2010

J80 Regatta Measurement Guide

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Introduction

All J/80 class events are governed by class rules even if these are small local events where there are only three to five boats starting. Each year there is at least one event that receives additional attention in terms of boats and crews conforming to class rules, the North Americans, and please be aware that some practices adopted at the local level may not be legal on a national or international level. In addition to the NAs this year we are fortunate to have the Worlds in Newport RI and this document is a guide to prepare you to pass a J/80 regatta measurement. This guide is not only written for those who have never been through a measurement but for everyone who plans to attend a major J/80 in 2010 and beyond. For experienced crews please use this document as a guide to better organize yourself which will help the process run more smoothly. If this is your first time you will learn good practices right from the start. Our goal as class measurers is to get everyone on the water sailing as soon as possible and the better organized we are collectively the faster we can accomplish our goal. If an owner has questions regarding any modification, repairs, experimental deck layout or equipment additions made to a boat that might impact its weight certificate (if previously weighed) or its legality we encourage you to contact one of us early on so we can help assist you with the issue. Open disclosure will save time, money, and a lot unnecessary stress for all of us involved and maintain a true Corinthian sprit throughout the class. As your measurers we are here to help and support everyone who is a member of the USA J/80 class.

Now that you have decided to attend a major J/80 regatta what is expected of you and what tasks must be completed to in order to have a boat and crew that meets class requirements. There are four major parts of the measurement process sail area, crew weight, boat weight, and the equipment inspection. We will explain these phases and what is expected from every boat during each phase. Each boat will have a designated individual that will be the main spokesperson for that boat and whom will communicate with the measurers, it does not have to be the owner. Once that person is on record as the boat representative all communication during the measurement process will flow through that individual. This will eliminate any confusion from another crew member interacting with the measurement team. Our most time consuming task is measuring the gennakers/spinnakers therefore we are going to lay down guidelines to speed up the boat weight and equipment inspections. No longer will we sit on a boat while the representative rummages through a boat looking for the required equipment or stand around waiting while the crew prepares the boat for inspection or to be weighed. All we ask is that you are ready when it is your time to be inspected and this document will help you to accomplish this otherwise you will be put at the end of the line since you are wasting the measurers time and those behind you that are prepared.

Sail Measurement

Sail measurement is the easiest part for the representative all they have to do is to deliver the sails they plan to use for the regatta to a designated area. You are allowed 1 main, 1 jib (headsail in rule book), and 2 spinnakers (gennaker in rule book) where all sails presented at the time of the measurement must have a royalty tag or button, any sail without a tag or button will not be measured and cannot be used for the regatta. All mains have a sail number and are easily identified but jibs and spinnakers are not that easy therefore have your sail bags clearly marked with the boat name and the name/cell phone of the representative. Do not have the battens in the sail bags. We measure many sails each day and there is a high probability that we can lose or give back the wrong ones therefore it is the responsibility of the representative to keep track of sail battens.

Section G – Sails in the class rules governs sail dimensions and allowed materials. We follow published ISAF techniques for sail measurement where our current process for measuring mainsails and headsails requires the host club to provide a large room where we lay down a sail template on the floor. Sections G.3 and G.4 provide the rules for construction and dimensions of the mainsail and headsail. The floor template allows the measurers to quickly determine if a sail is illegal. This determination is made if any portion of a sail is larger than the measuring points of the template. The dimensions in the class rules are maximums. If you have an illegal sail we will contact the representative and it is that person's responsibility to have the sail re-cut. Fortunately our major regattas are well attended by the class sailmakers from North, Quantum, UK, and Ullman so getting the sail repaired should be easily accomplished. Once the sail is deemed legal it will be stamped, signed, and dated by the measurer that was responsible for measuring sails. Once a sail has received a measurement stamp it does not have to be measured again but we will inspect the sail for the stamp. Please understand that the stamp does wear over time and may disappear completely. Sometimes brand new sails that have never been used may measure in too large in many dimensions. If you find yourself in that position we will ask you to go sailing and bring it back to be measured again and in most cases the sail meets class rules. Therefore it is recommended that you have a few hours on new sails prior having them measured.

As measurers our most time consuming aspect of the measurement process is measuring the spinnakers (gennakers). Section G.5 discusses the construction and dimensions of the spinnakers where the maximum allowed sail area is ***65 m^2*** and the luff length shall not exceed ***12,200 mm***. We use the following formula

$$Sail\ Area = \frac{(luff\ length + leech\ length)}{2} \times \frac{(foot\ length + (4 \times half\ width)}{6}$$

Each individual length is measured by hand and takes at a minimum two individuals. At a 25 boat regatta we could be measuring up to 50 spinnakers where it takes on average 10 – 12 minutes per sail translating into 16 to 20 man hours of effort assuming that the task runs very smooth without any issues. If we find a sail is over in area we usually measure it again to ensure

that we have the numbers correct. Once it is determined that the sail is too large we will contact the representative so the matter can be corrected.

Mainsails and headsails are easy to measure once the template is laid out on the floor, but the spinnakers are going to take time. How we approach the sail measurement phase is determine by the facilities we are given. This can be pre-determined far in advance of the regatta and we are going to make it the responsibility of the local fleet captain and hosting yacht club. Therefore we require the local fleet captain or regatta chairperson of the host club to make contact with the class measurers with possible locations for sail measurement so we are not wondering where we can measure sails when we should be laying out templates.

Crew Weight

The reason for this section is to reduce confusion when making unit conversions from kilograms to pounds. Section C.3.1 states that the maximum crew weight in swimming apparel is ***338.6 kg*** with no limit on numbers of crew. Therefore the maximum allowed class weight is 746 lbs.

Boat Weight

To participate in a major regatta a boat must have a valid weight certificate or it must be weighed at or prior to the regatta where class rules regarding the boat weight are found in section C.5.1 (a),(b). The minimum allowable weight is 1495 kg. If your boat is below this minimum one must add the difference in lead to make the boat legal. As an example if your boat weighs 1455 kg it is 40 kg light and you must add 40 kg of lead in specific locations as shown in Figure 1.

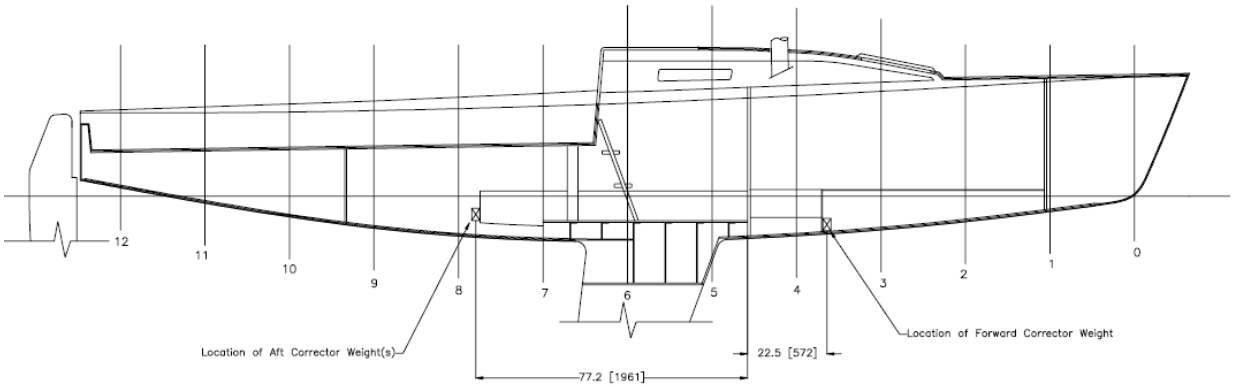

Figure 1 shows the placement of the corrector weights for a boat that weighs below the allowable minimum.

The distribution of weight is 50% forward on the centerline inside the air-tight compartment just forward of the rear bulkhead. The remaining 50% is split such that 25% is placed at the end of the port and starboard settees. Using our example where a boat is under the minimum by 40 kg one would place 20 kg forward and 10 kg at the end of each settee. The weight certificate will be issued with a weight of 1455 kg and during the equipment inspection we will look for properly place lead in order for the boat to be legal. The additional weight must be added to the boat prior to the boat being legal for the regatta. It is the responsibility of the representative to obtain the additional weight and install it into the boat. If you suspect your boat is light you should locate a lead supplier in advance in order to save time and quickly fix the problem if you are weighing your boat at a regatta that requires travel. Rules state that the lead corrector weights must be permanently installed.

We normally weigh boats at the crane used to launch a boat from the trailer. To weigh a boat it will be configured with specific equipment and dry. A lifting strap will be supplied by the representative and will not be attached to the boat because we must attach the strap (including the lifting shackle if used) to the scale and zero the scale when the strap is attached. Once the scale is zeroed then the representative will be responsible to attach the strap to the boat. We conduct pre-weigh inspection prior to moving the boat to the crane. The mast will be up with the boom attached and only the items on the following list shall be on the boat:

- Battery (size will be recorded)
- Engine (empty of fuel, horsepower and type will be recorded)
- Main sail
- Jib/headsail
- Spinnaker (only one spinnaker is allowed)
- Mainsheet
- Jib sheets
- Spinnaker sheets
- Main, jib and spinnaker halyards
- Companionway hatch and stairs
- Rudder with tiller
- Tack line
- Bowsprit lines
- Vang line
- Backstay line
- Furling line
- All allowed turning blocks
- 1 (one) winch handle
- Mast, boom and gooseneck bands

The process will be easier if the representative arrives with a properly configured boat in dry condition. A properly prepared boat is shown in the photos below in Figures 2, 3, and 4. The jib

Figure 2. The two pictures above show the interior of a J80 ready to be weighed. The airtight covers are open and the cover to the battery box is open. The stairs do not have to be attached in their normal location but on board. Water tends to collect in the small forward compartment in the left photo and in the airtight compartments.

can be rolled on the furler without the cover and the main and spinnaker must be out of their bags. A measurer will conduct a pre-weigh inspection that will take only a few minutes when the boat is properly configured and dry. Then it takes about 10 minutes to weigh the boat. If a boat has non-conforming equipment that is permanently mounted such as stereos, mounts to hold electronics, and additional tracks for PHRF racing these will be recorded and become permanent equipment.

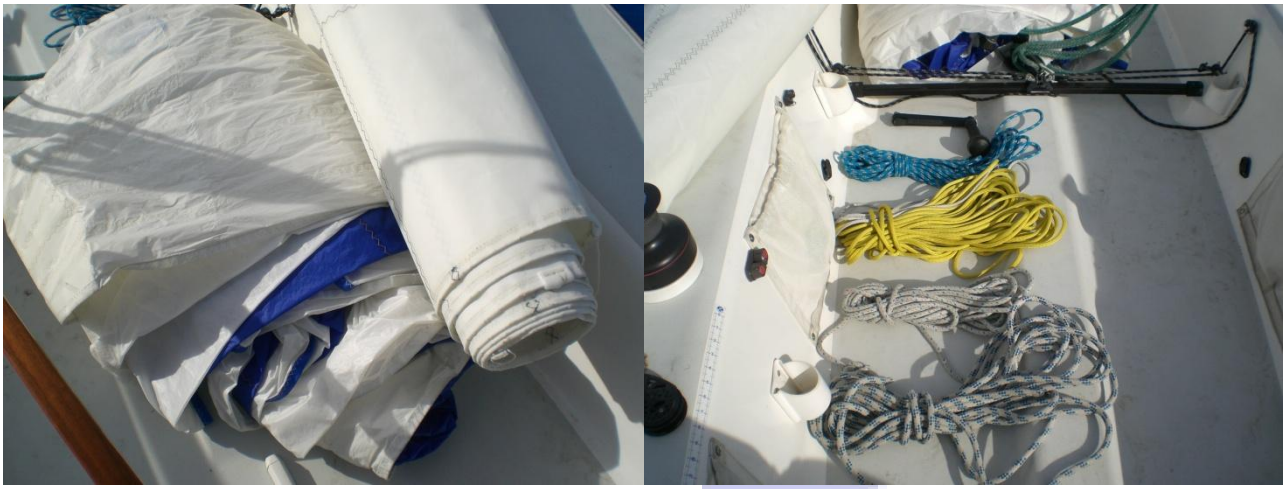

Figure 3. The picture on the left show the main and spinnaker without storage bags in the cockpit of the boat being weighed. The picture on the right shows the jib sheets, tack line, spin sheets, backstay line and winch handle. The mainsheet is attached to the boom and the traveler control line is rigged. All other control lines can be in their functional position such as the halyards.

Figure 4. The picture on the left shows the battery and the picture on the right shows the bilge that is dry. We will inspect the known areas where water collects.

Any changes made to a boat such as obtaining a different engine will require a new certificate. If you have purchased a used boat that has a weight certificate please ensure that the configuration of the boat is the same as it was when that certificate was issued, otherwise it will have to be weighed again. This is a simple process and the most helpful task the representative for a boat can do is to show up with a properly configured boat. We highly appreciate an organized effort and it helps those waiting to be weighed and the overall process in general.

Required Equipment Inspection

This is essentially the final step for a boat in the measurement process. For some competitors it is the only step, after verification, since they could arrive with measured sails and a weight certificate. The following list is the equipment that is required to be on board a J80 participating in a class event:

- Anchor, chain, and nylon rode
- Manual bilge pump
- Compass (can be permanently mounted)
- Applicable charts (see text below for explaination)
- Speed and depth or operational GPS
- Operational VHF
- Operation navigation lights
- 12 volt battery operational
- Horseshoe life ring
- First aid kit with manual
- 9 liter bucket (minimum)
- PFD for each crewmember
- Outboard motor
- C.G.- Efficient sound producing device (horn or whistle)
- C.G. -Two B-1 fire extinguishers (with indicator in green position)
- C.G. -Visual distress signals day/night (not beyond expiration date)

The following are non-equipment inspections that will be conducted:

- Bowsprit pole extension when retracted – cannot exceed 76mm beyond bow
- Lifeline deflection cannot exceed 50mm
- Current year transom sticker
- Companionway hatch and stairs

Most boats that fail this step are due to nonoperational navigation lights because one or all of the lights are bad or the battery is not charged. Therefore check your lights and have a charged battery before you ask the measurer to conduct this step. The next most troublesome area to pass is the lifeline deflection test. Over time lifelines stretch and 50mm is less than two inches again prior to this step take a ruler and measure the amount of vertical movement of the lifeline and if it is greater than two inches you will fail and have to tighten the lifelines in order to be able to sail in the regatta. This inspection should only last five minutes for a well prepared boat. Figure 5 is a photo of a boat that is prepared for the equipment inspection. All the equipment is on display in the cockpit and the measurer can easily check that the equipment is present. We will ask you to turn on the navigation lights and the VHF and GPS to show they are operational.

Figure 5 is an example of a boat that is ready for the equipment inspection where the representative has displayed the required equipment in the cockpit. In addition to the display the navigation lights should be turn on since we are going to have you turn them on anyway. The display can be on the ground next to the trailer.

Summary

This document was written to serve as a guide to help a boat prepare for a major J80 regatta. By following this guide you will not only be making it easier and less frustrating for you and your crew but you'll help the overall execution of the regatta. We will be reviewing this document each year to add new practices and to provide a means of communication to the fleet on changes to the measurement process due to rules changes or how we plan to inspect and pass boats wishing to sail in major regattas. Even though we do not inspect boats for local races it is understood that boats participating in an event that is considered a J80 class event that the boats shall conform to the class rules. Remember we are here to help and you can find our contact information at http://www.j80.org/officers.php.