use. Never obstruct ventilation openings. The ventilation requirements have been calculated to suit the LPG appliances as installed. Additional ventilation might be required if other appliances are operated simultaneously.	Annex C	[Yes ?]
126	CAUTION — Do not use solutions containing ammonia for manual leak testing.	Annex C	[Yes ?]
127	Warning label: DANGER — Avoid asphyxiation. Provide ventilation when the cooking appliance is in use. Do not use for space heating.	Annex C	[Yes / NA ?]
128	WARNING — Do not modify the craft's LPG system. Installation, alterations and maintenance shall be performed by a competent person. Have the system inspected at regular intervals or as required by national requirements.	Annex C	[Yes ?]
129	WARNING — If a leak is detected shut off the main LPG supply valve and do not use LPG appliances.	Annex C	[Yes ?]
130	General <ul style="list-style-type: none"> — Operating pressure of the LPG system; — Location and type of ventilation openings (e.g. closable ventilators such as windows, hatches, mushroom and dorade ventilators) in accommodation spaces containing LPG appliances; — Recommendation not to obstruct access to LPG system components in any way; — If a second LPG system is fitted, the owner's manual shall include information on which appliances are connected to each LPG system and the operating pressure of each LPG system; — Regular inspections of hoses and flue pipes in the LPG system, at least annually, and replacement if any deterioration is found; — Valves on empty cylinders shall be kept closed and disconnected. Protective covers, caps or plugs shall be kept in place. Reserve or empty cylinders shall be stored in LPG cylinder lockers or housings which are vented to the outside and intended for that purpose or on the boat exterior, protected from the weather and mechanical damage, and where escaping vapours can only flow overboard; — LPG cylinder housings or cylinder lockers shall not be used for storage of any other equipment. 	Annex C	[Yes ?]

Applicant:	
Boat Model Name:	



131	Operation of the LPG system	Annex C	[Yes ?]
	<ul style="list-style-type: none"> — LPG supply line valves and cylinder valves shall be closed when appliances are not in use, before refuelling and immediately in an emergency. — Appliance valves shall be closed before opening cylinder valve. — The user shall be informed on the need for ventilation when operating appliances that consume cabin oxygen. This information shall also be provided by the safety notice, see C.4. — If the stove is not gimballed, it shall not be used when high angles of rolling or sustained angles of heel are likely. 		
132	The owner's manual instructs the operator to remove and to replace cartridges in the open air and away from sources of ignition.	D.2	[Yes ?]
133	LPG system check	Annex C	[Yes ?]
	<p>The LPG system shall be checked for leakage before each use by means of the following:</p> <p>a) With with a gauge fitted: close appliance valve, open LPG cylinder valve, allow indicated gauge pressure to stabilize, close LPG cylinder valve, observe pressure gauge reading for 3 min, pressure gauge reading should remain constant if no leak in the LPG system is present, or</p> <p>The manual shall specify that the gauge does not provide an indication of liquid LPG remaining in the cylinder, only its vapour pressure, which is a constant at any given temperature.</p> <p>b) with a bubble leak detector fitted: operate as per manufacturer's instructions.</p> <p>If LPG leakage is detected or suspected, the following action shall be taken immediately:</p> <p>a) Shut off the LPG supply at the main supply valve(s);</p> <p>b) Extinguish naked flames and other ignition sources (heaters, cooking appliances, pilot lights etc.);</p> <p>c) Do not operate electric switches;</p> <p>d) Evacuate the area if possible.</p> <p>Warning — Do not use an installation that has leaked until it has been inspected and repaired by a competent person.</p> <p>The owner's manual shall include a clarification that the above user tests do not replace a LPG system check by a competent person and a warning not to use a flame to check for leaks. See example safety notices as provided in C.4.</p>		

Comments:

CHECKLIST**SMALL CRAFT - OWNER'S MANUAL****Ref.: EN ISO 10240:2005/A1:2015 (ISO 10240:2005/A1:2015) [Note: not harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 The general introduction as per Annex A is provided.	Annex A	[Yes ?]	
2 Safety label provided: DANGER -Denotes that an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken.	3	[Yes ?]	
3 Safety label provided: WARNING -Denotes that a hazard exists which can result in injury or death if proper precautions are not taken.	3	[Yes ?]	
4 Safety label provided: CAUTION -Denotes a reminder of safety practices or directs attention to unsafe practices which could result in personal injury or damage to the craft or components or to the environment.	3	[Yes ?]	
5 Owner's Manual delivered in hardcopy.	4.2	[Yes ?]	
6 Owner's Manual in language of the country of intended use.	4.2	[Yes ?]	
7 If more than 4 pages, the Owner's Manual has an index.	4.2	[Yes / NA ?]	
8 All symbols used are in accordance with ISO 8999 and ISO 11192.	4.2	[Yes ?]	
9 SI units shall be used in accordance with ISO 1000; other units in brackets.	4.3	[Yes ?]	
10 Introductory paragraph informing the owner about his responsibility.	5.2	[Yes ?]	
11 Name of craft manufacturer, company or person responsible for putting craft on the market.	5.3	[Yes ?]	
12 Name of the model or type.	5.3	[Yes ?]	
13 Explanation of craft design category:			
14 Category A: This craft is designed to operate in winds that may exceed wind force 8 (Beaufort scale) and in significant wave heights of 4 m and above, and is largely self-sufficient. Abnormal conditions such as hurricanes are excluded. Such conditions may be encountered on extended voyages, for example across oceans, or inshore when unsheltered from the wind and waves for several hundred nautical miles.	5.3	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



15	Category B: This craft is designed to operate in winds up to Beaufort force 8 and the associated wave heights (significant wave height up to 4 m). Such conditions may be encountered on offshore voyages of sufficient length, or on coastal waters when unsheltered from the wind and waves for several dozens of nautical miles. These conditions may also be experienced on inland seas of sufficient size for the wave height to be generated.	5.3	[Yes / NA ?]
16	Category C: This craft is designed to operate in winds up to Beaufort force 6 and the associated wave heights (significant wave height up to 2 m). Such conditions may be encountered in exposed inland waters, in estuaries, and in coastal waters in moderate weather conditions.	5.3	[Yes / NA ?]
17	Category D: This craft is designed to operate in winds up to Beaufort force 4 and the associated wave heights (occasional maximum waves of 0,5 m height). Such conditions may be encountered in sheltered inland waters, and in coastal waters in fine weather.	5.3	[Yes / NA ?]
18	If relevant: Explanation of significant wave height.	5.3	[Yes / NA ?]
19	Mass of craft in light condition (kg). Note for craft with outboard engine: this mass includes the mass of the heaviest recommended outboard engine.	5.3	[Yes ?]
20	Maximum recommended load and reference to chapter where all weights are listed (see 5.5).	5.3	[Yes ?]
21	Mass of craft in fully loaded condition (kg).	5.3	[Yes ?]
22	Main dimensions of the craft.	5.3	[Yes ?]
23	Drafts (in light craft condition and in the fully loaded condition).	5.3	[Yes ?]
24	Type of main propulsion.	5.3	[Yes ?]
25	If sailing boat: basic information on sail and rigging.	5.3	[Yes / NA ?]
26	Nominal fixed fuel tank(s) capacity (litres), with a statement mentioning that all of its capacity may not be usable according to trim and loading and that a 20 % reserve should be kept, type of fuel and position of filling point(s) and draining point (if fitted).	5.3	[Yes / NA ?]
27	Fixed fresh water tank(s) capacity (litres), with a statement mentioning that all of its capacity may not be usable according to trim and loading, and position of filling point(s) and draining point (if fitted).	5.3	[Yes / NA ?]
28	Fixed holding tank(s) capacity (litres), and position of through hull or deck fitting(s) and draining point (if fitted).	5.3	[Yes / NA ?]
29	Fixed oil tank(s) capacity (litres), clean and used, and position of filling and emptying point(s).	5.3	[Yes / NA ?]
30	Statement: "Builder's plate — Part of the information is given on the builder's plate affixed on the craft. A full explanation of this information is given in the relevant sections of this manual."	5.3	[Yes ?]
31	The maximum recommended number of persons as per to ISO 14946 and ISO 12217 is stated.	5.4	[Yes ?]

Applicant:	
Boat Model Name:	



32	WARNING - Do not exceed the maximum recommended number of persons. Regardless of the number of persons on board, the total weight of persons and equipment must never exceed the maximum recommended load. Always use seats/seating spaces provided.	5.4	[Yes ?]
33	Information of all weights of the maximum recommended load.	5.5	[Yes ?]
34	WARNING - When loading the craft, never exceed the maximum recommended load. Always load the craft carefully and distribute loads appropriately to maintain design trim (approximately level). Avoid placing heavy weights high up.	5.5	[Yes ?]
35	Maximum recommended engine power (kW) is provided.	5.6	[Yes ?]
36	Maximum recommended engine mass is provided if relevant.	5.6	[Yes / NA ?]
37	Location of through-hull fittings.	5.7.1	[Yes / NA ?]
38	WARNING - Keep any opening in the hull closed when not needed for operation to minimize the risk of flooding.	5.7.1	[Yes / NA ?]
39	Bilge pumps and bailing: -routine survey and maintenance instructions; -if only a bucket or bailer is required: It is the responsibility of the owner/operator to have at least one bucket/bailer on board, secured against loss.	5.7.2	[Yes ?]
40	Bilge pumps and bailing; if boat has no flotation: WARNING - the bilge pumping system is not designed for damage control.	5.7.2	[Yes / NA ?]
41	WARNING - "safety precaution - check the function of all bilge pumps at regular intervals. Clear pump inlets from debris. If seacocks are fitted in the fore and aft peak bulkheads, they shall be kept closed and shall only be opened to let water drain into the main bilges".	5.7.2	[Yes / NA ?]
42	ISO 12217-1/2/3: Opening appliances located in the topsides and comply with ISO 12216 are referenced as watertight closure to be kept shut when underway.	5.7.3	[Yes / NA ?]
43	12217-1/3: If some areas are excluded from the "crew area" or limiting the number of people on any given level, it is indicated in the owner's manual.	5.7.3	[Yes / NA ?]
44	12217-1/3: If a heavier mass is used for the level flotation test of an outboard engine, it is recorded in the owner's manual.	5.7.3	[Yes / NA ?]
45	12217-1: maximum load used for the stability assessment including: -maximum recommended load [kg]; -fuel, fresh water, other fluids of fixed tanks [kg]; -maximum load.	5.7.3	[Yes / NA ?]
46	12217-1/2/3 "This boat has been assessed as capable of supporting the crew even when swamped."	5.7.3	[Yes ?]
47	12217-1/2/3: "The following openings are marked KEEP SHUT WHEN UNDER WAY, and care shall be taken to observe this warning. "under way" has the meaning "not at anchor, or made fast to the shore or aground".	5.7.3	[Yes / NA ?]
48	12217-1/3: IMPORTANT - FAILURE to observe the limitations may result in the boat capsizing	5.7.3	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



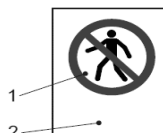
49 12217-1: If crew areas restricted by offset-load test: 5.7.3 [Yes / NA ?]

For stability reasons, the following parts of the boat should only be accessed by people in exceptional circumstances: (insert list of relevant locations). Such locations are indicated by the safety sign.

Key

1 sign P004 "No thoroughfare" from ISO 7010

2 supplementary text to read "No access"

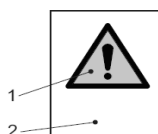


50 12217-1/3: If crew areas restricted by offset-load test: For stability reasons, the following parts of the boat should only be accessed by more than the indicated number of persons in exceptional circumstances: (insert list of relevant locations, e.g. deck, coachroof, flybridge, and limit on each location). Such locations are indicated by the safety sign and/or a sign at each control position.

Key

1 sign W001 "General warning" from ISO 7010

2 supplementary text to read "Max N persons on (location)" where N is the relevant number and (location): expressed for example as "flybridge" or "coachroof"



51 12217-2: minimum operating condition with any centerboard or keel in lowered position when an instruction is given in the owner's manual. 5.7.3 [Yes / NA ?]

52 12217-2; Maximum load. Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual. 5.7.3 [Yes / NA ?]

53 12217-2/3: Knockdown recovery test: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual. 5.7.3 [Yes / NA ?]

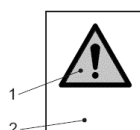
54 12217-2/3: Wind stiffness test: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual. 5.7.3 [Yes / NA ?]

55 12217-2/3: The owner's manual shall clearly state the apparent wind speed at which reefing becomes necessary (given in either knots or metres per second), and the possible consequences of failing to reef at the appropriate time. 5.7.3 [Yes / NA ?]

56 12217-2/3: IMPORTANT - If not sailed with care, the boat may swamp or capsize unless the sail area is adjusted to suit the prevailing wind conditions and the main sheet is not belayed. 5.7.3 [Yes / NA ?]

57 12217-2/3: Capsize-recovery test information: 5.7.3 [Yes / NA ?]
 -the likelihood of capsize when in normal use;
 -the righting technique which is most successful;
 -the minimum necessary crew mass [kg].

58 12217-2/3: Safety signs for capsize recoverable boats where there is no cabin: 5.7.3 [Yes / NA ?]



Key

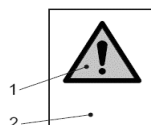
1 Sign W001 "General warning" from ISO 7010

2 Supplementary text to read "Risk of capsize!"

Applicant:	
Boat Model Name:	



- 59 12217-2/3: Safety signs for capsized recoverable boats where boat is fitted with a cabin: 5.7.3 [Yes / NA ?]



Key

- 1 Sign W001 "General warning" from ISO 7010
2 Supplementary text to read "Risk of capsizing! Persons in cabin may be trapped!"

- 60 12217-2: Where a break-out panel is used, the method is explained in the owner's manual. 5.7.3 [Yes / NA ?]

- 61 12217-2: Vertical center of gravity: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual. 5.7.3 [Yes / NA ?]

- 62 12217-2: **IMPORTANT** - The water ballast tanks located are intended to be completely full whenever the boat is afloat. 5.7.3 [Yes / NA ?]

- 63 12217-2/3: **IMPORTANT**: This boat is only intended to be sailed with the centreboard or drop keel locked in the lowered position (where the stability has only been assessed in this condition). 5.7.3 [Yes / NA ?]

- 64 12217-2: "The ballast tanks located may be filled with variable amounts of liquid to suit the sailing conditions. When using this ballast, the boat still satisfies the requirements for its design category, even with the ballast positioned to leeward". 5.7.3 [Yes / NA ?]

- 65 12217-2: "The position of movable solid ballast may be varied to suit the sailing conditions. When using this ballast, the boat still satisfies the requirements for its design category, even when the ballast is deployed to leeward". 5.7.3 [Yes / NA ?]

- 66 12217-2: This boat has been assessed using the Stability Index (STIX), which is a measure of the overall stability safety and considers the effects of boat length, displacement, hull proportions, stability characteristics and resistance to downflooding. This assessment has yielded the following data:
-STIX (minimum operating condition and loaded arrival condition);
-angle of vanishing stability (minimum operating condition and loaded arrival condition). 5.7.3 [Yes / NA ?]




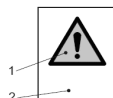
- 67 12217-2: Table 2, option 5: This boat may swamp or capsize if excessive sail is carried. It may sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Particular care should be taken in gusty wind conditions. 5.7.3 [Yes / NA ?]

- 68 12217-2/3: Table 2, option 6: This boat may swamp or capsize if excessive sail is carried. It is designed not to sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Particular care should be taken in gusty wind conditions 5.7.3 [Yes / NA ?]

- 69 12217-2: This boat may capsize and remain inverted if excessive sail is carried. It is designed not to sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Other stability hazards are ...(see 7.5 and insert as appropriate). 5.7.3 [Yes / NA ?]

Applicant:	
Boat Model Name:	



70	12217-2/3: Reefing safety sign for fully enclosed boats:	5.7.3	[Yes / NA ?]
	 <p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Reef sails before water enters, or boat will flood and may not recover"</p>		
71	12217-2/3: Reefing safety sign for other boats:	5.7.3	[Yes / NA ?]
	 <p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Reef sails at <i>N</i> knots (or m/s) apparent wind speed", where <i>N</i> is the relevant wind speed</p>		
72	12217-2: Stability data table using ISO 12217-2 Clause 6.5.2 or Clause 7 is provided.	5.7.3	[Yes / NA ?]
73	12217-2: Wind speed limit for stability data for each sail combination and load condition	5.7.3	[Yes / NA ?]
74	12217-3: Risk of capsizing or swamping sign:	5.7.3	[Yes / NA ?]
	 <p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Risk of capsizing or swamping"</p>		
75	12217-3: This boat will capsize or swamp if a load of 85 kg is placed on the gunwale. Users should not sit or stand on the gunwale:	5.7.3	[Yes / NA ?]
	 <p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Do not sit on gunwale"</p>		
76	12217-3: Label: "Do not puncture air tank/container/bag"	5.7.3	[Yes / NA ?]
77	Instructions for propulsion engines, generator sets, etc.: -ensure flow of cooling water; -ensure that ventilation ducts are free; -precautions when refuelling; -prevention of damage to fuel lines; -avoidance of contact of flammable materials with hot engine parts; -advise not to store equipment containing petrol in compartments not designed for this purpose.	5.8.1	[Yes / NA ?]
78	Instructions for gas systems: -operating of appliances; -injection of the system; -gas cylinders shall only be stored in specified housing/lockers; -location of gas housing/lockers; -procedure of changing gas cylinders; -precautions to avoid contact of materials with hot areas; -advise to shut of the gas valve in the event of an LPG leak or fire; -advise to ensure proper ventilation to prevent asphyxiation.	5.8.2	[Yes / NA ?]

Applicant:	
Boat Model Name:	



79	Instructions for other fuel-burning systems with relevant informations, if applicable: - operating instructions for appliances; - precautions when refuelling appliances; - instructions for safe storage of fuel containers; - precautions to avoid contact of materials with hot areas or flames; - advise to ensure proper ventilation to prevent asphyxiation.	5.8.3	[Yes / NA ?]
80	Electrical systems: information and instruction for safe operation as relevant: - operation and position of battery selector switches; - description of switch panel(s); - procedure of changing fuses, type, capacity and identification in diagram; - not to obstruct battery ventilation ducts; - precautions when recharging and disconnecting/reconnecting battery; - precautions when connecting/disconnecting shore supply; - for shore supply: Information about the risk of swimming if craft is connected to the shore power.	5.9	[Yes / NA ?]
81	WARNING: Do not work on an energized AC system.	5.9	[Yes / NA ?]
82	Motor craft: information on safe handling as relevant: - avoid sudden manoeuvres at speed; - Do not sit in the bow cockpit when the boat is moving fast; - Always use the dead-man switch, if provided.	5.10.1	[Yes / NA ?]
83	Engine starting: instruction for safe operation is provided.	5.10.2	[Yes / NA ?]
84	Emergency steering: Location and operation are indicated.	5.10.3	[Yes / NA ?]
85	If liferaft stowage area is needed the location is identified.	5.11.2	[Yes / NA ?]
86	Danger from moving parts of machinery: instructions to avoid moving parts of engine, shafts etc., and if relevant details concerning guards are provided.	5.11.3	[Yes / NA ?]
87	Ventilation when using combustion device: The information on risks from exhaust gases and safety labels.	5.11.4	[Yes / NA ?]
88	Ventilation when using combustion device: Instructions for mitigating CO on petrol-powered craft.	5.11.4	[Yes / NA ?]
89	Recommendations given about securing loose equipment when underway.	5.11.5	[Yes ?]
90	Information in regards to respect for environment: - Respect codes of good practise, be aware about local environment laws; - Be aware of international regulations against marine pollution (Marpol) and to respect it; -Instructions not to discharge toilets or holding tanks close to shore or in any prohibited zone, and to use harbour or marina pump-out facilities to empty the holding tank before leaving the harbour.	5.11.6	[Yes / NA ?]
91	Use of holding tanks with additional information: -note to observe local regulation on discharge; -location of discharge shutoff seacocks and methods of securing these sealed shut.	5.11.7	[Yes / NA ?]
92	Mass of the trailering condition is provided, if relevant.	5.11.9	[Yes / NA ?]

Applicant:	
Boat Model Name:	



93	Any other information relevant for the safe operation of the craft is provided.	6	[Yes ?]
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Comments:

CHECKLIST**SMALL CRAFT - OWNER'S MANUAL****Ref.: EN ISO 10240:2020 [Note: not harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 The general introduction as per Annex A is provided.	Annex A	[Yes ?]	
2 Owner's Manual delivered in hardcopy.	4.2	[Yes ?]	
3 Owner's Manual in language of the country of intended use.	4.2	[Yes ?]	
4 If more than 4 pages, the Owner's Manual has an index.	4.2	[Yes / NA ?]	
5 All symbols used are in accordance with ISO 8999 and ISO 11192.	4.2	[Yes ?]	
6 SI units shall be used in accordance with ISO 1000; other units in brackets.	4.3	[Yes ?]	
7 Introductory paragraph informing the owner about his/her responsibility.	5.2	[Yes ?]	
8 If safety labels are used, meaning explained as follows: DANGER -indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.	5.2	[Yes / NA ?]	
9 If safety labels are used, meaning explained as follows: WARNING - indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.	5.2	[Yes / NA ?]	
10 If safety labels are used, meaning explained as follows: CAUTION - indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.	5.2	[Yes / NA ?]	
11 If safety labels are used, meaning explained as follows: NOTICE - indicates information considered important, but not hazard-related, for example, relating to property damage.	5.2	[Yes / NA ?]	
12 Name of craft manufacturer, company or person responsible for putting craft on the market.	5.3	[Yes ?]	
13 Name of the model or type.	5.3	[Yes ?]	
14 Explanation of craft design category:			
15 Category A: A craft given design category A is considered to be designed to operate in winds of less than Beaufort force 10 and the associated significant wave heights.	5.3	[Yes / NA ?]	
16 Category B: A craft given design category B is considered to be designed to operate in winds of Beaufort force 8 or less and the associated significant waves heights of up to 4 m.	5.3	[Yes / NA ?]	
17 Category C: A craft given design category C is considered to be designed to operate in typical steady winds of Beaufort force 6 or less and the associated significant waves heights of up to 2 m.	5.3	[Yes / NA ?]	
18 Category D: A craft given design category D is considered to be designed to operate in typical steady winds of Beaufort force 4 or less and the associated significant waves heights of up to 0,3 m and occasional waves of 0,5 m height.	5.3	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



19	Mass of craft in light condition (kg). Note for craft with outboard engine: this mass includes the mass of the heaviest recommended outboard engine.	5.3	[Yes ?]
20	Maximum load for the builder's plate (m_{MBP}), including a note to the loading provisions (see Cl. 5.5)	5.3	[Yes ?]
21	Mass of craft in fully loaded condition (kg).	5.3	[Yes ?]
22	Main dimensions of the craft.	5.3	[Yes ?]
23	Drafts (in light craft condition and in the fully loaded condition).	5.3	[Yes ?]
24	Type of main propulsion.	5.3	[Yes ?]
25	If sailing boat: basic information on sail and rigging.	5.3	[Yes / NA ?]
26	Nominal fixed fuel tank(s) capacity (litres), with a statement mentioning that all of its capacity may not be usable according to trim and loading and that a 20 % reserve should be kept, type of fuel and position of filling point(s) and draining point (if fitted).	5.3	[Yes / NA ?]
27	Fixed fresh water tank(s) capacity (litres), with a statement mentioning that all of its capacity may not be usable according to trim and loading, and position of filling point(s) and draining point (if fitted).	5.3	[Yes / NA ?]
28	Fixed holding tank(s) capacity (litres), and position of through hull or deck fitting(s) and draining point (if fitted).	5.3	[Yes / NA ?]
29	Fixed oil tank(s) capacity (litres), clean and used, and position of filling and emptying point(s).	5.3	[Yes / NA ?]
30	Ballast tanks.	5.3	[Yes / NA ?]
31	Statement: "Builder's plate — Part of the information is given on the builder's plate affixed on the craft. A full explanation of this information is given in the relevant sections of this manual."	5.3	[Yes ?]
32	The maximum recommended number of persons as per to ISO 14946 and ISO 12217 is stated.	5.4	[Yes ?]
33	WARNING - Do not exceed the maximum recommended number of persons. Regardless of the number of persons on board, the total weight of persons and equipment must never exceed the maximum recommended load. Always use seats/seating spaces provided.	5.4	[Yes ?]
34	Information of all weights of the maximum recommended load for builder's plate.	5.5	[Yes ?]
35	WARNING - When loading the craft, never exceed the maximum recommended load. Always load the craft carefully and distribute loads appropriately to maintain design trim (approximately level). Avoid placing heavy weights high up.	5.5	[Yes ?]
36	Maximum recommended engine power (kW) is provided.	5.6	[Yes / NA ?]
37	Maximum recommended engine mass is provided if relevant.	5.6	[Yes / NA ?]
38	Routine servicing and maintenance instructions of the engine(s).	5.6	[Yes / NA ?]
39	Maintenance of the exhaust system.	5.6	[Yes / NA ?]
40	Location of through-hull fittings.	5.7.2	[Yes / NA ?]
41	Bilge pumps and bailing	5.7.3	
42	Location of each bilge pump by a plan, sketch, layout grid or other means and the capacity rated by the pump manufacturer.	5.7.3	[Yes / NA ?]
43	If relevant, operation instructions	5.7.3	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

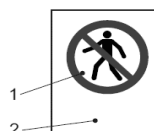
Applicant:	
Boat Model Name:	



44	Bilge pumps and bailing: If only a bucket or bailer is required: It is the responsibility of the owner/operator to have at least one bucket/bailer on board, secured against loss.	5.7.3	[Yes / NA ?]
45	If only a bucket or bailer is required: It is the responsibility of the owner/operator to have at least one bucket/bailer on board, secured against loss.	5.7.3	[Yes / NA ?]
46	If boat has no upright and level flotation: WARNING - The bilge pumping system is not designed for damage control.	5.7.3	[Yes / NA ?]
47	NOTE - check pump inlets for bulkheads, then water drain into the main bilges. Key 1 sign P004 "No thoroughfare" from ISO 7010 2 supplementary text to read "No access"	lar intervals. Clear fore and aft peak e opened to let 5.7.3	[Yes / NA ?]
48	ISO 12217-1/2/3: Opening appliances located in the topsides and comply with ISO 12216 are referenced as watertight closure to be kept shut when underway.	5.7.4 - 5.7.6	[Yes / NA ?]
49	12217-1/3: If some areas are excluded from the "crew area" or limiting the number of people on any given level, it is indicated in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
50	12217-1/3: If a heavier mass is used for the level flotation test of an outboard engine, it is recorded in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
51	12217-1: maximum load used for the stability assessment including: -maximum recommended load [kg]; -fuel, fresh water, other fluids of fixed tanks [kg]; -maximum load.	5.7.4 - 5.7.6	[Yes / NA ?]
52	12217-1/2/3 "This boat has been assessed as capable of supporting the crew even when swamped."	5.7.4 - 5.7.6	[Yes / NA ?]
53	12217-1/2/3: "The following openings are marked KEEP SHUT WHEN UNDER WAY, and care shall be taken to observe this warning. "under way" has the meaning "not at anchor, or made fast to the shore or aground"."	5.7.4 - 5.7.6	[Yes / NA ?]
54	12217-1/3: IMPORTANT - FAILURE to observe the limitations may result in the boat capsizing	5.7.4 - 5.7.6	[Yes / NA ?]
55	12217-1: If crew areas restricted by offset-load test: For stability reasons, the following parts of the boat should only be accessed by people in exceptional circumstances: (insert list of relevant locations). Such locations are indicated by the safety sign.	5.7.4 - 5.7.6	[Yes / NA ?]

Key

- 1 sign P004 "No thoroughfare" from ISO 7010
2 supplementary text to read "No access"



Applicant:	
Boat Model Name:	

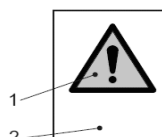


56	12217-1/3: If crew areas restricted by offset-load test: For stability reasons, the following parts of the boat should only be accessed by more than the indicated number of persons in exceptional circumstances: (insert list of relevant locations, e.g. deck, coachroof, flybridge, and limit on each location). Such locations are indicated by the safety sign and/or a sign at each control position.	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Max N persons on (location)" where N is the relevant number and (location) is expressed for example as "flybridge" or "coachroof"</p>			
57	12217-2: minimum operating condition with any centerboard or keel in lowered position when an instruction is given.	5.7.4 - 5.7.6	[Yes / NA ?]
58	12217-2: Maximum load. Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
59	12217-2/3: Knockdown recovery test: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
60	12217-2/3: Wind stiffness test: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
61	12217-2/3: The owner's manual shall clearly state the apparent wind speed at which reefing becomes necessary (given in either knots or metres per second), and the possible consequences of failing to reef at the appropriate time.	5.7.4 - 5.7.6	[Yes / NA ?]
62	12217-2/3: IMPORTANT - If not sailed with care, the boat may swamp or capsize unless the sail area is adjusted to suit the prevailing wind conditions and the main sheet is not belayed.	5.7.4 - 5.7.6	[Yes / NA ?]
63	12217-2/3: Capsize-recovery test information: -the likelihood of capsize when in normal use; -the righting technique which is most successful; -the minimum necessary crew mass [kg].	5.7.4 - 5.7.6	[Yes / NA ?]
64	12217-2/3: Safety signs for capsized recoverable boats where there is no cabin:	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 Sign W001 "General warning" from ISO 7010</p> <p>2 Supplementary text to read "Risk of capsize!"</p>			
65	12217-2/3: Safety signs for capsized recoverable boats where boat is fitted with a cabin:	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 Sign W001 "General warning" from ISO 7010</p> <p>2 Supplementary text to read "Risk of capsized! Persons in cabin may be trapped!"</p>			
66	12217-2: Where a break-out panel is used, the method is explained in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]
67	12217-2: Vertical center of gravity: Any centerboard or keel is in raised position unless it can be affixed in the lowered position and an instruction is given in the owner's manual.	5.7.4 - 5.7.6	[Yes / NA ?]

Applicant:	
Boat Model Name:	

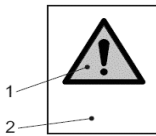

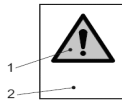


68	12217-2: IMPORTANT - The water ballast tanks located are intended to be completely full whenever the boat is afloat.	5.7.4 - 5.7.6	[Yes / NA ?]
69	12217-2/3: IMPORTANT : This boat is only intended to be sailed with the centreboard or drop keel locked in the lowered position (where the stability has only been assessed in this condition).	5.7.4 - 5.7.6	[Yes / NA ?]
70	12217-2: "The ballast tanks located may be filled with variable amounts of liquid to suit the sailing conditions. When using this ballast, the boat still satisfies the requirements for its design category, even with the ballast positioned to leeward".	5.7.4 - 5.7.6	[Yes / NA ?]
71	12217-2: "The position of movable solid ballast may be varied to suit the sailing conditions. When using this ballast, the boat still satisfies the requirements for its design category, even when the ballast is deployed to leeward".	5.7.4 - 5.7.6	[Yes / NA ?]
72	12217-2: This boat has been assessed using the Stability Index (STIX), which is a measure of the overall stability safety and considers the effects of boat length, displacement, hull proportions, stability characteristics and resistance to downflooding. This assessment has yielded the following data: -STIX (minimum operating condition and loaded arrival condition); -angle of vanishing stability (minimum operating condition and loaded arrival condition).	5.7.4 - 5.7.6	[Yes / NA ?]
73	12217-2: Table 2, option 5: This boat may swamp or capsize if excessive sail is carried. It may sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Particular care should be taken in gusty wind conditions.	5.7.4 - 5.7.6	[Yes / NA ?]
74	12217-2/3: Table 2, option 6: This boat may swamp or capsize if excessive sail is carried. It is designed not to sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Particular care should be taken in gusty wind conditions.	5.7.4 - 5.7.6	[Yes / NA ?]
75	12217-2: This boat may capsize and remain inverted if excessive sail is carried. It is designed not to sink if this occurs. The working sail plan should be reduced if the apparent wind exceeds ... knots/metres per second. Other stability hazards are ... (see 7.5 and insert as appropriate).	5.7.4 - 5.7.6	[Yes / NA ?]
76	12217-2/3: Reefing safety sign for fully enclosed boats: Key 1 sign W001 "General warning" from ISO 7010 2 supplementary text to read "Reef sails at <i>N</i> knots (or m/s) apparent wind speed", where <i>N</i> is the relevant wind speed	5.7.4 - 5.7.6	[Yes / NA ?]



Applicant:	
Boat Model Name:	



77	12217-2/3: Reefing safety sign for other boats:	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Reef sails before water enters, or boat will flood and may not recover"</p>			
			
78	12217-2: Stability data table using ISO 12217-2 Clause 6.5.2 or Clause 7 is provided.	5.7.4 - 5.7.6	[Yes / NA ?]
79	12217-2: Wind speed limit for stability data for each sail combination and load condition	5.7.4 - 5.7.6	[Yes / NA ?]
80	12217-3: Risk of capsize or swamping sign:	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Risk of capsize or swamping"</p>			
			
81	12217-3: This boat will capsize or swamp if a load of 85 kg is placed on the gunwale. Users should not sit or stand on the gunwale:	5.7.4 - 5.7.6	[Yes / NA ?]
<p>Key</p> <p>1 sign W001 "General warning" from ISO 7010</p> <p>2 supplementary text to read "Do not sit on gunwale"</p>			
			
82	Bilge water should be kept to a minimum.	5.7.4	[Yes / NA ?]
83	Stability is reduced by any weight added above the main deck.	5.7.4	[Yes / NA ?]
84	In rough weather, hatches, lockers and doorways should be closed to minimize the risk of flooding.	5.7.4	[Yes / NA ?]
85	Stability may be reduced when towing or lifting heavy weights using a davit or boom.	5.7.4	[Yes / NA ?]
86	Air tanks shall not be punctured including warning label on the boat "Do not puncture air tank/container/bag".	5.7.4	[Yes / NA ?]
87	Breaking waves are a serious stability hazard.	5.7.4	[Yes / NA ?]
88	Any change in the disposition of the masses aboard (for example, the addition of a fishing tower, a radar, a stowing mast, change of engine, etc.) may significantly affect the stability, trim and performance of the craft.	5.7.4	[Yes / NA ?]
89	Position and operation of escape hatches of sailing multihulls in the event of inversion.	5.7.6	[Yes / NA ?]
90	Instructions for the actions to be taken following a grounding of the craft.	5.7.7	[Yes / NA ?]

Applicant:	
Boat Model Name:	



91	Instructions for propulsion engines, generator sets, etc.: -ensure flow of cooling water; -ensure that ventilation ducts are free; - precautions when refuelling; -prevention of damage to fuel lines; - requirement to keep fixed ventilation openings unobstructed at all times; -avoidance of contact of flammable materials with hot engine parts; -not to store equipment containing petrol in compartments not designed for this purpose.	5.8.2	[Yes / NA ?]
92	Instructions for gas systems: -operating of appliances; -insection of the system; -gas cylinders shall only be stored in specified housing/lockers; -location of gas housing/lockers; -procedure of changing gas cylinders; -precautions to avoid contact of materials with hot areas; - advise to shut of the gas valve in the event of an LPG leak or fire; - advise to ensure proper ventilation to prevent asphyxiation.	5.8.3	[Yes / NA ?]
93	Instructions for other fuel-burning systems with relevant informations, if applicable: - operating instructions for appliances; - precautions when refuelling appliances; - instructions for safe storage of fuel containers; - precautions to avoid contact of materials with hot areas or flames; - advise to ensure proper ventilation to prevent asphyxiation.	5.8.4	[Yes / NA ?]
94	Electrical systems: information and instruction for safe operation as relevant: - operation and position of battery selector switches; - description of switch panel(s); - procedure of changing fuses, type, capacity and identification in diagram; - not to obstruct battery ventilation ducts; - precautions when recharging and disconnecting/reconnecting battery; - precautions when connecting/disconnecting shore supply; - for shore supply: Information about the risk of swimming if craft is connected to the shore power - information required for the safe operation of 3 Phase AC service, if applicable.	5.9	[Yes / NA ?]
95	WARNING: Do not work on an energized AC system.	5.9	[Yes / NA ?]
96	Motor craft: information on safe handling as relevant: - avoid sudden manoeuvres at speed; - For comfort and safety, reduce speed in rough seas; - Always use the engine cut off lanyard, if provided.	5.10.1	[Yes / NA ?]
97	Engine starting: instruction for safe operation is provided.	5.10.2	[Yes / NA ?]
98	Emergency steering: Location and operation are indicated.	5.10.3	[Yes / NA ?]
99	If liferaft stowage area is needed the location is identified.	5.11.2	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



100	Danger from moving parts of machinery: instructions to avoid moving parts of engine, shafts etc., and if relevant details concerning guards are provided.	5.11.3	[Yes / NA ?]
101	Ventilation when using combustion device: The information on risks from exhaust gases.	5.11.4	[Yes / NA ?]
102	Ventilation when using combustion device: Instructions for mitigating CO on petrol-powered craft.	5.11.4	[Yes / NA ?]
103	Recommendations given about securing loose equipment when underway.	5.11.5	[Yes ?]
104	Information in regards to respect for environment: - Respect codes of good practise, be aware about local environment laws; - Be aware of international regulations against marine pollution (Marpol) and to respect it; -Instructions not to discharge toilets or holding tanks close to shore or in any prohibited zone, and to use harbour or marina pump-out facilities to empty the holding tank before leaving the harbour.	5.11.6	[Yes ?]
105	Use of holding tanks with additional information: -note to observe local regulation on discharge; -location of discharge shutoff seacocks and methods of securing these sealed shut.	5.11.7	[Yes / NA ?]
106	Mass of the trailering condition is provided, if relevant.	5.11.9	[Yes / NA ?]
107	Instructions how to tune and maintain rigging systems	5.12	[Yes / NA ?]
108	Any other information relevant for the safe operation of the craft is provided.	6	[Yes / NA ?]

Comments:

CHECKLIST**SMALL CRAFT - HYDRAULIC STEERING SYSTEMS****Ref.: EN ISO 10592:2017 (ISO 10592:1994)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 All component parts are supported independently of the connecting tubes.	5.2	[Yes ?]	
2 Connections, fittings, oil fill openings and bleeders are accessible.	5.3	[Yes ?]	
3 Hydraulic lines supported by clips, straps or other means to prevent chafing or vibration damage.	8.1	[Yes ?]	
4 Hoses and piping protected from hot objects.	8.2	[Yes ?]	
5 Hydraulic components secured to the craft's structure.	8.3	[Yes ?]	
6 Pumps permanently marked:			
7 - number of international standard;	13.1	[Yes ?]	
8 - name/trademark of manufacturer;	13.1	[Yes ?]	
9 - type;	13.1	[Yes ?]	
10 - system max. operating pressure (pascal);	13.1	[Yes ?]	
11 - year of production.	13.1	[Yes ?]	
12 Cylinders permanently marked:	13.2		
13 - number of international standard;	13.2	[Yes ?]	
14 - name/trademark of manufacturer;	13.3	[Yes ?]	
15 - type;	13.4	[Yes ?]	
16 - cylinder max. operating pressure (pascal);	13.5	[Yes ?]	
17 - year of production.	13.6	[Yes ?]	


The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
18 Outboard motor and inboard-outboard requirements tested.	4	[Yes ?]	
19 All components are compatible to form a complete system.	5.1	[Yes ?]	
20 System withstands corrosion, pressure, vibration, shock and movement.	5.4 - 5.7	[Yes ?]	
21 System operates throughout ambient temperature range of -10 °C and +60 °C.	5.5	[Yes ?]	
22 System withstands throughout storage temperature range of -30 °C and +60 °C.	5.5	[Yes ?]	
23 Materials are suitable.	7	[Yes ?]	
24 System installed as required by manufacturer of the system.	8.1	[Yes ?]	
25 Threaded fasteners provided with locking means.	8.4	[Yes ?]	
26 Steering wheel and helm shafts fit each other.	8.5	[Yes ?]	
27 Threaded fasteners adjusted during installation locked with locking devices as required.	8.6	[Yes ?]	
28 Relief valve withstand static force in either direction of 3300 N.	9.1	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:			
Boat Model Name:			
29	System withstands a single tangential force of 450 N in either directions applied at certain places.	9.2	[Yes ?]
30	Installer's manual provided with the system.		[Yes ?]
31	Steering wheel certification number.		
32	Steering helm and cable assembly certification number(s).		

Instructions/Warnings to be included in the owner's manual

33	Operating instructions.	10	[Yes ?]
34	Filling and bleeding procedures.	10	[Yes ?]
35	In the event of failure, alternative means of operation.	10	[Yes / NA ?]
36	Maintenance procedures.	10	[Yes ?]
37	Trouble correction guidelines with warnings.	10	[Yes ?]
38	Specifications for hydraulic fluid.	10	[Yes ?]
39	System diagram of typical installation.	10	[Yes ?]
40	Part number and designation of frequent and easily replaceable components parts.	10	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - VENTILATION OF PETROL ENGINE AND/OR PETROL TANK COMPARTMENTS****Ref.: EN ISO 11105:2020 (ISO 11105:2020)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



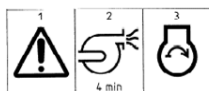
Subject to check	Clause	Requirements	Checked ?
1 Ventilation ducts are self-draining.	4.4	[Yes ?]	
2 Compartments/Spaces with petrol engines and/or fixed petrol tanks are separated from habitable spaces.	4.5	[Yes ?]	
3 Supply or exhaust ducts do not open directly into a habitable space.	4.8	[Yes ?]	
4 Ventilation ducts or openings terminate on the exterior of the craft and outside of weather enclosures.	4.9	[Yes ?]	
5 Electrical components installed in a petrol engine/tank compartment, or a connecting compartment, shall be ignition protected according to ISO 8846.	4.14	[Yes / NA ?]	
6 Each compartment containing a permanently installed engine or a petrol tank has natural ventilation.	5.1	[Yes ?]	
7 Airflow of natural ventilation is achieved by a supply opening or duct from the atmosphere and an exhaust opening or duct to the atmosphere.	5.2	[Yes ?]	
8 Exhaust openings/ducts of natural ventilation are located in the lower 1/3rd of the compartment with ist opening above the normal accumulation of bilge water.	5.2	[Yes ?]	
9 Supply openings/ducts and exhaust openings/ducts in a compartment are located above the normal accumulation of bilge water.	5.2	[Yes ?]	
10 Compartment air intake and exhaust openings of natural ventilation are separated at least 600 mm.	5.2	[Yes ?]	
11 The exhaust of a natural ventilation system is a part of the powered ventilation system.	5.4	[Yes / NA ?]	
12 Each compartment containing a permanently installed engine, is ventilated by an exhaust blower system.	6.1	[Yes / NA ?]	
13 There is at least one powered exhaust blower for each petrol engine used for propulsion.	6.2	[Yes / NA ?]	
14 If a vapor detector is installed, this shall not automatically activate the powered ventilation.	6.4	[Yes / NA ?]	
15 If a powered ventilation system is installed, each blower switch location has a visual indication to indicate that voltage is applied to the ventilation system.	6.5	[Yes / NA ?]	
16 Each blower has its own dedicated overcurrent protection.	6.7	[Yes / NA ?]	
17 Air intake openings inside a compartment are separated from exhaust openings inside the compartment by at least 380 mm.	6.10	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



- 18 **Label:** Symbol or information about the exhaust blower in a language acceptable in the country of use: 6.11 [Yes / NA ?]

WARNING — Operate blower for 4 min before starting engine.



Affixed: As close as practical to each ignition switch and in plain view of the operator.

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
19 The remaining volume in petrol tank compartments is less than 3l?	4.1	[Yes / No ?]	
20 Please indicate the net compartment volume (V) [volume that results from subtracting the volume of the permanently installed items of equipment and accessories from the total, or gross, compartment volume]:	5.3	[m ³]	
21 Based on the given net volumen, the minimum cross-sectional area (A) of intake openings/ducts shall be at least:	5.3	[mm ²]	#ZAHL!
22 Please fill in the built-in cross-sectional area:		[mm ²]	
23 The built-in cross-sectional area is larger than the calculated minimum cross-sectional area?			
24 The minimum internal cross-sectional area of ventilation ducting for petrol tank compartments are at least 1134 mm ² .	4.10	[Yes ?]	
25 The minimum internal cross-sectional area of ventilation ductin for petrol engine compartments are at least 3161 mm ² .	4.11	[Yes ?]	
26 Exterior openings for intake and exhaust are seperated to minimize recirculation.	4.12	[Yes ?]	
27 Fittings used in flexible ventilation ducts are of at least 80% of the required dimension of the flexible ventilation duct.	4.13	[Yes / NA ?]	
28 Based on the given volume, the blower system(s) exhaust air from the craft shall have a rate of at least:	6.8	[m ³ /min]	1,5
29 Please fill in the built-in blower system rating:		[m ³ /min]	
30 The built-in blower system rating is larger than the calculated?			

CHECKLIST**SMALL CRAFT, ENGINE-DRIVEN - FIELD OF VISION FROM HELM POSITION****Ref.: EN ISO 11591:2011 (ISO 11591:2011) [Note: not harmonised to RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Field of vision including sight water surface is measured with craft in fully loaded, ready for use condition during cruising, manoeuvring, docking or other extended operational modes.	4.1	[Yes ?]	
2 At least one helm station meets the vision requirements .	4.3	[Yes ?]	
3 If more than one helmstation: helmstations that do not comply are marked as required.	4.3	[Yes / NA ?]	
4 Helm stations used either standing or sitting comply in at least one position.	4.4	[Yes / NA ?]	
5 Throttle and shift controls are within 0,7 m of the high eye position.	4.5	[Yes ?]	
6 Throttle and shift controls enable low eye position at all throttle settings.	4.5	[Yes ?]	
7 Craft designed to be operated from both standing and seated positions: controls shall meet the requirements from at least the seated position.	4.5	[Yes / NA ?]	
8 Low eye position may be achieved by seat with vertical height adjustment.	4.6	[Yes / NA ?]	
9 No obstruction of forward vision by permanent and removable tops and/or other structural parts and mounted instruments in the vicinity of the helmsman.	4.7	[Yes ?]	
10 Horizontal forward vision according to 4.1.1.	5.1.1	[Yes ?]	
11 Horizontal forward vision according to 4.1.2.	5.1.2	[Yes ?]	
12 Horizontal forward vision according to 4.1.3.	5.1.3	[Yes ?]	
13 Horizontal forward vision according to 4.1.4.	5.1.4	[Yes ?]	
14 Obstructed vision distance to the water surface in the horizontal range does not exceed four times the hull length or 50 m.	5.1.5	[Yes ?]	
15 Vertical forward vision according to 4.2.1.	5.2.1	[Yes ?]	
16 Vertical forward vision according to 4.2.2.	5.2.2	[Yes ?]	
17 Horizontal astern vision for craft without permanent cabin or superstructure aft of main helm position fulfil requirements of 5.1.	6.1	[Yes / NA ?]	
18 Horizontal astern vision for craft with permanent cabin or superstructure aft of main helm position fulfil requirements of 5.2.	6.2	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
19 Field of vision including sight water surface is measured with craft in fully loaded, ready for use condition during cruising, manoeuvring, docking or other extended operational modes.	4.1	[Yes ?]	
20 Glazing has at least 70% light transmission.	4.2	[Yes / NA ?]	
21 Horizontal forward vision according to 5.1.1.	5.1.1	[Yes ?]	
22 Horizontal forward vision according to 5.1.2.	5.1.2	[Yes ?]	
23 Horizontal forward vision according to 5.1.3.	5.1.3	[Yes ?]	
24 Horizontal forward vision according to 5.1.4.	5.1.4	[Yes ?]	
25 Obstructed vision distance to the water surface in the horizontal range does not exceed four times the hull length or 50 m.	5.1.5	[Yes ?]	
26 Vertical forward vision according to 5.2.1.	5.2.1	[Yes ?]	
27 Vertical forward vision according to 5.2.2.	5.2.2	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

28 Operator vision from the helm may be obstructed by high trim angles of the craft and other factors caused by one or more of the following variable conditions:	7	[Yes ?]	
29 -propulsion unit trim angles;	7	[Yes / NA ?]	
30 -hull trim plane angles;	7	[Yes / NA ?]	
31 -loading and load distribution;	7	[Yes ?]	
32 -speed;	7	[Yes ?]	
33 -rapid acceleration;	7	[Yes ?]	
34 -transition from displacement to planning mode;	7	[Yes / NA ?]	
35 -sea conditions;	7	[Yes ?]	
36 -rain and spray;	7	[Yes ?]	
37 -darkness and fog;	7	[Yes ?]	
38 -interior lights;	7	[Yes ?]	
39 -position of tops and curtains;	7	[Yes ?]	
40 -persons or movable gear in the operator's field of vision;	7	[Yes ?]	
41 The International Regulation for Preventing Collisions at Sea (COLREG) and the rules of the road require that a proper lookout be maintained at all times and observance of right of way be respected. Observance of these rules is essential.	7	[Yes ?]	
42 For craft with more than one helm position, the main helm position shall be specified.	7	[Yes / NA ?]	
43 WARNING — Vision from this helm station is limited. Maintain a lookout as required.	7	[Yes / NA ?]	

Comments:

CHECKLIST**SMALL CRAFT - FIELD OF VISION FROM THE STEERING POSITION****Ref.: ISO 11591:2020 [Note: not harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 At least one steering position meets the vision requirements.	4.1	[Yes ?]	
2 If more than one steering position: steering positions that do not comply are marked as required.	4.1	[Yes / NA ?]	
3 Field of vision from the eye position at the steering position provided through a horizontal arc of at least 112,5° on the starboard side to 112,5° on the port side of the craft without the operator leaving the steering position.	4.2.1.1	[Yes ?]	
4 Clear vision from the eye position maintained with normal movement of the operator while maintaining control of the craft.	4.2.1.2	[Yes ?]	
5 Obstructed vertical vision distance to the water surface in the horizontal range does not exceed four times the length of hull or 50 m.	4.2.2.2	[Yes ?]	
6 Astern unobstructed visibility provided to the operator while maintaining control of the craft by: - normal movement of the operator or; - mirrors or; - other means.	4.3	[Yes ?]	
7 Human-powered craft fulfil additional requirements of 5.1.	5.1	[Yes / NA ?]	
8 If power driven craft with steering wheel or equivalent and fixed installed direction control, requirements for low eye position are met.	6.1.1	[Yes / NA ?]	
9 If power driven craft with steering wheel or equivalent fixed installed direction control, the minimum vertical field of vision from the main steering position, standing or seating while ensuring the requirements 4.2.1.	6.1.2	[Yes / NA ?]	
10 If sailing craft under sail or auxiliary power, field of vision during normal conditions of use can be maintained with normal movement of the operator in the main steering position.	7.1	[Yes / NA ?]	
11 If sailing craft under sail or auxiliary power, sails or parts thereof comply with requirement 4.	7.2	[Yes / NA ?]	
12 If sailing craft under sail or auxiliary power, craft with one or more wheels, tillers or other steering means.	7.3	[Yes / NA ?]	
13 If tillers are used, they have one or more articulating extensions.	7.3	[Yes / NA ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
14 Field of vision is measured with craft under normal condition of use.	4.1	[Yes ?]	
15 Vertical field of vision forward to the horizon and water surface determined with the craft at an attitude established by the level reference line determined with the craft in the loaded condition (mLDC) in accordance with ISO 8666.	4.2.2.1	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

16 Operator vision from the steering location might be obstructed due to one or more of the following variable conditions:	8		
17 -loading and load distribution;	8	[Yes ?]	
18 -speed;	8	[Yes ?]	
19 -sea conditions;	8	[Yes ?]	
20 -reduced visibility;	8	[Yes ?]	
21 -persons or movable gear in the operator's field of vision;	8	[Yes ?]	
22 -propulsion unit trim angles (power driven craft);	8	[Yes / NA ?]	
23 -hull trim plane angles (power driven craft);	8	[Yes / NA ?]	
24 -rapid acceleration (power driven craft);	8	[Yes / NA ?]	
25 -transition from displacement to planning mode (power driven craft);	8	[Yes / NA ?]	
26 -interior lights (power driven and sailing craft);	8	[Yes / NA ?]	
27 -position of tops and curtains (power driven and sailing craft);	8	[Yes / NA ?]	
28 For craft with more than one steering location, the main steering position shall be specified.	8	[Yes / NA ?]	
29 List of sails under which the requirements of this standard cannot be met.	8	[Yes / NA ?]	
30 WARNING — Vision from this steering location is limited. Maintain a lookout as required.	8.1/8.2/8.3	[Yes / NA ?]	

Comments:

CHECKLIST

SMALL CRAFT - DETERMINATION OF MAXIMUM PROPULSION POWER RATING USING MANOEUVRING SPEED - PART 1:

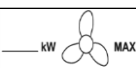
CRAFT WITH A HULL LESS THAN 8M

Ref.: EN ISO 11592-1:2016 [ISO 11562-1:2016]

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Tests passed according to requirements and test report attached to this document.	7	[Yes ?]	
2 Label: Power capacity <div style="text-align: center;">  </div> Affixed: Easily visible to the operator (outboard powered craft) or in the cockpit interior or in the engine compartment of the craft.	4.3	[Yes ?]	
3 Label: Maximum manoeuvring speed label with following information or in a language acceptable in the country of use.	7.7.4	[Yes / NA ?]	



Warning

Manoeuvrability above knots is limited
Sudden turns may cause loss of control
Reduce speed before making sharp turns in either direction
Read owner's manual

Affixed: In clear view of the operator.

Instructions/Warnings to be included in the owner's manual

4 "Maximum propulsion power rating for the craft: ... kW".	Annex B	[Yes ?]	
5 "Do not operate this craft with an engine of rated power larger than that posted on the capacity label in the craft."	Annex B	[Yes ?]	
6 "Do not operate this craft at negative propulsion unit trim settings (bow down) at high speed. Craft may lean over on side. Instability in turns may result. Use negative trim to accelerate to planing speed from displacement speed and at lower planing speeds in choppy water (applicable to craft equipped with propulsion unit power trim)."	Annex B	[Yes ?]	
7 "Do not operate at maximum speed while in congested high traffic waterways or in weather and sea conditions of reduced visibility, high winds or large waves. Reduce speed and wake as courtesy and as a safety consideration to yourself and others. Observe and obey speed limit and no wake zones."	Annex B	[Yes ?]	
8 "Observe right-of-way as defined by Rules of the Road and required by COLREG."	Annex B	[Yes ?]	
9 "Always be certain to have sufficient distance to stop or manoeuvre if required to avoid collisions."	Annex B	[Yes ?]	
10 If applicable, manoeuvring speed signs.	Annex B	[Yes ?]	

Comments:

If propulsion unit has power trim it has to be adjusted for maximum speed.	5.7	[Yes / NA?]	
Wind speed less than 10 knots and wave height less than 0,2 m.	6.1	[Yes?]	

Only operator (weight between 70 and 90 kg) on board.	6.2	[Yes?]
Maximum full throttle speed (vmax) measured [knots].	6.3	[Yes?]
Calculate $d = 6LH$, if maximum speed $v_{max} \leq 30$ knots.	7.3	[Yes / NA?]
Calculate $d = 6LH + 2(v_{max}-30)$, if maximum speed $v_{max} > 30$ knots.	7.4	[Yes / NA?]
Test course is set up as shown in Annex A (page 2).	7.4	[Yes?]
Tests passed according to requirements.	7	[Yes?]
Boat provided with permanent sign.	7.7.4	[Yes / NA?]
Owner's manual provides required information.	Annex B	[Yes?]

Comments:

CHECKLIST**SMALL CRAFT - DETERMINATION OF MAXIMUM PROPULSION POWER RATING USING MANOEUVRING SPEED - PART 2:**
CRAFT WITH A LENGTH OF HULL BETWEEN 8M AND 24M

Ref.: EN ISO 11592-2:2021

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Tests passed according to requirements and test report attached to this document.	6/7	[Yes ?]	
2 Label: Maximum recommended engine power rating label or in a language acceptable in the country of use.	11	[Yes ?]	



Affixed: Easily visible to the operator (outboard powered craft) or in the cockpit interior or in the engine compartment of the craft. Or label on the builder's plate.

3 Label: If $v_{max} < v_{tmax}$ and the craft fails to pass the test at 100% v_{max} , but passes the test at not less than 85% v_{max} :	9	[Yes / NA ?]	
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"SUDDEN, SHARP TURNS ABOVE XX knots (YY km/h) MAY CAUSE LOSS OF BOAT CONTROL, WHICH COULD RESULT IN SERIOUS INJURY OR DEATH. REDUCE SPEED BEFORE ATTEMPTING A SUDDEN SHARP TURN. READ OWNER'S MANUAL FOR ADDITIONAL INFORMATION."

General warning sign
ISO 7010 — W001

Affixed: On the craft, in a legible manner, in a location visible to the operator from the helm position(s).

4 Label: If $v_{max} \geq v_{tmax}$ and the craft passes the test at 100% v_{tmax} :	9	[Yes / NA ?]	
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"THIS CRAFT HAS ONLY BEEN MANOEUVRE-TESTED FOR SPEEDS UP TO XX knots (YY km/h). SUDDEN, SHARP TURNS ABOVE XX knots (YY km/h) MAY CAUSE LOSS OF BOAT CONTROL, WHICH COULD RESULT IN SERIOUS INJURY OR DEATH. REDUCE SPEED BEFORE ATTEMPTING A SUDDEN SHARP TURN. READ OWNER'S MANUAL FOR ADDITIONAL INFORMATION."

General warning sign
ISO 7010 — W001

Affixed: On the craft, in a legible manner, in a location visible to the operator from the helm position(s).

Instructions/Warnings to be included in the owner's manual

5	Maximum manoeuvring speed in knots or km/h.	10	
6	Required warning labels (see subject 3-4).	10	[Yes ?]
7	Maximum recommended engine power	10	[kW]
8	WARNING - Not to install engine(s) with higher power output than recommended by the manufacturer. It can cause loss of craft control and injury or death.	10	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - WATERTIGHT COCKPITS AND QUICK-DRAINING COCKPITS****Ref.: EN ISO 11812:2018 (ISO 11812:2001)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 The loading and measurement conditions are in the "fully loaded ready-for-use" condition according to ISO 8666.	5.1	[Yes ?]	
2 The measurements/calculations were made with the boat upright and at rest in smooth water.	5.1	[Yes ?]	
3 Watertight cockpits have sills in accordance with clause 8.	5.2	[Yes / NA ?]	
4 Watertight cockpits have a degree of water tightness according to clause 9.	5.2	[Yes / NA ?]	
5 Quick-draining cockpits/recesses have the bottom height HB above the waterline, in accordance with clause 6.	5.3	[Yes / NA ?]	
6 Quick-draining cockpits/recesses have draining devices according to clause 7.	5.3	[Yes / NA ?]	
7 Quick-draining cockpits/recesses have sills in accordance with clause 8.	5.3	[Yes / NA ?]	
8 Quick-draining cockpits/recesses show a degree of water tightness according to clause 9.	5.3	[Yes / NA ?]	
9 If the cockpit bottom has more than one level, annex B is used.	5.3	[Yes / NA ?]	
10 Closing appliances fitted in watertight and/or quick-draining cockpits, giving access to the interior of the boat, fulfil the requirements of ISO 12216 and clause 9.	5.4	[Yes / NA ?]	
11 The minimum cockpit bottom height $H_{B,min}$ is according to Table 2.	6.1	[Yes ?]	
12 Are surfaces up to 10% of the horizontal projection of the cockpit bottom which are not required to comply with 6.1 considered to be full of water when assessing the fully load condition.	6.2.1	[Yes / No ?]	
13 Lockers in cockpit bottoms fulfilling the requirements of 5.3 and clause 9 need not be considered full of water, but only filled with the maximum loading corresponding to the "fully loaded" condition.	6.2.2	[Yes / NA ?]	
14 Cockpit draining only by gravity.	7.1.1	[Yes ?]	
15 The requirements of 7.1.3.1 and 7.1.3.2 are fulfilled when the boat is heeled to port and starboard.	7.1.3	[Yes ?]	
16 If a sailing monohull: Drainage is provided for at least 90% of the cockpit volume at the lesser heel angle of 30°, or when the deck at side touches the water.	7.1.3.1	[Yes / NA ?]	
17 If a non-sailing boat or multihull: Drainage is provided for at least 90% of the cockpit volume at 10° heel.	7.1.3.2	[Yes / NA ?]	
18 The quick-draining cockpit has at least two drains, one port and one starboard, unless one opening enables drainage when the boat is heeled to both port and starboard, as required in 7.1.	7.3	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



19	Drains with a circular cross section have a diameter of at least 25 mm.	7.4.1	[Yes / NA ?]
20	Drains with other cross-sectional shapes have an area of at least 500 mm ² , and a minimum dimension of 20 mm.	7.4.1	[Yes / NA ?]
21	When devices that prevent loose objects from falling into the draining system are used, like grids: The requirements of Table 4 or annex D are fulfilled.	7.4.2	[Yes / NA ?]
22	Centreboard housings and other types of aperture are used as drains and are designed for this purpose.	7.5	[Yes / NA ?]
23	Drain outlets are: - above waterline, or - below waterline and fitted with seacocks, unless the drain outlet is an integral part of the hull extending from the outlet up to 0,75 H _B , min above the waterline.	7.6	[Yes / NA ?]
24	Drain piping is protected against damage from loose objects stowed in the boat and against being kicked or stepped on.	7.7	[Yes / NA ?]
25	Drain piping does not trap water and is only used for cockpit drainage.	7.7	[Yes / NA ?]
26	Watertight cockpits have no opening below the height h _c .	8.1	[Yes / NA ?]
27	The sill height is measured vertically from the cockpit bottom to the lowest point on the sill edge that allows ingress of water.	8.2.1.	[Yes ?]
28	The sill height is according to the requirements of Table 5.	8.2.2	[Yes ?]
29	Above sill level, appliances complying with ISO 12216 are used up to h _c .	8.2.3	[Yes ?]
30	Semi-fixed sills and washboards have a device maintaining them in place, when in use, at least operable from the inside.	8.2.4	[Yes / NA ?]
31	Semi-fixed sills and washboards meet the strength requirements of ISO 12216.	8.2.4	[Yes / NA ?]
32	Semi-fixed sills are only detachable with the use of tools.	8.2.4	[Yes / NA ?]
33	A provision is made for washboards to be stored in a specific location in the vicinity of the companionway.	8.2.4	[Yes / NA ?]
34	All surfaces of watertight cockpits up to h _c have water tightness degree 1.	9.1	[Yes / NA ?]
35	All surfaces of quick-draining cockpits up to h _c have water tightness degree 1.	9.2.1	[Yes / NA ?]
36	The water tightness of the closing appliances is according to Table 6 and a test report has been submitted.	9.2.1	[Yes / NA ?]
37	Hatches and appliances located in the cockpit bottom or sides up to h _{s,min} are fitted with seals and sills at least 12 mm high, or tested as installed to water tightness degree 2 according to annex E. A test report has been submitted.	9.2.1	[Yes / NA ?]
38	The lowest point of non-closable ventilation openings are at least 2h _{s,min} , or 0,3 m, whichever is the greater, above cockpit bottom, and watertight to degree 4.	8.2.2	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
39 When the boat is upright, 98% of the cockpit volume drains, excluding any recess in according with the exceptions of 6.2.	7.1.2	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



40	The draining time is determined by measurement of actual draining time and a test report has been submitted.	7.8.1	[Yes / NA ?]
41	The draining time is determined by calculation and has been submitted.	7.8.1	[Yes / NA ?]
42	The draining time is calculated according to the quick method in 7.8.4 and has been submitted.	7.8.3	[Yes / NA ?]
43	The draining time is calculated according to the thorough method in Annex C and has been submitted.	7.8.3	[Yes / NA ?]

Instructions/Warnings to be included in the owner's manual

44	The cockpit is documented with "watertight" or "quick-draining".	10	[Yes ?]
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Comments:

CHECKLIST**SMALL CRAFT - WATERTIGHT OR QUICK-DRAINING RECESSES AND COCKPITS****Ref.: ISO 11812:2020 [Note: not yet harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 All surfaces and appliances in watertight recesses have a watertightness of degree 1 up to hc.	6.1	[Yes / NA ?]	
2 All surfaces for quick draining recesses have a watertightness degree of 1.	6.2	[Yes / NA ?]	
3 Opening appliances installed on the surface of a quick-draining recess are secured in closed position by manually operated mechanical positive device.	6.2	[Yes / NA ?]	
4 Watertightness degree of appliances in quick-draining recesses are: -for the bottom and side up to hsmn - Degree 2; -between hsmn and 2hsmin - Degree 3; -above 2hsmin - Degree 4.	6.2	[Yes / NA ?]	
5 The minimum height $H_{B\ min}$ of the recess bottom above waterline for quick-draining recesses are at least: -0,15 m -Design Category A; - 0,1 m - Design Category B; - 0,075 m -Design Category C; - 0,05 m - Design Category D.	8	[Yes / NA ?]	
6 Is the craft fully enclosed?.	7.2	[Yes / No ?]	
7 Is the recess open to the sea?.	7.2	[Yes / No ?]	
8 All of the recesses are located aft of the mid hull length of the craft?.	7.2	[Yes / No ?]	
9 Companionway sills			
10 Is there a sill for any companionway opening?.	7.2	[Yes / No ?]	
11 Companionways are installed on the rear face of a superstructure?	7.2	[Yes / No ?]	
12 Companionway within the limits of a recess or located within an area extending 0,6m outside of the recess boundary?	7.1	[Yes / No ?]	
13 The lowest point of the companionway opening is higher than ((LH/17)+hsmin) above the reference waterline.	7.2	[Yes / No ?]	
14 Companionway opening appliance is permanently installed, enabling immediate closure?.	7.2	[Yes / No ?]	
15 The permanent part of semi-fixed sills is at least hsmn/2.	7.4	[Yes / NA ?]	
16 The sill height is according to the requirements of Table 5.	7.4	[Yes / NA ?]	
17 Draining			
18 Drainage only by gravity.	9.1	[Yes ?]	
19 Drainage system arranged to minimize trapping of water in the recess, in both reference and heeled waterline condition.	9.1	[Yes / NA ?]	
20 Linked recesses are treated as being separate if the total link cross section area is < 120% of the minimum drainage area of the total volume of relevant recesses.	9.1	[Yes / NA ?]	
21 At least two drains are installed, one port and one starboard.	9.2.1	[Yes / NA ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



22	Drains with a circular cross section have an internal diameter of at least 25 mm.	9.2.1	[Yes / NA ?]
23	Drains with other cross-sectional shapes have an internal cross section area of at least 500 mm ² and an internal minimum dimension of 20 mm.	9.2.1	[Yes / NA ?]
24	The drain outlets are located above the waterline.	9.2.3	[Yes / NA ?]
25	The drain outlets are located below the waterline, in maximum load condition and fitted with seacocks.	9.2.3	[Yes / NA ?]
26	All drain piping systems have a watertightness degree 1.	9.2.3	[Yes / NA ?]
27	Drain piping are protected against damage.	9.2.3	[Yes / NA ?]
28	Drain piping in the engine room are insulated from the heat or withstand 70°C.	9.2.3	[Yes / NA ?]
29	Drain piping can not trap water.	9.2.3	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
30 The loading and measurement conditions are in the "maximum load" condition according to ISO 8666.	5.1	[Yes ?]	
31 The measurements/calculations were made with the craft upright and at rest in calm water.	5.1	[Yes ?]	
32 Quick draining recesses - Single bottom recess drainage: The minimum recess bottom height $H_{B \min}$ above waterline is measured at the centre of the surface of the bottom.	8	[Yes / NA ?]	
33 Quick draining recesses - Multi Bottom recess drainage: The minimum recess bottom height $H_{B \min}$ above waterline is measured at the centre of the surface of the lowest bottom.	8	[Yes / NA ?]	
34 Calculation(s) and/or test report(s) for the cockpit is/are submitted.		[Yes ?]	

Instructions/Warnings to be included in the owner's manual

35 Recommendation to keep the drain system clear of debris or ropes, and checking seacock operation, where relevant.	11	[Yes / NA ?]	
36 All opening appliances covering downflooding openings shall be identified.	11	[Yes ?]	
37 How to secure opening appliances covering downflooding points in the closed position while underway.	11	[Yes ?]	
38 Recommendation that all opening appliances in the recesses shall be closed at sea. Only companionway appliances are opened to allow passage when entering and leaving the interior.	11	[Yes / NA ?]	
39 Recommendation that semi-fixed sills, including washboards, shall be raised in the closed position.	11	[Yes / NA ?]	

Comments:

CHECKLIST**SMALL CRAFT - HULL CONSTRUCTION AND SCANTLINGS****Ref.: EN ISO 12215**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	

**Instructions/Warnings to be included in the owner's manual**

Subject to check	Clause	Requirements	Checked ?
1 ISO 12215-2: Temperature range for safe operation of core materials, used for structural parts may limit the mechanical properties of the sandwich due to extreme conditions.	5	[Yes / NA ?]	
2 ISO 12215-3: It is the responsibility of the boat owner to follow the instructions of the boat manufacturer, especially concerning: -the possible reduction of mechanical properties by the induction of heat; -the use of chemicals and antifouling paints that are incompatible with aluminium.	Annex A	[Yes / NA ?]	
3 ISO 12215-5:2019: CAUTION -The owner is responsible for ensuring that the normal mode of operation is maintained. This means that the speed of the craft needs to be matched to the prevailing sea state, the craft being used "with good seamanship behaviour."	13	[Yes / NA ?]	
4 ISO 12215-5:2019: If sandwich outer skin is thinner than values used in Annex I ("good practise"): " CAUTION — The outer skin of the craft is strong enough to resist the design pressure but not local damage from hitting hard/sharp objects. If the outer skin is damaged, it shall be repaired immediately."	13	[Yes / NA ?]	
5 ISO 12215-5:2019: Commercial craft and workboats: -definition of type of craft according to table J.1; -any relevant recommendations for workboats.	J.3	[Yes / NA ?]	
6 ISO 12215-5:2019: Heavy duty workboats: -speed reduction table.	J.3	[Yes / NA ?]	
7 ISO 12215-5:2018: "The owner is advised that he/she is responsible for ensuring that the normal mode of operation is maintained. This will mean that the speed of the craft will need to be matched to the prevailing sea state."	12	[Yes / NA ?]	
8 ISO 12215-5:2008: If $k_6 = 0.9$ used: "The outer skin of your boat is not design to resist local damage from hitting hard/sharp objects. If the outer skin is damaged, it shall be repaired immediately."	12	[Yes / NA ?]	
9 ISO 12215-6: Guidance for docking and/or trailering if the keel fulfils good practise according to 7.1.2.1	7.1.2.1	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



10	ISO 12215-8: If KUSE = 0.9 is used, a warning requiring regular inspection of the rudder is necessary.	7.2	[Yes / NA ?]
11	ISO 12215-8: If KSERV = 0.8 is used, a note to this effect is necessary.	7.3	[Yes / NA ?]
12	ISO 12215-8: note that owner's are expected to execute responsible craft handling and helm actuation reates should reflect the prevailing craft speed.	7.3	[Yes / NA ?]
13	ISO 12215-8: Information about lubrication of bearings, if applicable.	12.1	[Yes / NA ?]
14	ISO 12215-8: Information on the risks and the required inspection intervals and maintanance of alluminium alloys.	A.1.3	[Yes / NA ?]
15	ISO 12215-9: If the centerboard is not designed to support the forces at maximum speed, the recommending speed in accordance with centerboard depolyment shall be indicated.	7.7.1	[Yes / NA ?]
16	ISO 12215-9: If fins made from lead and no steel framing is installed, instructions for keel bolt checking and re-tightning shall be indicated.	D.3.4	[Yes / NA ?]
17	ISO 12215-9: If recommeded by the manufacturer, inspection method and procedure shall be clearly stated.	F.2.4.2	[Yes / NA ?]

The following questions shall be varified by the inspector.

This is to control dimensions and positions of structural members and enforcements between drawing and craft, to make a visual inspection of construction details and to perform checks of the specimen's construction process (laminating, welding, gluing, etc.) and/or the manufacturers related quality system.

	Documen- tation attached	Verified on craft under assessment
Design and manufacturing drawings		
18 General arrangement		
19 Lines plan, if used for assessment		
20 Deck plan		
21 Construction plans (with cross sections)		
Detail drawings		
22 Engine mounts		
23 Keel - hull connection		
24 Deck - hull connection		
25 Mast support		
26 Chainplates		
27 Rudder		
28 Strong points		
29 Other strength critical items (i.e. hydraulic rams, ...)		
30 Other laminate details		
Manufacturing details		
31 List of used materials		
32 GRP schedule / Sandwich schedule		
33 Description welding procedure		
34 Description laminate procedure (e.g. resin / core)		
35 Description of wood construction		

Applicant:	
Boat Model Name:	



**Note: please submit 3D/2D files to IMCI for the verification
Scantling calculations are attached to this document.**

	Drawing Title	Drawing Number	Drawing Date
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CHECKLIST**SMALL CRAFT - WINDOWS, PORTLIGHTS, HATCHES, DEADLIGHTS AND DOORS****Ref.: EN ISO 12216:2018 (ISO 12216:2002)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Requirements	Checked ?
1 Opening appliances are positively fixed when closed.	4.3 [Yes / NA ?]	
2 The appliances fulfill the minimum degree of watertightness.	4.4.1 [Yes / NA ?]	
3 No sliding appliances used in Area I ?.	4.4.2.1 [Yes / NA ?]	
4 No sliding appliances used as deck hatches of trimaran outrigger hulls?	4.4.2.2 [Yes / NA ?]	
5 Are simply supported plates used in area I ?	6.1.1.1 [Yes / NA ?]	
6 The lower edge of any opening appliances is at least 200 mm above the waterline, in fully loaded ready-for use condition. Excluded are escape hatches.	6.3.1.1 [Yes ?]	
7 The small unsupported dimension of any appliance in area I does not exceed 300 mm. Excluded are escape hatches.	6.3.1.1 [Yes ?]	
8 All opening appliances shall open inwards. Excluded are escape hatches.	6.3.1.2 [Yes / NA ?]	
9 Technical datasheet for material of the appliances is submitted, including the one of the interlayer in case of laminated glass.	6.3.1.4 [Yes ?]	
10 Sliding appliances are fitted with stops at each end of it's stroke.	6.3.3.1 [Yes / NA ?]	
11 Doors made with removable sections are fitted with a device to keep them in position, when in use.	6.3.4 [Yes / NA ?]	
12 Doors made with removable sections are stored inside the craft in the vicinity of the door opening and easily reached without the use of tools.	6.3.4 [Yes / NA ?]	
13 Doors made with removable sections of crafts of design category A are equipped with a device connecting the boards together when not in use.	6.3.4 [Yes / NA ?]	
14 Any opening appliance has a locking device, operable at least from inside. Excluded are deadlights.	6.3.5 [Yes / NA ?]	
15 Minimum clearing characteristics of escape hatches according to ISO 12217?	6.3.7 [Yes / NA ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Requirements	Checked ?
16 All appliances are designed and fixed to prevent substantial ingress of water when closed.	4.4 [Yes ?]	
17 All types of fastening ensure watertightness of the plate or frame, and resistance to loads due to normal operating pressure.	6.2.1 [Yes ?]	
18 Glued joints are resistant to sunlight, environmental effects or cleaning chemicals.	6.2.3 [Yes / NA ?]	

Applicant:	
Boat Model Name:	



19	Glued joints fulfil at least one of the following requirements of this standard: -inside pressure test; -seperation test; -manufacturers gluing procedure and conditions are followed and the band strength was checked through calculation.	6.2.3	[Yes / NA ?]
20	Deadlights installed in area I are permanently attached to the appliance or the craft structure. They are only operative in the case of rupture. Of the opening part of the window.	6.3.6	[Yes / NA ?]
21	Calculation worksheet and/or test report(s) are submitted.		[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - WINDOWS, PORTLIGHTS, HATCHES, DEADLIGHTS AND DOORS****Ref.: EN ISO 12216:2021 [Note: not yet harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Requirements	Checked ?
1 The appliances fulfill the minimum degree of watertightness.	4.3.1 [Yes ?]	
2 No sliding appliances used in Area I ?.	4.3.2.1 [Yes ?]	
3 No sliding appliances used as deck hatches of trimaran outrigger hulls?	4.3.2.3 [Yes / NA ?]	
4 Are simply supported plates used in area I ? Please submit technical information if applicable.	6.1.1.1 [Yes / No ?]	
5 The maximum unsupported area of any appliance within area I is not more than 0,852 m ² .	6.3.1.1 [Yes / NA ?]	
6 The small unsupported dimension of any appliance in area I does not exceed 300 mm and 600mm for laminated glass. Excluded are escape hatches.	6.3.1.1 [Yes / NA ?]	
7 Technical datasheet(s) for glazing material is/are submitted. This includes the interlayer in case of laminated glass.	6.3.1.2 [Yes ?]	
8 The lower edge of any opening appliances is at least: -500 mm (Design Category A); -400 mm (Design Category B); -300 mm (Design Category C); -200 mm (Design Category D); above the waterline, in mldc condition and upright. Excluded are escape hatches.	6.3.1.3.1 [Yes / NA ?]	
9 All opening appliances shall open inwards. Excluded are escape hatches and transoms.	6.3.1.3.2 [Yes / NA ?]	
10 A companionway deck hatch have a sill height according to the standard.	6.3.3 [Yes / NA ?]	
11 Alternative for companionways which are not the main companionway: Label: KEEP CLOSED WHILE UNDERWAY IN CATEGORY XX CONDITION. Affixed: At the flush deck companionway deck hatch.	6.3.3 [Yes / NA ?]	
12 Sliding appliances are fitted with stops at each end of ist stroke.	6.3.4.2 [Yes / NA ?]	
13 Washboards are fitted with a device to keep them in place, when in use.	6.3.5 [Yes / NA ?]	
14 Washboards are stowed in the vicinity of the door opening and easily reached without the use of tools.	6.3.5 [Yes / NA ?]	
15 Washboards of crafts of design category A are equipped with a device connecting the boards together when not in use.	6.3.5 [Yes / NA ?]	
16 Any opening appliance has a securing device, operable at least from inside. Excluded are deadlights.	6.3.6 [Yes / NA ?]	
17 A securing device for the open position is required on sliding hatched and sliding cabin doors	6.3.6 [Yes / NA ?]	

Applicant:	
Boat Model Name:	



18	Minimum clearing characteristics of escape hatches according to ISO 12217?	6.3.8	[Yes / NA ?]
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The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check		Requirements	Checked ?
19	All appliances are designed and fixed to prevent substantial ingress of water when closed.	4.3	[Yes ?]	
20	All types of fastening ensure watertightness of the plate or frame, and resistance to loads due to normal operating pressure.	6.2.1	[Yes ?]	
21	Glued joints are resistant to sunlight, environmental effects or cleaning chemicals.	6.2.3	[Yes / NA ?]	
22	Glued joints fulfil at least one of the following requirements of this standard: -inside pressure test; -separation test; -manufacturers gluing procedure and conditions are followed and the bond strength was checked through calculation.	6.2.3	[Yes / NA ?]	
23	Deadlights of windows installed in area I are permanently attached to the appliance or the craft structure. They are only operative in the case of rupture. Of the opening part of the window.	6.3.7	[Yes / NA ?]	
24	Calculation worksheet and/or test report(s) for all appliances are submitted.		[Yes ?]	
<u>Instructions/Warnings to be included in the owner's manual</u>				
25	Warning if a companionway deck hatch has no sill height and is not the main companionway.	10	[Yes / NA ?]	

Comments:

CHECKLIST**SMALL CRAFT - ELECTRICAL SYSTEMS - ALTERNATING CURRENT INSTALLATIONS****Ref.: EN ISO 13297:2018 (ISO 13297:2014)**

Checklist_Evaluation_Module PCA en210531

Applicant:	
Boat Model Name:	



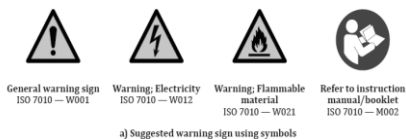
Subject to check	Requirements	Checked ?
1 If the craft has a fully insulated D.C. systems: A.C. protective conductor is connected to metallic hull respectively to the craft external ground/earth for a non-conductive hull.	4.2 [Yes / NA ?]	
2 Metallic craft: the hull is not used as a circuit conductor.	4.3 [Yes / NA ?]	
3 The a.c. protective conductor has a single final connection to metallic hull respectively to the main grounding point/earthing point.	4.4 [Yes / NA ?]	
4 Metallic craft: connection of the protective conductor is above any anticipated water accumulation.	4.5 [Yes / NA ?]	
5 Metallic housings or enclosures of appliances are connected to the protective conductor.	4.6 [Yes / NA ?]	
6 Individual circuits cannot be energized by more than one source at a time.	4.7 [Yes ?]	
7 The transfer and cut-off from one powering source to another fulfils 4.7.	4.7 [Yes / NA ?]	
8 Energized parts are IP2X (IEC 60529) or guarded by other protective means against accidental contact. Access only by use of tools if not IP 2X protected.	4.8 [Yes ?]	
9 If the polarity of the system has to be maintained for the proper operation, a reverse polarity indicating devices fitted.	4.11 [Yes / NA ?]	
10 If both a.c. and d.c. circuits are fitted, distribution is from separated panelboards or clearly divided identified sections.	4.12 [Yes / NA ?]	
11 Wiring diagrams identifying circuits and components are provided.	4.12 [Yes ?]	
12 Label: Shore power inlets marked to indicate voltage and currents.	5.1 [Yes / NA ?]	

Warning: Electricity
ISO 7010 — W012Refer to instruction
manual/booklet
ISO 7010 — M002**Affixed:** in the vicinity of the shore power inlet.

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- 13 **Label:** A permanently mounted waterproof warning sign for energized parts / or in language acceptable in the country of use. 5.2 [Yes ?]



WARNING — To minimize shock and fire hazards:	
1	Turn off craft's shore power connection switch before connecting or disconnecting shore power cable.
2	Connect shore power cable to craft's inlet before connecting to shore power source.
3	If incorrect polarity is indicated, immediately disconnect cable.
4	Disconnect shore power cable at shore power source first.
5	Close shore power inlet cover tightly.
DO NOT ALTER SHORE POWER CABLE CONNECTORS	

Affixed: At the panel-board.

- | | | | |
|----|--|-------|--------------|
| 14 | Switches and controls are marked to indicate their use, unless purpose is obvious and mistaken operation will not cause a hazardous condition. | 5.3 | [Yes ?] |
| 15 | Label: Electrical equipment is marked/identified with following information:
-manufacturer's identification;
-model number or designation;
-electrical rating in volts and amperes or volts and watts;
-phase and frequency, if applicable;
-ignition protected, if applicable.
Affixed: On the devices | 5.4 | [Yes ?] |
| 16 | Double pole circuit breakers that open both live and neutral conductors are installed in the unpolarized system. | 7.1.1 | [Yes / NA ?] |
| 17 | No fuses are installed in the unpolarised system. In polarized system a fuse shall interrupt the active (phase) conductor. | 7.1.2 | [Yes / NA ?] |
| 18 | Each a.c. motor installation and each motor is individually protected according to 7.1.3 or has an integral overcurrent / thermal protection unless the motor will not overheat under a continuous locked rotor. | 7.1.4 | [Yes / NA ?] |
| 19 | Double-pole circuit-breakers are installed in all supply circuits. | 7.2.1 | [Yes / NA ?] |
| 20 | A manually reset trip-free circuit-breaker is installed within 0,5 m of the source of power or, the conductor from the source of power to the panel-board circuit-breaker is contained within a protective covering or, within a conduit or cable trunking or equivalent protective covering. | 7.2.2 | [Yes ?] |
| 21 | Main shore power inlet circuit breaker: additional fuses or circuit-breakers are provided within 3 m of the inlet or attachment point to the electrical system in the craft, measured along the conductor for those located over 3 m from the shore-power inlet connection or the electrical attachment point of a permanently installed shore-power cord. | 7.2.2 | [Yes / NA ?] |
| 22 | Overcurrent protection is provided for live conductors of each branch circuit of a polarised system at the point of connection to the main panel board bus. | 7.3.1 | [Yes / NA ?] |

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23	Branch circuit in unpolarised systems: both conductors are provided with overcurrent protection by double-pole circuit-breakers and double-pole switches, if used, at the point of connection to the main panel-board bus.	7.3.2	[Yes / NA ?]
24	Craft earth leakage protection provided in all sources by one or more double-pole RCDs (30mA trip sensitivity & 100 ms max. trip time).	8.2	[Yes ?]
25	The RCD device has an internal circuit for manual testing of the trip function.	8.3	[Yes ?]
26	Active conductors are black or brown. [Note: only brown shall be used if DC system on board using black for DC negative].	10.7	[Yes ?]
27	Neutral conductors are white or light blue.	10.7	[Yes ?]
28	Protective conductors are green or green/yellow.	10.7	[Yes ?]
29	Conductor connections located protected from the weather are minimum IP 55.	11.1	[Yes ?]
30	Connections above deck exposed to intermittent immersion are IP 67.	11.1	[Yes / NA ?]
31	Conductors are supported throughout their length in conduits, cable trunking or trays, or by individual supports at maximum intervals of 450 mm.	11.2	[Yes ?]
32	Separation of a.c. and d.c. wiring is achieved by: - separate compartment in ducting or trunking system; or - installation on tray or ladder with physical separation; or - separate conduit, sheath or trunking system; or - directly fixed to a surface and separated by at least 100 mm.	11.3	[Yes / NA ?]
33	Conductors are routed above bilge water level or at least 25mm above automatic bilge pump switch.	11.4	[Yes ?]
34	Wiring and connections routed in the bilge area are in IP67 enclosures and without connections below foreseeable water level.	11.4	[Yes / NA ?]
35	Conductors have suitable terminals; no bare wires to stud or screw connection.	11.7	[Yes ?]
36	Terminals are screw clamp, screwless, ring or captive-spade type as per 11.8.	11.8	[Yes / NA ?]
37	No twist-on connectors (wire nuts) are used.	11.10	[Yes ?]
38	Exposed shanks of terminals are protected against accidental shorting. Those for the grounding systems may be exempt.	11.11	[Yes / NA ?]
39	Conductors are routed 50 mm away from water-cooled exhaust components, unless an equivalent thermal barrier is provided.	11.12	[Yes / NA ?]
40	Conductors are routed 250 mm away from dry exhaust components, unless a thermal barrier is provided.	11.12	[Yes / NA ?]
41	Conductors exposed to physical damage are protected by sheaths, conduits or other means. Bulkhead and structural members passages for conductors are protected against chafing.	11.13	[Yes ?]
42	Maximum of four conductors are secured on one terminal stud.	11.15	[Yes ?]
43	When designed to supply motor circuits or a generator is installed, a system voltmeter is installed on the panel board.	12.2	[Yes / NA ?]
44	Label: The panel board is permanently marked with the system voltage and frequency. Affixed: On the panel board.	12.3	[Yes ?]

Applicant:	
Boat Model Name:	



45	The front side of the panel board is readily accessible, rear side accessible.	12.4	[Yes ?]
46	Depending on location, connections and components of panel board(s) have correct IP ratings (ICE 60529).	12.5	[Yes ?]
47	A visible means is provided on the panel board, indicating the inverter is active on line and/or standby (voltmeter or lamp).	12.6	[Yes / NA ?]
48	Label: If an inverter is installed:	12.7	[Yes / NA ?]
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <small>WARNING – ELECTRICAL SHOCK HAZARD</small> <small>Craft is equipped with a d.c. to a.c. power inverter.</small> <small>To avoid serious injury or death from electrical shock:</small> <small>disconnect a.c. shore power and d.c. battery power to inverter before opening panel or servicing electrical systems.</small> </div>		
	Affixed: on the panel board when an inverter is installed.		
49	Shore power inlets have minimum rating of IP44 when mated with plug.	13.1	[Yes / NA ?]
50	The a.c. and d.c. system sockets are not interchangeable.	13.2	[Yes / NA ?]
51	Socket outlets are subjected to rain, spray or splashing are minimum IP 55, also when in use and mated with an appropriate plug.	13.3	[Yes / NA ?]
52	Socket outlets subjected to flooding are IP 67, also when in use and mated with an appropriate plug.	13.4	[Yes / NA ?]
53	Socket outlets have grounding and terminal provided for the protective conductor.	13.5	[Yes / NA ?]
54	Socket outlets for the galley area are located such that chords can be plugged in without crossing above a stove or sink.	13.6	[Yes / NA ?]
55	Powering of the a.c. system is supplied by one of the following means as stated in clause 14.1.	14.1	[Yes ?]
56	Inverter outlet circuits are protected.	15.2	[Yes / NA ?]
57	Label: d.c. conductor terminals or conductor label d.c. +/- or POS/NEG or +/-.	15.4	[Yes / NA ?]
	Affixed: on conductor terminal or conductor.		
58	Label: The inverter provides ready connection of three or more conductors with connectors, eg. L1, G, N.	15.6	[Yes / NA ?]
	Affixed: on the terminals or conductors.		
59	Label: Warning about electrical shock hazards.	15.8	[Yes / NA ?]
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <small>WARNING – ELECTRICAL SHOCK HAZARD</small> <small>To avoid electrical shock hazard:</small> <small>disconnect a.c. shore power and d.c. battery power to inverter before opening panel</small> </div>		
	Affixed: On all access panels to compartments containing a.c. connections.		
60	Inverter(s)/charger(s) is/are marked/identified with: -input voltage, amperage and frequency; -nominal output voltage and frequency; -d.c. output voltage at float or shut off, if applicable; -continuous output current at 12 V at specified input voltage at 25°C; -battery type; -warning concerning internal charged capacitor hazard when servicing.	15.9	[Yes / NA ?]

Applicant:	
Boat Model Name:	



61	Inverter(s) is/are marked/identified with: -input voltage and amperage; -continuous output current at rated voltage; -nominal output voltage and frequency; -surge capability and duration.	15.10	[Yes / NA ?]
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The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

	Subject to check		Requirements	Checked ?
62	The protective conductor insulation is green or green with yellow stripe. Neither colour is used for current carrying conductors. Note: the equipotential conductor of the D.C. system also uses green or green with a yellow stripe insulation.	4.1	[Yes ?]	
63	The neutral conductor is only grounded at the source of power.	4.9	[Yes ?]	
64	The shore power neutral is grounded through the shore power cable and not grounded on board of the craft (see exceptions).	4.9	[Yes / NA ?]	
65	If fitted in the protective conductor, the galvanic isolator is fail-safe.	4.10	[Yes / NA ?]	
66	The value of current flow for overcurrent protection devices for motor loads is consistent with the demand load characteristics of the protection circuit.	7.1.3	[Yes / NA ?]	
67	According to Table A.1 the rating of the overcurrent protection device \leq the maximum current-carrying capacity of the conductor being protected.	7.1.5	[Yes ?]	
68	Isolation and polarisation transformers, including a bank of transformers operating as a unit are overcurrent protected.	7.2.3	[Yes / NA ?]	
69	Transformers are protected by an individual overcurrent device on the primary side, rated $\leq 125\%$ of the rated primary current of the transformer.	7.2.3	[Yes / NA ?]	
70	RCD are of the trip-free type.	8.1	[Yes ?]	
71	Not double-insulated appliances and fixed a.c. electrical equipment have exposed conductive parts connected to the protective conductor.	9	[Yes / NA ?]	
72	Appliances have integral or external overcurrent protection.	9	[Yes ?]	
73	Conductors and flexible cords have a minimum rating of 300/500 V.	10.1	[Yes ?]	
74	Conductors and flexible cords are of multistrand copper.	10.2	[Yes ?]	
75	Conductors and flexible cords are sized in accordance with Table A.1.	10.2	[Yes ?]	
76	Conductor insulation outside engine spaces is temperature rated at $\geq 60^\circ\text{C}$.	10.3	[Yes / NA ?]	
77	Conductors are at least 1 mm^2 in area, except those in internal wiring with $0,75\text{ mm}^2$.	10.4	[Yes ?]	
78	In engine spaces the conductor insulation is temperature rated at $\geq 70^\circ\text{C}$ and insulation is oil-resistant or be protected by conduit or sleeving. Current carrying capacity is derated to Annex A.	10.5	[Yes / NA ?]	
79	The protective conductor does not have a cross-sectional area less than that of the live conductor in the supply circuit in accordance to clause 10.6.	10.6	[Yes ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



80	The d.c. circuit is separated from the a.c. circuit by an earthed metal screen in a multicore cable.	11.3	[Yes / NA ?]
81	Studs, nuts and washers are corrosion resistant and galvanically compatible.	11.5	[Yes ?]
82	Aluminium and unplated steel are not used for studs, nuts or washers.	11.5	[Yes / NA ?]
83	Solderless crimp-on terminals and connectors are attached with a suitable crimping tool.	11.6	[Yes / NA ?]
84	Friction type connectors used only in circuits not exceeding 20 A and with separation force > 20N.	11.9	[Yes / NA ?]
85	Tensile values for connectors are in compliance.	11.14	[Yes / NA ?]
86	Receptacles/sockets have a voltage rating matching the power sources.	13.7	[Yes / NA ?]
87	The shore power cable(s) capacity alone (or with the on board generator in addition) is at least as large as the required system load(s).	14.2	[Yes / NA ?]
88	If installed, a.c. generators are connected to the distribution system as per 4.6 or 4.9.	14.3	[Yes / NA ?]
89	The power feeder conductor is protected at the generator with overcurrent protection rated at maximum 120 % of the nominal output. For exception see note regarding self-limiting generators.	14.4	[Yes / NA ?]
90	Inverter(s) is/are installed as per 15.1.	15.1	[Yes / NA ?]
91	If installed in conditions according to clause 6, inverter(s) shall have IGP and be marked accordingly.	15.3	[Yes / NA ?]
92	A separate d.c. equipotential conductor is installed from the metallic case to the engine negative terminal or bus; see 15.5.	15.5	[Yes / NA ?]
93	The inverter integral switch is switching all live conductors. Note requirement for grounded conductor in 15.7.	15.7	[Yes / NA ?]

Instructions/Warnings to be included in the owner's manual

94	Wiring diagram with conductor identification.	Annex B	[Yes ?]
95	Do not modify the craft's electrical system or relevant drawings. Installation, alterations and maintenance should be performed by a competent marine electrical technician. Inspect system at least biennially.	Annex B	[Yes ?]
96	Disconnect shore power connections when system is not in use.	Annex B	[Yes ?]
97	Connect metallic housings or enclosures of installed electrical appliances to the protective conductor system in the craft (green or green with a yellow stripe conductor).	Annex B	[Yes ?]
98	Use double-insulated or grounded (earthed) electrical appliances.	Annex B	[Yes ?]
99	If reverse polarity indicator is activated, do not use electrical system. Correct polarity fault before activating the electrical system on the craft.	Annex B	[Yes / NA ?]
100	Do not alter shore power cable connectors, use only compatible cable connectors and shore power receptacles.	Annex B	[Yes ?]
101	Instructions on monthly testing of the RCD.	Annex B	[Yes ?]
102	WARNING — Do not allow shore power cable end to hang in the water. An electrical field can result which can cause injury or death to nearby swimmers.	Annex B	[Yes ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



-
- | | | | |
|-----|--|---------|---------|
| 103 | WARNING — To minimize shock and fire hazards: | Annex B | [Yes ?] |
|-----|--|---------|---------|
- Turn off craft's shore power connection switch before connecting or disconnecting shore power cable.
 - Connect shore power cable to craft's inlet before connecting to shore power source.
 - If reverse polarity indicator is activated, turn off craft's shore power connection switch immediately (if fitted).
 - Disconnect shore power cable at shore power source first.
 - Close shore power inlet cover tightly.
-

Comments:

CHECKLIST**SMALL CRAFT - STEERING GEAR - GEARED LINK SYSTEMS****Ref.: EN ISO 13929:2017 (ISO 13929:2001)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Materials used does not effect accuracy and reliability of compasses or navigational instruments, whatever the steering angle may be.	4.2.2	[Yes ?]	
2 All components securely fastened to structure of craft, which is reinforced as necessary.	5.1	[Yes ?]	
3 Threaded fasteners whose integrity affects operation of the system are referenced by instructions for correct assembly.	5.1	[Yes ?]	
4 Threaded fasteners whose integrity affects operation of the system are locked by a device whose presence is determined by visual inspection.	5.1	[Yes ?]	
5 Rudder stops are fitted to ensure that the max. rudder angle specified by steering system manufacturer is not exceeded.	5.2	[Yes ?]	
6 Where the helm or pedestal is mounted remotely from the rudder operating level, the gearboxes are connected via universal joints and solid linkages.	5.3	[Yes ?]	
7 Label: Steering system marked with: -number of international standard; -name of manufacturer; -model type.	7	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
8 Rudder stops withstand 150 % of the specified max. output force at full lock.	5.2	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

9 A general description of the principle of operation.	8.1	[Yes ?]	
10 Specific precautions critical for correct operation are listed.	8.1	[Yes ?]	

Comments:

CHECKLIST

SMALL CRAFT - LIQUID-FUELLED GALLEY STOVES AND HEATING APPLIANCES

Ref.: EN ISO 14895:2016 (ISO 14895:2016)

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Is petrol used as fuel or for priming of the appliances?	4.2	[No ?]	
2 Heaters and their exhaust systems are installed outside areas flammable vapours can accumulate.	4.3	[Yes / NA ?]	
3 Marine environment has been considered for design and installation of appliances (e.g. vibration, craft movement, humidity, corrosion).	4.4	[Yes ?]	
4 Appliance control is readily accessible and located to minimize possible injury from burners and/or hot components where being used.	4.5	[Yes ?]	
5 Outgoing combustion of heaters pass through sealed ductwork terminating outside of the craft.	4.6	[Yes / NA ?]	
6 Where user awareness for the safe operation of an appliance is required, a durable, permanently legible sign covering the operation, including the refuelling procedure if applicable, and any unique hazards involved with its use, shall be provided on or in the immediate vicinity as per clause 8.	4.7	[Yes / NA ?]	
7 Appliances requiring priming shall be fitted with a readily accessible drip pan to contain any fuel overflowing from the priming fuel container under conditions of pitch and heel as applicable (see 6.8 for stoves and 7.1 for heaters).	4.9	[Yes / NA ?]	
8 The drip pan shall be at least 20 mm deep.	4.9	[Yes / NA ?]	
9 Appliances shall not feature open flame pilot lights. If pilot lights are integral then they shall be installed so that outgoing products of combustion pass through sealed ductwork terminating outside the craft.	4.10	[Yes / NA ?]	
10 The appliance and any associated remote fuel tank is securely fastened to the craft.	5.1	[Yes / NA ?]	
11 The risk of injury or damage is minimized by the position of the appliance.	5.2	[Yes ?]	
12 The heater and/or heater exhaust components shall not constitute a risk of fire, even in the case of overheating.	5.3	[Yes / NA ?]	
13 For stoves with non-integral fuel tank: a readily accessible shut-off valve, non-integral with the stove is located near the fuel tank.	5.4	[Yes / NA ?]	
14 The valve shall close against the flow of fuel.	5.4	[Yes / NA ?]	
15 The on- and off-position and closing direction of the valve shall be indicated.	5.4	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



16	If the fuel tank is located outside of the galley and mounted higher than the stove or back siphoning is not prevented, a second valve is fitted ready accessible and reachable outside of zone II as per ISO 9094.	5.4	[Yes / NA ?]
17	Electrical operated shut-off devices, which are interrupting the fuel flow when not activated, are permitted.	5.4	[Yes / NA ?]
18	For heaters with a non-integral tank: a fuel shut-off device shall be located near the remote fuel tank.	5.4	[Yes / NA ?]
19	The valve shall close against the flow of fuel.	5.4	[Yes / NA ?]
20	The on- and off-position and closing direction of the valve shall be indicated.	5.4	[Yes / NA ?]
21	Electrical operated shut-off devices, which are interrupting the fuel flow when not activated, are permitted.	5.4	[Yes / NA ?]
22	Any remote fuel tank is installed outside Zone II as per ISO 9094.	5.5	[Yes / NA ?]
23	Fuel lines are solid metallic piping or flexible hoses meeting ISO 8469, clause 5 outside and ISO 7840 inside of engine rooms.	5.7	[Yes / NA ?]
24	Joints in the distribution pipes or hoses are kept to a minimum.	5.8	[Yes / NA ?]
25	Remote tanks filling point shall be outside of Zone II as per ISO 9094.	5.9	[Yes / NA ?]
26	The combustion air inlet is positioned or guarded that it cannot be blocked.	5.10	[Yes / NA ?]
27	Heating air shall be fresh air or re-circulated and drawn from clean area not likely to be contaminated by exhaust fumes.	5.11	[Yes / NA ?]
28	Any ductwork is securely fastened.	5.11	[Yes / NA ?]
29	If the appliance consumes air for combustion from habitable spaces and no other means of ventilation is provided to the habitable space, then fixed ventilation shall be provided of size equal to or greater than the appliance's combustion air intake.	5.12	[Yes / NA ?]
30	Exhaust outlet shall be located to avoid emissions from entering the habitable space(s) of the craft.	5.13	[Yes / NA ?]
31	Any ducting used to route the hot heating air through the vessel shall be so positioned or protected that no injury or damage could be caused if it were to be touched.	5.14	[Yes / NA ?]
32	Any brackets or ties used to support or secure such parts as per 5.15 and/or 5.16 shall be of a suitable heat resistant material. If the heater is installed in a locker, then suitable steps shall be taken to protect any surrounding material and contents from heat damage.	5.17	[Yes / NA ?]
33	The duplicate label (see Clause 8.1) shall be affixed where it is clearly visible if the original appliance label is obscured.	5.18	[Yes / NA ?]
34	If a portable tank is used, it shall be of suitable design and labelled for the type of fuel used and shall have provisions to be secured on-board the craft.	5.19	[Yes / NA ?]
35	Stove design and construction.	6	
36	Liquid-fuel priming pans or troughs shall be secured to the burner or heat generator so that their relationship is maintained.	6.1	[Yes / NA ?]
37	Priming pans or troughs shall be designed to contain fuel without spillage under conditions of pitch or roll of the craft to 15° in any direction.	6.2	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



38	Oven doors shall be provided with a means to prevent unintentional opening due to force from sliding food and utensils.	6.9	[Yes / NA ?]
39	Operating, maintenance and installation instructions shall be supplied with every stove, drawing particular attention to set up, maintenance, regular operation, prevention of risks and risk management.	6.10	[Yes / NA ?]
40	Heater design and construction.	7	
41	A clearly visible tell-tale shall be provided and shall indicate when the combustion heater is switched on or off.	7.7	[Yes / NA ?]
42	Operating, maintenance and installation instructions shall be supplied with every heater, drawing particular attention to set up, maintenance, regular operation, prevention of risks and risk management.	7.8	[Yes / NA ?]
43	Marking	8	
44	Each appliance shall be permanently marked or labelled with the following information. A duplicate label shall be provided by the manufacturer:	8.1	
45	- manufacturer's name or trademark;	8.1	[Yes ?]
46	- model number;	8.1	[Yes ?]
47	- rated heating output (for heaters);	8.1	[Yes ?]
48	- serial number;	8.1	[Yes ?]
49	- fuel type(s) on integral tanks at the opening used for filling or heater ID plate;	8.1	[Yes ?]
50	- operating voltage (where relevant).	8.1	[Yes ?]
51	Label: Open flame stoves label, in language acceptable in the country of use.	8.2	[Yes / NA ?]



WARNING: OPEN FLAME STOVES PRODUCE CARBON MONOXIDE. AVOID ASPHYXIATION. MAINTAIN OPEN VENTILATION WHEN STOVE IS IN USE

Affixed: On or adjacent to open flame stoves.

52	Label: Stoves with integral fuel tanks label in language acceptable in the country of use.	8.3	[Yes / NA ?]
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WARNING: POSSIBLE HAZARD OF EXPLOSION AND FIRE. TURN OFF STOVE BURNERS BEFORE FILLING FUEL CONTAINER

Affixed: On, or adjacent to, the stove.

Applicant:	
Boat Model Name:	



- 53 **Label:** Non-pressurized stoves with integral tanks designed to have the fuel container removed for filling label in language acceptable in the country of use. 8.4 [Yes / NA ?]



WARNING: POSSIBLE HAZARD OF EXPLOSION AND FIRE. REMOVE FUEL CONTAINER FROM STOVE BEFORE FILLING. TURN OFF STOVE BURNERS BEFORE FILLING. FILL FUEL CONTAINER AWAY FROM STOVE

Affixed: On, or adjacent to, the stove.

- 54 Openings for filling fuel tanks shall be identified to indicate the type of fuel to be used with. 8.5 [Yes / NA ?]
NOTE: The word "FUEL" alone shall not be used.

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
55 Appliance is installed according to manufacturer's instructions.	4.1	[Yes ?]	
56 Protection shall be provided to prevent human contact with exposed parts of the heating system exceeding a surface temperature of 110 °C.	5.15	[Yes ?]	
57 The heater or the heated medium shall not be liable to cause burns to persons. The surface temperature of any part of the heating system likely to come into contact with any person during normal craft operation shall not exceed a temperature of 85 °C.	5.16	[Yes / NA ?]	
58 Pressurized liquid-fuel tanks integral with a stove shall be equipped with a pressure relief valve designed to release at not more than twice the vapour pressure of the fuel used at 60 °C.	6.3	[Yes / NA ?]	
59 Pressurized liquid-fuel tanks integral with a stove shall be shielded or insulated so that, under continuous operation at maximum heat, the pressure in the tank will not exceed 50 % of the relief valve setting.	6.4	[Yes / NA ?]	
60 Pressurized liquid-fuel tanks integral with a stove shall be designed to withstand four times the relief-valve setting.	6.5	[Yes / NA ?]	
61 Pressurized liquid-fuel tanks integral with a stove shall be tested to withstand a minimum internal pressure of two times the design working pressure or 700 kPa, whichever is greater.	6.6	[Yes / NA ?]	
62 Stoves shall be capable of operating during periods of craft pitch or heel at angles up to 15° in any direction sustained at the maximum angle for at least 15 s. Stoves in monohull sailing craft shall be capable of operation at sustained angles of heel of 30°. This may be obtained by the use of gimbals.	6.7	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



63	Means shall be provided on or adjacent to stove-top cooking surfaces to prevent both deep and shallow cooking utensils from sliding across or off the stove, at pitch angles of up to 15° for all craft, and heel angles of 15° for engine-driven craft and sailing multihull and 30° for monohull sailing craft. This may be obtained by gimbals.	6.8	[Yes / NA ?]
64	Heaters shall be designed and constructed to meet the following general requirements: - be suitable for marine use; - be able to operate at least of 15° heel or pitch in any direction; - have overheat control devices.	7.1	[Yes / NA ?]
65	Heaters shall not pollute the heating air. The combustion circuit of the heat exchanger shall be subjected to a leakage test to ensure that exhaust gasses cannot enter the heated air intended for the habitable space.	7.2	[Yes / NA ?]
66	The temperature of the heated air entering the habitable space shall not exceed 150 °C to be measured at the centre of the heating air outlet.	7.3	[Yes / NA ?]
67	An integral flame failure device shall be installed in every heater. This device shall recognize a flame failure and shut the heater down in a controlled manner.	7.4	[Yes / NA ?]
68	In the event of a failed start the heater shall be designed to avoid any fuel overflowing. This may be achieved by supplying a safety lock out system following a pre-determined number of failed start attempts or by supplying of return lines.	7.5	[Yes / NA ?]
69	If a combustion air blower is fitted, a delayed shut-off shall be provided, even in the event of overheating or in the event of an interrupted fuel supply.	7.6	[Yes / NA ?]
<u>Instructions/Warnings to be included in the owner's manual</u>			
70	Stoves:		
71	Instructions to read the stove's owner's manual.	Annex A	[Yes / NA ?]
72	Instructions for priming, lighting and use of the stove, also for turning off the stove and fuel supply.	Annex A	[Yes / NA ?]
73	Type of fuel used (such as alcohol type, diesel, kerosene) and cautions and possible hazards with other fuels that are not suitable for use.	Annex A	[Yes / NA ?]
74	Instructions for the refuelling procedure, including possible hazard warnings concerning fire and explosion.	Annex A	[Yes / NA ?]
75	Cleaning and maintenance of the stove and fuel system.	Annex A	[Yes / NA ?]

Applicant:	
Boat Model Name:	



76	Warnings and cautions with at least the following informational elements: - open-flame stoves consume oxygen and to draw the owner's attention to the warning label required in 8.2; - insufficient oxygen supply can cause asphyxiation; - maintain ventilation open when stove is in use; - do not use the open-flame stove for space or comfort heating; - stove exhaust components can be hot during and directly after operation; - ensure stove inlets and exhaust outlets are not obstructed while stove is in operation; - turn stove off during refuelling.		
77	Recommendations for storage of spare fuel: -keep spare fuel to a minimum and in containers of corrosion-resistant material; -keep stowed outside the accommodation spaces; -keep stowed in areas where the temperature cannot exceed 60 °C.	Annex A	[Yes / NA ?]
78	Heaters:	Annex B	
79	Instructions to read the heater's owner's manual.	Annex B	[Yes / NA ?]
80	Instructions for use of the heater, also for turning off and fuel supply. These instructions shall include ensuring heater's cool down cycle is not interrupted and turning off heater fuel supply if manual valve is fitted.	Annex B	[Yes / NA ?]
81	Type of fuel used (such as alcohol type, diesel, kerosene) and cautions and possible hazards with other fuels that are not suitable for use.	Annex B	[Yes / NA ?]
82	Instructions for the refuelling procedure, including possible hazard warnings concerning fire and explosion.	Annex B	[Yes / NA ?]
83	Specify inspection and/or maintenance intervals.	Annex B	[Yes / NA ?]
84	Recommendations for storage of spare fuel: -keep spare fuel to a minimum and in containers of corrosion-resistant material; -keep stowed outside the accommodation spaces; -keep stowed in areas where the temperature cannot exceed 60 °C.	Annex B	[Yes / NA ?]
85	Recommendations for storage of spare fuel: - keep spare fuel to a minimum and in containers of corrosion-resistant material; - keep stowed outside the accommodation spaces; - keep stowed in areas where the temperature cannot exceed 60 °C.	Annex B	[Yes / NA ?]

Comments:

CHECKLIST**SMALL CRAFT - BUILDER'S PLATE****Ref.: EN ISO 14945:2021 (ISO 14945:2021) & EN ISO 14946:2021 (ISO 14646:2021)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Note: Only to be filled in if IMCI does not provide the builder's plate for the PCA assessment

Subject to check	Clause	Requirements	Checked ?
1 A rigid or flexible builder's plate is mounted but not on the boat shell.	4.1	[Yes / NA ?]	
2 Alternatively to a rigid or flexible label, the craft shell is used for the marking.	4.1	[Yes / NA ?]	
3 Characters and other markings on the builder's plate are carved, stamped-burned, embossed, moulded, etched, printed, affixed by permanently setting adhesive, or is applied by other suitable means. Alternatively, the information is printed or etched on the craft itself.	4.2	[Yes ?]	
4 The characters contrast or are on a different level to the background so that alterations are obvious.	4.2	[Yes ?]	
5 The required information characters are at least 5 mm in height.	4.3	[Yes ?]	
6 Other characters are at least 3 mm in height.	4.3	[Yes ?]	
7 Pictograms and symbols are at least 8 mm in height.	4.4	[Yes ?]	
8 Plate is readily visible in the cockpit or near the main steering position.	4.5	[Yes ?]	
9 Plate is separately from the watercraft identification number.	4.5	[Yes ?]	
10 The following information is displayed:	5.1		
11 PCA: the name of the Notified Body, registered trade name/mark and contact address.	5.1	[Yes ?]	
12 CE marking, if applicable.	5.1	[Yes ?]	
13 Craft design category(s).	5.1	[Yes ?]	
14 Maximum load for builder's plate m_{MBP} with the person symbol and the suitcase symbol.	5.1	[Yes ?]	
15 Maximum number of persons according to ISO 14946:2021 and the person symbol.	5.1	[Yes ?]	
16 If the responsible person wishes to display more than one design category, the plate shows the maximum number of persons and the maximum load clearly identified to belong to the specific design category.	5.2	[Yes / NA ?]	
17 Additional information in the label does not impair the legibility of the required information and is separated from it (preferably by a line or similar delimiter).	5.3	[Yes / NA ?]	
18 If maximum propulsion power rating is included, it is displayed in [kW].	5.3	[Yes / NA ?]	
19 If maximum outboard engine(s) mass is included, it is displayed in [kg].	5.3	[Yes / NA ?]	
20 The colours applied to the label are UV and fade resistant.	4.2	[Yes ?]	
Comment:			

not applicable: NA

follow up on variation report: Rpt or X

CHECKLIST**SMALL CRAFT - BILGE-PUMPING SYSTEMS****Ref.: EN ISO 15083:2018 (ISO 15083:2003)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Bilge-pumping systems is capable of removing water from all main compartments of the craft where water can accumulate.	5.1	[Yes / NA ?]	
2 If fore and aft peaks have a combined volume of more than 10 % of the displacement they are linked to the bilge-pumping system.	5.1	[Yes / NA ?]	
3 Can trapped water in fore and aft peaks with a combined volume of less than 10 % be emptied into the main bilges by a valve, or drained by other means.	5.1	[Yes / NA ?]	
4 Type(s), number(s) and location(s) of bilgepumps as required by table 2.	5.1	[Yes / NA ?]	
5 Check documented pumps to have capacity of each bilge pump, as stated. This shall be according to 5.1.3 shall be not less than (see table 2): - 10 l/min for boats with LH less than or equal to 6 m, - 15 l/min for boats with LH greater than 6 m and less than 12 m, or - 30 l/min for boats with LH greater than or equal to 12 m.	5.3	[Yes / NA ?]	
6 Pump handle is secured unless pump is permanently fitted.	6.1.3	[Yes / NA ?]	
7 Discharge of bilge pump into cockpit only if this is open aft to sea.	6.1.4	[Yes / NA ?]	
8 Bilge pump not connected to cockpit drains.	6.1.4	[Yes / NA ?]	
9 If a switch is subjected to spray, it is water resistant to IP56.	6.2.3	[Yes / NA ?]	
10 Bilge pump mounted in an accessible location.	7.1	[Yes / NA ?]	
11 Water inlet prevents ingestion of debris, e.g. by strainer.	7.2	[Yes / NA ?]	
12 Outlet above maximum healed waterline unless seacock is installed.	7.5	[Yes / NA ?]	
13 Hose connections secured with non-corrosive clamps or mechanically fastened.	7.7	[Yes / NA ?]	
14 Non-submersible bilge pump motor is mounted above bilge water level.	7.8	[Yes / NA ?]	
15 Automatic bilge pump control has manual power supply switch.	7.9	[Yes / NA ?]	
16 Automatic bilge pump control has visual indication to show power supply.	7.10	[Yes / NA ?]	
17 Manual bilge pumps can be operated to their capacity.	7.11	[Yes / NA ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
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Applicant:	
Boat Model Name:	



18	Electrical bilge pumps complies with ISO 8849.	6.2.1	[Yes / NA ?]
19	Electrical connections water resistant to IP67.	6.2.2	[Yes / NA ?]
20	Electrical connections located above acceptable water level if not submersible.	6.2.2	[Yes / NA ?]
21	Intake hose does not collapses under maximum suction.	7.3	[Yes ?]
22	Pump discharge lines non-restrictive.	7.4	[Yes ?]
23	Simultaneous operation of several pumps at time does not diminishes the capacity of the entire system.	7.6	[Yes / NA ?]

Instructions/Warnings to be included in the owner's manual

24	Means of bailing shall be specified for open and partially decked boats.	5.1.2	[Yes / NA ?]
25	For craft in design category D and Lh less than or equal 6 m, manual bilge pump or other means of bailing shall be specified.	5.1.3.2	[Yes / NA ?]
26	Bilge-pumping system: -type, capacity and location of each bilge pump; -operating instructions; -requirements for servicing.	Annex A	[Yes / NA ?]
27	For open, partially decked boats and fully decked boats of design category D without a bilge pump: "It is the responsibility of the owner/operator to have at least one bailer/draw bucket on board, secured against accidental loss."	Annex A	[Yes / NA ?]
28	CAUTION - Check the function of all bilge pumps at regular intervals. Clear debris from the pump inlets.	Annex A	[Yes / NA ?]
29	CAUTION - The seacocks in the fore and aft peak bulkheads shall be kept closed and shall only be opened to let water drain into the main bilges.	Annex A	[Yes / NA ?]
30	WARNING - The combined capacity of the system is not intended to drain the craft in the case of damage.	Annex A	[Yes / NA ?]

Comments:

CHECKLIST**SMALL CRAFT - BILGE-PUMPING SYSTEMS****Ref.: EN ISO 15083:2020 [Note: not yet harmonised for RCD 2013/53/EU]**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	

**Subject to check****Clause Requirements Checked ?****Note: the following requirements are applicable to all boats which require a bilge-pump system. See Table 2.**

1	Bilge-pumping system(s) is capable of removing water from all separate bilge water compartments.	5.1	[Yes ?]
2	If fore and aft peaks have a combined volume of more than 10% of the displacement they are linked to the bilge-pumping system.	5.1	[Yes / NA ?]
3	If trapped water in fore and aft peaks can be emptied into the main bilges by a valve or drained by other means, fore and aft peaks need not be linked to the bilge-pumping system.	5.1	[Yes / NA ?]
4	Bilge water compartments not readily accessible have a bilge pump installed.	5.1	[Yes / NA ?]
5	Type(s), number(s) and location(s) of bilge pumps as required by table 2.	5.1	[Yes ?]
6	Check documented pumps to have capacity of each bilge pump, as stated. This shall be according to 5.1.2/5.1.3 not be less than (see table 2): - 600 l/h for boats with LH less than or equal to 6 m, - 900 l/h for boats with LH greater than 6 m and less than 12 m, or - 1800 l/h for boats with LH greater than or equal to 12 m.	5.3	[Yes ?]
7	The capacity for manual bilge pumps shall be rated for 45 strokes per minute or less.	5.3	[Yes / NA ?]
8	Pump handle is secured unless pump is permanently fitted.	6.1.3	[Yes / NA ?]
9	Discharge of bilge pump into cockpit only if this is open aft to sea.	6.1.4	[Yes / NA ?]
10	Bilge pumps systems shall not discharge into a recess nor be connected to recess drains.	6.1.4	[Yes ?]
11	If a switch is subjected to spray, it is water resistant to IP56.	6.2.3	[Yes / NA ?]
12	Bilge pump mounted in an accessible location.	7.1	[Yes ?]
13	Water inlet prevents ingestion of debris, e.g. by strainer.	7.2	[Yes ?]
14	Outlet above maximum heeled waterline unless a seacock is installed and backflow into the boat is prevent.	7.5	[Yes / NA ?]
15	Hose connections secured with non-corrosive clamps or mechanically fastened.	7.7	[Yes / NA ?]
16	Non-submersible bilge pump motor is mounted above bilge water level.	7.8	[Yes / NA ?]
17	Individual electrical bilge pump has a manual power supply switch.	7.9	[Yes / NA ?]
18	Automatic bilge pump control has manual power supply switch.	7.10	[Yes / NA ?]
19	Automatic bilge pump control has visual indication to show power supply (switch position or a light).	7.11	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



20	Manual bilge pumps can be operated to their capacity.	7.12	[Yes / NA ?]
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The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
21 Bilge pumps shall be operable within temperature limits ranging from 0 °C to + 60 °C and shall withstand storage temperatures, without operation, of -40 °C to +60 °C when in the dry condition.	6.1.1	[Yes ?]	
22 Electrical bilge pumps complies with ISO 8849.	6.2.1	[Yes / NA ?]	
23 Intake hose does not collapses under maximum suction.	7.3	[Yes ?]	
24 Pump discharge lines non-restrictive.	7.4	[Yes ?]	
25 Simultaneous operation of several pumps at time does not diminishes the capacity of the entire system.	7.6	[Yes / NA ?]	
26 Accidental discharge of pollutants overboard in the upright or heeled waterline position is not possible.	7.13	[Yes ?]	

Instructions/Warnings to be included in the owner's manual

27 Means of bailing shall be specified for craft, not requiring a bilge pumping system (e.g. non fully enclosed boats).	5.1.2	[Yes / NA ?]	
28 For craft in design category D and Lh less than or equal 6 m, manual bilge pump or other means of bailing shall be specified.	5.1.3.2	[Yes / NA ?]	
29 Bilge-pumping system: -type, capacity and location of each bilge pump; -operating instructions; -requirements for servicing.	8	[Yes ?]	
30 "It is the responsibility of the owner/operator to have at least one means of bailing on board, secured against accidental loss."	8	[Yes ?]	
31 CAUTION - Check the function of all bilge pumps at regular intervals. Clear debris from the pump inlets.	8	[Yes ?]	
32 CAUTION - The seacocks in the fore and aft peak bulkheads shall be kept closed and shall only be opened to let water drain into the main bilges.	8	[Yes / NA ?]	
33 WARNING - The combined capacity of the system is not intended to drain the craft in the case of damage.	8	[Yes / NA ?]	
34 Additional information: -replacement of bilge pumping system filtes (when required); -maintanance; -visual inspection of drip trays (when installed); -visual inspection of bilge; - position of automatic bilge pump switch.	8	[Yes / NA ?]	

Comments:

CHECKLIST**SMALL CRAFT- ANCHORING, MOORING AND TOWING - STRONG POINTS****Ref.: EN ISO 15084:2018 (ISO 15084:2003)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Is the anchoring or towing strong point be used for mooring as well.	5.1	[Yes / No ?]	
2 The minimum number of strong points is as required - all craft: one anchoring/towing point forward; - craft over 6 m LH: at least one mooring point aft; - craft over 12 m LH: at least one additional mooring point both forward & aft; - craft over 18 m LH: at least one additional mooring point port and starboard.	5.2	[Yes ?]	
3 If strong points secured with nuts and bolts, doubling plates or washers of adequate size are used.	7.1	[Yes / NA ?]	
4 Where the intended use of a strong point for anchoring and/or being towed is not self evident, the strong point is labelled.	7.3	[Yes / NA ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
5 The strong points are assessed to comply with the horizontal loads defined in clause 6.2 by direct calculation or a test.	6.2; 6.3	[Yes ?]	
6 If the boat manufacturer specifies or supplies lines, chains or cables which exceed the requirements with the breaking strength defined in clause 6.2, the breaking strength are assessed to withstand a breaking strength of not less than 125 % of the rope or chain that is specified or supplied.	6.4	[Yes / NA ?]	
7 The craft structure in the vicinity of strong points is reinforced to take the loads calculated for the breaking strength.	7.1	[Yes ?]	
8 All strong points are made of corrosion resistant materials.	7.2	[Yes ?]	
9 Non metallic strong points are UV stabilized.	7.2	[Yes / NA ?]	

Instructions/Warnings to be included in the owner's manual

10 Information on the breaking strength of the strong points.	Annex A	[Yes ?]	
11 Where the purpose of a specific strong point is not self evident, it shall be explained.	Annex A	[Yes / NA ?]	
12 CAUTION - Always tow or be towed at a slow speed. Never exceed the hull speed of a displacement craft when being towed.	Annex A	[Yes ?]	
13 CAUTION - A tow line shall always be made fast in such a way that it can be released when under load.	Annex A	[Yes ?]	

14	It is the owner's/operators responsibility to ensure that mooring lines, towing lines, anchor chain(s), anchor lines and anchor(s) are adequate for the vessel's intended use.	Annex A	[Yes ?]
15	Where non-metallic strong points are installed, their limited life time shall be taken into consideration. They shall be replaced once they show any signs of deterioration, visible surface cracks or permanent deformation.	Annex A	[Yes / NA ?]

Comments:

CHECKLIST**SMALL CRAFT- MAN-OVERBOARD PREVENTION AND RECOVERY****Ref.: EN ISO 15085:2003/A2:2018 (ISO 15085:2003/Amd 2:2017)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Safe access is provided either via the working deck, the interior of the boat or combination thereof to boat steering including emergency steering, strong points, sail handling and trimming, interior and engine room compartment.	4.1	[Yes ?]	
2 The working deck area is free, continuous and not angled more than 15° from the horizontal.	4.3	[Yes ?]	
3 The working deck area has a width of ≥ 100 mm for Design Cat. D, 120 mm for Cat. C, and 150 mm for Cat. A and B, measured according to 4.3.	4.3	[Yes ?]	
4 All working decks are connected.	4.4	[Yes ?]	
5 Steps and obstacles higher or longer than 500 mm are avoided.	4.4	[Yes ?]	
6 For non-sailing boats: the requirements of Table 3 are fulfilled.	6.2	[Yes / NA ?]	
7 For sailing boats: The requirements of Table 4 are fulfilled.	6.3	[Yes / NA ?]	
8 Working deck areas are slip resistant.	7.1	[Yes ?]	
9 The slip resistant surfaces have no spacing greater than 75 mm for non-glazed areas, and 500 mm for glazed areas.	7.1	[Yes ?]	
10 Sailing dinghies have at least slip resistant surfaces on locations where people are supposed to tread.	7.1	[Yes / NA ?]	
11 Trampolines and nets part of the working deck, have slip-resistant characteristics.	7.2	[Yes / NA ?]	
12 Openings in the working deck area having a depth > 1m, and not provided with a lid or hatch, are surrounded by guard-rails according to clause 9.	7.2	[Yes / NA ?]	
13 Openings in the working deck area having a depth > 1m, and not provided with a lid or hatch, are provided with nets or trampolines.	7.2	[Yes / NA ?]	
14 The junction between trampoline or net and the boat does not involve any risk of foot trapping.	7.2	[Yes / NA ?]	
15 The connection of trampoline and nets withstands a uniform load of 3000 N/mm ² or 50% of the crew limit, whichever is smaller.	7.2	[Yes / NA ?]	
16 Footstops are as close as practical to the outboard edges of the working deck with regard to the exceptions in 8.2.	8.2	[Yes ?]	
17 For Cat. C sailing boats: the footstop height is 25 mm.	8.3	[Yes / NA ?]	
18 For Cat. C non-sailing boats: the footstop height is 20 mm.	8.3	[Yes / NA ?]	
19 For Cat. A and B sailing boats: the footstop height is 30 mm.	8.3	[Yes / NA ?]	
20 For Cat. A and B non-sailing boats: the footstop height is 25 mm.	8.3	[Yes / NA ?]	
21 The footstop height is measured according to the requirements of 8.3.	8.3	[Yes / NA ?]	
22 The footstop angle to the vertical is ≤ 30°.	8.3	[Yes / NA ?]	

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



23	If angled surfaces foot-stops on non-sailing boats of design categories C and D: Surfaces shall have an inclination $\geq 20^\circ$ from the horizontal and a height according to 8.3 being slip-resistant.	8.4	[Yes / NA ?]
24	The vertical clearance between deck and foot-stop the open spaces to the lowest foot-stopping point is ≤ 40 mm. See figure 2e.	8.5	[Yes / NA ?]
25	Within 100 mm from the footstop there is no step in the working deck level > 15 mm.	8.6	[Yes / NA ?]
26	Gaps in footstop rails are ≤ 100 mm to the edge of the adjacent fitting or footstop rail.	8.7	[Yes / NA ?]
27	Handholds fitted < 300 mm inboard from the outer working deck edge are placed ≥ 500 mm above deck level, but not higher than the adjacent superstructure.	9.2	[Yes / NA ?]
28	Handholds fitted > 300 mm inboard from the outer working deck edge are placed at any height.	9.2	[Yes / NA ?]
29	On route along the outer edges of the working deck, the maximum distance between two handholds is $\leq 1,5$ m.	9.2	[Yes / NA ?]
30	Low guard-rails have a height of at least 450 mm.	10.2	[Yes / NA ?]
31	High guard-rails have a height of at least 600 mm.	10.2	[Yes / NA ?]
32	For low guard-rail: if discontinuities in working deck level, the vertical gap between the lowest guard-rail/line and the deck or foot-stop, coaming etc, is not greater than 560 mm.	10.2	[Yes / NA ?]
33	For high guard-rail: if discontinuities in working deck level, the vertical gap between the lowest or intermediate guard-rail/line and the deck or foot-stop, coaming etc, is not greater than 380 mm.	10.2	[Yes / NA ?]
34	The maximum length of these discontinuities is ≤ 600 mm.	10.2	[Yes / NA ?]
35	If sailing craft: If high guard-rail/guard-lines are installed, an intermediate guard-rail is fitted with the gap between this intermediate line and the deck, foot, stop, bulwark, etc, whichever is higher, ≤ 300 mm.	10.3	[Yes / NA ?]
36	The gap between this intermediate guard-rail and the deck, foot-stop, coaming etc., is ≤ 300 mm.	10.3	[Yes / NA ?]
37	Alternatively, the intermediate line is replaced by a device limiting the gap between two adjacent protections below 380 mm, in any direction.	10.3	[Yes / NA ?]
38	Any part of the working deck higher than H1 in Table 5 from the adjacent part of the working deck is equipped with a footstop according to clause 8.	10.4	[Yes / NA ?]
39	Any part of the working deck higher than H2 in Table 5 from the adjacent part of the working deck is equipped with a footstop according to clause 8, and guard-rails having the same height as at the outer periphery of the deck.	10.4	[Yes / NA ?]
40	If openings in the guard-rail/guard-lines: Permanently fixed and quickly operable mobile sections are fitted in way of these openings. These sections shall be designed not to open inadvertently.	10.5	[Yes / NA ?]
41	Openings in guard-rails for passage of sails have no gap transversally and the space between the rails is ≤ 150 mm.	10.5	[Yes / NA ?]
42	The bow pulpit opening between pulpit and any part of the boat is ≤ 360 mm.	10.6	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



43	If high guard-rails are required: Aft pulpits are ≥ 600 mm height.	10.7.1	[Yes / NA ?]
44	If high guard-rails are required: The transversal lines do not meet the requirements of 10.1, 10.2, 10.3 and 12.2.1 since they meet the requirements of 10.7.1.	10.7.1	[Yes / NA ?]
45	If low guard-rails are required: Aft pulpits are ≥ 450 mm height.	10.7.2	[Yes / NA ?]
46	If low guard-rails are required: The transversal lines do not meet the requirements of 10.1, 10.2, 10.3 and 12.2.1 since they meet the requirements of 10.7.2.	10.7.2	[Yes / NA ?]
47	If a sailing catamaran, the wire/rod and stanchion bracing on the forward cross beam is regarded as guard-rail. The minimum height is according to Table 4.	10.8	[Yes / NA ?]
48	If a sailing catamaran, the longitudinal guard-rail height on outer edges diminishes to zero at forward beam. The greatest distance between handhold points on transverse and longitudinal guard-rails is $\leq 0,75$ m.	10.8	[Yes / NA ?]
49	If a sailing catamaran, guard-rails are omitted on the central hull in areas where a person falling from working deck would land on a trampoline. The width of this trampoline is at least 700 mm.	10.9	[Yes / NA ?]
50	Guard-lines are firmly supported. Means is provided to tension the line.	12.1	[Yes / NA ?]
51	The spacing between stanchions or guard-line supports is $\leq 2,2$ m.	12.2.1	[Yes / NA ?]
52	Stanchions/line supports are mechanically secured in their supports, not taken into consideration the tension of the guard-lines.	12.2.3	[Yes / NA ?]
53	Guard-lines are held horizontally and vertically by the stanchion/line support.	12.2.3	[Yes / NA ?]
54	Stanchions/line supports are not angled outboard more than 10° from the vertical, at any point above 50 mm from the deck.	12.2.3	[Yes / NA ?]
55	Hooking points are located within 1 m of the edge of the main access hatch/door.	13.2	[Yes / NA ?]
56	Hooking points are located within 2 m of all outside steering positions.	13.2	[Yes / NA ?]
57	Hooking points are located within 2 m of the mast of sailing boats.	13.2	[Yes / NA ?]
58	Hooking points are located within 2 m of the winch positions of sailing boats.	13.2	[Yes / NA ?]
59	Hooking points are located within 2 m of the windlass or towing strong points.	13.2	[Yes / NA ?]
60	Hooking points are not more than 3 m apart.	13.2	[Yes / NA ?]
61	If a habitable sailing multihull of Cat. A and B: At least one hooking point is in the vicinity of each escape hatch to be used in inverted position.	13.2	[Yes / NA ?]
62	Any hooking point is inscribed within a circle of 15 mm diameter.	13.3	[Yes / NA ?]
63	Attachment points for jack-lines are fitted port and starboard on deck, to provide secure fixing of jack-lines.	14.2	[Yes / NA ?]
64	The jack-lines are long enough to allow movement on deck for boat operation.	14.2	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



65	Jack-lines are as long as practicable. Attachment points are fitted at the ends of each section.	14.2	[Yes / NA ?]
66	If a high-speed boat: Each occupant has a body support limiting the risk of being thrown overboard in case of sharp turns, acceleration or movements in sea.	15.1	[Yes / NA ?]
67	Support is provided by one handhold according to clause 9 and body support.	15.1	[Yes / NA ?]
68	Support is provided by two handholds according to clause 9, allowing simultaneous gripping of two hands.	15.1	[Yes / NA ?]
69	The body support has a height of ≥ 120 mm above the rigid bottom of the seat with compressed cushion.	15.1	[Yes / NA ?]
70	When standing or leaning, the body support provides support for back and torso.	15.2	[Yes / NA ?]
71	When sitting riding astride a seat, body support is provided by action of the knees.	15.2	[Yes / NA ?]
72	Propeller propulsion is not used as means of reboarding.	16	[Yes ?]
73	The boat is provided with a means of reboarding by a person in the water unaided, by either:	16	
74	- a rigid ladder according to 16.2, or	16.1	[Yes / NA ?]
75	- a non-rigid ladder according to 16.3, or	16.1	[Yes / NA ?]
76	- another dedicated device, or	16.1	[Yes / NA ?]
77	- a design of the watercraft which enables reboarding without a dedicated device.	16.1	[Yes / NA ?]
78	Any device for activation of a deployable device is located not higher than 500 mm above waterline.	16.1	[Yes / NA ?]
79	Any flexible activation device, e.g. a rope, is fixed not higher than 500 mm above the waterline.	16.1	[Yes / NA ?]
80	A deployable device can be activated even if engine is stopped with any primary energy fault.	16.1	[Yes / NA ?]
81	Attention has been paid to the location of the means of reboarding relative to possible danger from propeller(s).	16.1	[Yes ?]
82	The reboarding means leads directly to the working deck.	16.1	[Yes / NA ?]
83	The reboarding means leads to a part outside of the working deck with slip resistance surface and fitted with handholds on its way leading to the working deck.	16.1	[Yes / NA ?]
84	If reboarding means is rigid ladder, following requirements are met:	16.2	
85	- it does not swing away in the water under load, and	16.2	[Yes / NA ?]
86	- it is not angled beyond vertical as installed, and	16.2	[Yes / NA ?]
87	- steps or rungs have a treading depth of 25 mm being slip resistant, and	16.2	[Yes / NA ?]
88	- steps or rungs have a maximum spacing of 305 mm, and	16.2	[Yes / NA ?]
89	- a minimum rung width of 100 mm per foot or a minimum total width of 200 mm for two foot [figure a)], and	16.2	[Yes / NA ?]
90	- a horizontal tread clearance of at least 100 mm from adjacent structure, and	16.2	[Yes / NA ?]
91	- the bottom step is at least 560 mm below the waterline in m_{LC} condition, and	16.2	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



92	- allows a grip clearance from adjacent structures of at least 32 mm, and	16.2	[Yes / NA ?]
93	- a handhold that can be reached on the ladder or its vicinity not more than 500 mm away from the upper step or rung, and	16.2	[Yes / NA ?]
94	- the highest step or rung is located not more than 500 mm below the adjacent area leading to the working deck, and	16.2	[Yes / NA ?]
95	- the ladder fulfils its purpose if subjected to a vertical force of 1800 N applied at any point.	16.2	[Yes / NA ?]
96	If reboarding means is a non-rigid ladder, following requirements are meet:	16.3	
97	- steps or rungs have a treading depth of 25 mm being slip resistant, and	16.3	[Yes / NA ?]
98	- steps or rungs have a maximum spacing of 305 mm, and	16.3	[Yes / NA ?]
99	- the bottom step is at least 1200 mm below the waterline in m _{LC} condition and	16.3	[Yes / NA ?]
100	- the highest step or rung is located not more than 500 mm below the adjacent area leading to the working deck, and	16.3	[Yes / NA ?]
101	- rigid rungs have a width of 250 mm, and	16.3	[Yes / NA ?]
102	- the ladder is attached by at least two separate points spaced not less than the rung width, and	16.3	[Yes / NA ?]
103	- the submerged steps or rungs have negative buoyancy, and	16.3	[Yes / NA ?]
104	- the ladder fulfils its purpose if subjected to a vertical force of 1800 N applied at any point the ladder.	16.3	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
105 Handholds withstand, as installed, a horizontal force of 1500 N without rupture.	9.3	[Yes / NA ?]	
106 Guard-rails withstand a horizontal force of 280 N with a deflection at the force level of ≤ 50 mm.	11	[Yes / NA ?]	
107 Guard-rails withstand a horizontal force of 560 N without breaking.	11	[Yes / NA ?]	
108 Guard-lines have a strength according to Table 6.	12.1	[Yes / NA ?]	
109 Any device forming a part of guard-lines withstand the loads defined in Table 5.	12.1	[Yes / NA ?]	
110 Stanchions or guard-line supports withstand a horizontal force of 280 N with a deflection at the force level of ≤ 50 mm, assessed with no lines on.	12.2.2	[Yes / NA ?]	
111 Stanchions or guard-line supports withstand a horizontal force of 560 N without breaking, assessed with no lines on.	12.2.2	[Yes / NA ?]	
112 If boat is in Cat. C: Hooking points withstand a horizontal force of 3600 N .	13.3	[Yes / NA ?]	
113 If boat is in Cat. A and B: Hooking points withstand a horizontal force of 6000 N.	13.3	[Yes / NA ?]	
114 Attachment points for jack-lines withstand a horizontal force of 20000 N in the direction of, and up to an angle of 30° from a line connecting them.	14.3	[Yes / NA ?]	

Applicant:	
Boat Model Name:	



115	If a deployable device is provided as means of reboarding, the work force required for activation is maximum 100 N.	16.1	[Yes / NA ?]
116	A test according to 16.4 has been conducted by a person wearing a flotation device according to Table 1, if the device is: - non-rigid ladder, or - any other dedicated device, or - reboarding by design of the craft.	16.4	[Yes / NA ?]

Instructions/Warnings to be included in the owner's manual

117	Working deck area(s) explained as text or sketch.	4.1	[Yes / NA ?]
118	If periodical inspection of guard-lines or replacement of the synthetic line is needed, the period between inspection or maintenance, and the actions to be performed are explained.	12.1	[Yes / NA ?]
119	If option 4 is used, a sentence shall indicate that the boat is only intended for daytime sailing and not at night.	6.3	[Yes / NA ?]
120	Description of re-boarding and how to deploy it, with a recommendation that it shall be kept readily deployable and usable at all times.	16	[Yes ?]

Comments:

CHECKLIST

SMALL CRAFT- NAVIGATION LIGHTS - INSTALLATION, PLACEMENT AND VISIBILITY

Ref.: EN ISO 16180:2018 (ISO 16180:2013)

Checklist_Evaluation_Module PCA en220801

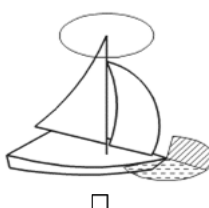
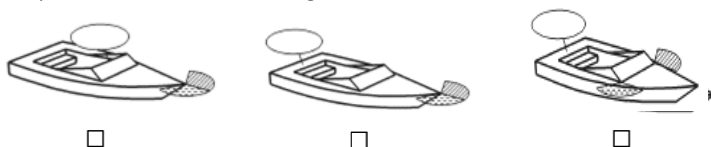
Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Length of hull [m]			
2 Maximum speed [knots]			
3 Craft type (<u>N</u> on- <u>P</u> owered , <u>P</u> ower, <u>S</u> ail, <u>S</u> ail+ <u>P</u> ower)			

Power craft and/or sailing craft under power

- 4 Please indicate the configuration for power craft or sailing craft under power less than 12 m in length of hull.



Green

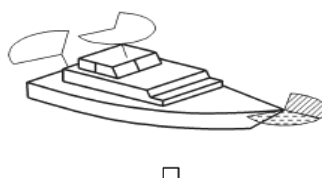
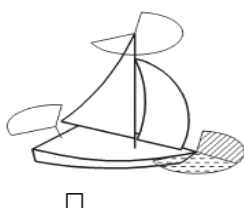


Red

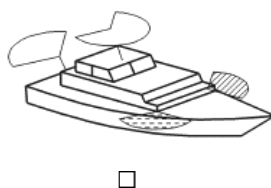


White

- 5 Please indicate the configuration for a power craft or sailing craft under power $\geq 12\text{m}$ to $< 20\text{m}$ in length of hull.



- 6 Please indicate the configuration for power craft and sailing craft under power $\geq 20\text{m}$ in length of hull.



Sailing craft

Applicant:	
Boat Model Name:	



7 Please indicate the navigation light configuration for the sailing craft.

 <input type="checkbox"/>	 <input type="checkbox"/>	 Green
 <input type="checkbox"/>	 <input type="checkbox"/>	 Red
		 White

8	Navigation lights are visible under normal operating condition.	4.2.2	[Yes ?]
9	Navigation lights are not obscured by fixed structures or optional equipment.	4.2.3	[Yes ?]
10	Navigation lights are mounted so that they do not shine in operators' eyes in normal operation position to prevent reflection of a craft's structure within operator's field of vision.	4.2.4	[Yes ?]
11	One switch or one position of a multiple position switch, shall display the complete navigation light configuration as required for the craft while underway.	4.2.6	[Yes ?]
12	Another switch or switch position shall display the anchor light only.	4.2.6	[Yes ?]
13	Damage of navigation lights caused by contact with other objects under normal operating conditions is minimized.	4.2.7	[Yes ?]
Power driven craft (including sailing craft under power and sail) - underway			
14	If two masthead lights are carried the aft one shall be at least 4,5 m vertically higher than the forward one.	4.4.2.1	[Yes / NA ?]
15	If two masthead lights are carried the horizontal distance between them shall not be less than one half of the length of the craft.	4.4.2.1	[Yes / NA ?]
16	If two masthead lights are carried the forward light shall be placed not more than one quarter of the length of the craft from the stem.	4.4.2.1	[Yes / NA ?]
17	Craft less than 7m with a maximum speed of less than 7knots exhibit an all-round white light.	4.4.2.1	[Yes / NA ?]
18	If craft less than 7m with a maximum speed of less than 7knots carries sidelights then the all-round white light is 1 m higher.	4.4.2.1	[Yes / NA ?]
19	The masthead light or all-round light for craft less than 12 m in length of hull displaced from the fore and aft centreline provided that the sidelights are combined into one lantern or are located as close as possible to the same fore and aft line as the masthead light or all-round light.	4.4.2.2.2	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



20	If craft less than 12m, masthead light 1m minimum above the sidelines.	4.4.2	[Yes / NA ?]
21	If craft ≥ 12 m to < 20 m in length of hull, masthead light 2,5 m minimum above the gunwale.	4.4.2.3	[Yes / NA ?]
22	If craft ≥ 20 m in length of hull, masthead light forward of midship at a height above the hull of not less than 6 m.	4.4.2.4	[Yes / NA ?]
23	If craft ≥ 20 m in length of hull and breadth of the craft exceeds 6 m, masthead light at a height above the hull not less than such breadth, not greater than 12m.	4.4.2.4	[Yes / NA ?]
Sailing craft - Underway under sail alone			
24	Two all-around lights in a vertical line installed where they can best be seen.	4.4.3.1	[Yes / NA ?]
25	If two all-round lights are installed, the upper being red and the lower green, in addition to the prescribed sidelights and stern light but not with a tricolour light.	4.4.3.1	[Yes / NA ?]
26	Sailing craft under 7 m in length of hull have lights as prescribed for craft under 12m in length of hull,	4.4.3.1	[Yes / NA ?]
27	Sailing craft under 7 m in length of hull have ready an electric torch or lantern showing a white light.	4.4.3.1	[Yes / NA ?]
28	If craft less than 12m, combination sidelight on the fore and aft centreline.	4.4.3.2	[Yes / NA ?]
29	If craft ≥ 12 m to < 20 m in length of hull, combination sidelight placed over the fore and aft centreline.	4.4.3.3	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
30 Navigation lights comply with positioning COLREG? Documentation about the position is submitted.	4.2.1	[Yes / NA ?]	
31 Navigation lights comply with technical requirements of COLREG? Documentation about the technical compliance is submitted.	4.2.1	[Yes / NA ?]	
32 Navigation lights ensure required arcs of visibility, vertical separation and location requirements when craft is in fully loaded, ready-to-use condition.	4.2.5	[Yes / NA ?]	
33 Navigation lights installed according manufacturers' instructions.	4.3.1	[Yes / NA ?]	
34 Electric navigation lights installed in accordance with ISO 10133 or ISO 13297 or equivalent safety standard.	4.3.2	[Yes / NA ?]	
35 Used conductors are sized for no more than 3% voltage drop.	4.3.2	[Yes / NA ?]	
36 If a metallic frame or enclosure in a direct current (dc) system has a current carrying connection, it shall be mounted on an electrically nonconductive surface and polarity of the electrical leads shall be observed.	4.3.3	[Yes / NA ?]	

Instructions/Warnings to be included in the owner's manual

37 Diagram(s) identifying the electrical circuits of the craft with the location of navigation lights in the craft and identification of conductors by colour or other means.	Annex A	[Yes ?]
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Applicant:	
Boat Model Name:	



38	Location and description of functions of electrical controls, dials, switches, fuses and also circuitbreakers installed on the panel-board for the operation of the navigation lights.	Annex A	[Yes ?]
39	Details of replacement light sources.	Annex A	[Yes ?]
40	Access to navigation light fixtures.	Annex A	[Yes ?]
41	NEVER - work on the electrical installation while the system is energized.	Annex A	[Yes ?]
42	NEVER - modify the craft's electrical system or relevant drawings. Installation, alterations and maintenance should be performed by a competent marine electrical technician.	Annex A	[Yes ?]
43	NEVER - alter or modify the rated current amperage of overcurrent protective devices.	Annex A	[Yes ?]
44	NEVER - install or replace electrical appliances or devices with components which exceed the rated current amperage of the circuit.	Annex A	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - Electric propulsion systems****Ref.: EN ISO 16315:2016**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 For the battery group data including the following: - battery technology/type; - prospective short circuit current in (kA) and time constant in (s); - ventilation and temperature parameters; - Ampere hours (Ah).	Annex B	[Yes ?]	
2 Generator data including the following: - power (kW), rated voltage, power factor, frequency, other; - necessary reactance's and time constants; - maximum operating temperature.	Annex B	[Yes / NA ?]	
3 Propulsion motor data including the following: - power (kW), rated voltage, power factor, frequency, other; - regeneration performances; - braking data; - maximum operating temperature.	Annex B	[Yes ?]	
4 Charger data including the following: - power (kW), rated voltage, power factor, frequency, other; - short-circuit current (kA); - maximum operating temperature.	Annex B	[Yes ?]	

Further documentation

5 Overcurrent protection for each propulsion unit: position and rating		[Yes ?]	
6 Wire diagram including conductor length and type		[Yes ?]	
7 Voltage drop calculation	10.6	[Yes ?]	
8 Proof of separation of the DC system for propulsion and household [see RCD, Annex I, para 5.3]		[Yes ?]	
9 Proof that semiconductor converters shall conform to IEC 60146, if applicable	4.7.2	[Yes ?]	
10 Proof that the electrical motor complies with IEC 60034	4.7.3	[Yes ?]	
11 Information about the identification of all electrical equipment and enclosures	4.9.1	[Yes ?]	
12 Proof of compliance for an electric/electronic throttle according to EN ISO 25197:2018		[Yes / NA ?]	
13 EMC compliance with IEC 60945 for the electronic equipment	4.12	[Yes ?]	
14 Ignition protection of electrical equipment in the same vicinity as a battery / battery pack if emitting flammable gas or substances is possible		[Yes ?]	
15 Restrictions of hazardous areas and its accessibility, if applicable	4.14	[Yes ?]	
16 Information and proof about fault tripping of controls, its reset and emergency stop and manual emergency control mode	5.1.1	[Yes ?]	

Applicant:	
Boat Model Name:	



17	Information and proof for instruments, alerts and trip alarm	5.2	[Yes ?]
18	Information and proof for protection against electrical shock: accidental contact; insulation resistance of 500 ohm/V	6.1.3	[Yes ?]
19	Information and proof for fault to earth automatic disconnection	6.2, 6.3	[Yes ?]
20	Information and proof of the overcurrent protection, type and characteristic; see IEC 60947		[Yes ?]
21	Information about the battery monitoring and installation	8	[Yes ?]
22	Documentation about the compliance of the electrical installation which refers to IEC 60092-352 and other standards	9	[Yes ?]
23	Earthing and bonding testing	10.2	[Yes ?]
24	Insulation resistance of all components in the system.	10.3	[Yes ?]
25	On load test and inspection of electrical propulsion systems, and associated switch gear and control gear	10.5	[Yes ?]
26	On load test; Voltage drop;	10.6	[Yes ?]

Instructions/Warnings to be included in the owner's manual

Subject to check	Clause	Requirements	Checked ?
27 Block diagram of the propulsion system and a description of the installation location of the electric assemblies;conditions.	A.1	[Yes ?]	
28 Diagram(s) identifying the electrical circuits of the craft with the locations of electrical devices in the craft and identification of conductors by colour or other means;	A.1	[Yes ?]	
29 Location and description of functions of electrical controls, dials, switches, fuses and also circuitbreakers installed on the panel board;	A.1	[Yes ?]	
30 Instructions on how to leave the crafts electrical propulsion system when unattended;	A.1	[Yes ?]	
31 Description of display information as required by Clause 5;	A.1	[Yes ?]	
32	A.1	[Yes ?]	
33 Manufacturer instructions for any electrical machinery provided for consumer use	A.1	[Yes ?]	
34 Following advisory instructions are provided for the owner's manual to never: - work on the electrical installation while the system is energised; - modify the propulsion system, battery type and system components; - alter or modify the rated current amperage of overcurrent protective devices; - install or replace electrical appliances or devices with components which exceed the rated current amperage of the circuit.	A.2	[Yes ?]	

CHECKLIST**SMALL CRAFT - PERMANENTLY INSTALLED PETROL AND DIESEL FUEL TANKS****Ref.: EN ISO 21487:2018 (ISO 21487:2012/A1:2014/A2:2015)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements	Checked ?
1 Fuel type.	3.1/3.2	[Petrol / Diesel]	
2 Provisions are made for determination of fuel level or quantity.	4.3.1	[Yes ?]	
3 Metal tanks shall be designed/installed that no exterior surface will trap water.	4.3.2	[Yes / NA ?]	
4 Non-integral tank supports, chocks or hangers shall be separated from the surface of metal tanks by a non-abrasive material, or welded to the tank.	4.3.4	[Yes / NA ?]	
5 The fuel fill pipe has a minimum diameter of 28,5 mm.	4.3.7	[Yes ?]	
6 Diesel tank equipped with inspection hatch(es), at least 120 mm diameter.	4.3.10	[Yes / NA ?]	
7 If petrol tank, not integral with hull.	5.1.1	[Yes / NA ?]	
8 If petrol tank, all fittings and openings on top. Metallic fill and ventilation pipes may be connected to the sides or ends if welded to the tank and reach above the tank top.	5.1.2	[Yes / NA ?]	
9 If petrol tank, no tank drains are permitted.	5.1.3	[Yes / NA ?]	
10 Label: Fuel tank information: -manufacturer's name/trademark, city or equivalent, and country; -year of manufacture; -design capacity, expressed in litres; -maximum temperature to which the tank may be exposed (for non-metallic tanks only); -fuel or fuels for which the tank is suitable, in symbols (as specified in ISO 11192) or in words; -maximum fill-up height above tank top, expressed in metres, and allowable test pressure, expressed in kilopascals; -"ISO 21487" marking or label if the tank is a non-metallic petrol fuel tank fire tested in accordance with this International Standard. Affixed: on the tank, visible during inspection.	8	[Yes ?]	

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements	Checked ?
11 All seals such as gaskets, o-rings and joint-rings shall be of non-wicking, i.e. non-fuel absorbent, material.	4.1.1	[Yes ?]	
12 All materials are resistant to deterioration by the fuel and to other liquids (e.g. grease, lubricating oil, bilge solvents and sea water).	4.1.2	[Yes ?]	

Applicant:	
Boat Model Name:	



13	Copper-based alloys for fittings are acceptable for direct coupling with all tank materials specified in Table 1, except aluminium.	4.2	[Yes / NA ?]
14	Copper-based alloy fittings are used for aluminium tanks only if a galvanic barrier is arranged between fitting and tank.	4.2	[Yes / NA ?]
15	Rigid fuel suction tubes and fill pipes which extend to the tank bottom have sufficient clearance to prevent contact with the bottom during normal operation.	4.3.3	[Yes / NA ?]
16	If baffles are provided, the open area of the baffle is not greater than 30% of the tank cross-section in the plane of the baffle.	4.3.5	[Yes / NA ?]
17	Baffle openings do not prevent fuel flow across the bottom or trap vapour.	4.3.6	[Yes / NA ?]
18	The ventilation pipes have a minimum inside diameter of 11 mm (95 mm ²) or a ventilation opening preventing tank pressure exceeding 80% of the marked.	4.3.8	[Yes ?]
19	The tank material and thicknesses comply with the requirements of Table 1.	4.3.9	[Yes ?]
20	Non-integral tank installed to introduce loads into the structure.	4.4.1	[Yes / NA ?]
21	If petrol tank, the pressure-impulse test requirements in 7.3 are met.	5.2.2	[Yes / NA ?]
22	Alternatively, a metallic petrol tank may be tested in accordance to 7.2 with enhanced pressure but fulfils requirements for plating thickness, construction and welding.	5.2.2	[Yes / NA ?]
23	If a non-metallic petrol tank, the fire test requirements in 7.4 and/or 7.5 are met.	5.2.3	[Yes / NA ?]
24	If integral and cored hull, the core does not deteriorate from exposure.	6.1.1	[Yes / NA ?]
25	Diesel integral fuel tanks are in accordance with ISO 12215-5.	6.1.3	[Yes / NA ?]
26	Diesel tanks meet the leakage test requirements according to 7.1.2.	6.2.1	[Yes / NA ?]
27	If diesel tank is non-metallic, non-integral and installed in engine compartment, the tank is fire tested according to 7.4 or 7.5.	6.2.3	[Yes / NA ?]
28	Petrol and/or diesel fuel tank has been type tested with hydraulic pressure/strength test by fuel tank manufacturer.	7.2.1	[Yes / NA ?]
29	Individual fuel tank has been leakage tested by fuel tank manufacturer.	7.2.2	[Yes ?]

Comments:

CHECKLIST**SMALL CRAFT - ELECTRICAL/ELECTRONIC CONTROL SYSTEMS FOR STEERING, SHIFT AND THROTTLE****Ref.: ISO 25197:2018 (ISO 25197 2012+A1:2014)**

Checklist_Evaluation_Module PCA en220801

Applicant:	
Boat Model Name:	



Subject to check	Clause	Requirements Checked ?
1 Label: Operational characteristics, instructions and warnings for proper use. Affixed: on-product.	4.11	[Yes / NA ?]
2 Label: Portable helm station controls with following information: -keep proper lookout; -hold on to prevent falling, boat may move suddenly; -read owner's manual for safe use of the system. Affixed: on the portable helm or where the device is stored.	7.3	[Yes / NA ?]
3 Label: Warning labels or text for the DPS and/or if helm stations not equipped with a display screen: -boat is considered underway; -keep proper lookout; -stay out of water; -hold on to prevent falling, boat may move suddenly; -read owner's manual for safe use of the system.	8.3	[Yes / NA ?]
4 Label: If the helm station(s) is (are) not equipped with an electronic display and the craft has a dynamic-positioning system installed. Use symbols or the following warnings: -boat is considered underway; -keep proper lookout; -propellers are spinning, swimming is dangerous; -boat may move suddenly, hold on to prevent falling; -read owner's manual for safe use of the system. Affixed: in the vicinity of the helm station.	11	[Yes / NA ?]

The following questions shall be filled in by the watercraft manufacturer and appropriate documentation shall be submitted to the inspector for verification.

Subject to check	Clause	Requirements Checked ?
5 The manufacturer of the system has submitted a Declaration of Conformity with regards to the compliance as Annex II component according to the Recreational Craft Directive for the parts of the system intended for steering control of the boat. See also comment on last page of this checklist.		[Yes / NA ?]
6 The manufacturer of the system has submitted a confirmation with regards to the compliance to ISO 25197 for the parts of the system intended for throttle control of the boat. See also comment on last page of this checklist.		[Yes / NA ?]
7 The system is energized whenever the propulsion engine(s) are running.	4.4	[Yes ?]

Applicant:	
Boat Model Name:	



8	The system is fully operational within five seconds after being powered (except for dynamic positioning and displays).	4.5	[Yes ?]
9	Multi-installed engine steering systems are redundant by virtue of the fact that they are both mechanically and electrically independent of each other.	4.6	[Yes / NA ?]
10	A single device is allowed for control of multiple engines (e.g. steering wheel, joystick).	4.6	[Yes / NA ?]
11	Each helm station shall give a visual indication when active.	4.7	[Yes ?]
12	When the system enters a fail-safe mode, the operator is alerted by a visible and/or audible means at each helm station.	4.8	[Yes ?]
13	The sound pressure of an audible alarm 1 metre from the command station is at least 75 dB(A), but not greater than 85 dB(A). Systems incorporating a mute feature shall maintain the visual alert as long as the failure persists.	4.9	[Yes ?]
14	Muting of the alarm is not allowed if the alert system is only audible.	4.9	[Yes ?]
15	Instructions for proper installation and use of the steering system shall be made available by the manufacturer.	4.10	[Yes ?]
16	It is only be possible to start propulsion equipment in neutral (exception: temporary override for emergency situations).	4.12	[Yes ?]
17	Within 0,5 seconds on a physical input command, the steering, shift and throttle actuators do react/adjust to the input.	4.13	[Yes ?]
18	ISO 8846 is meet for electrical components intended to be installed in petrol engine or petrol tank compartments for IGP.	4.16	[Yes ?]
19	If the system provides both, cruising- and manoeuvring mode, an indication to the operator at the command station is provided of which mode the system is in. The system does not change the mode without input from the operator.	4.18	[Yes / NA ?]
20	If the system is equipped with a control head, requirements of clause 5 apply. [operator input device, other than a steering wheel, for the simultaneous control of steering and propulsion]	5	
21	The control head operation is permitted for both cruising-mode and manoeuvring-mode operation.	5.1	[Yes / NA ?]
22	When the operator releases the grip, the control head position shall return to the neutral.	5.2	[Yes / NA ?]
23	When released in cruising mode, the control head engine throttle control must not be returned to a low RPM or a manufacturer-determined idle state for operation.	5.3	[Yes / NA ?]
24	Releasing the control head in manoeuvring mode to neutral results in a disengaged transmission and determined idle or stop state of electric motors.	5.4	[Yes / NA ?]
25	The control head orientation relative to the craft and the movement of the craft are identically.	5.5	[Yes / NA ?]
26	The orientation relative to the craft is clearly indicated for portable helms.	5.6	[Yes / NA ?]
27	If the control head includes a rotation function, the control head activation, clockwise or counter-clockwise, results in rotating the craft in the same direction.	5.7	[Yes / NA ?]
28	Transfer of command from one station to another is completed at the helm station intended to be active.	6.0	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



29	Portable helm station controls can only be used in the manoeuvring mode.	7.1	[Yes / NA ?]
30	In case that a portable helm station control has a loss of communication or malfunction it results in disengaged transmission and idling thermal engine(s) and stopping electric engine(s). In addition the operator is notified and able to transfer the function to another helm.	7.2	[Yes / NA ?]
31	The signal strength of a wireless device is displayed at the portable control or an audible warning signal alerts the operator that the signal is weak and he/she is about to lose control.	7.4	[Yes / NA ?]
32	A wireless device shall only be able to control the boat of origin.	7.5	[Yes / NA ?]
33	An indication of its electrical-charge status is given on a wireless portable helm control and the device shall prevent activation when the charge is insufficient to maintain a connection for 15 minutes without loss of the wireless communication link.	7.6	[Yes / NA ?]
34	A wireless portable helm control notifies the operator when the device is 15 minutes from deactivation due to insufficient charge.	7.7	[Yes / NA ?]
35	Check point 8.1 to 8.8 only if a Dynamic Positioning System (DPS) is part of the system. Otherwise scratch out 8.1 to 8.8.	8.0	
36	A Dynamic Positioning System (= DPS) can only be activated manually.	8.1	[Yes / NA ?]
37	The craft main helm station has a visual display for the DPS precision value.	8.2	[Yes / NA ?]
38	Activation of the DPS is only possible if the DPS precision value is within the manufacturer-set limits.	8.4	[Yes / NA ?]
39	The DPS control system alerts the operator visually and audibly about disengagement in case that the DPS precision value of an activated dynamic-positioning (autonomous) mode is out of the manufacturer-set limits.	8.5	[Yes / NA ?]
40	The manufacturer has set the maximum allowable envelope/radius and heading deviation. This one is not adjustable by the operator.	8.6	[Yes / NA ?]
41	The manufacturer has set the maximum engine speed for dynamic positioning. This one is not adjustable by the operator.	8.7	[Yes / NA ?]
42	In case that a command station in a multiple helm system has a malfunction, the system does not prevent transfer or operation from other helm stations. In addition the operator is notified audible and/or visual about the malfunction.	9.1.1	[Yes / NA ?]
43	In the event of loss of steering control affecting only one engine in a multi-engine installation, the system is still capable of steering the boat.	9.1.2	[Yes / NA ?]
44	In the event of a command station failure, the operator shall be notified and the affected command station is switched to a fail-safe mode.	9.1.3	[Yes / NA ?]
45	In the event of loss of steering control in a single-engine rudder or strut installation, emergency control of the rudder is possible.	9.1.4	[Yes / NA ?]

compliant: Yes or V

not applicable: NA

follow up on variation report: Rpt or X

Applicant:	
Boat Model Name:	



46	The system notifies the operator of a command logic loss or a malfunction in its computer command logic.	9.2	[Yes ?]
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Instructions to be included in the owner's manual

46	Operational characteristics, instructions and warnings for proper use are described (if not labelled on-product).	4.11	[Yes / NA ?]
47	Necessary information for safe operation of the system.	12	[Yes ?]
48	Maintenance requirements.	12	[Yes ?]
49	Locations of helm stations.	12	[Yes ?]
50	Information regarding all visual indicators and audible alerts.	12	[Yes ?]
51	Information on how to transfer command from one helm station to another.	12	[Yes ?]
52	Warning symbols or text for the DPS systems: -do not leave helm station unattended; -boat is considered underway; -keep proper lookout; -stay out of water, propellers are spinning; -hold on to prevent falling, boat may move suddenly.	12	[Yes / NA ?]

Note:

With regards to the certification of electrical/electronic control systems for steering, shift and throttle, following Recommendation For Use (RFU) has been published by the Recreational Craft Sectorial Group (RSG) as RFU #115:

Scenario/Question:

Are shift and throttle and dynamic position control systems, or combinations thereof, which are included in scope of standard ISO 25197, Annex II components?

Recommended Solution:

No. Only those components that control the steering that are listed in Annex II.3: steering wheels, steering mechanismus and cable assemblies.

A "control head" (e.g. a joystick) which controls both the throttle and steering systems are considered to be Annex II components but a throttle of a shift, which is independent of the system that controls the attitude of the drive unit/rudder, is not.

Comments:
