

Directive 2013/53/EU of the European Parliament and of the Council
of 20 November 2013 on recreational craft and personal watercraft
and repealing Directive 94/25/EC (Text with EEA relevance)

ANNEX I

ESSENTIAL REQUIREMENTS**A. Essential requirements for the design and construction of products referred to in Article 2(1)**

1. WATERCRAFT DESIGN CATEGORIES

Design category	Wind force(Beaufort scale)	Significant wave height(H^{1/3}, metres)
A	exceeding 8	exceeding 4
B	up to, and including, 8	up to, and including, 4
C	up to, and including, 6	up to, and including, 2
D	up to, and including, 4	up to, and including, 0,3

Explanatory notes:

- A. A recreational craft given design category A is considered to be designed for winds that may exceed wind force 8 (Beaufort scale) and significant wave height of 4 m and above but excluding abnormal conditions, such as storm, violent storm, hurricane, tornado and extreme sea conditions or rogue waves.
- B. A recreational craft given design category B is considered to be designed for a wind force up to, and including, 8 and significant wave height up to, and including, 4 m.
- C. A watercraft given design category C is considered to be designed for a wind force up to, and including, 6 and significant wave height up to, and including, 2 m.
- D. A watercraft given design category D is considered to be designed for a wind force up to, and including, 4 and significant wave height up to, and including, 0,3 m, with occasional waves of 0,5 m maximum height.

Watercraft in each design category must be designed and constructed to withstand the parameters in respect of stability, buoyancy, and other relevant essential requirements listed in this Annex, and to have good handling characteristics.

2. GENERAL REQUIREMENTS

2.1. **Watercraft identification**

Each watercraft shall be marked with an identification number including the following information:

- (1) country code of the manufacturer,
- (2) unique code of the manufacturer assigned by the national authority of the Member State,
- (3) unique serial number,
- (4) month and year of production,
- (5) model year.

Detailed requirements for the identification number referred to in the first paragraph are set out in the relevant harmonised standard.

2.2. Watercraft builder's plate

Each watercraft shall carry a permanently affixed plate mounted separately from the watercraft identification number, containing at least the following information:

- (a) manufacturer's name, registered trade name or registered trade mark, as well as contact address;
- (b) CE marking, as provided for in Article 18;
- (c) watercraft design category in accordance with Section 1;
- (d) manufacturer's maximum recommended load derived from point 3.6 excluding the weight of the contents of the fixed tanks when full;
- (e) number of persons recommended by the manufacturer for which the watercraft was designed.

In the case of post-construction assessment, the contact details and the requirements referred to in point (a) shall include those of the notified body which has carried out the conformity assessment.

2.3. Protection from falling overboard and means of reboarding

Watercraft shall be designed to minimise the risks of falling overboard and to facilitate reboarding. Means of reboarding shall be accessible to or deployable by a person in the water unaided.

2.4. Visibility from the main steering position

For recreational craft, the main steering position shall give the operator, under normal conditions of use (speed and load), good all-round visibility.

2.5. Owner's manual

Each product shall be provided with an owner's manual in accordance with Article 7(7) and Article 9(4). That manual shall provide all the information necessary for safe use of the product drawing particular attention to set up, maintenance, regular operation, prevention of risks and risk management.

3. INTEGRITY AND STRUCTURAL REQUIREMENTS

3.1. Structure

The choice and combination of materials and its construction shall ensure that the watercraft is strong enough in all respects. Special attention shall be paid to the design category in accordance with Section 1, and the manufacturer's maximum recommended load in accordance with point 3.6.

3.2. Stability and freeboard

The watercraft shall have sufficient stability and freeboard considering its design category in accordance with Section 1 and the manufacturer's maximum recommended load in accordance with point 3.6.

3.3. Buoyancy and flotation

The watercraft shall be constructed as to ensure that it has buoyancy characteristics appropriate to its design category in accordance with Section 1 and the manufacturer's maximum

recommended load in accordance with point 3.6. All habitable multihull recreational craft susceptible of inversion shall have sufficient buoyancy to remain afloat in the inverted position.

Watercraft of less than 6 metres in length that are susceptible to swamping when used in their design category shall be provided with appropriate means of flotation in the swamped condition.

3.4. Openings in hull, deck and superstructure

Openings in hull, deck(s) and superstructure shall not impair the structural integrity of the watercraft or its weather tight integrity when closed.

Windows, port lights, doors and hatch covers shall withstand the water pressure likely to be encountered in their specific position, as well as point loads applied by the weight of persons moving on deck.

Through hull fittings designed to allow water passage into the hull or out of the hull, below the waterline corresponding to the manufacturer's maximum recommended load in accordance with point 3.6, shall be fitted with a means of shutoff which shall be readily accessible.

3.5. Flooding

All watercraft shall be designed so as to minimise the risk of sinking.

Where appropriate, particular attention shall be paid to:

- (a) cockpits and wells, which should be self-draining or have other means of keeping water out of the watercraft interior;
- (b) ventilation fittings;
- (c) removal of water by pumps or other means.

3.6. Manufacturer's maximum recommended load

The manufacturer's maximum recommended load (fuel, water, provisions, miscellaneous equipment and people (in kilograms)) for which the watercraft was designed, shall be determined in accordance with the design category (Section 1), stability and freeboard (point 3.2) and buoyancy and flotation (point 3.3).

3.7. Life raft stowage

All recreational craft of design categories A and B, and recreational craft of design categories C and D longer than 6 metres shall be provided with one or more stowage points for a life raft (life rafts) large enough to hold the number of persons the recreational craft was designed to carry as recommended by the manufacturer. Life raft stowage point(s) shall be readily accessible at all times.

3.8. Escape

All habitable multihull recreational craft susceptible of inversion shall be provided with viable means of escape in the event of inversion. Where there is a means of escape provided for use in the inverted position, it shall not compromise the structure (point 3.1), the stability (point 3.2) or buoyancy (point 3.3) whether the recreational craft is upright or inverted.

Every habitable recreational craft shall be provided with viable means of escape in the event of fire.

3.9. Anchoring, mooring and towing

All watercraft, taking into account their design category and their characteristics, shall be fitted with one or more strong points or other means capable of safely accepting anchoring, mooring and towing loads.

4. HANDLING CHARACTERISTICS

The manufacturer shall ensure that the handling characteristics of the watercraft are satisfactory with the most powerful propulsion engine for which the watercraft is designed and constructed. For all propulsion engines, the maximum rated engine power shall be declared in the owner's manual.

5. INSTALLATION REQUIREMENTS

5.1. Engines and engine compartments

5.1.1. *Inboard engine*

All inboard mounted engines shall be placed within an enclosure separated from living quarters and installed so as to minimise the risk of fires or spread of fires as well as hazards from toxic fumes, heat, noise or vibrations in the living quarters.

Engine parts and accessories that require frequent inspection and/or servicing shall be readily accessible.

The insulating materials inside the engine compartment shall not sustain combustion.

5.1.2. *Ventilation*

The engine compartment shall be ventilated. The ingress of water into the engine compartment through openings must be minimised.

5.1.3. *Exposed parts*

Unless the engine is protected by a cover or its own enclosure, exposed moving or hot parts of the engine that could cause personal injury shall be effectively shielded.

5.1.4. *Outboard propulsion engine starting*

Every outboard propulsion engine fitted on any watercraft shall have a device to prevent the engine being started in gear, except:

- (a) when the engine produces less than 500 Newton's (N) of static thrust;
- (b) when the engine has a throttle limiting device to limit thrust to 500 N at the time of starting the engine.

5.1.5. *Personal watercraft running without driver*

Personal watercraft shall be designed either with an automatic propulsion engine cut-off or with an automatic device to provide reduced speed, circular, forward movement when the driver dismounts deliberately or falls overboard.

5.1.6. Tiller-controlled outboard propulsion engines shall be equipped with an emergency stopping device which can be linked to the helmsman.

5.2. Fuel system

5.2.1. *General*

The filling, storage, venting and fuel-supply arrangements and installations shall be designed and installed so as to minimise the risk of fire and explosion.

5.2.2. *Fuel tanks*

Fuel tanks, lines and hoses shall be secured and separated or protected from any source of significant heat. The material the tanks are made of and their method of construction shall be in accordance with their capacity and the type of fuel.

Petrol fuel tank spaces shall be ventilated.

Petrol fuel tanks shall not form part of the hull and shall be:

- (a) protected against fire from any engine and from all other sources of ignition;
- (b) separated from living quarters.

Diesel fuel tanks may be integral with the hull.

5.3. **Electrical system**

Electrical systems shall be designed and installed so as to ensure proper operation of the watercraft under normal conditions of use and shall be such as to minimise risk of fire and electric shock.

All electrical circuits, except engine starting circuits supplied from batteries, shall remain safe when exposed to overload.

Electric propulsion circuits shall not interact with other circuits in such a way that either would fail to operate as intended.

Ventilation shall be provided to prevent the accumulation of explosive gases which might be emitted from batteries. Batteries shall be firmly secured and protected from ingress of water.

5.4. **Steering system**

5.4.1. *General*

Steering and propulsion control systems shall be designed, constructed and installed in order to allow the transmission of steering loads under foreseeable operating conditions.

5.4.2. *Emergency arrangements*

Every sailing recreational craft and single-propulsion engine non-sailing recreational craft with remote-controlled rudder steering systems shall be provided with emergency means of steering the recreational craft at reduced speed.

5.5. **Gas system**

Gas systems for domestic use shall be of the vapour-withdrawal type and shall be designed and installed so as to avoid leaks and the risk of explosion and be capable of being tested for leaks. Materials and components shall be suitable for the specific gas used to withstand the stresses and exposures found in the marine environment.

Each gas appliance intended by the manufacturer for the application for which it is used shall be so installed in accordance with the manufacturer's instructions. Each gas-consuming appliance must be supplied by a separate branch of the distribution system, and each appliance must be controlled by a separate closing device. Adequate ventilation must be provided to prevent hazards from leaks and products of combustion.

All watercraft with a permanently installed gas system shall be fitted with an enclosure to contain all gas cylinders. The enclosure shall be separated from the living quarters, accessible only from the outside and ventilated to the outside so that any escaping gas drains overboard.

In particular, any permanently installed gas system shall be tested after installation.

5.6. **Fire protection**

5.6.1. *General*

The type of equipment installed and the layout of the watercraft shall take account of the risk and spread of fire. Special attention shall be paid to the surroundings of open flame devices, hot areas or engines and auxiliary machines, oil and fuel overflows, uncovered oil and fuel pipes and routing of electrical wiring in particular away from heat sources and hot areas.

5.6.2. *Fire-fighting equipment*

Recreational craft shall be supplied with fire-fighting equipment appropriate to the fire hazard, or the position and capacity of fire-fighting equipment appropriate to the fire hazard shall be indicated. The craft shall not be put into service until the appropriate fire-fighting equipment is in place. Petrol engine compartments shall be protected by a fire extinguishing system that avoids the need to open the compartment in the event of fire. Where fitted, portable fire extinguishers shall be readily accessible and one shall be so positioned that it can easily be reached from the main steering position of the recreational craft.

5.7. **Navigation lights, shapes and sound signals**

Where navigation lights, shapes and sound signals are fitted, they shall comply with the 1972 COLREG (The International Regulations for Preventing Collisions at Sea) or CEVNI (European Code for Interior Navigations for inland waterways) Regulations as appropriate.

5.8. **Discharge prevention and installations facilitating the delivery ashore of waste**

Watercraft shall be constructed so as to prevent the accidental discharge of pollutants (oil, fuel, etc.) overboard.

Any toilet fitted in a recreational craft shall be connected solely to a holding tank system or water treatment system.

Recreational craft with installed holding tanks shall be fitted with a standard discharge connection to enable pipes of reception facilities to be connected with the recreational craft discharge pipeline.

In addition, any through-the-hull pipes for human waste shall be fitted with valves which are capable of being secured in the closed position.

B. **Essential requirements for exhaust emissions from propulsion engines**

Propulsion engines shall comply with the essential requirements for exhaust emissions set out in this Part.

1. **PROPULSION ENGINE IDENTIFICATION**

1.1. Each engine shall be clearly marked with the following information:

- (a) engine manufacturer's name, registered trade name or registered trade mark and contact address; and, if applicable, the name and contact address of the person adapting the engine;

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- (b) engine type, engine family, if applicable;
 - (c) a unique engine serial number;
 - (d) CE marking, as provided for in Article 18.
- 1.2. The marks referred to in point 1.1 must be durable for the normal life of the engine and must be clearly legible and indelible. If labels or plates are used, they must be attached in such a manner that the fixing is durable for the normal life of the engine, and the labels/plates cannot be removed without destroying or defacing them.
- 1.3. The marks must be secured to an engine part necessary for normal engine operation and not normally requiring replacement during the engine life.
- 1.4. The marks must be located so as to be readily visible after the engine has been assembled with all the components necessary for engine operation.

2. EXHAUST EMISSION REQUIREMENTS

Propulsion engines shall be designed, constructed and assembled so that when correctly installed and in normal use, emissions shall not exceed the limit values obtained from point 2.1, Table 1 and point 2.2, Tables 2 and 3:

- 2.1. Values applying for the purposes of Article 55(2) and Table 2 of point 2.2:

TABLE 1

(g/kWh)								
Type	Carbon monoxide $CO = A + B / P_N^N$			Hydrocarbons $HC = A + B / P_N^N$			Nitrogen oxides NO_x	Particulates PT
	A	B	n	A	B	n		
Two-stroke spark ignition	150,0	600,0	1,0	30,0	100,0	0,75	10,0	Not applicable
Four-stroke spark ignition	150,0	600,0	1,0	6,0	50,0	0,75	15,0	Not applicable
Compression ignition	5,0	0	0	1,5	2,0	0,5	9,8	1,0

Where A, B and n are constants in accordance with the table, P_N is the rated engine power in kW.

- 2.2. Values applying from 18 January 2016:

TABLE 2

Exhaust emission limits for compression ignition (CI) engines⁰

Status: This is the original version (as it was originally adopted).

Swept Volume SV (L/cyl)	Rated Engine Power P_N (kW)	Particulates PT (g/kWh)	Hydrocarbons + Nitrogen Oxides HC + NO _x (g/kWh)
SV < 0,9	$P_N < 37$	The values referred to in table 1	
	$37 \leq P_N < 75$ a	0,3	4,7
	$75 \leq P_N < 3700$	0,15	5,8
0,9 ≤ SV < 1,2	$P_N < 3700$	0,14	5,8
1,2 ≤ SV < 2,5		0,12	5,8
2,5 ≤ SV < 3,5		0,12	5,8
3,5 ≤ SV < 7,0		0,11	5,8

a + Alternatively, compression-ignition engines with rated engine power at or above 37 kW and below 75 kW and with a swept volume below 0,9 L/cyl shall not exceed a PT emission limit of 0,20 g/kWh and a combined HC + NO_x emission limit of 5,8 g/kWh.

b ++ Any compression-ignition engine shall not exceed a Carbon monoxide (CO) emission limit of 5,0 g/kWh.

TABLE 3

Exhaust emission limits for spark ignition (SI) engines

Type of engine	Rated Engine Power P_N (kW)	Carbon monoxide CO (g/kWh)	Hydrocarbons + Nitrogen Oxides HC + NO _x (g/kWh)
Stern-drive and inboard engines	$P_N \leq 373$	75	5
	$373 < P_N \leq 485$	350	16
	$P_N > 485$	350	22
Outboard engines and PWC engines	$P_N \leq 4,3$	$500 - (5,0 \times P_N)$	30
	$4,3 < P_N \leq 40$	$500 - (5,0 \times P_N)$	$15,7 + \left(\frac{50}{P_N^{0,9}}$
	$P_N > 40$	300	$15,7 + \left(\frac{50}{P_N^{0,9}}\right)$

2.3. Test cycles:

Test cycles and weighting factors to be applied:

The following requirements of ISO standard 8178-4:2007 shall be used, taking into account the values set out in the table below.

For variable speed CI engines test cycle E1 or E5 shall be applied or alternatively, above 130 kW, test cycle E3 may be applied. For variable speed SI engines test cycle E4 shall be applied.

Status: This is the original version (as it was originally adopted).

Cycle E1, Mode number	1	2	3	4	5
Speed	Rated speed		Intermediate speed		Low-idle speed
Torque, %	100	75	75	50	0
Weighting factor	0,08	0,11	0,19	0,32	0,3
Speed	Rated speed		Intermediate speed		Low-idle speed
Cycle E3, Mode number	1	2	3	4	
Speed, %	100	91	80	63	
Power, %	100	75	50	25	
Weighting factor	0,2	0,5	0,15	0,15	
Cycle E4, Mode number	1	2	3	4	5
Speed, %	100	80	60	40	Idle
Torque, %	100	71,6	46,5	25,3	0
Weighting factor	0,06	0,14	0,15	0,25	0,4
Cycle E5, Mode number	1	2	3	4	5
Speed, %	100	91	80	63	Idle
Power, %	100	75	50	25	0
Weighting factor	0,08	0,13	0,17	0,32	0,3

Notified bodies may accept tests carried out on the basis of other tests cycles as specified in a harmonised standard and as applicable for the engine duty cycle.

2.4. **Application of the propulsion engine family and choice of parent propulsion engine**

The engine manufacturer shall be responsible for defining those engines from his range which are to be included in an engine family.

A parent engine shall be selected from an engine family in such a way that its emissions characteristics are representative for all engines in that engine family. The engine incorporating those features that are expected to result in the highest specific emissions (expressed in g/kWh), when measured on the applicable test cycle, should normally be selected as the parent engine of the family.

2.5. Test fuels

The test fuel used for exhaust emission testing shall meet the following characteristics:

Petrol Fuels				
Property	RF-02-99Unleaded		RF-02-03Unleaded	
	min	max	min	max
Research Octane Number (RON)	95	—	95	—
Motor Octane Number (MON)	85	—	85	—
Density at 15 °C (kg/m ³)	748	762	740	754
Initial boiling point (°C)	24	40	24	40
Mass fraction of sulphur (mg/kg)	—	100	—	10
Lead content (mg/l)	—	5	—	5
Reid vapour pressure (kPa)	56	60	—	—
Vapour pressure (DVPE) (kPa)	—	—	56	60
Diesel Fuels				
Property	RF-06-99		RF-06-03	
	min	max	min	max
Cetane number	52	54	52	54
Density at 15 °C (kg/m ³)	833	837	833	837
Final boiling point (°C)	—	370	—	370
Flash point (°C)	55	—	55	—
Mass fraction of sulphur (mg/kg)	To be reported	300 (50)	—	10
Mass fraction of ash (%)	To be reported	0,01	—	0,01

Notified bodies may accept tests carried out on the basis of other tests fuel as specified in a harmonised standard.

3. DURABILITY

The manufacturer of the engine shall supply engine installation and maintenance instructions, which if applied should mean that the engine in normal use will continue to comply with the

limits set out in points 2.1 and 2.2 throughout the normal life of the engine and under normal conditions of use.

This information shall be obtained by the engine manufacturer by use of prior endurance testing, based on normal operating cycles, and by calculation of component fatigue so that the necessary maintenance instructions may be prepared by the manufacturer and issued with all new engines when first placed on the market.

The normal life of the engine is as follows:

- (a) For CI engines: 480 hours of operation or 10 years, whichever occurs first;
- (b) For SI inboard or stern drive engines with or without integral exhaust:
 - (i) for the engine category
 $P_N \leq 373 \text{ kW}$
: 480 hours of operation or 10 years, whichever occurs first,
 - (ii) for engines in the category
 $373 < P_N \leq 485 \text{ kW}$
: 150 hours of operation or three years, whichever occurs first,
 - (iii) for the engine category
 $P_N > 485 \text{ kW}$
: 50 hours of operation or one year, whichever occurs first;
- (c) personal watercraft engines: 350 hours of operation or five years, whichever occurs first;
- (d) outboard engines: 350 hours of operation or 10 years, whichever occurs first

4. OWNER'S MANUAL

Each engine shall be provided with an owner's manual in a language or languages which can be easily understood by consumers and other end-users, as determined by the Member State in which the engine is to be marketed.

The owner's manual shall:

- (a) provide instructions for the installation, use and maintenance needed to assure the proper functioning of the engine to meet the requirements of Section 3 (Durability);
- (b) specify the power of the engine when measured in accordance with the harmonised standard.

C. Essential requirements for noise emissions

Recreational craft with inboard or stern drive engines without integral exhaust, personal watercraft and outboard engines and stern drive engines with integral exhaust shall comply with the essential requirements for noise emissions set out in this Part.

1. NOISE EMISSION LEVELS

- 1.1. Recreational craft with inboard or stern drive engines without integral exhaust, personal watercraft and outboard engines and stern drive engines with integral exhaust shall be designed, constructed and assembled so that noise emissions shall not exceed the limit values in the following table:

Rated Engine Power(single engine)In kW	Maximum Sound Pressure Level = L_{pASmax}In dB
$P_N \leq 10$	67
$10 < P_N \leq 40$	72
$P_N > 40$	75

where P_N = rated engine power in kW of a single engine at rated speed and L_{pASmax} = maximum sound pressure level in dB.

For twin-engine and multiple-engine units of all engine types an allowance of 3 dB may be applied.

- 1.2. As an alternative to sound measurement tests, recreational craft with inboard engine configuration or stern drive engine configuration, without integral exhaust, shall be deemed to comply with the noise requirements set out in point 1.1 if they have a Froude number of $\leq 1,1$ and a Power to Displacement ratio of ≤ 40 and where the engine and exhaust system are installed in accordance with the engine manufacturer's specifications.
- 1.3. 'Froude number' F_n shall be calculated by dividing the maximum recreational craft speed V (m/s) by the square root of the waterline length lwl (m) multiplied by a given gravitational acceleration constant, g , of $9,8 \text{ m/s}^2$.

$$F_n = \frac{V}{\sqrt{(g \cdot lwl)}}$$

'Power to Displacement ratio' shall be calculated by dividing the rated engine power P_N (in kW) by the recreational craft's displacement D (in tonnes)

$$\text{Power to Displacement ratio} = \frac{P_N}{D}$$

2. OWNER'S MANUAL

For recreational craft with inboard engine or stern drive engines without integral exhaust and personal watercraft, the owner's manual required under point 2.5 of Part A, shall include information necessary to maintain the recreational craft and exhaust system in a condition that, insofar as is practicable, will ensure compliance with the specified noise limit values when in normal use.

For outboard engines and stern drive engines with integral exhaust, the owner's manual required under Section 4 of Part B shall provide the instructions necessary to maintain the engine in a condition, that insofar as is practicable, will ensure compliance with the specified noise limit values when in normal use.

3. DURABILITY

The provisions on the durability in Section 3 of Part B shall apply mutatis mutandis to the compliance with the requirements on noise emissions set out in Section 1 of this part.

ANNEX II

COMPONENTS OF WATERCRAFT

- (1) Ignition-protected equipment for inboard and stern drive petrol engines and petrol tank spaces;
- (2) Start-in-gear protection devices for outboard engines;
- (3) Steering wheels, steering mechanisms and cable assemblies;
- (4) Fuel tanks intended for fixed installations and fuel hoses;
- (5) Prefabricated hatches, and port lights.

ANNEX III

**DECLARATION BY THE MANUFACTURER OR THE IMPORTER
OF THE PARTLY COMPLETED WATERCRAFT (ARTICLE 6(2))**

The declaration by the manufacturer or the importer established in the Union referred to in Article 6(2) shall contain the following:

- (a) the name and address of the manufacturer;
- (b) the name and address of the representative of the manufacturer established in the Union or, if appropriate, of the person responsible for the placing on the market;
- (c) a description of the partly completed watercraft;
- (d) a statement that the partly completed watercraft complies with the essential requirements that apply at this stage of construction; this shall include references to the relevant harmonised standards used, or references to the specifications in relation to which compliance is declared at this stage of construction; furthermore, it is intended to be completed by other legal or natural persons in full compliance with this Directive.

ANNEX IV

EU DECLARATION OF CONFORMITY No xxxxx⁽¹⁾

1. No xxxxx (Product: product, batch, type, or serial number):
2. Name and address of the manufacturer or his authorised representative [The authorised representative must also give the business name and address of the manufacturer] or the private importer.
3. This declaration of conformity is issued under the sole responsibility of the manufacturer or the private importer or the person referred to in Article 19(3) or (4) of Directive 2013/53/EU.
4. Object of the declaration (identification of product allowing traceability. It may include a photograph, where appropriate):

5. The object of the declaration described in point 4 is in conformity with the relevant Union harmonisation legislation:
6. References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:
7. Where applicable, the notified body ... (name, number) performed ... (description of intervention) and issued the certificate:
8. Identification of the person empowered to sign on behalf of the manufacturer or his authorised representative
9. Additional information:
The EU declaration of conformity shall include a statement of the propulsion engine manufacturer and that of the person adapting an engine in accordance with points (b) and (c) of Article 6(4) that:
 - (a) when installed in a watercraft, in accordance with the installation instructions accompanying the engine, the engine will meet:
 - (i) the exhaust emission requirements of this Directive;
 - (ii) the limits of Directive 97/68/EC as regards engines type-approved in accordance with Directive 97/68/EC which are in compliance with stage III A, stage III B or stage IV emission limits for CI engines used in other applications than propulsion of inland waterway vessels, locomotives and railcars, as provided for in point 4.1.2 of Annex I to that Directive; or
 - (iii) the limits of Regulation (EC) No 595/2009 as regards engines type-approved in accordance with that Regulation.

The engine must not be put into service until the watercraft into which it is to be installed has been declared in conformity, if so required, with the relevant provision of this Directive.

If the engine has been placed on the market during the additional transitional period provided for in Article 55(2), the EU declaration of conformity shall contain an indication thereof.

Signed for and on behalf of:

(place and date of issue)

(name, function) (signature)

ANNEX V

EQUIVALENT CONFORMITY BASED ON POST-CONSTRUCTION ASSESSMENT (MODULE PCA)

1. Conformity based on post-construction assessment is the procedure to assess the equivalent conformity of a product for which the manufacturer has not assumed the responsibility for the product's conformity with this Directive, and whereby a natural or legal person referred to in Article 19(2), (3) or (4) who is placing the product on the market or putting it into service under his own responsibility is assuming the responsibility for the equivalent conformity of the product. This person shall fulfill the

obligations laid down in points 2 and 4 and ensure and declare on his sole responsibility that the product concerned, which has been subject to the provisions of point 3, is in conformity with the applicable requirements of this Directive.

2. The person who is placing the product on the market or putting it into service shall lodge an application for a post-construction assessment of the product with a notified body and must provide the notified body with the documents and technical file enabling the notified body to assess the conformity of the product with the requirements of this Directive and any available information on the use of the product after its first putting into service.

The person who is placing such a product on the market or putting it into service shall keep these documents and information at the disposal of the relevant national authorities for 10 years after the product has been assessed on its equivalent conformity in accordance with the post-construction assessment procedure.

3. The notified body shall examine the individual product and carry out calculations, tests and other assessments, to the extent necessary to ensure that the equivalent conformity of the product with the relevant requirements of this Directive is demonstrated.

The notified body shall draw up and issue a certificate and a related report of conformity concerning the assessment carried out and shall keep a copy of the certificate and related report of conformity at the disposal of the national authorities for 10 years after it has issued these documents.

The notified body shall affix its identification number next to the CE marking on the approved product or have it affixed under its responsibility.

In case the assessed product is a watercraft, the notified body shall also have affixed, under his responsibility, the watercraft identification number as referred to in point 2.1 of Part A of Annex I, whereby the field for the country code of the manufacturer shall be used to indicate the country of establishment of the notified body and the fields for the unique code of the manufacturer assigned by the national authority of the Member State to indicate the post-construction assessment identification code assigned to the notified body, followed by the serial number of the post-construction assessment certificate. The fields in the watercraft identification number for the month and year of production and for the model year shall be used to indicate the month and year of the post-construction assessment.

4. CE marking and EU declaration of conformity

- 4.1. The person who is placing the product on the market or putting it into service shall affix the CE marking and, under the responsibility of the notified body referred to in Section 3, the latter's identification number to the product for which the notified body has assessed and certified its equivalent conformity with the relevant requirements of this Directive.
- 4.2. The person who is placing the product on the market or putting it into service shall draw up an EU declaration of conformity and keep it at the disposal of the national authorities for 10 years after the date the post-construction assessment certificate has been issued. The declaration of conformity shall identify the product for which it has been drawn up.

A copy of the EU declaration of conformity shall be made available to the relevant authorities upon request.

- 4.3. In the case the assessed product is a watercraft, the person who is placing the watercraft on the market or putting it into service shall affix to the watercraft the builder's plate described in point 2.2 of Part A of Annex I, which shall include the words 'post-construction assessment', and the watercraft identification number described in point 2.1 of Part A of Annex I, in accordance with the provisions set out in Section 3.
5. The notified body shall inform the person who is placing the product on the market or putting it into service of his obligations under this post-construction assessment procedure.

ANNEX VI

SUPPLEMENTARY REQUIREMENTS WHEN INTERNAL PRODUCTION CONTROL PLUS SUPERVISED PRODUCTION TESTS SET OUT IN MODULE A1 IS USED (ARTICLE 24(2))

Design and construction

On one or several watercrafts representing the production of the manufacturer one or more of the following tests, equivalent calculation or control shall be carried out by the manufacturer or on his behalf:

- (a) test of stability in accordance with point 3.2 of Part A of Annex I;
- (b) test of buoyancy characteristics in accordance with point 3.3 of Part A of Annex I.

Noise emissions

For recreational craft fitted with inboard or stern drive engines without integral exhaust and for personal watercraft, on one or several watercraft representing the production of the watercraft manufacturer, the sound emission tests defined in Part C of Annex I shall be carried out by the watercraft manufacturer, or on his behalf, under the responsibility of a notified body chosen by the manufacturer.

For outboard engines and stern drive engines with integral exhaust, on one or several engines of each engine family representing the production of the engine manufacturer, the sound emission tests defined in Part C of Annex I shall be carried out by the engine manufacturer, or on his behalf, under the responsibility of a notified body chosen by the manufacturer.

Where more than one engine of an engine family is tested, the statistical method described in Annex VII shall be applied to ensure conformity of the sample.

ANNEX VII

CONFORMITY OF PRODUCTION ASSESSMENT FOR EXHAUST AND NOISE EMISSIONS

1. For verifying the conformity of an engine family, a sample of engines shall be taken from the series. The manufacturer shall decide the size (n) of the sample, in agreement with the notified body.
2. The arithmetical mean X of the results obtained from the sample shall be calculated for each regulated component of the exhaust and noise emission. The production of the

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series shall be deemed to conform to the requirements ('pass decision') if the following condition is met:

$$X + k \cdot S \leq L$$

S is standard deviation, where:

$$S^2 = \sum (x - X)^2 / (n - 1)$$

X	=	the arithmetical mean of the results obtained from the sample
x	=	the individual results obtained from the sample
L	=	the appropriate limit value
n	=	the number of engines in the sample
k	=	statistical factor depending on n (see table below)

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
k	0,97	0,61	0,48	0,42	0,37	0,34	0,31	0,29	0,27	0,26	0,25	0,24	0,23	0,22	0,21	0,21	0,20	0,19

If $n \geq 20$ then
 $k = 0,860 / \sqrt{n}$

ANNEX VIII

SUPPLEMENTARY PROCEDURE TO BE APPLIED UNDER CONFORMITY TO TYPE BASED ON INTERNAL PRODUCTION CONTROL (MODULE C)

In the cases referred to in Article 24(5) when the quality level appears unsatisfactory, the following procedure shall apply:

An engine is taken from the series and subjected to the test described in Part B of Annex I. Test engines shall have been run in, partially or completely, in accordance with the manufacturer's specifications. If the specific exhaust emissions of the engine taken from the series exceed the limit values in accordance with Part B of Annex I, the manufacturer may ask for measurements to be done on a sample of engines taken from the series and including the engine originally taken. To ensure the conformity of the sample of engines with the requirements of this Directive, the statistical method described in Annex VII shall be applied.

ANNEX IX

TECHNICAL DOCUMENTATION

The technical documentation referred to in Article 7(2) and Article 25 shall, as far as it is relevant for the assessment, contain the following:

- A general description of the type;
- Conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits, and other relevant data;
- Descriptions and explanations necessary for the understanding of said drawings and schemes and the operation of the product;

- (d) A list of the standards referred to in Article 14, applied in full or in part, and descriptions of the solutions adopted to fulfil the essential requirements when the standards referred to in Article 14 have not been applied;
- (e) Results of design calculations made, examinations carried out and other relevant data;
- (f) Test reports, or calculations namely on stability in accordance with point 3.2 of Part A of Annex I and on buoyancy in accordance with point 3.3 of Part A of Annex I;
- (g) Exhaust emissions test reports demonstrating compliance with Section 2 of Part B of Annex I;
- (h) Sound emissions test reports demonstrating compliance with Section 1 of Part C of Annex I.

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- (1) It is optional to assign a number to the declaration of conformity.