

2019 UKOPRA OFFSHORE POWERBOAT RULES  
SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)



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# 2019 UKOPRA OFFSHORE POWERBOAT RULES

## SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

### Section 7 – Offshore 1 / Offshore 2 (Marathon)

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#### **700 – Offshore Rules**

Changes to these rules can only be made following approval by the UKOPRA Committee.

- Such changes taking effect not less than six months after approval, unless a special decision is mentioned in the wording of the decision with its justification.
- Changes affecting safety may be made at any time, according to their necessity.

The following rules and definitions are for racing powerboats which have been designed and are suitable for racing in open and unprotected waters.

No outside assistance is allowed during a race.

#### **Offshore 1 / Offshore 2**

Competitors may refuel during a race at recognised port or marina fuel outlets within harbour confines.

Ship to ship or air to ship refuelling at sea is not permitted.

Any competing craft may be towed and if a tow is accepted, then that competitor will be treated as a retirement from the race or that particular leg of the race.

#### **Emergencies**

It must be understood that in Marathon Racing every team/crew must be prepared for any/all eventualities with regard to their own safety.

If any team experiences difficulties or an emergency during the race, then they must be aware and prepared to be effectively on their own until rescue teams (from whatever source) can arrive.

Every team should have emergency plans which should include a risk assessment setting out how they would deal with an on-board emergency situation until such time as rescue teams arrive.

Racing is inherently dangerous and crews must be prepared to ensure their own safety at all times. In the event of an emergency crew cannot rely on race organisers to facilitate a rescue and must be self-sufficient and capable of initiating their own rescue.



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#### **701 - Organisers Rules Responsibility**

Organisers of UKOPRA events shall not be permitted to make any additions to these rules which by their nature would affect the eligibility of any boat EXCEPT in circumstances specifically affecting safety or in respect of special laws which may apply to the particular locality of the race.

- Organisers shall seek the approval of UKOPRA to make such additions.
- Organisers shall have the right to refuse any boat which they deem to be unsuitable and/or which does not conform to the requirements of these rules.
- Organisers are free to organise prize categories for varying types, such as cabin boats, diesel engines etc., provided the craft comply with fundamental rules.
- Organisers may also organise separate races for the different classes and/or prize categories.
- The Race Committee shall cordon off, restrict and supervise the crane area. Access to this area shall be limited to authorised race officials and designated race boat crews.



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### 702 - Class subdivisions

#### Offshore 1

Class	Length (M / Feet)	Engines in Litres			Minimum installed engines	Minimum weight (KG at the end of the race with any residual fuel)	
		Inboard Petrol	Inboard Diesel	Outboard			
A	11.30 M – 15.30 M 37' – 50'	27	27	22	2	410 KG / M	
B	9.15 M – 15.30 M 30' – 50'	18	18	2S	8000	2	360 KG / M
				2S EPA	10500		
				4S/SC	9000		
				4S	13500		

#### Offshore 2

Class	Length	Engines in Litres			Minimum installed engines	Minimum weight (KG at the end of the race with any residual fuel)	
		Inboard Petrol	Inboard Diesel	Outboard			
C - Sport	8.23 M – 15.3 M 27' – 50' M	14	14	N/A	2	Outboard 280 KG / M Inboard 328 KG / M	
C - Stock	8.23 M – 15.3 M 27' – 50' M	13	13	2S			6000
				2S EPA			7000
				4S/SC			6000
				4S	9000		

Class	Length	Engines in Litres			Minimum installed engines	Minimum weight (KG at the end of the race with any residual fuel)	
		Inboard Petrol	Inboard Diesel	Outboard			
D	8.23 M – 15.3 M 27' – 50' M	12.5 (T)	10	2S EPA	6100	1	Outboard
		8.5 (S)		4S/SC	4200		197 KG / M
				4S	7300		Inboard
E	7.35 M – 15.3 M 24' – 50' M	6.5	6.5	2S EPA	5200	1	262 KG / M
				4S/SC	3500		Outboard
				4S	5800		180 KG / M
							Inboard
							246 KG / M

Class	Length	Engines in Litres			Minimum installed engines	Minimum weight (KG at the end of the race with any residual fuel)
		Inboard Petrol	Inboard Diesel	Outboard		
Motor Cruiser						
F	9.15 M – 15.30 M 30' – 50'	27	27	All	2	460 KG / M
Cabin capacity minimum H 1.75 M x 1m2. Length / Beam ratio < 3.75:1						
G	7.35 M – 15.30 M 24' – 50'	13	13	All	2	394 KG / M
Cabin capacity minimum H 1.50 M x 0.8m2. Length / Beam ratio < 3.75:1						

**\* Minimum weights are exclusive of crew but inclusive of all race equipment**



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Class subdivisions are established in accordance with the following:

- The minimum hull length for all competing craft is 24ft/6.32 meters and the maximum for all is 50ft/15.20 meters using standard racing measurement procedure. See Class classification table (702 - Class subdivisions).
- All competing craft must be capable of exceeding 40 knots, except for Historic Class boats.
- All competing craft must be of mono hull design.



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#### 703 – Engines

Engine volume limits are as described in 702 - Class subdivisions for naturally aspirated engines.

Where engines include a supercharging or Turbocharging forced induction system (or similar) then the normal cylinder capacity is to be multiplied by 1.4 and the boat will pass into the class corresponding to the volume resulting from this multiplication.

#### Engine Description

For all classes except A, B, C and C Sport NB the term 'OEM' = Original Engine Manufacturer.

A) Engines eligible for Marathon classes other than the classes A, B and C (all these are 'free') must be based on currently, or previously advertised/available mainstream production units (i.e., Mercruiser, Volvo, OMC, Yanmar, Cummins, FPT etc) available to the general public through normal distribution channels with a minimum production run of 500 units.

Engines should be from the pleasure line, not the race line of engines from any manufacturer. If the engine is listed with separate runner exhaust, as described in section (G), the motor is not acceptable.

As an example, the Merc 525hp motor, has CMI headers with runner lengths greater than 6" long, so these motors would not be permissible.

The old Merc 500 carb, had GILL/Merc alloy manifolds with common plenum, they would be acceptable, as would STD Merc 496HO's, or 502efi's.

B) The original bore & stroke must be retained, however, an allowance will be made for OEM piston oversize, i.e., +0.030.

C) Inlet system (intake manifold, intercooler, throttle body etc) MUST remain OEM; throttle bodies must retain OEM internal dimensions at butterfly. Turbochargers must be OEM as specified as STD for motor to which it's fitted.

D) Internal engine modifications are allowed, such as camshaft choice, cylinder head gas flowing etc, however, rules for OEM induction systems, intercoolers, turbochargers, etc will be strictly enforced.

E) Engine components may be compared to standard OEM components to establish eligibility.

F) Transom or side exhausts are permitted, providing that the total volume of water passing through the engine cooling system mixes with the exhaust gases from the manifold.



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G) Choice of exhaust manifold is free, so long as they are not of the separate runner type, i.e., Stellings, CMI, PF Marine, KE Lightning, etc.

Exhaust ports must exit to a common plenum within the manifold, with each branch not exceeding 150mm in length. It is in the competitors' interest to contact the authority prior to purchasing exhaust systems to ensure eligibility if there is any doubt. No dispensation will be given for exhaust manifolds that do not meet the rules.

H) Drive systems are “free”.

I) Height adjustable hydraulic engine jacks are NOT permitted.

Single engined craft and single shaft driven boats may compete. All such boats MUST carry an auxiliary engine for use in emergency breakdowns capable of propelling the craft at 5mph for a minimum of 35 miles. This engine can be stowed in the boat but must be shown to be sufficiently retained so that it will not work loose or cause damage.

Boats with more than one outboard engine or outdrive must have a properly engineered tie-bar system

#### **Engine Mountings**

Outboards: Engine mountings shall be attached to the transom with at least 4 bolts, which shall be either pinned or lock-nutted.

Inboards: Engine mountings shall be sound and the mounting bolts securing to the hull shall be pinned or lock-nutted.

Engines shall be enclosed in their own compartment/s with the exception of normal ventilation. Each and every engine need not be contained in its own compartment. The compartments shall have rigid covers.

#### **Fuel**

Although International standards exist for petrol and for diesel, there remains a huge imbalance of specification from one country to another regarding the specification of 'pump' fuel available.

Due to these circumstances no specification of fuel is illustrated in the rules.

The only fuel to be used by any offshore Marathon powerboat must have the same characteristics as the fuel commercially available to the general public as dispensed from roadside pumps or marine fuelling facilities.



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For petrol engines, the fuel used shall be unleaded petrol.

No additives are permitted except lubricating oil for two stroke engines, providing that such oil does not increase the octane or the water content of the fuel or enhance the fuel by any other means.

For diesel engines, the fuel shall be that.

It is strongly recommended that teams keep detailed records of where they purchased the fuel they intend to use in races by way of receipts.

In the case a sample is found to be illegal then a control sample can be sourced to demonstrate that the error is with the supplier, but the team will still be responsible and maybe disqualified but might go some way to demonstrate it was not premeditated act.

#### **Fuel Tanks**

Fuel tanks must be purpose made and permanently fixed.

They must be secure, non-leaking, vented, grounded and have an easily accessible means of shutting the fuel supply off from the tank/s.

For safety, it is strongly recommended that fuel tanks in engine compartments are suitably encased to prevent any flying objects in the engine compartments from penetrating the bare skin of the fuel tank.

When additional electric pumps are fitted to the fuel supply of outboard motors, a fuel cut-off switch for the pump shall be fitted in easy reach of all crew members.

The positioning of the fuel cut-off switch must be clearly marked for safety reasons.

Fuel transfer at sea is only permitted between your own fixed on-board tanks.

Race fuel may not be stored or carried on board in any jerry-can type of container.

#### **Batteries**

Batteries shall be housed in ventilated compartments, mounted upon a secure and solid platform and be fitted with an isolator switch.

Offshore Powerboat Rules 2019 The battery isolator switch position must be clearly marked for safety reasons.



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#### **Engine Cut-Off Devices**

Engine cut-off devices for connection to the crew are mandatory (first man out shuts off engine).

An emergency over-ride system to restart the engine/s shall be mandatory.

The lanyards used must not exceed 70cm between driver and the boat. The emergency cut-off devices must be positioned so that when they operate the lanyard and cap (or clip) will not catch or foul.

The lanyards shall be attached to all crew members at all times when the boat is racing.

#### **Electrical Harness**

Properly protected terminal boards shall be used with flexible (not solid core) cabling supported well up to the terminals and at suitable intervals throughout the length of any run.

Where relative movement or vibration occurs across any gap, cables shall be sheathed in plastic or metal tube anchored at both ends.

Reinforced cable suitable for marine duty shall be used.

Electrical equipment in engine compartments shall be kept to a minimum and sited away from heat or fuel.

#### **Fire Prevention**

All boats with inboard engines shall carry a fixed automatic fire extinguishing system.

This system shall be properly installed, engineered and maintained.

Sensors and injectors shall be in danger regions of the engine compartment/s.

ALL boats including inboards shall carry a minimum of 2 fully charged dry powder 2kg fire extinguishers.



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#### **704 – Hull**

##### **Reinforced Water Deflector**

All Craft which do not have a forward cabin structure, must have a Reinforced Water Deflector over and under the deck, designed and constructed of materials with sufficient strength to provide adequate crew protection.

- The forward fairing on deck must rise to a minimum height of the chin of the tallest crew member when in the normal driving position.
- The top 5cm of the water deflector must be at least 45 degrees from the horizontal with a minimum of 30cm width per person measured transversely in the horizontal plane.
- The Reinforced Water Deflector must be designed and constructed so as to present no hazard if the crew is thrown forward and must be so designed that it would not restrict the crew from being ejected in all cases.

Open RIBs must have a solid fitted console to deflect water.

In addition, all vessels must have a means of preventing the riding crew from sliding forward under the foredeck when in their normal racing position.

- A bulkhead or suitable kick-board in front of each of the riding crew must be fitted and be of sufficient strength to prevent the riding crew from forward movement in the event of rapid deceleration.
- The bulkhead/kick-board must be secured so that there is no more than 1-inch space between the crews' floor and the bulkhead.

##### **Bow Ballast Tanks**

Bow ballast tanks are permitted.

##### **Lifting Points**

Where physically possible, teams should ensure that their boat has fixed lifting points, and their own certified lifting strop, which must be carried in the boat.

For ALL boats, the lifting positions of the craft for emergency lift by crane slings must be clearly marked on either side of the boat.



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#### **Deck Fittings**

- All boats must have guard rails or handholds as rails or handles raised above the deck of a suitable material or wire in stanchions.
- A single rail will suffice.
- A rope secured to the bow and made fast in the cockpit will not be accepted.

#### **Towing**

- All vessels must be fitted with a properly designed towing point of adequate construction and strength for the boat to be towed when waterlogged for extended periods.
- A Tow line suitable in length and strength for the boat in all weathers must be carried by all craft and can be permanently attached to the strong point during races unless the crew can demonstrate that a towing line can be easily attached to the towing point whilst at sea.
- This towing line should have a fixed loop to provide ease of attachment.

In addition, each boat should carry sufficient fenders & warps as to be able to dock or raft independently in port or to be able to raft suitably to another vessel if assistance was either required or being offered.

#### **Hull without canopies and partial canopies**

No seat belts or restraints whatsoever are permitted in open boats, i.e. boats with no canopies or boats with partial canopies.

#### **Hull with restraints, canopies, and partial canopies**

All competitors and crew members who race in boats with restraints, canopies, and partial canopies must hold a current immersion test certificate.

Canopied boats must have a current Measurement Certificate and comply with full Championship rules for canopies.

- Boat builders/designers must confirm in writing that the boat is designed for such activities and to race in a given class. This confirmation is to be supported by detailed technical drawings as appropriate.
- Crew must be able to demonstrate that they can safely exit the boat (maximum recommended exit time 30 seconds) and this may be subject to scrutineer testing at events.



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- The nominated skipper of the vessel accepts ultimate responsibility for complying with all of the above requirements.
- Carbon monoxide sensors and/or alarms must be fitted in all canopied boats.

These rules are important safety rules and require adhering to, however certain rules may be slightly varied where a team feel there is a better safer alternative solution.

If this is the case, then a team should write to the Championship committee with the fullest written details and drawings.

If the committee in conjunction with the scrutineering team concurs to this requested variation, then they may be accepted for use in the championship.

#### **Partial Canopies**

All competitors and crew members who race in boats with restraints, canopies, and partial canopies must hold a current immersion test certificate.

Partial canopies may be permitted subject to the technical inspector's approval, this process must be commenced a minimum of 3 months before the event.

There must be an opening hatch with a minimum open space sufficiently large (minimum 55cm X 82.5cm) for each person in the boat to exit immediately.

Alternatively, there must be an open space in the rear of the craft sufficiently large (minimum 1.3m X 1.3m) for all crew to exit the boat immediately.

Access at this opening must not be restricted in any way whatsoever.

Partially canopied boats must have restraint systems fitted which, if fitted, must comply with the following Offshore rules:

- Crew Immersion Test
- Air Supply
- Stop buttons for engine cut-off
- Rear of Head Protection
- Specification of 5 or 6 strap Harness

Additionally, the following rules apply:

- Boat builders/designers must confirm in writing that the boat is designed for such activities and to race in a given class. This confirmation to include key safety points below, with detailed technical drawings supplied as appropriate.



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- Crew must be able to demonstrate that they can safely exit the boat (maximum recommended exit time 30 seconds) and this may be subject to scrutineer testing at events.
- Seat belt mounts must be of appropriate strength and position, considering the boats maximum designed speed.
- Structure of the partial canopy must be of similar strength to the hull/running surface of the boat.
- The screen must be of suitable materials and have flanges adequate to offer the strength required to meet the anticipated loads and speed of the craft.
- All crew must have in date immersion test training and hold a current immersion test certificate.
- Doors or hatches must be so designed to allow them to be easily opened from inside and out and must be labelled to allow rescuer to immediately understand opening system and backup system – hinges must have removable pins.
- There must be an air system provided for each crew member – spare air systems are not acceptable.
- There must be a minimum clearance between seats or door aperture of 40cm if this is the primary exit route.
- The nominated skipper of the vessel accepts ultimate responsibility for complying with all of the above requirements.
- Carbon monoxide sensors and/or alarms must be fitted in all canopied boats.

These rules are important safety rules and require adhering to, however certain rules may be slightly varied where a team feel there is a better safer alternative solution.

If this is the case, then a team should write to the Championship committee with the fullest written details and drawings.

If the committee in conjunction with the scrutineering team concurs to this requested variation, then they may be accepted for use in the championship.



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#### **Boats with Restraints**

These rules are important safety rules and require adhering to, however certain rules may be slightly varied where a team feel there is a better safer alternative solution.

If this is the case, then a team should write to the Championship committee with the fullest written details and drawings.

If the committee in conjunction with the scrutineering team concurs to this requested variation, then they may be accepted for use in the championship.

All the crew, who must be seated, must have a restraint system comprising of and conforming to the following rules:

- A Reinforced Cockpit with Canopies is defined as a containment area for crew and can be constructed as an integral part of the boat.
- This Reinforced Cockpit Area must be designed and constructed to a specification capable of withstanding the forces of a water impact when running at the highest design speed of the boat, and therefore protecting all members of the crew in the event of an accident.
- The various components that constitute the Reinforced Cockpit shall be properly maintained to ensure reliable operation of all components, with emphasis being placed on the canopy release mechanism, emergency air supply and restraint systems.

These rules also apply to any boat in any class using Reinforced Cockpits with Canopies.

#### **Cockpit Evacuation / Immersion Training**

- Before racing in a craft with restraint systems, all crews must have passed in the last fourteen months, an immersion training in a restraint system to ensure that they can exit a reinforced cockpit crew compartment successfully.
- Prior to taking the Immersion training, all crews must have a valid scuba certificate or have received suitable training.
- An immersion Certificate to certify the passed test, showing the expiry date, must be delivered by recognised experts.
- All riding crew members using restraints must sign an indemnity form prior to competing in any race or practice.



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#### **Drawings and Measurement**

The responsibility for the design and construction of the canopy rests solely with the participant.

#### **Reinforced Cockpit Area**

The reinforced cockpit(s) shall be of a closed type design with a minimum of one opening hatch and constructed to a similar strength as the running surface of the boat.

This area must be the sides, floor, decking and bulkheads fore and aft.

All new cockpits built after 1 January 2019 shall be built by a UKOPRA registered cockpit builder.

Cockpit builders wishing to be registered must submit drawings and laminate specifications to UKOPRA – this process can take a month.

Canopies must be a composite structure with the following features.

- Polycarbonate areas are strongly recommended to be as small as possible while still maintaining that the driver and co-driver have clear, safe and undisturbed visibility ahead at sea level whilst racing. It is strongly recommended that these polycarbonate areas are built using 12 mm thickness, or more.
- The combined visibility of driver and co-driver must be through a horizontal arc of 22 degrees (112.5 degrees either side of the center line of the boat).
- These polycarbonate panels are to be recessed into the composite structure and may be bonded using a suitable bonding agent, and/or “bobbins”. It is recommended that there is also a through bolted outer flange for the fitting of the polycarbonate panels.

#### **Screen Flanges**

Screen flanges shall be a minimum of 50 mm at forward direction and mm towards sides and should be fastened every 100 mm if using “bobbins”; it is recommended to use metal “bobbins” with heads, as opposed to the recessed plastic type.

The outer polycarbonate area of the flange fitting must not be painted, so that the measurer/ scrutineer may monitor any discrepancies.

- Window to flanges joints must be glued and/or use bobbins of nylon or aluminium.
- Bolts: min 6 mm stainless steel, nylock nuts, washers
- Bolt spacing: max. 10 cm if not glued



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- The outer edges of the canopy surrounding the hatch, must be fitted with a water deflector, (height 10 mm min) to prevent water forcing open the hatch in the event of a capsize.

#### **Roll Bar**

These Restraint Cockpits must be fitted with an internal roll bar, two in a tandem cockpit as a minimum.

There must also be, between the two single cockpits, an anti-compression strut or structure of similar strength to the roll bar.

Roll bar in front of/around each crew member.

Roll bar strong enough and well secured to the bottom stringers.

Central compression strut to hold roll bar, for side by side cockpits. Side compression struts may also be necessary for side by side cockpits.

Alternatively, instead of a compression strut, the design of the cockpit primary structure will consist of a center roof rib connected to the roll bar and the aft bulkhead with sufficient strength to satisfactorily react the design impact loads.

#### **Hatches**

- Hatch openings shall have a minimum of 25 mm flange.
- Hatches must have a slot for pry bar, on the opposite side of the hinges, use in emergency/rescue.
- Hatches should be recessed on the front and sides.
- The outer edges of the canopy surrounding the hatch, should be fitted with a water deflector, (height 10 mm min) to prevent water forcing open the hatch in the event of a capsize.
- Water deflector to be fitted only on front and sides of hatch, not behind of hatch. (A water deflector on back of hatch might force water into cockpit area.)

It is mandatory that the hatches are constructed to the same specification as the cockpit.

The hatches shall be fitted with a catch which has a positive open and positive close mechanism and should hold the hatch against lateral forces.

These hatches shall be able to be opened from both inside and outside the cockpit and must have a second emergency mechanism to allow the rescue team to easily remove the hatch from outside if necessary.



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These hatches should be fitted with hinges with short release pins.

This is important because long pins invariably bind the hinge.

There should be one or more divers grab handles fitted to the outside of each hatch.

Canopy hatch release handles, which must be provided both inside and out, must be painted fluorescent orange or have a fluorescent orange background panel to identify them and directional arrows to indicate the method of opening.

The canopy lid hinges and the canopy hatch covers release mechanism must not encroach within the canopy aperture area, and these hinges and release mechanisms must not in any way hinder the exiting of crew members when fully race fitted.

Canopy openings should have the entry/exit apertures located directly above the crews' heads.

The canopy aperture openings should be at least 0.55 m in length and 0.55 m in width.

If the crew is seated side by side, then the opening should be at least 0.55 m x 0.825 m wide.

In tandem configuration, the opening(s) should be 0.55 m x 0.55 m per crew member. The canopy apertures should be cut with all corners having a radius of 0.025 m minimum or 0.25 m maximum.

The radius should be constant and have a smooth finish to relieve stress.

The canopy aperture must have a 20 mm wide (minimum) fluorescent orange band around the opening, both inside and outside of the opening.

It is mandatory that one single air supply (not oxygen) and a bottle will be provided for each riding crew member.

The air supply must be securely fixed adjacent to, or on each one of them. It is recommended that sufficient air be provided in each individual bottle for ten minutes.

Air bottles must have a pressure gauge fitted for visual checking at pre- race scrutineering. This gauge should be filled with liquid and be at least 5 cm in diameter for easy reading.

Air supply bottles shall be "Turned On" before leaving the dock to go to starting a race or taking part in practice and/or testing.

Reinforced Cockpits must have flood tubes or other means of flooding the cockpit to equalise the pressure quickly in an accident. The floor of the cockpit should be as air tight as possible to help the cockpit pressure equalise far more quickly when in an upturned position.



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Boats with restraints must have stop buttons/switches located in the cockpit area, immediately accessible to driver, co-driver and rescue officers. The stop buttons/switches must be identified by a fluorescent colour.

These switches must shut off all fuel pumps as well as the ignition circuit.

In the case of diesel boats, the stop control cable for the fuel injection pump shall be a non-sleeved cable, so as to eliminate the cable being able to bond in a fire.

Cockpits with Restraints must be fitted with rear of head protection for each crew member. This must be an integral part of the seat, which must be attached directly to the structure of the Restraint Compartment.

The head protection must be a minimum of 0.2m wide and extend at least 75% of the height of the safety helmet as worn by the crew whilst in the normal seating position. There must be a minimum safe vertical and lateral clearance between the canopy and each of the crew members when in the normal seating position.

The Restraint System must consist of a 5 or 6 strap harness and should utilise a 75 mm lap belt, a 50 mm strap over the shoulder harness rated at 4,100kg (9,000 lb.) and grommeted to prevent chafing or cutting of the belt. Harness straps must be attached directly to the cockpit structure. Those straps close behind the driver's head and neck must be 100 mm to 150 mm apart at point of attachment.

The shoulder harness should be installed at 90 degrees to the spine at shoulder line to minimise compression injuries under high "G" loading. All straps must be free to run through intermediate loops or clamps/buckles. All anchor point bolts must be fitted with backing plates of 10cm minimum width.

The driver harness attachment bolts in reinforced cockpits must consist of minimum grade EN8 bolts, with an 8 x 1.25 mm thread and locked nuts. There must be a spacer and plain washers on each bolt. The spacers must be glued to the cockpit structure. Intention of these spacers is to prevent buckling of surface material near bolts. This always leads to local delamination which easily spreads out over cockpit structure, when it is under stress.

On the sides of the structure, which has to take up the force on the attachment bolts, there must be a stainless steel plate (washer of minimum 3mm thickness and 100 cm<sup>2</sup> area).

When using seats with suspension, and therefore not using a bulkhead restraint anchorage, drawings must be lodged with UKOPRA of the measurer and approved prior to boat measurement. All restraint systems must have a common method of release. The single lever method (sometimes called the NASCAR type) or rotary type, are both acceptable restraint release systems.



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Both types of restraint release must be examined for satisfactory operation by the scrutineer before every race.

The shoulder harness should be installed 90 degrees to the spine at shoulder line to minimise compression injuries and the high “G” loading

Lap belt should continue in straight line to anchorage.

A quick release steering wheel may be fitted on a boat with personal restraints, but all drivers must be able to exit the cockpit without removing the steering wheel.

Rear view mirrors are mandatory, as well as a method of cleaning the canopy whilst under way.

Each wing mirror must have a minimum size of 60 sq.cm and be bolted on 2 points to assure proper mounting.

All crew containment areas of inboard engine canopied boats must be fitted with a carbon-monoxide sensor and/or alarm.

Each Reinforced Cockpit Area shall have one or more water activated light(s) or similar.

All boats with restraints must have their bows painted fluorescent orange for at least 0.5 m. Only boats with restraints and closed canopies are allowed to use orange coloured bows. If the hull is of a similar colour, then there must be a white separating band of at least 0.15 m wide to ensure that the fluorescent orange band is obvious.

The number of riding crew members must be written in black (so they read correctly if the boat is capsized) in at least 0.25 m high numbering on the orange nose in the best of the following three locations where the shape of the boat allows:

- a) The lower running surface.
- b) The topside of the hull.
- c) The deck of the hull

Should any boat be found to have contravened the riding crew number requirement, the penalty shall be disqualification from that event.

Note: Numbers shall be placed on the orange nose, not the white band area.



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SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

**705 - Race Numbers**

All boats are to be allocated a race number by UKOPRA.

- These numbers shall be painted in waterproof black paint or to be made of black coloured self-adhesive materials of adequate strength.
- They shall be applied to a white or yellow background.
- No number may begin with a zero.
- All numbers shall be plain and up- right.
- On all boats the numbers shall be positioned as far forward as possible.

The numbers must be placed on:

- The foredeck within front / of boat.
- Both sides of the hull within front / of boat.
- Those numbers displayed on the foredeck and on the underside of a tunnel must read correctly from the transom and shall be underlined by a black bar.

Race numbers shall include a prefix letter:

'A', 'B', 'C', 'D', 'E', 'F' or 'G' to match each sub-class of classification.

No part of any advertising, sign writing, flags, badges, emblems or marks of any kind shall be within 60 cm of the race number.

British boats will be expected wherever possible to make a race number change where an overseas competitor has the same number.

**Dimensions**

Minimum dimensions for individual numbers must be:

- Height = 30 cm; width = 23 cm; thickness = 5 cm; spacing = 13 cm.
- The background shall extend at least 23 cm in front of and beyond the end number and at least 6.5 cm above and below the numbers.

The height must be to the minimum height measured vertically.

The class prefix will precede the numbers and they will be separated by a dash.

The class prefix must conform with the same minimum dimensions as the race number.



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### SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

#### **706 - National Flag**

All boats are to fly their appropriate national flag of the designated driver as determined by the entry, with minimum dimension 450mm X 300mm throughout the race.

Alternatively, the flag must be painted, or glued, on a panel of not less than 45m X 300mm on both sides of the hull.

#### **707 – Safety Equipment to wear**

##### **Lifejackets**

- Each person aboard a boat must wear, during the race and practice, an efficient racing vest.
- All crew must wear a racing vest suitable for their class.
- Specification: All vests must have inherent buoyancy of at least 150 Newton and be fitted with collars.
- The Grabner & Hutch Wilco Motorboat Offshore Racing vests are also acceptable. Lacing ties and/or straps must be adequate & in good condition.
- All straps must be at least 40mm wide & have a minimum breaking strain of 500kg. There must be lifting straps at the front or on the shoulders.
- Zips are not permitted as the sole means of fastening a racing vest.
- Where zips are used as an ancillary means of closure, they must be in working order.
- Tears/rents or bad repairs through which buoyancy material may leak out are not permitted.
- Vests shall be at least 60% orange or yellow or have orange or yellow panels.
- Vests must have a lifting eye or strap attached to the main harness.
- Vests must not be able to ride up over the wearer's head & be secure to wearer's body. The disposition of the solid buoyancy must be such as to ensure that an unconscious person shall float face up in the water.
- The vest must have impact protection material covering the back.
- For crew using restraints, the racing vest must comply with cockpit rules
- The use of an automatically inflatable racing vest is prohibited these must be manual.



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- The efficiency of the crash helmet and racing vest is the sole responsibility of the wearer.

#### **Helmets**

Any person aboard any boat partaking in races must wear an adequate helmet of orange colour throughout the race and during practice runs.

Helmets may only be removed when effecting repairs and the boat is “off plane”.

- Each crew member’s helmet must be identified with their boat race number.
- This number shall be placed on the top surface of the helmet and shall be read from the rear.
- The numbers shall have a minimum height of 75 mm and shall be of the same style as the boat race number.
- These numbers shall be painted in waterproof black paint or be made of black coloured self-adhesive material of adequate strength.
- The choice and efficiency of a helmet is the sole responsibility of the wearer.

#### **Protective Clothing**

All crew members whilst racing must wear suitable protective clothing that covers the torso and all limbs to the wrists and ankles.

Protective clothing used must be durable enough to provide bodily protection and it is recommended to be fire retardant.



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### SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

#### **708 - Safety Equipment to be carried onboard**

Whilst on the water at an event, all the relevant safety equipment, i.e., restraints, racing vests, helmets and racing suits must be worn whilst the race boat is on the plane.

The following equipment shall be carried and stowed to the satisfaction of the Race Committee.

Boats meeting the criteria of the UKOPRA rules on restraints and canopies must comply with the requirements regarding storage of safety equipment contained in those rules.

#### **Buoyancy**

It is recommended that boats should have enough buoyancy in the race boat or in the material used for its construction to ensure that the boat floats if capsized or holed.

Boats which do not have sufficient buoyancy may be refused entry to any competition by the organisers of each individual event if deemed unsafe by the organising committee or promoter.

#### **Bilge Pumps**

Suitable and automatic bilge pumps shall be fitted to the boat capable of pumping out all sections of the boat even where water-tight bulkheads are fitted.

They shall be accessible and be fitted with a suction pipe leading to the lowest point of the bilge and with a discharge pipe overboard.

There shall also be at least one manual bilge pump in the boat.

#### **Pump**

All RIBS shall carry a hand or foot pump capable of being operated below the gunwale.

#### **Inflatable Life Raft**

It is mandatory that every boat carries one certified and in date Inflatable Life Raft capable of carrying the complete crew, together with adequate fresh water and a first-aid kit.

The life raft shall be stowed in an easily accessible position so that in the event of emergency the life raft can be quickly released, particularly in the event of fire.

Aviation style life rafts are not acceptable for Ultra Marathon races where the total race length exceeds 500nm.

The life raft is recommended to comply with ISAF Offshore Special Regulations (OSR) Appendix A Part 2 or ISO 9650 Type 1 Part 1, Group A standard, and should be fitted with a boarding ramp. (Or equivalent NA approved standards)



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### SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

#### **VHF Radio**

All boats will carry a shipboard installation of a fully synthesized VHF transceiver with GMDSS capability carrying all 55 International Channels, with an aerial output of not less than 25 watts.

Organisers may require additional channel(s) to be programmed into this radio to comply with local regulations. In addition, a multi-channel waterproof hand held VHF radio, which should be carried by one crew member at all times when racing.

Each vessel must have a Ship's Licence for their radio equipment and at least one crew must have an Operator's Licence, both Licences to be checked at Race Control and be available for scrutineering.

#### **E.P.I.R.B.**

A portable emergency position indicating radio beacon (E.P.I.R.B.) operating on 406 MHz shall be carried and stowed in an easily accessible position.

#### **First Aid Kit**

All boats shall carry an adequate medical kit and emergency thermal protective aids for each member of the crew.

#### **Medical Compress and Knife**

All crew must carry on their person whilst racing a whistle, medical compress and a knife.

#### **Radar Reflector**

All boats must carry a RADAR reflector suitable for the boat or a Search & Rescue Transponder - SART.

#### **Anchor**

Anchor/s with adequate anchor lines must be carried at all times and shall be of a weight and type adequate to hold the boat and shall be properly stowed in an accessible place.

#### **Fire Extinguishers**

Two (2) fire extinguishers to be immediately accessible to the crew, and must minimum of 2kg each, or of equivalent capacity.



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The extinguishers must fulfil the classification ABC (eq. US: classification AB).

- American Class A Class B
- European Class A Class B Class C UNCLASSIFIED Class D
- Australian/Asian Class A Class B Class C Class E Class D Class F
- Fuel/Heat source Ordinary combustibles Flammable liquids Flammable gases  
Electrical equipment Combustible metals Cooking oil or fat Class F
- Class C Class D Class K

#### **Compass and Charts**

Compass - All boats must be equipped with a liquid filled magnetic compass.

Compass deviation cards for magnetic compasses must relate to adjustment within the 7 months prior to the date of the event.

Electronic compasses may be used in addition.

Charts/back-up navigation system – All boats must carry at all times:

Either:

A comprehensive set of paper charts which must be in date and corrected to current Notices to Mariners.

These charts must be of suitable scales and detail to enable safe navigation over the entire course.

Or

A properly installed electronic chart plotter containing chart data of suitable scales and detail to enable safe navigation over the entire course.

In addition to the installed chart plotter a portable chart plotter containing chart data of suitable scales and detail must be carried to enable safe navigation over the entire course.

This additional unit must be provided with additional emergency batteries to ensure a minimum of 8 hours operation.

Nautical Almanac – All boats must carry at all times a nautical almanac or excerpts from a nautical almanac providing detailed navigational information of the entire course.



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### SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

#### **Navigation Lights**

Navigation lights in working order shall be carried in accordance with International Rules for the Prevention of Collisions at Sea.

#### **Strobe Light**

All boats shall have a White or Orange High Intensity Strobe Light fitted to indicate 'coming off plane' but not needing assistance.

- The strobe light must be able to be operated by the throttle man, and should be operated by the throttle man if a problem occurs, to enable any following race boats to take avoiding action.
- The strobe light shall be mounted on the top rear of the canopy. When dual canopies are used, the light may be on or behind either one.
- This strobe light may also be used as a substitute for the orange retirement flag when returning to port under reduced power.

#### **Equipment boats must carry:**

All Boats must start and finish and carry throughout the race the following minimum equipment:

- Carbon monoxide sensors and/or alarms for boat with full or partial canopies
- Certified Lifting strops, if specifically required by Race Instructions
- Manual Bilge Pump
- Hand or foot Pump (RIBS only)
- Tow Rope and Warps
- Anchor and rope/chain minimum length 50 metres.
- Fog horn and Torch
- Two 2kg dry powder fire extinguishers suitably mounted close to engines or crew
- 3.25 Orange retirement Flag 0.60m x 0.40m
- Auxiliary engine (single engine race craft only)
- Inflatable Liferaft compliant with rules.



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- All boats shall carry an orange rectangular flag of minimum size 60cm X 40cm as a means of announcing retirement from the race, and the means of maintaining it aloft in a well visible position.
- Flares:
  1. 4 x red rocket
  2. 4 x red handheld
  3. 2 x orange smoke
  4. 4 x white collision
  5. 1 mini flare pack to be carried per person
- VHF handheld radio
- 1 x E.P.I.R.B operation on 406MHz.
- Tracker System as specified if provided by event organiser
- Adequate first aid kit
  1. 1 x foil blanket
  2. Thermal protective aids for each crew member.
- Radar Reflector
- Crash Helmets compliant with rules
- Life jackets compliant with rules
- Adequate protective clothing
- Whistle, Knife, Compress
- An Emergency Grab must be carried on board at all times to include:
  1. Fresh water
  2. Day and night flares
  3. Thermal Protective Aids
  4. First Aid Kit

It is recommended to include portable VHF Radio, passports, money and credit cards.

- The following safety equipment must be attached to the Boat:



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1. Fixed VHF transceiver with GMDSS capability, as per rule.
2. GPS & RADAR equipment as per Racing Instructions.

Each Organiser can, in the Racing instructions, specify additional safety equipment necessary for their race.



## 2019 UKOPRA OFFSHORE POWERBOAT RULES

### SECTION 7 – OFFSHORE 1 / OFFSHORE 2 (MARATHON)

#### **709 – Crew**

##### **Licences**

All boats will carry a minimum of two crew members with valid UKOPRA licences and of minimum 18 years of age.

Only licensed drivers are permitted to control the boat when under the jurisdiction of the race organiser.

The issuing of licences is the task of UKOPRA.

UKOPRA will verify that the competitors have the necessary experience and skill to take part in Offshore Marathon events.

As a reference for minimum competence:

- The Competitors who have not held a Marathon Licence must submit a detailed CV of their racing and boating experience to UKOPRA.
- This CV must demonstrate practical experience and theoretical knowledge to a minimum Authority qualification or military equivalent these may include:

RYA day Skipper – or RYA Coastal Skipper – or RYA Yachtmaster – or RYA Advanced Powerboat (not RYA Powerboat Level 2 on its own).

An International equivalent of qualifications will also be accepted.

##### **Qualifications**

- Both driver and co-drivers must have first aid and resuscitation knowledge as defined by Red Cross or similar.
- A current sea survival certificate must be held by all crew members.
- All crew must have in date immersion test training and hold a current immersion test certificate (Boats with canopies).

