

## MULTIHULL CHECK LIST FOR AEGEAN 600

The purpose of this list is to assist the owner to prepare the boat and her equipment but does not include all the requirements of the Offshore Special Regulations 2020-2021

### 2.04 General Requirements

2.04.1 All equipment required by OSR shall:

- a) function properly
- b) be regularly checked, cleaned and serviced
- c) if it has an expiry date, it will not have exceeded its expiry date whilst racing
- d) when not in use be stowed in conditions in which deterioration is minimised
- e) be readily accessible
- f) be of a type, size and capacity suitable and adequate for the intended use and size of the boat.

2.04.2 Heavy items shall be permanently installed or securely fastened

### 3.05 Stability and Flotation – Multihulls

3.05.1 Watertight bulkheads and compartments (which may include permanently installed flotation material) in each hull, to ensure that the boat is effectively unsinkable and capable of floating in a stable position with at least half the length of one hull flooded (see OSR 3.13.2)

3.05.2 Transverse watertight bulkheads at intervals of not more than 4 m (13'-3") in every hull without accommodation if with a First Launch after 1998

3.05.3 Designed and built to resist capsizes

### 3.08 Hatches & Companionways

3.08.1 Hatch covers forward of the maximum beam station shall not open toward the interior of the boat, except hatches in the side of a coachroof or ports having an area of less than 0.071 m<sup>2</sup> (110 in<sup>2</sup>)

3.08.2 A hatch, including a hatch over a locker shall be:

- a) permanently attached and capable of being firmly shut immediately and remaining firmly shut in a 180° capsizes

3.08.3 Hatches not conforming with 3.08.1 and 3.08.2 shall be clearly labelled and used in accordance with the following instruction "NOT TO BE OPENED AT SEA" 10

3.08.4 Companionway hatches:

- a) fitted with a strong securing arrangement which shall be operable from the exterior and interior even when the boat is inverted
- b) blocking devices:

- i capable of being retained in position with the hatch open or shut
- ii secured to the boat (e.g. by lanyard) for the duration of the race
- iii permit exit in the event of inversion

3.08.7 if a multihull with a companionway hatch extending below the local sheerline either:

- a) have a minimum sill height of 300 mm (12") and be capable of being blocked off up to the level of the local sheerline whilst giving access to the interior with the blocking device(s) in place; or
- b) be in compliance with ISO 11812 to design category A

### **3.12 Mast Step**

3.12 The heel of a keel stepped mast securely fastened to the mast step or adjoining structure

### **3.14 Pulpits, Stanchions, Lifelines**

3.14.1 The perimeter of the deck surrounded by system of lifelines and pulpits as follows:

- a) Continuous lifelines fixed only at (or near) the bow and stern. However a gate on each side of a boat is permitted. Except at its end fittings and at gates, the movement of a lifeline in a fore-and-aft direction shall not be constrained. Temporary sleeving shall not modify tension in the lifeline.
- b) Minimum heights of lifelines and pulpit rails above the working deck and vertical openings:
  - i upper: 600 mm (24")
  - ii intermediate: 230 mm (9")
  - iii vertical opening: no greater than 380 mm (15") except that on a boat with a Primary Launch before 1993 where it shall be no greater than 560 mm (22")
  - iv a boat less than 8.5 m (28') LH may use a single lifeline system with a height between 450 mm (18") and 560 mm (22")
- c) Lifelines permanently supported at intervals of not more than 2.2 m (7'-2 1/2") and shall not pass outboard of supporting stanchions
- d) Pulpit and stanchion bases permanently installed with pulpits and stanchions mechanically retained in their bases
- e) The outside of pulpit and stanchion base tubes no further inboard from the edge of the working deck than 5% of maximum beam or 150 mm (6"), whichever is greater, nor further outboard than the edge of the working deck
- f) Stanchions straight and vertical except that:
  - i within the first 50 mm (2") from the deck, stanchions shall not be displaced horizontally from the point at which they emerge from the deck or stanchion base by more than 10 mm (3/8")

ii stanchions may be angled to not more than 10° from vertical at any point above 50 mm (2") from the deck

g) A bow pulpit may be open provided the opening between the pulpit and any part of the boat does not exceed 360 mm (14")

h) Lifelines may terminate at or pass through adequately braced stanchions set inside and overlapping the bow pulpit

i) When a deflecting force of 4 kg (8.8 #) is applied to a lifeline at the mid-point of the longest span between supports that are aft of the mast, the deflection shall not exceed:

i 50 mm (2") for an upper or single lifeline

ii 120 mm (4 ¾") for an intermediate lifeline

### **3.14.2 Special Requirements for Pulpit, Stanchions, Lifelines on Multihulls**

3.14.2 a) When on a boat it is impractical to precisely follow OSR regarding pulpits, stanchions, lifelines, the regulations for monohulls shall be followed as closely as possible

#### **3.14.6 Lifeline Specifications**

3.14.6 a) Lifelines of either:

3.14.6 a) i stranded stainless steel wire

3.14.6 a) ii HMPE

3.14.6 b) The minimum diameter specified in table 8 below

3.14.6 c) Stainless steel lifelines shall be uncoated and used without close-fitting sleeving, however, temporary sleeving may be fitted provided it is regularly removed for inspection.

3.14.6 d) A lanyard of synthetic rope may be used to secure lifelines provided the gap it closes does not exceed 100 mm (4"). This lanyard shall be replaced annually

3.14.6 e) All components of the lifeline enclosure system shall have a breaking strength no less than the lifeline

LH	Wire Min. lifeline diameter	HMPE rope(Single braid) min. lifeline diameter	HMPE Core (Braid on braid) min. lifeline diameter
under 8.5m (28')	3mm (1/8")	4mm (5/32")	4mm (5/32")
8.5m - 13m	4mm (5/32")	5mm (3/16")	5mm (3/16")
over 13m (42' 8")	5mm (3/16")	5mm (3/16")	5mm (3/16")

3.14.6 f) When HMPE is used, it shall be protected from chafe and spliced in accordance with the manufacturer's recommended procedures

### **3.15 Multihull Nets or Trampolines**

3.15.1 The words "net" and "trampoline" are interchangeable. A net shall be:

3.15.1 a) essentially horizontal

3.15.1 b) made from durable woven webbing, water permeable fabric, or mesh with openings not larger than 5 cm (2") in any dimension. Attachment points shall be planned to avoid chafe. The junction between a net and a boat shall present no risk of foot trapping

3.15.1 c) solidly fixed at regular intervals on transverse and longitudinal support lines and shall be fine-stitched to a bolt rope

3.15.1 d) able to carry the full weight of the crew either in normal working conditions at sea or in case of capsize when the boat is inverted.

### **3.15.2 Trimarans with Double Crossbeams**

3.15.2 A trimaran with double crossbeams shall have nets on each side covering:-

3.15.2 a) the area formed by the crossbeams, central hull and outriggers

3.15.2 b) the triangles formed by the aft end of the central pulpit, the mid-point of each forward crossbeam, and the intersection of the crossbeam and the central hull

3.15.2 c) the triangles formed by the aftermost part of the cockpit or steering position (whichever is furthest aft), the mid-point of each after crossbeam, and the intersection of the crossbeam and the central hull; except that:-

3.15.2 d) OSR 3.15.2(c) is not a requirement when cockpit coamings and/or lifelines are present which comply with the minimum height requirements in OSR 3.14

### **3.15.3 Trimarans with Single Crossbeams**

3.15.3 A trimaran with a single crossbeam shall have nets between the central hull and each outrigger on each side between two straight lines from the intersection of the crossbeam and the outrigger, respectively to the aft end of the pulpit on the central hull, and to the aftermost point of the cockpit or steering position on the central hull (whichever is furthest aft)

### **3.16 Catamarans**

3.16.1 A catamaran shall have nets covering the area defined:

3.16.1 a) laterally by the hulls; and

3.16.2 b) longitudinally by transverse stations through the forestay base, and the aftermost point of the boom lying fore and aft. However, a catamaran with a central nacelle (non-immersed) may satisfy the regulations for a trimaran

### **3.21 Drinking Water Tanks & Drinking Water**

3.21.1 a) Permanently installed delivery pump and water tank(s)

#### **3.21.3 Emergency Drinking Water**

3.21.3 a) At least 9 l (2.4 US Gal) of drinking water for emergency use in a dedicated and sealed container or container(s)

### **3.23 Bilge Pumps and Buckets**

3.23.1 a) two strong buckets, each with a lanyard and of at least 9 l (2.4 US Gal) capacity

3.23.1 c) provision to pump out all watertight compartments (except those filled with impermeable buoyancy).

3.23.2 All required permanently installed bilge pumps shall be operable with all cockpit seats, hatches and companionways shut and with permanently installed discharge pipe(s) of sufficient capacity

3.23.3 Bilge pumps shall not be connected to cockpit drains and shall not discharge into a Closed Cockpit

3.23.4 Bilge pumps shall be readily accessible for maintenance and for clearing out debris

3.23.5 All removable bilge pump handles retained by a lanyard

### **3.24 Compass**

3.24 a) Marine magnetic compass capable of being used as a steering compass:

3.24 b) Permanently installed marine magnetic steering compass, independent of any power supply, correctly adjusted with deviation card

3.24 c) a second compass which may be hand-held and/or electronic

### **3.27 Navigation Lights**

3.27.1 that conform to the International Regulations for Preventing Collisions at Sea (Part C and Technical Annex I) and shall be exhibited as required by those regulations.

3.27.2 mounted above sheerline and so that they will not be masked by sails or the heeling of the boat

3.27.3 reserve lights having the same specifications as above, and that can be powered independently

3.27.4 spare bulbs (not required for LED)

### **3.28 Engines, Generators, Fuel**

#### **3.28.1 Propulsion Engines**

3.28.1 a) engines and associated systems installed in accordance with their manufacturers' guidelines and suitable for the size and intended use of the boat

3.28.1 b) an engine which provides a minimum speed in knots of  $(1.8 \times \sqrt{LWL})$  in metres) or  $(\sqrt{LWL})$  in feet)

3.28.1 c) inboard engine, however if less than 12.0 m (39'-4") LH either an inboard engine, or an outboard engine together with permanently installed power supply systems

3.28.1 d) an inboard combustion engine shall have a permanently installed exhaust, cooling system, fuel supply, fuel tank(s) and shall have adequate heavy weather protection

3.28.1 e) an inboard electrical engine, when fitted, shall be provided with a permanently installed power supply, adequate heavy weather protection and have an engine control system

### **3.28.3 Liquid Fuel Systems**

3.28.3 a) All fuel tanks for storage of liquid fuels shall be rigid (but may have permanently installed flexible linings) and shall have a shutoff valve

3.28.3 b) At the start a boat with a combustion engine shall carry sufficient fuel to meet charging requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours

### **3.28.4 Battery Systems**

3.28.4 a) a dedicated engine/generator starting battery when an electric starter is the only method for starting the engine and/or separate generator

3.28.4 b) batteries installed after 2011 shall be of the sealed type from which liquid electrolyte cannot escape

3.28.4 c) At the start a boat with an electric engine shall carry sufficient capacity to meet electrical requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours

### **3.29 Communications Equipment, GPS, Radar, AIS**

3.29.1 a marine radio transceiver with an emergency antenna when the regular antenna depends upon the mast

3.29.2 if the marine radio transceiver is a VHF:

3.29.2 a) a minimum rated output power of 25 W

3.29.2 b) a masthead antenna and co-axial feeder cable with not more than 40% power loss

3.29.2 c) be DSC capable if installed after 2015

3.29.2 d) DSC capable VHF transceivers shall be programmed with an assigned MMSI (unique to the boat), be connected to a GPS receiver and be capable of making distress alert calls as well as sending and receiving a DSC position report with another DSC equipped station

3.29.5 a hand-held marine VHF transceiver, watertight or with a waterproof cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21)

3.29.6 a second radio receiver, which may be the handheld VHF in 3.29.5 above, capable of receiving weather bulletins

3.29.8 a GPS

3.29.13 an AIS Transponder which either:

3.29.13 a) shares the masthead VHF antenna via a low loss AIS antenna splitter; or

3.29.13 b) has a dedicated AIS antenna not less than 38 cm (15") in length mounted with its base not less than 3 m (10') above the Waterline and co-axial feeder cable with not more than 40% power loss

#### **4.02 Search and Rescue Visibility**

4.02.2 A 1 m<sup>2</sup> (11 ft<sup>2</sup>) area of highly-visible pink, orange or yellow showing when the boat is inverted

#### **4.03 Soft Wood Plugs**

4.03 A tapered soft wood plug stowed adjacent to every through-hull opening

#### **4.04 Jackstays and Clipping Points**

4.04.1 Permanently Installed fittings for jackstay ends and clipping points

4.04.2 Jackstays which shall:

4.04.2 a) be independent on each side of the deck

4.04.2 b) enable a crewmember to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations

4.04.2 c) have a breaking strength of 2040 kg (4500#) and be uncoated and nonsleeved stainless steel 1 x 19 wire of minimum diameter 5 mm (3/16"), webbing or HMPE rope

4.04.3 Clipping points which shall:

4.04.3 a) be adjacent to stations such as the helm, sheet winches and masts, where crewmembers work

4.04.3 b) enable a crewmember to clip on before coming on deck and unclip after going below

4.04.3 c) enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays

4.04.3 d) on a trimaran with a rudder on the outrigger, permit a crewmember to repair the steering mechanism whilst attached to a clipping point

#### **4.05 Fire Fighting Equipment**

4.05.1 A fire blanket adjacent to every cooking device with an open flame

4.05.2 2 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat

#### **4.06 Anchors**

4.06.2 2 un-modified anchors that meet the anchor manufacturer's recommendation 17 based on the boat's dimensions with suitable combination

of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes except that for a boat less than 8.5 m (28') LH there shall be 1 anchor meeting the same criteria.

#### **4.07 Flashlights and Searchlights**

4.07.1 Watertight lights with spare batteries and bulbs as follows:

4.07.1 a) a searchlight, suitable for searching for a person overboard at night and for collision avoidance

4.07.1 b) a flashlight in addition to 4.07 a)

4.07.1 c) the watertight flashlight in OSR 4.07 b) shall be stowed in the grab bag or emergency container

#### **4.08 First Aid Manual and First Aid Kit**

4.08 A First Aid Manual and First Aid Kit. The contents and storage of the First Aid Kit shall reflect the likely conditions and duration of the passage, and the number of crew

#### **4.09 Foghorn**

4.09 A foghorn

#### **4.10 Radar Reflector**

4.10.1 A passive radar reflector with:

4.10.1 a) octahedral circular plates of minimum diameter 30 cm (12"), or

4.10.1 b) octahedral rectangular plates of minimum diagonal dimension 40 cm (16"), or

4.10.1 c) a non-octahedral reflector with a documented Root Mean Square minimum Radar Cross Section (RCS) area of 2 m<sup>2</sup> (22 ft<sup>2</sup>) from 0-360° of azimuth and ±20° of heel

#### **4.11 Navigation Equipment**

4.11 Navigational charts (not solely electronic), light list and chart plotting equipment

#### **4.12 Safety Equipment Location Chart**

4.12 A safety equipment location diagram in durable waterproof material, clearly displayed in the main accommodation, marked with the location of principal items of safety equipment

#### **4.13 Depth, Speed and Distance Instruments**

4.13.1 A knotmeter or distance measuring instrument (log)

4.13.2 A depth sounder

#### **4.15 Emergency Steering**

4.15.1 An emergency tiller capable of being fitted to the rudder stock except when



4.15.1 a) the principal method of steering is by means of an unbreakable metal tiller

4.15.1 b) there are two methods (e.g. tillers, wheels) of controlling a rudder, neither of which shares components with the other except for the rudder stock.

4.15.2 A proven method of emergency steering with the rudder disabled

#### **4.16 Tools and Spare Parts**

4.16.1 Tools and spare parts, suitable for the duration and nature of the passage

4.16.2 An effective means to quickly disconnect or sever the standing rigging from the boat

#### **4.17 Boat's name**

4.17 The boat's name on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, recovery slings, grab bags etc.

#### **4.18 Retro-reflective material**

4.18 Marine grade retro-reflective material on lifebuoys, recovery slings, liferafts and lifejackets

#### **4.20 Liferafts**

##### **4.20.1 Liferaft Construction**

4.20.1 a) One or more inflatable liferafts with a total capacity to accommodate at least the total number of people on board which complies with:

4.20.1 a) i SOLAS LSA Code 1997 Chapter IV or later version; Or

4.20.1 a) ii ISO 9650-1:2005, Type 1, Group A - Small Craft - Inflatable; Or

4.20.1 a) iii ISAF liferafts manufactured before 2016 until replacement is due at end of service life; Or

4.20.1 a) iv ORC liferafts manufactured before 2003 until replacement is due at end of service life

##### **4.20.3 Liferaft Packing and Stowage**

4.20.3 a) Each liferaft shall be packed either in:-

4.20.3 a) i a rigid container securely stowed on the working deck, in the cockpit or in an open space; or:-

4.20.3 a) ii a rigid container or valise securely stowed in a dedicated weather tight locker containing liferaft and abandon ship equipment only which is readily accessible and opens onto the cockpit or working deck, or transom

4.20.3 b) In a boat with primary launch before June 2001, a liferaft may be packed in a valise not exceeding 40 kg securely stowed below deck adjacent to a companionway

4.20.3 c) On a multihull or on a monohull with moveable ballast the liferaft shall be readily deployable whether or not the boat is inverted

4.20.3 d) The end of each liferaft painter should be securely fastened to the boat

4.20.3 e) Each raft shall be capable of being got to the lifelines or launched within 15 seconds

#### **4.20.5 Liferaft Servicing**

4.20.5 a) A liferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals:

4.20.5 a) i SOLAS liferafts annually

4.20.5 a) ii ISO 9650 canister packed liferafts every 3 years

4.20.5 a) iii ISO 9650 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually

4.20.5 a) iv ISAF liferafts annually

4.20.5 a) v ORC liferafts annually

4.20.5 b) Servicing certificates (original or a copy) on board

#### **4.21 Grab Bags**

4.21 Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents:

4.21 a) a watertight hand-held marine VHF transceiver with spare batteries

4.21 b) a watertight flashlight with spare batteries and bulb

4.21 c) 3 red hand flares

4.21 d) a watertight strobe light with spare batteries

4.21 e) a knife

4.21 f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m<sup>2</sup> (1 ft<sup>2</sup>) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip

#### **4.22 Crew Overboard Identification and Recovery**

4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use

4.22.6 Each inflatable lifebuoy and any automatic device shall be tested and serviced at intervals in accordance with its manufacturer's instructions

4.22.7 A heaving line, no less than 6 mm (1/4") diameter, 15 - 25 m (50 - 75') long, readily accessible to cockpit

4.22.8 A recovery sling which includes a:

4.22.8 a) buoyant line of length no less than the shorter of 4 times LH or 36m (120')

4.22.8 b) buoyancy section (horseshoe) with no less than 90 N (20#) buoyancy

4.22.9 c) minimum strength capable to hoist a crewmember aboard

#### **4.23 Pyrotechnic and Light Signals**

4.23 Pyrotechnic signals shall be provided conforming to SOLAS LSA Code Chapter III Visual Signals and not older than the stamped expiry date (if any) or if no expiry date stamped, not older than 4 years.

4 Red Hand Flares LSA III 3.2, 2 Orange Smoke Flares LSA III 3.3

#### **4.25 Cockpit Knife**

4.25 A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.

#### **4.26 Storm & Heavy Weather Sails**

##### **4.26.2 Sail Areas**

4.26.2 The maximum area of storm and heavy weather sails shall be lesser of the areas below or as specified by the boat designer or sailmaker

4.26.2 a) A heavy-weather jib (or heavy-weather sail in a boat with no forestay) with:

4.26.2 a) i area of 13.5% height of the foretriangle squared

4.26.2 a) ii readily available means, independent of a luff groove, to attach to the stay

4.26.2 c) For sails made after 2011: Storm and heavy weather jib areas calculated as:  $(0.255 \times \text{luff length} \times (\text{luff perpendicular} + 2 \times \text{half width}))$

##### **4.26.3 Sail Inventory**

4.26.3 a) ii either a storm trysail as defined in OSR 4.26.2 d), or mainsail reefing to reduce the luff by at least 40% (or rotating wing mast if suitable)

#### **5.01 Lifejacket**

5.01.1 A lifejacket which shall:

5.01.1 a) i) if manufactured before 2012 comply with ISO 12402 - 3 (Level 150) or equivalent, including EN 396 or UL 1180 and:

5.01.1 a) i) if inflatable have a gas inflation system

5.01.1 a) i) have crotch/thigh straps (ride up prevention system (RUPS))

5.01.1 a) ii if manufactured after 2011 comply with ISO 12402-3 (Level 150) and be fitted with a whistle, lifting loop, reflective material automatic/manual gas inflation system

5.01.1 a) ii crotch/thigh straps (ride up prevention system (RUPS))

5.01.1 b) have an emergency position indicating light in accordance with either ISO 12402-8 or SOLAS LSA code 2.2.3

5.01.1 c) be clearly marked with the boat's or wearer's name

5.01.1 d) have a sprayhood in accordance with ISO 12402-8

5.01.1 f) if inflatable, regularly checked for air retention

5.01.2 A boat shall carry at least one gas inflatable lifejacket spare cylinder and, if appropriate, spare activation head for each type of lifejacket on board.

5.01.4 The person in charge shall personally check each lifejacket at least once annually.

## **5.02 Safety Harness and Tethers**

5.02.1 A harness that complies with ISO 12401 or equivalent

5.02.2 A tether that shall:

5.02.2 a) comply with ISO 12401 or equivalent

5.02.2 b) not exceed 2 m (6'-6") including the length of the hooks

5.02.2 c) have self-closing hooks

5.02.2 d) have overload indicator flag embedded in the stitching

5.02.2 e) be manufactured after 2000

5.02.3 All of the crew shall have either:

a) a tether not exceeding 1m(3'3") including the length of the hooks, or

b) an intermediate self-closing hook on a 2 m (6'-6") tether

5.02.5 A tether which has been overloaded shall be replaced

## **SECTION 6 – TRAINING**

6.01.3 When there are only two crewmembers, at least one shall have undertaken training within the five years before the start of the race in OSR

6.02 Training Topics

### **6.02 Training Topics**

6.02.1 Giving Assistance to Other Craft

6.02.2 Personal Safety Gear, theory and practice

6.02.3 Care and Maintenance of Safety Gear

6.02.4 Fire Precautions and Firefighting, theory and practical

6.02.5 Crew Overboard Identification and Recovery

6.02.6 Hypothermia, Cold Shock and Drowning

6.02.7 Crew Health

6.02.8 Marine Weather

6.02.9 Heavy Weather

6.02.10 Storm Sails

6.02.11 Damage Control

6.02.12 Search and Rescue Organization

6.02.13 Pyrotechnics and Signalling Gear, theory and practical

6.02.14 Emergency Communications, theory and practical

6.02.15 Liferafts and Abandon Ship, theory and practical

#### **6.04 Routine Training On-Board**

6.04 At least annually the crews shall practice the drills for:

6.04 a) Crew-Overboard Recovery

6.04 b) Abandonment of vessel

#### **6.05 Medical Training**

6.05.3 At least one member of the crew shall be familiar with First Aid procedures, hypothermia, drowning, cardio-pulmonary resuscitation and relevant communications systems