

## Crackerbox Technical Inspection Sheet (REVISED 4/20)

**Boats in the class shall be raced with two persons on board ----- no exceptions**

### **Engine**

Engine shall either be 314 cubic inches maximum or 275 cubic inches maximum. The 314 c.i.d engine shall use a 650 CFM Holley carburetor Model #4150, Part #4777C (classic series), and all dash numbers, and is to remain "as furnished" by the manufacturer. Any modification not written herein will not be permissible or allowed. The following dimensions not to exceed: Throttle bore of 1-11/16", Primary venturi of 1-1/4" and secondary venturi of 1-5/16". Booster venturi shall not be modified from original and must be mounted in the original location. A carburetor test gauge kit, 7864 for Holley 0-4777 series 650 CFM Carburetors is available from BLP Products, 1015 West Church St., Orlando, FL 32805; phone 800-624-1358. It will be permissible to use epoxy to keep the booster venturi in place. Metering blocks are to remain unchanged from original. Milling of choke horn is not allowed. The choke assembly may be removed as well as any linkages that are not used. Power valve may be blocked. Accelerator pump nozzles and inlet jets may be changed. Accelerator pump must remain stock at 30cc. Any float may be used that fits in the float bowl. Any device to prevent fuel sloshing may be used. Jet extenders are permitted. The 275 c.i. engine may use mechanical fuel injection. All other existing motor rules apply

To determine total cubic inches use the following formula: Bore x Bore x Stroke x .7854 x number of cylinders.  
Example  $4.03 \times 4.03 \times 3 \times .7854 \times 8 = 306.13446$  cubic inches.

Engine size: Bore \_\_\_\_\_ x Bore \_\_\_\_\_ x Stroke \_\_\_\_\_ x .7854 x cylinders \_\_\_\_\_ = \_\_\_\_\_ total cubic inches.  
Is block and heads of OEM design? Yes \_\_\_\_\_ No \_\_\_\_\_ Is block cast iron? Yes \_\_\_\_\_ No \_\_\_\_\_

Induction = injection \_\_\_\_\_ carburetion \_\_\_\_\_ Carburetion part # \_\_\_\_\_ with Throttle bore 1- 11/16"  
\_\_\_\_\_ Primary Venturi 1-1/4" \_\_\_\_\_ Secondary Venturi 1-5/16" \_\_\_\_\_ Booster Venturi in proper location? Yes \_\_\_\_\_ No \_\_\_\_\_ Any modifications done? Yes \_\_\_\_\_ No \_\_\_\_\_. A carburetor test kit #7864 from BLP Products may be used. Method used for measuring: Go-No Go gauges \_\_\_\_\_ or a physical measurement \_\_\_\_\_.  
Has air horn been milled? Yes \_\_\_\_\_ No \_\_\_\_\_

### **Fuel**

Fuel shall be gasoline of a type available for automotive, marine and aviation use. For the 275 cubic inch displacement engine only, methanol fuel may be used.

Fuel test method: Digitron for gasoline (must test a negative number) \_\_\_\_\_ Specific gravity for methanol not to exceed .800 @ 20 degrees C (68 degrees F). \_\_\_\_\_

### **Hull**

The official *Technical Inspection Manual and Guide to Measuring the Racing Crackerbox, Appendix B*, shall be used as a guide for hull inspection

Boats shall be not more than 15 feet 6 inches long or less than 13 feet 6 inches measured from bow to transom.

Boat length is \_\_\_\_\_.

#### **APPENDIX B • Technical Inspection Manual and Guide to Measuring the Racing Crackerbox**

The purpose of this manual is to provide a unified and simplified procedure to inspect the racing Crackerbox. This is a guide to be used as a minimum inspection procedure while inspecting the hull; and in no way supersedes the inspector, referee, or other binding authority's right to perform a complete inspection (including but not limited to lofting of frame work and hull dimension, measuring as specified in section 50.5 of the rule book). Rule 50 and rule 49 take precedent in any discrepancy with this guide. This procedure identifies a minimum of twelve points to be inspected of the more critical areas of the hull, verifying basic dimensional compliance as paraphrased in section 50.1 of the rulebook.

**Suggested Tools** (these are recommended, similar tools may be substituted)

1- Aluminum Straight Edge 3/8 thick, 2" wide, 4' long (or equivalent)

1- 1/8" Dowel 2- 1/2" Dowels 1- Grease Pen 1- 20' Tape Measure 2- 2' Carpenters Level (two plumb bobs or equivalent may be used)

**Note to Inspector:** Prior to lifting a hull for inspection, verify that the lifting slings used are in compliance with rule 3.9 of the General Safety Rules. Additional references can be found in **Rule 49.8 Hull Lifting Requirements**.

**Transom Definition:** For the purposes of this Guide the transom will be the primary vertical plane at the stern of the hull. All measurements taken from the transom must be perpendicular to the transom (see fig. 1).

**Transom Width Measurement: Point A**

Measure the minimum and maximum distance across the transom perpendicular to the hull centerline. The minimum dimension is 55 1/2", and the maximum dimension is 59 6". Actual measurement is \_\_\_\_\_"

**Note:** That the 1" +/- tolerance as specified in section 50.5 TABLE OF OFFSETS does not apply to these dimensions. (See fig. 1).

**Station #7: Point B and Station #4: Point C**

Measuring perpendicular from the transom toward the bow, place a mark at 81 inches (Point B, Station 7) and at 123 inches (Point C, Station 4) on both sides of the boat. Use the markings at each point, along with two levels, to measure the minimum and maximum width of the hull at the chine at each station. The readings should be no less than 66 inches and no greater than 70 inches for point B (Station 7) and no less than 56 3/4 inches Actual measurement is \_\_\_\_\_. and no greater than 64 inches for point C (Station 4). (See fig. 2a and fig. 2b). Actual measurement is \_\_\_\_\_.

**Overall Length: Point D**

Measuring from the transom center to the tip of bow, the overall length of the hull should be no less than 13' 6" and no greater than 15' 6". Per rule 50.5.3 the adjustable plates are in no way to be included in the measurement of overall length. When engine height or other deck attachments interfere with the tape measure, a simple method of determining hull length is to use two carpenters' levels or plumb bobs—one at the transom center and one at the tip of the bow. (See fig. 3). If the measured value does not meet the requirements set out in rule 50.5.3 and the Inspector feels the issue is due to measurement error, the Inspector shall measure the length of the hull per rule 50.5.

**Concavity: Point E, F, G, H, I**

With the hull suspended in the air in a safe manner as determined by the inspector, measuring perpendicular from the transom towards the bow, place a mark at 6 inches, 24 inches, 48 inches, 72 inches, and 93 inches on the keel centerline and on the chine on both sides of the hull (see fig. 4a). Place a straightedge flat on the bottom at the keel centerline to the chine at each marked location. Repeat this process on both sides of the keel. If space is observed between the hull's bottom and the straightedge, then use the 1/8 inch dowel to determine if it can be placed between the bottom and the straightedge. When measuring the bottom concavity, there will be a 1/8 inch maximum deviation from a theoretical straight line from the keel centerline to chine from the transom forward to amidships per rule 50.5.9. It should be expected that some underwater gear such as the strut, prop shaft shrouds, water pickups, etc. could interfere with getting a measurement to the keel centerline. In this case the inspector shall use his/her best judgment as to whether the device is hiding potential concavity. In this case, simply move the straightedge around the area and re-measure to achieve an accurate determination of the hull's legality. (See fig. 4b). Note: If devices such as water pickups, mounting plates, blast plates etc. are mounted to the keel obstructing the centerline, an offset must be used to determine bottom concavity. For example, using two 1/2" dowels, place one on the keel centerline and the other on the chine. Place the straight edge across the dowels and take a measurement. The measurement should be no more than 5/8 of an inch. (See fig. 4b).

**Seat Back: Point J**

Measuring from the transom to the back of the driver’s and rider’s seats, there must be no less than 9 1/2 inches per rule 50.5.6 (See fig. 5). Actual measurement is\_\_\_\_\_.

**Engine Placement: Point K**

Engine must be mounted in front of the cockpit and have a minimum distance of 53 inches perpendicular from the transom

to the tip of the crankshaft per rule 50.5.5. A simple method of determining engine location is to use two carpenter’s levels—one at the transom and one at the tip of the crankshaft (See fig. 6). Actual measurement is\_\_\_\_\_.

**Visual Inspection: Point L**

The bottom shall be visually inspected per rule 50.5 and 50.6. The adjustable plates should be blended or flushed to the bottom per rule 50.6.5. All other underwater gear must be mounted in accordance with rule 50.5.10 and 50.6 (See fig. 7 and fig. 8 below for examples). Visual inspection pass \_\_\_\_\_ or fail \_\_\_\_\_.

Chief Inspector\_\_\_\_\_ APBA #\_\_\_\_\_

Inspector \_\_\_\_\_ APBA # \_\_\_\_\_

Referee \_\_\_\_\_ APBA# \_\_\_\_\_

Inboard Commissioner \_\_\_\_\_ APBA# \_\_\_\_\_

Boat Owner’s signature \_\_\_\_\_ APBA# \_\_\_\_\_