US Sailing Safety Equipment Requirements
amended to include
2019 Transpac Required Equipment

The full USS SER document is downloadable from:

To prepare for inspection:

Storm trysail and storm jib bent on, fully hoisted if wind permits.
Emergency steering gear in place for testing.
Overboard gear set up.
Jacklines rigged.
Raft in place or stowed as for race.
Emergency running lights rigged (if portable).
Ready to demonstrate pumps with water in bilge or buckets.
Anchor and rode on the dock for measurement.
Required flares displayed.
All required personal gear displayed.
All required documents in binder or folder with copies for inspector.

Inspection Checklist for Transpac 2019

Yacht name __________________  Yacht type __________________

Inspection date __________ Inspection location __________________

Inspector _______________ Skipper or yacht representative _______________

General

_____Strongly built, watertight, capable of withstanding solid water and knockdowns. Properly rigged and ballasted, fully seaworthy.

_____Stability index greater than or equal to 115, or meet the requirements of ISO 12217-2A

Storm Sails, Reefing, and Halyards

Storm trysail

Maximum area 17.5% of mainsail luff x foot (E x P).
Mainsail luff _____ mainsail foot _____ mainsail area x 0.175 _____
Storm trysail leech _____ storm trysail Leech Perp _____ storm trysail area _____
_____Can be set independently of main boom.
_____Correct sail numbers on trysail.
_____Capable of being attached to mast with mainsail furled.
_____Highly visible material if constructed after 1/1/2014.

Storm Jib

Maximum area 5% foretriangle height (I dimension) squared.
Foretriangle height _____ height^2 _____ height^2 x 0.05 _____
Storm jib luff _____ storm jib LP _____ storm jib area _____
_____Alternate means of attaching to headstay without head foil.
_____Highly visible material if constructed after 1/1/2014.
Heavy weather jib

Maximum area 13.5% foretriangle height squared (#4 jib usually okay).

Foretriangle height _____ height^2 _____ height^2 x 0.135 _____

Heavy weather jib luff _____ LP _____ area _____

Heavy weather sail of some other type if yacht has no forestay.

Mainsail reefing to reduce luff by at least 10%.
No halyards that require going aloft to lower a sail.
Topping lift or other means to support boom without mainsail if LOA greater than 9.14m (30 ft).

Deck and Cockpit

Cockpit volume not to exceed 0.08 x LOA x Max. Beam x Freeboard aft. Cockpit sole at least 0.02 x LOA above LWL. (Transpac NOR allows "coastal" rather than "offshore" cockpit volume limit.)

Cockpit drains
One square inch of drain per eight square feet of cockpit sole area (or drain 6" water in 5 minutes).

Cockpit drain diameter _____ Number of drains _____ Cockpit area _____

Companionway.
Hatch boards up to local shearline without blocking access.
Hatch boards captive and tethered with hatch open or closed.
Cockpit seat hatches can be secured when closed.

Lifelines, Pulpits and Toe Rails

Lifelines and pulpits surrounding deck, including headstay.
Stanchion and pulpit bases within working deck.
Bow pulpit opening not to exceed 360 mm (14.2") between vertical portion of pulpit and any part of the boat.
Stern pulpit or lifelines across stern.
Bare SS wire. 4" lashing, replaced annually, allowed.
Lifeline tension (upper): Less than 50mm (2") deflection under 40 N (9 lb) transverse load.
Lifeline tension (lower): Less than 120mm (5") deflection under 40 N (9 lb) transverse load.
Deflection measurements: Upper _____ Lower _____
Lifeline support maximum spacing 2.20m (86.6" or 7'-2.6").

Lifeline height
Under 30 ft: 18", no vertical gap more than 18".
Over 30 ft: 24", no vertical gap more than 15".

Lifeline wire diameter:
Under 9.14m (30 ft) LOA: 3mm (1/8")
9.14m - 13.1m (30 ft - 43 ft): 4mm (5/32")
over 13.1m (43 ft): 5mm (3/16")

Toe rail from mast forward (or additional lifeline 25-51mm above deck).
Under 9.14m (30 ft) LOA: 18mm (3/4")
Over 9.14m (30 ft) LOA: 25mm (1")

Jacklines
Jacklines, 20kN (4,500 lb) breaking strength, allowing access to all points on deck.
Harness clipping points. Harness clipping points or jacklines must allow clipping on before coming on deck and unclipping after going below. Number of non-jackline clipping points _____
On-deck safety gear

_____ Lifesling or equivalent ready for immediate use, equipped with:
        _____ Self-igniting light
        Battery replacement date _____
        Battery expiration date _____

_____ Overboard pole and flag within reach of helm, ready for immediate use, equipped with:
        _____ Whistle.
        _____ Drogue.
        _____ Self-igniting light.
        Battery replacement date _____
        Battery expiration date _____

_____ Inflatable life buoys/Lifeslings tested at recommended intervals.
        Date of last test _____
        Date of expiration _____

_____ USCG approved throwable device (if no other required device is a USCG approved throwable).

_____ Heaving line, sock type, 15m (50 ft), floating polypropylene, readily accessible to cockpit.

_____ Cockpit knife in sheath.

Navigation lights

_____ Deck level or higher, not obstructed by sails.
        _____ LOA under 12 m (39.4 ft): 10W (or 1 mile visibility side, 2 miles stern).
        _____ LOA 12 m (39.4 ft) or above: 25W (or 2 miles visibility side and stern).

_____ Secondary nav lights, same visibility rating as primaries, separate power source.
        Can use common switch panel, can be at deck level, can be battery-powered portable
        provided visibility complies with requirements.

Cabin

_____ All heavy items secured (batteries, stove, toolboxes, anchors, chain, internal ballast).
_____ Head or "fitted bucket."
_____ Bunks sufficient for off watch crew.
_____ Stove with fuel shutoff.
_____ Hand holds.
_____ Mast step secured to structure.

Ship's Systems

_____ Required speed under power in knots = square root of LWL in feet.
_____ Sufficient fuel for 10 hours of motoring at required speed.
_____ Engine, generator and fuel systems, compliant with ABYC, ISO or USCG standards.

_____ Inboard propulsion engine with permanent enclosure, fuel and exhaust systems.
   or
_____ Outboard engine:
        _____ In motor well and available for immediate use (transom mount not acceptable).
        _____ Separate electrical generation and fuel storage system.

Bilge pumps

_____ One 10 GPM pump operable from below deck, with all hatches closed.
_____ One 10 GPM pump operable from on deck, with all hatches closed.
_____ Permanently installed discharge lines.
_____ Cannot discharge to cockpit (unless open stern) or cockpit drain lines.
_____ Pumps and inlet strainers accessible for cleaning.
_____ Pump handles tethered near pumps.
Sea cocks on all hull penetrations (except integral deck scuppers and transducers)
   _____Transducers must have other means of closing.
   _____Tapered soft wood plugs for each hull penetration, attached with lanyards.

**Navigation and Electronics**

   _____Magnetic steering compass.
   _____Second compass, may be hand-held or hand-bearing compass.
   _____Knotmeter or distance-measuring equipment
   _____Marine DSC VHF permanently installed, 25 watts, 15" minimum masthead antenna, no more than 40% power loss in feedline, internal GPS or GPS interfaced.
      MMSI number: ______________________

      VHF Feedline type:
         _____RG8X ("mini 8").
         _____RG8U.
         _____9913F (conventional connectors).
         _____LMR600 (special connectors).
         _____other

   _____Handheld DSC VHF, waterproof or in watertight container, with MMSI number programmed.
      Handheld MMSI number if different from yacht's MMSI: ____________________________

   _____GPS
   _____Means of recording GPS position of overboard crew within ten seconds.
   _____Demonstrate crew familiarity with MOB function on GPS.
   _____Iridium or Inmarsat satphone. Satphone number ______________________
      _______Installed for operation below decks with external antenna and power supply.
   _____Capability to send and receive email.
   _____Method of receiving weather information other than VHF.
   _____Emergency VHF antenna, 381 mm (15") minimum, coax feedline to reach deck.
   _____AIS transceiver,
      _____Masthead AIS antenna, low-loss antennae splitter
      or
      _____Dedicated AIS antenna, 0.9m, base at least 3m above waterline, feedline max 40% loss.

   _____EPIRB, 406 MHz, with internal GPS (in addition to EPIRB packed in raft).
      _____EPIRB registration documents. EPIRB serial number ______________________
      _____EPIRB battery replacement date ______
      _____EPIRB battery expiration date ______
      _____Permanently installed depth sounder with range of at least 61m (200 ft).
   _____Non-electronic charts appropriate for the race course.
   _____Optional: HF marine radio (single side-band).
      SSB call sign___________ Ham call sign___________
**Required Equipment**

- Anchor, compliant with anchor manufacturer's recommendations based on boat size.
- Suitable anchor chain and line.

Pointer to anchor recommendation (if documentation is not supplied):

<table>
<thead>
<tr>
<th>Primary anchor type</th>
<th>Primary anchor weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rode length</td>
<td>Rode diameter</td>
</tr>
<tr>
<td>Chain length</td>
<td>Chain diameter</td>
</tr>
<tr>
<td>Chain type (proof coil, BBB, high tensile)</td>
<td></td>
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</tbody>
</table>

Flares, SOLAS certified

- 4 red hand flares. Exp. date
- 2 orange smoke flares. Exp. date

- Sail number banner
- Yacht's name on miscellaneous buoyant objects.

- Flashlights with spare batteries (and bulbs if not LED).
  - Waterproof high powered searchlight.
    - Spare batteries (and bulb if not LED).
  - Waterproof flashlights, one per crew.
    - Spare batteries (and bulb if not LED).

- First aid kit.
- First aid manual.
- Fire extinguishers, at least two, accessible in different locations, as required by USCG or ISO.
  - Number of fire extinguishers.
- Fog horn or other noise-making device.
- Radar reflector, 292mm (11.5") diameter octahedral, or equiv.
- Spare bulbs for all nav lights (if not LED).
- Tools and spare parts.
- Effective means to quickly disconnect or sever standing rigging from hull.
- Retro-reflective tape and yacht's name on lifebuoys, lifeslings, liferafts and lifejackets.
- Two buckets, at least 8 liters (2 gallons) each with lanyards attached.
- Posted waterproof diagram of safety equipment storage locations.

- Grab bag or ditch bag, one per raft, inherent flotation, bright color with lanyard and clip.

Grab bag shall contain:

- Waterproof hand-held VHF (may satisfy hand-held VHF requirement)
- EPIRB (may satisfy onboard EBIRP requirement)

**Water**

- At least 1 gallon per person in sealed emergency water containers.
- Drinking water not in permanent tanks shall be in containers of 5 gallons or less, securely tied or strapped in locations permitted under NOR 10.2. (If located more than 0.2 x MB outboard of centerline, top surfaces no more than 0.30m (1.0 ft) above waterline.)
- Single failure of a water tank or delivery system not to allow loss of more than half the water.
**Personal Gear**

PFD for each crew, compliant with ISO or USCG specifications.

- Number of 150N (33.7 lb) buoyancy inflatable PFDs.
- Number of 100N (22 lb) inherently buoyant PFDs.
- Number of Re-arming kits for PFDs.
- Check PFDs for air retention. Date __________
- Crotch or thigh straps on all PFDs
- Whistles on all PFDs.
- Waterproof lights on all PFDs.
- Marine retro-reflective tape on all PFDs
- Yacht's name or wearer's name on all PFDs

Harness and tether for each crew

- Number of harnesses
- Number of tethers, 2m (6'7") or shorter, 20 kN (4500 lb) tensile strength, quick release at harness end.

**Liferaft**

Rated capacity for entire crew.

- Rated Capacity _____
- Compliant with SOLAS, ISAF, ISO 9650-1 or ORC approved.
- For boats built after 01/06/2001, raft must be on deck in rigid container or in dedicated self-draining raft compartment.
- For boats built before 01/06/2001, and raft less than 88 lb, raft may be stowed in a soft valise pack below decks.

Crew must be capable of launching raft within 15 seconds from stowed location.

- Liferaft-to-deck time trial result______
- Current liferaft certificate of inspection.

**Emergency Steering**

- Emergency tiller that can be fitted to rudder stock.
- Emergency steering system independent of main rudder.
- Emergency rudder demonstration video.
  - or
- Emergency rudder live demonstration.

Optional emergency rudder test protocol:

- Under power in calm water. Approx. speed_____ 
- Main rudder locked on centerline.
- Use emergency rudder to reverse course, both directions, no change in helm setting.
  - Time for 180° turn to port ________
  - Time for 180° turn to starboard ________

**MOB Procedures**

Demonstration as per NOR 8.9 (can be certified by captain and all crew present in advance of inspection)

- Return to location after losing sight of object
- Demonstrate method of hoisting crewmember on board from water
Document List

_____ EPIRB registration documents.

_____ Liferaft certification documents.

_____ Safety equipment stowage chart, including grab bag, raft, first aid supplies, through-hulls and fire extinguishers. May also include engine spares, repair materials and tools.

_____ Declaration of successful emergency rudder test under sail in 10 knots of wind (can be time-stamped video).

_____ Anchor manufacturer's recommendation based on boat size, if different from Fortress or Guardian chart.

_____ Documentation (can be time-stamped video) of completion of the overboard position recording system and return, sailing out of sight of object and returning for retrieval in open water.

_____ Signed copy of the valid 2019 ORR certificate.

These Items are submitted via the online entry system, it is not necessary to show them to the inspector:

A) Full yacht and owner/skipper/charterer information as required by the online entry system.

B) Crew List with addresses, phone numbers, email addresses, emergency contacts as required by the online entry system. It will be the responsibility of the owner or charterer to maintain and update the current crew list and contact numbers.

C) Signed waiver, release and indemnification by Owner/Skipper/Charterer and all crew members as recorded on the online entry system.

D) Media Rights Waiver form signed by Owner/Skipper/Charterer and all crew members.

E) Documentation of completion of the crew qualification requirements per NOR 8.1.

F) Documentation of completion confirming that the crew safety at sea training requirement has been met per NOR 8.1.3 and 8.1.4.

G) Documentation of the completion of Man Overboard procedures defined in NOR 8.9.

H) The yacht’s on-board email address.

I) The yacht’s Satphone number.

J) Provide a phone contact and email address in Hawaii that must be active from the day the yacht arrives in Hawaii until the awards ceremony.

K) Full payment of the appropriate Entry Fee listed below in NOR 5.