

# ***West Coast Jet Sprint Club (inc)***



Rules and Code of Conduct

for

Jet Sprint Boat Racing

July 2020

The rules herein are effective as July 2020.

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# 1. Terms and Definitions

- 1.1. **The Club** - The West Coast Jet Sprint Club (inc) its committee and members.
- 1.2. **WCJSC** - same as “the club”
- 1.3. **The Track** – the series of channels forming the jet sprint race circuit, this includes the spinout pool and the launch ramp areas.
- 1.4. **Pit Marshal** - an official nominated by the club for a particular event. The responsibility of the pit marshal is to organise the competitors into the order defined by the race controller and ensure that all safety equipment is correctly fitted before a boat enters the launch pool. The Pit marshal is directly responsible to the race controller.
- 1.5. **Race Controller** - an official nominated by the club for a particular event. The race controller’s responsibility is to oversee the running of the event and make rulings based on the rules set out within. The race controller is deemed to be the final arbiter for that event.
- 1.6. **DNS** - Did Not Start. (failed to start a round)
- 1.7. **DNF** - Did Not Finish. (failed to complete a round in the prescribed rotation)
- 1.8. **Qualifying Round** - The rounds in which a competing team can take their best time to secure a place in the elimination.
- 1.9. **Elimination Round** - The rounds where a competitor has only one opportunity to progress forward with their fastest previous time. i.e. qualified time to fastest 6, fastest 3. This may be altered by the race controller in the event of diminished or increased boat numbers.
- 1.10. **Run** - The completion of the prescribed track, by following the course directions described on the track map of the race course at any given event.
- 1.11. **Scrutineering** - The scrutineering process is a visual check of a boats construction and fitment of required safety equipment. The scrutineers will, to the best of their ability, highlight areas of concern that, in their opinion, need to be addressed by the owner/driver of the craft and as such a pass at scrutineering will not imply or guarantee structural integrity of the hull or roll cage.
- 1.12. **Crew** - a crew is comprised of one driver and one navigator and any boat can field a maximum of two crews for any one race event. (refer rule 3.5 )

## 2. General Rules

### 2.1. Boats

Any boat size, type and configuration, with a reciprocating engine, will be permitted, providing the boat is solely propelled by a water jet unit/ s, carries two crew persons and complies with all safety requirements as specified under Boat and Safety Equipment rules including an approved Roll Cage.

### 2.2. Hull

Hulls must be of metal construction up to the deck line; the deck line may not go down to the chine. All decks must be fitted in such a way as to add strength to the hull, and be permanently fixed.

### 2.3. Exhaust

The use of an efficient manufacturer brand muffler is compulsory. All boats will be required to meet supplementary track regulations for noise. These limits shall be notified by the race organisers/promoter 30 days prior to the start of the race season. (Opportunity must be given for crew to meet noise restrictions prior to any race).

Each boat must be fitted with a noise management compliance sticker stating the recorded noise level of the boat as measured using the clubs calibrated sound level meters. (Refer to Noise management plan for details of measurements required)

Sound level readings will be made at each event to check for compliance.

### 2.4. Configuration

Driver and crew will sit side by side with a difference in seat placement fore or aft, of not more than 300mm to each other. Crew shall have a clear and unhindered escape route through the front of any roll cage.

### 2.5. Crews

2.5.1. LS Class - Sportsman, LS Class - AFJSA, Group A and Super class boats must carry two crew members (driver and navigator).

2.5.2. Any boat may have a maximum of two crews (A and B teams). Each driver is to have his or her own navigator.

2.5.3. Doubling up is strictly prohibited. This means no driver can navigate and a navigator cannot drive.

2.5.4. Navigator may only navigate for one driver.

2.5.5. A driver can only compete in one class during an event.

2.5.6. No driver or navigator may compete in more than one boat or class on race day. However, if a boat is rendered unable to continue racing, the race controller may permit the crew to continue racing in another boat, providing they can record a qualifying time in that replacement boat before the elimination rounds commence. Times previously recorded in the disabled boat will be disregarded.

2.5.7. Only one boat change per crew per meeting is allowed.

**PENALTY:** Boat substitution or change without approval - disqualification for the day or remaining rounds.

### 2.6. Time Keeping

The timekeeper's word is final and no protests will be considered. The timekeeper's area is out of bounds to all competitors and their crew at all times except by direct invitation of the race controller. This rule also applies to the race control area.

There shall be two forms of timekeeping, this may be manual or a timekeeping program. Should both systems fail simultaneously for a run, that run shall be re-run.

**PENALTY:** *Unauthorized entry to race control area and Control tower/timekeeper's area or contact with the timekeeper - may result in disqualification for the remainder of the day's racing.*

## **2.7. Safety Equipment**

All items named in "Boat and Safety Equipment" shall be available for inspection at the time and place nominated for scrutineering.

**PENALTY:** *The team will not be allowed to compete for that meeting.*

## **2.8. Scrutineering**

Scrutineering shall be at a time and place as nominated by the event organiser on the entry form and must be attended by all boats and crews unless prior arrangements are made with the organiser.

Boats should be presented for scrutineering at the time designated for each event. Crews will be notified of the required attendance times in advance of the race meeting. Generally this will be 2 hours before racing starts (and may vary with increased boat numbers). All scrutineering must be completed 1 hour before racing starts unless otherwise organised with the scrutineers.

The scrutineering area is declared an alcohol-free zone.

**PENALTY:** *Not attending scrutineering without prior approval, the team will not be allowed to compete for that meeting.*

**PENALTY:** *Consuming alcohol or smoking in the scrutineering area, the team will not be allowed to compete for that meeting.*

## **2.9. Race Entry Nominations**

- 2.9.1. Entry forms submitted without payment or incomplete will be deemed invalid and disregarded. Late entries will only be accepted at the sole discretion of the WCJSC (inc) and may be subjected to a late entry fee and/or may be placed on a cancellation list.
- 2.9.2. If a competitor wishes to withdraw an entry prior to the event a refund of the entry fee may be granted at the discretion of the Club.
- 2.9.3. If a competitor fails to commence racing at an event due to mechanical failure a refund of the entry fee may be granted at the discretion of the Club.
- 2.9.4. Entrants who are a "no-show" on race day are NOT entitled to a credit or a refund of their entry fee.
- 2.9.5. In order to compete each crew shall hold two (2) fully paid current competitors licenses issued by their respective country's/states association or jet sprint authority. Financial crew members from affiliated clubs and associations and licensed international crew members are deemed to meet this requirement.
- 2.9.6. A fully licensed crew may purchase a Day License for a navigator to compete in any event. (Refer also Section 14 for details of Championship Points)
- 2.9.7. The club at its discretion may allow a person to drive a boat on a day license for the purpose of "trying out", this applies for one event only. In this circumstance the team will not be eligible to accumulate any points towards the WCJSC Championship and will not be eligible to be awarded a trophy for that event. Application to race on a day license for the purpose "trying out", must be submitted in writing to the secretary seven (7) days prior to the event.

## **2.10. Driver Fitness**

- 2.10.1. No driver shall compete with an injury or disability, which, in the opinion of the race controller could adversely affect his/her ability to safely and effectively control the boat. This includes the ability of either crew member to safely and quickly exit the boat following an accident. Medical clearance in writing may be required before a driver or navigator is allowed to race.
- 2.10.2. If a competitor (driver or navigator) is injured in any way during a race meeting they must obtain a clearance from the attending medical officer before being allowed to resume racing. The medical officer's advice will be final and no protests will be considered.

## **2.11. Pits**

- 2.11.1. The pits are a controlled area and designated an alcohol and smoking (including E-Cigarettes) free zone.
- 2.11.2. Entry to the pits area is limited to the competitors who have nominated to race for the event, pits crews associated with nominated teams, officials and persons holding valid pit passes. Under all conditions entry to the pits is at the discretion of the race controller.
- 2.11.3. Children in the pits shall be under the supervision of a responsible adult at all times.
- 2.11.4. Vehicles in the pits are limited to that of the boat tow vehicle and vehicles of pit crew members of nominated teams. Launch ramp area is limited to only the vehicle directly involved with launching the boat.
- 2.11.5. For safety reasons movement of vehicles in the pits should be kept to a minimum.
- 2.11.6. The maximum speed limit for vehicle movement within the pit area is walking pace.
- 2.11.7. Vehicles that do not comply with these conditions will be excluded from the pits area for the remainder of the race event.

## **3. Course Design and Use**

- 3.1. A new course with of a maximum of 25 directional changes will be set for each event.
- 3.2. "The track" should not to be used outside of any race event by any person, unless prior permission is sort from all committee members. Permission will only be granted under extenuating circumstances if ALL committee members approve the application.
- 3.3. In the event that permission is granted the person/team must comply with the requirement for the attendance of a medical officer and sufficient safety crew to deal with a possibility of an accident.
- 3.4. Once an event course design has been published to competitors for an event there will be no use allowed on "the track" until after that event.

## **4. Event Administration**

- 4.1. A race controller will be appointed by the WCJSC to control each event.
- 4.2. The race controller is the final arbiter for any disputes other than official protests on the day.
- 4.3. An approved host state/country authority member who has had at least two years experience in Jet Sprinting shall carry out Scrutineering.
- 4.4. Any queries, which can not be satisfactorily resolved by the scrutineers, shall be referred to the race controller for a decision; the race controller is the final arbiter.
- 4.5. The WCJSC reserves the right to alter any of the above rules so as to accommodate any unusual or unforeseen circumstance or errors that may arise from time to time or state to state.

## **5. Event Organisers Responsibilities**

- 5.1. Organisers of all events must provide adequate first aid equipment, for any likely emergency, and ensure the attendance of qualified first aid personnel and an ambulance available at trackside.
- 5.2. Organisers of all events must provide adequate fire extinguishing equipment for any likely emergency. (Race gas and Methanol). It is preferable to engage the services of a trained fire crew.
- 5.3. Organisers of all events must engage the services of an adequate and able bodied safety crew. Although the primary requirement is to assist with refloating of boats, which have become grounded, an essential aspect is an ability to quickly react and assist with any craft in difficulties that may endanger the crew. (ie. a roll-over)
- 5.4. The safety crew must be given a safety briefing prior to commencement of the event, so that they are conversant with the requirements regarding the safety of a crew in the event of a crash or roll-over in or out of the water and that they are aware all other safety requirements concerning their own safety in the handling of boats.

## **6. Boat and Safety Equipment**

### **6.1. Safety Harness**

- 6.1.1. Must be fitted for both crew and be securely attached to the roll cage or the seat base bearers. Harnesses must be of a CAMS approved type, 5 point minimum harness (although 6 point is recommended) with minimum 2 inch belts and have lever action, quick release buckles. Belts must be replaced 8 years from expiry date or 10 years from date of manufacture. If belts show signs of fraying, wear or are faded they must be replaced regardless of expiry date or DOM.
- 6.1.2. All harnesses shall have a lever action quick release buckle and be in good condition. (See roll cage specs)
- 6.1.3. Harnesses fitted with push lock or twist action buckles are NOT permitted.
- 6.1.4. The mounting point for the shoulder straps behind each crew member must be between a line horizontal to the shoulders, and a line drawn downward from the shoulders at an angle of approximately 25 degrees to the horizontal. If the shoulder straps join prior to a single common mounting point then that junction shall be at least 150mm (6 inches) behind the crew member's neck.

- 6.1.5. Shoulder straps must wrap around the horizontal cross bar of the roll cage as the only means of attachment.
- 6.1.6. The lap and crotch straps must be positioned in such a way to wrap and hold the pelvic region over the greatest possible surface area. Care shall be taken that the webbing of the harness is protected against chaffing in any area.
- 6.1.7. All harnesses shall be replaced whenever the webbing is cut, frayed or weakened due to the actions of chemicals abrasion or sunlight etc. Safety belt harness hardware must be replaced if it is bent, deformed or corroded.
- 6.1.8. All drivers and navigators must be scrutineered with their nominated boat so their safety equipment can be checked for correct size.

## **6.2. Arm Restraints**

Motor sport type approved arm restraints must be worn on the outside wrist of each crew member and shall be of a length which will prevent the arm from protruding from the boat in the event of a roll over. They must be attached to the safety harness in such a way as to release freely when the buckle is released.

## **6.3. Head Restraints**

Head and neck restraints for both driver and navigator are compulsory. Seats to be fitted with wings from the seat back head rest protruding out each side of the helmet in a line drawn forward past half the forward length of the helmet when the head is rested to the back of the seat in the sitting position. Head restraints must have the ability to absorb the side to side impact of the head under racing conditions without being left permanently bent out of shape after normal racing. A Frontal Head Restraint (FHR) must be worn by each driver and navigator which complies with SFI 38.1, FIA 8858 standards. Quick release fixing posts that disconnect the device via a 'tab pull system' for FHR's are mandatory. It is the responsibility of the wearer to ensure that the FHR device that they are using is suitable for the application that they will be wearing it for and consideration of use should be given to FHR devices that are easy to release, and be compatible with seating layout.

## **6.4. Personal Safety Equipment**

All competitors whether they are competing or practicing must wear a correct fitting approved helmet; motor sports type FHR, arm restraint, enclosed footwear and flame retardant suit. Protective equipment must meet the relevant Australian or international standards for the item in question.

### **6.4.1. Race Suits**

All boat crew race suits shall be a motor sport approved flame retardant race suit, single layer suits are acceptable with the use of full fire retardant underwear. NO cotton or synthetic workman style overalls will be accepted.

### **6.4.2. Face and Hand Protection**

All boat crew members must wear a motor sport approved flame retardant balaclava and hand protection. Balaclavas with openings from eyebrows to directly below the nose are acceptable. Balaclavas must not be of the peephole type, the mouth and nose must be easily cleared.

### **6.4.3. Foot Protection**

All boat crew members must wear fully enclosed footwear; race boots are recommended but not essential. It is also recommended that cotton or woolen (non synthetic) socks also be worn with the above footwear.

#### 6.4.4. Helmets

- 6.4.4.1. All helmets must be of an open face type.
- 6.4.4.2. This type of helmet offers ease of access for the safety and first aid crew in the event that resuscitation is required.
- 6.4.4.3. All helmets must be in excellent condition with no frayed chin straps or damaged/rusted anchor points and buckles and must correctly fitted for the person who wears them.
- 6.4.4.4. Any brand of crash helmet is allowed provided they meet the relevant standard specifications applied by the jet sprint authority in the Country of origin of the boat and crew concerned, approved Internationally manufactured helmets may be eligible for competition use, consult with WCJSC representative or committee for approval.
- 6.4.4.5. Full-face helmets or helmets with removable face pieces are not acceptable.  
Exception: Full face helmets may be used if fitted with a working air breathing system.
- 6.4.4.6. Helmets that conform to the relevant Australian Standard must carry the official sticker to confirm this compliance.

All safety equipment must be properly and securely fitted to the crew, prior to the boat lining up at the start line and all must be in place when the boat crosses the finish line. No other items of clothing shall be worn over the fire retardant suit.

The driver shall be responsible for checking that his or her crew is wearing the required safety equipment and that it is correctly adjusted, before proceeding onto the start line. The pit marshal and starter will visually check safety equipment prior to allowing any boat to cross the start line, but will not be responsible for any item not being in place during competition.

***PENALTY: Incorrect fitting or missing safety equipment during run – DNF***

#### 6.5. Engine Mounts

- 6.5.1. Engines are to be solid mounted to the main engine bearers. Where an engine mount is built to create a frame there shall be a minimum of four (4), 10mm metric or 3/8 inch equivalent bolts and nuts to secure that frame to the main bearers of the boat.
- 6.5.2. Where engine mounts create four separate attachment points there shall be a minimum of eight (8), 10mm metric or 3/8 inch equivalent bolts and nuts.
- 6.5.3. Flexible mounts will only be permitted if they have security through bolting and it can be demonstrated to the scrutineers' satisfaction that the through bolt is designed to restrain the engine should the flexible portion fail.

#### 6.6. Fuel Tanks and Fittings

- 6.6.1. Fuel tanks must be securely mounted and be fitted with a non spill-sealing cap. The tank must not be mounted in such a way as to be a stressed or a load bearing part of the boat structure.
- 6.6.2. Adequate breathers are to be fitted to the fuel tank; the breather tube must include a non return valve and be vented to the outside of the boat.
- 6.6.3. A fuel filler must be fitted in such a manner that no fuel can spill into the hull during refueling.

- 6.6.4. All fuel and vent lines must be resistant to the type of fuel used. All fuel lines must be attached with proper fittings no spring loaded hose clips or clamping of fuel lines is permitted. (With the exception of the fuel filler to the scrutineers satisfaction)
- 6.6.5. A fuel shut off tap or control must be fitted and identified by its own red triangle (75mm sides) and must be located between the seats or on the dash and able to be operated by either crew when harnessed in their seats.
- 6.6.6. Only fuel rated hoses and fittings to be present throughout fuel system. No plastic allowed.

## **6.7. Batteries**

- 6.7.1. All batteries shall be of a non-spill type, (i.e. manifold-vented or gelled) and firmly secured to the hull or bearers.
- 6.7.2. An operating battery isolating kill switch must be installed and located between the seats within easy reach of both crew whilst harnessed in their seats. Metal constructed boats should have the isolating switch to the earth terminal.

## **6.8. Fire Extinguishers**

- 6.8.1. An approved fire extinguisher must be in close proximity to each boat, trailer or tow vehicle when the boat is on the trailer. They must be easily accessible to the crew or race officials in the event of an incident.
- 6.8.2. Approved Types:
  - 6.8.2.1. The extinguisher required for each boat must be of a type designed to extinguish the fuel type used in that boat.
  - 6.8.2.2. Capacity 1 kg minimum. (DCP – Dry Chemical Powder – Type 3)
  - 6.8.2.3. All types must carry standard approval label and a certificate showing that it has been serviced in the last 12 months.
  - 6.8.2.4. Aerosol type fire extinguishers are NOT permitted.

## **6.9. Steering**

- 6.9.1. All shackles and turn buckle components in the steering system must be lock-wired to prevent these items from becoming loose. (Nylon TY wraps are acceptable Stainless steel Aircraft grade lock wire is highly recommended)
- 6.9.2. Chain guards/guides must be fitted to each side of the main steering chain sprocket.
- 6.9.3. All open pulleys must be fitted with keepers. Where steering is constructed using a lever system any shackles attaching the steering cables shall be lock wired.
- 6.9.4. All steering cables must be from a braided type wire rope, with a minimum 750 kg breaking strain.
- 6.9.5. Jet unit steering shafts where fitted shall have Nylok type nuts, the thread of any bolt must protrude through the nylon locking device or have been locked by fitting two standard nuts. All rose joints should be fitted with a keeper washer of sufficient diameter to prevent total joint failure should the rose joint collapse.

## **6.10. Engine Control**

- 6.10.1. Two throttle return springs, either of which is capable of closing the throttles, must be fitted in addition to any internal carburettor throttle shaft springs.
- 6.10.2. Where fuel injection is fitted there will be at least one spring on the accelerator pedal in addition to the factory fitted springs on the throttle shafts. Where this is not possible the spring will be fitted to the main operational lever of the fuel injection where the throttle cable is attached. At all times for any boat the throttle must be able to return to the idle position unaided.

- 6.10.3. Any other items that in the opinion of the scrutineer are unsafe must be rectified to the scrutineers' satisfaction.

## **6.11. General Equipment**

- 6.11.1. All boats must have a bow towing eye with at least a 10 mm (3/8 inch) diameter hole that can be fitted with a suitable D-shackle to aid the rescue crew or tow boat to attach a safety line.
- 6.11.2. All boats must be fitted with a working bilge pump.
- 6.11.3. An operational reverse is mandatory for all boats.

## **7. Roll Cage Specifications**

### **7.1. General Requirements**

- 7.1.1. A roll cage, which meets these minimum specifications, must be fitted to all boats. Any boat not complying with these standards will not be permitted to race.
- 7.1.2. The intention of these specifications is to provide the best possible protection to drivers and navigators, taking into consideration the accidents which have occurred within the sport and best practices in other motor sports.
- 7.1.3. No guarantee is implied or stated, nor is any responsibility taken, regarding the degree of protection or safety afforded by any roll cage constructed to these specifications. Owners are encouraged to seek the advice of a structural engineer qualified in roll cage design.
- 7.1.4. All jet sprint boats are to have roll cages constructed so that all parts of the crew's bodies above the deck line are contained within the roll cage structure. At the same time, the roll cage should provide minimum restriction to the driver's vision to the sides or front and must allow quick and easy access and exit, especially in the event of an inverted accident.
- 7.1.5. While different designs of roll cages will be permitted, each design must satisfy the requirements stated above and be constructed to the following minimum specifications. The roll cage diagrams below should be used as a guide only and are not intended to represent a structural design.

### **7.2. Roll Cage Construction Materials**

- 7.2.1. Only round tubing is deemed acceptable.
- 7.2.2. Mild steel tubing minimum diameter 41.2mm (1.625 inches); DOM, 1020/26, mechanical (Drawn over mandrel, round carbon steel tube) 3.0mm (0.120 inch) wall thickness minimum.
- 7.2.3. Dimensions for mild steel roll cage as per drawing three.
- 7.2.4. Chrome molly tube; minimum diameter 38.1mm (1.50 inches), wall thickness 2.1 mm (0.083 inches).

### **7.3. Welding & Forming**

- 7.3.1. All joints must be fully welded by a competent welder with all welds being of good external appearance and remain un-ground using the TIG or MIG process with the 4130 filler wire, for chrome Molly.
- 7.3.2. Joints should be preheated and welded in 90-degree increments to avoid brittleness. (Chrome Molly)
- 7.3.3. Tube must be contoured and shaped for a close fit prior to welding.

- 7.3.4. Tubes cannot be flattened in order to make a joint.
- 7.3.5. All bracing bars should be of straight tube between attachment points.

## **7.4. Configuration**

- 7.4.1. All bracing and the rear A frame must be straight between attachment points, see Figure 1 (one)
- 7.4.2. The main 'A' frame roll cage structure and brace bars must be of one-piece continuous tubing. No welds permitted other than at attachment points and capping plates.
- 7.4.3. The top corners of the overhead framework must be formed in one 90 degree bend, formed on a bender suitable for bending the chrome molly size used. Roll cages constructed of Mild steel or aluminium shall be treated in the same manner when allowed by the rules for each class of boat
- 7.4.4. The two A frames must be spaced apart a minimum of 100 mm (4 Inches) between centres.
- 7.4.5. Capping plate 3 mm (0.120 inches) must be welded to each corner of the A frame covering the entire bend. (May be mild steel)
- 7.4.6. A minimum of one 3 mm (0.120 inches) plate or tube must be welded in between the capped A frame corners between the top bars.
- 7.4.7. The mounting points on the cage for the shoulder straps behind each crew member must be between a line horizontal to the shoulders and a line drawn downward from the shoulders at an angle of approximately 25 degrees to the horizontal.
- 7.4.8. The two A frames must have a brace on the side so as to form an A section on the side of the cage and should where possible also be attached to the side panel (gunwale) as well as the chine. If the boat has a fibreglass deck and no strength to the cage is achieved by attaching it to the side, it is strongly recommended to upgrade to the thickness and size of the A frame legs.
- 7.4.9. Helmet Clearance: 5 or 6-point harness, a minimum clearance of 100 mm from the top of the helmet to the underside of the cage top bar must be maintained for all crew.
- 7.4.10. An X styled brace going from the upper outer A frame to either:
  - 7.4.11. The back cross bar and then down to the engine bearers or outer chine area. (The bottom part of the X brace can be removable in this configuration provided suitable hardware is used.
  - 7.4.12. Goes directly to the engine bearers or chine and joined where they intersect. (If the lower part of the 'X' brace goes to the chine it must have suitable load distributing plates on attachment points) see method of securing.
- 7.4.13. Seats must mount to the one piece cross bars attached securely to the roll cage, shown in Figure 3 and must be attached at all manufacturers located mounting points. A minimum 4 points at the base and one at the back above the shoulder line of any crew is required.

## **7.5. Method of Securing**

- 7.5.1. Attachment plates or load-spreading flanges must be welded to the tube ends to secure the cage to the boat and must be at least 5 mm (.197 inches) minimum thickness.

- 7.5.2. For rectangle attaching plates:  
Minimum width of attaching plate = minimum tube diameter.  
Minimum length of attaching plate = minimum tube diameter x 2. For circular attaching plates:  
Minimum diameter of round flanges should be tube minimum tube diameter x 2.
- 7.5.3. The roll cage may be bolted or welded to the boat as defined below.

## **7.6. Anchor Points**

- 7.6.1. The primary elements of the roll cage must be secured to the main engine bearers and the chine.
- 7.6.2. In the absence of chine bearers in an alloy boat, the cage should be attached in the chine area of the bottom skin with load-spreading flanges as above.
- 7.6.3. In addition to the above, the main roll bar structure may be attached to the fore or side deck, provided that a brace bar of the same type and size material as the roll bar continues the load path through to the bottom of the boat. Provided the primary elements of the roll cage structure attach to the boat bottom as stated above, then braces may be attached to the roll cage in order to strengthen the boat sides or deck structure.

## **7.7. Bolting**

- 7.7.1. Through bolting with back-up washers is required.
- 7.7.2. Minimum of two bolts are required for each attachment point.
- 7.7.3. Minimum bolt diameter:  
10mm metric or 3/8" equivalent for two bolts.  
8mm metric or 5/16" equivalent for four bolts.  
6mm metric or 1/4" equivalent for six bolts.
- 7.7.4. All bolts must be secured with some type of locking nut, "Nylok" type is the recommended type, secondary locking nuts are deemed acceptable.
- 7.7.5. Short bolting (when the thread of the bolt installed does not fully protrude through the nut) is not acceptable. A general recommendation for bolting is that a minimum two threads protrude beyond the end of the nut.

## **7.8. Crew Protection**

- 7.8.1. The driver and navigator must be able to exit an inverted boat through the front area of the roll cage with no frame members in such a position as to impede their exit or rescue.
- 7.8.2. The frame of the cage must protect the crew from any frontal or inverted impact to their head and torso and must be able to restrain the engine from moving forward far enough to cause injury by having suitable cross-members in place.
- 7.8.3. No cage should project more than 17.8cm (7 inches) above the helmet of the tallest crew member.
- 7.8.4. A minimum clearance from the top of the crews' helmet to the underside of the roll bar will be 100 mm (4 inches) for a five or six-point harness.

## 8. Roll Cage Diagrams

The figures below are for illustration purposes only and should not be considered as structural design drawings. Owners are encouraged to seek professional advice in the design of each roll cage

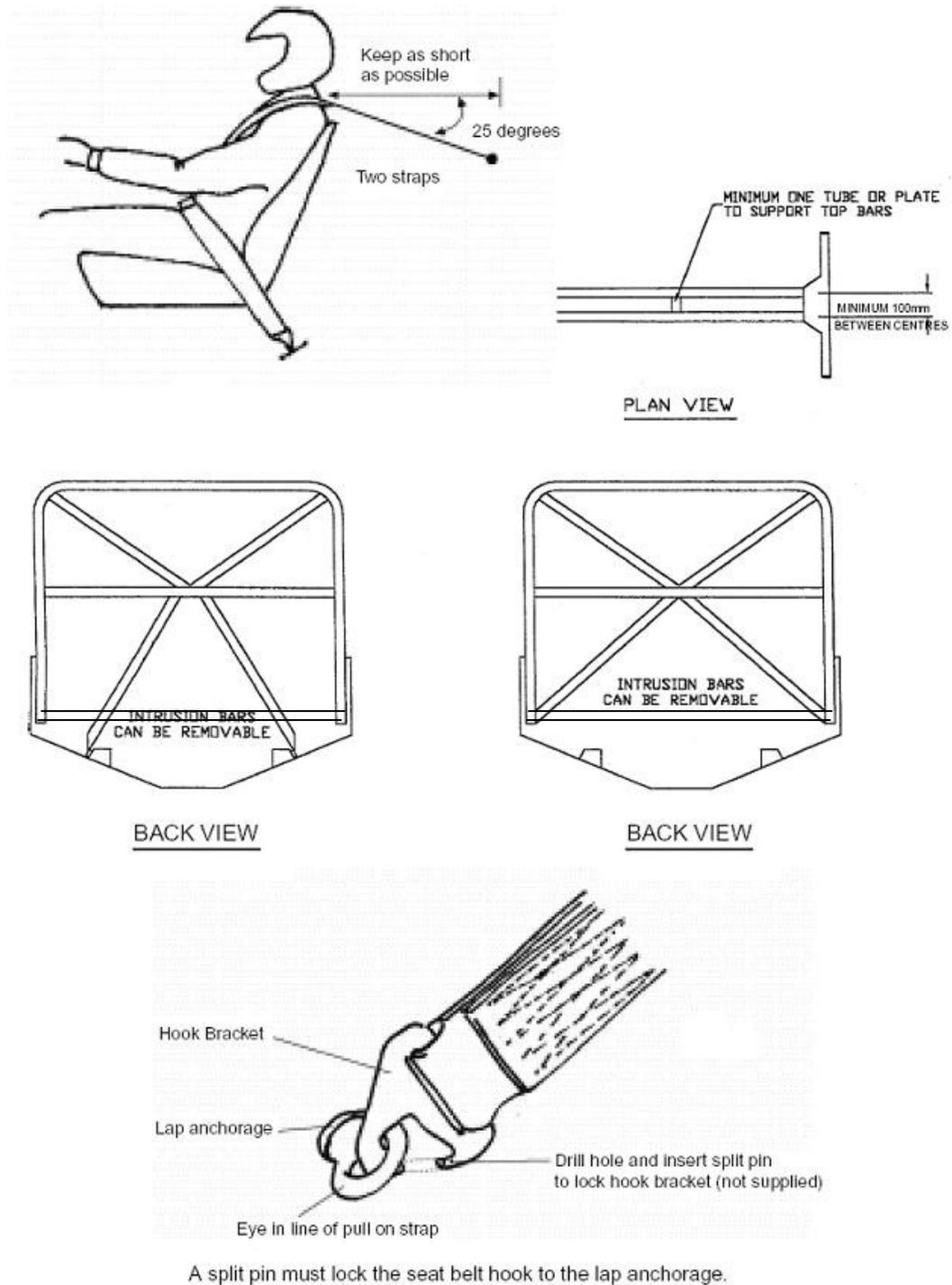
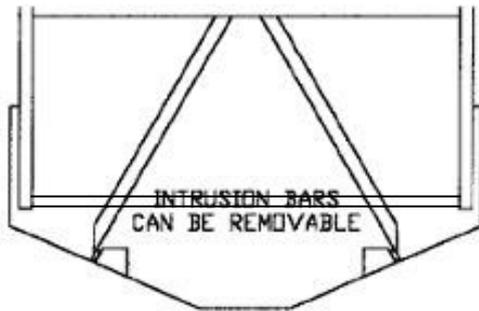
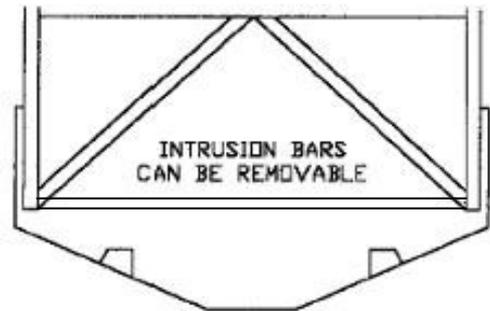


Figure 1

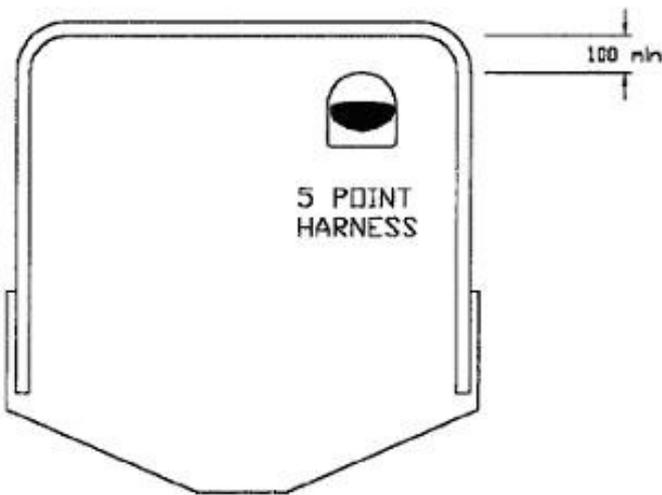
## Roll cage diagrams (continued)



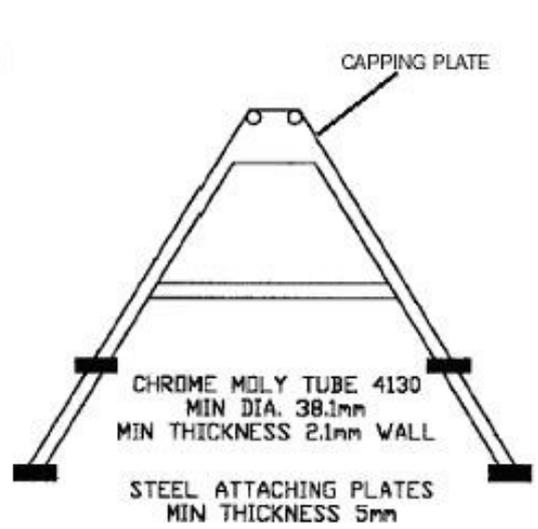
BACK VIEW



BACK VIEW



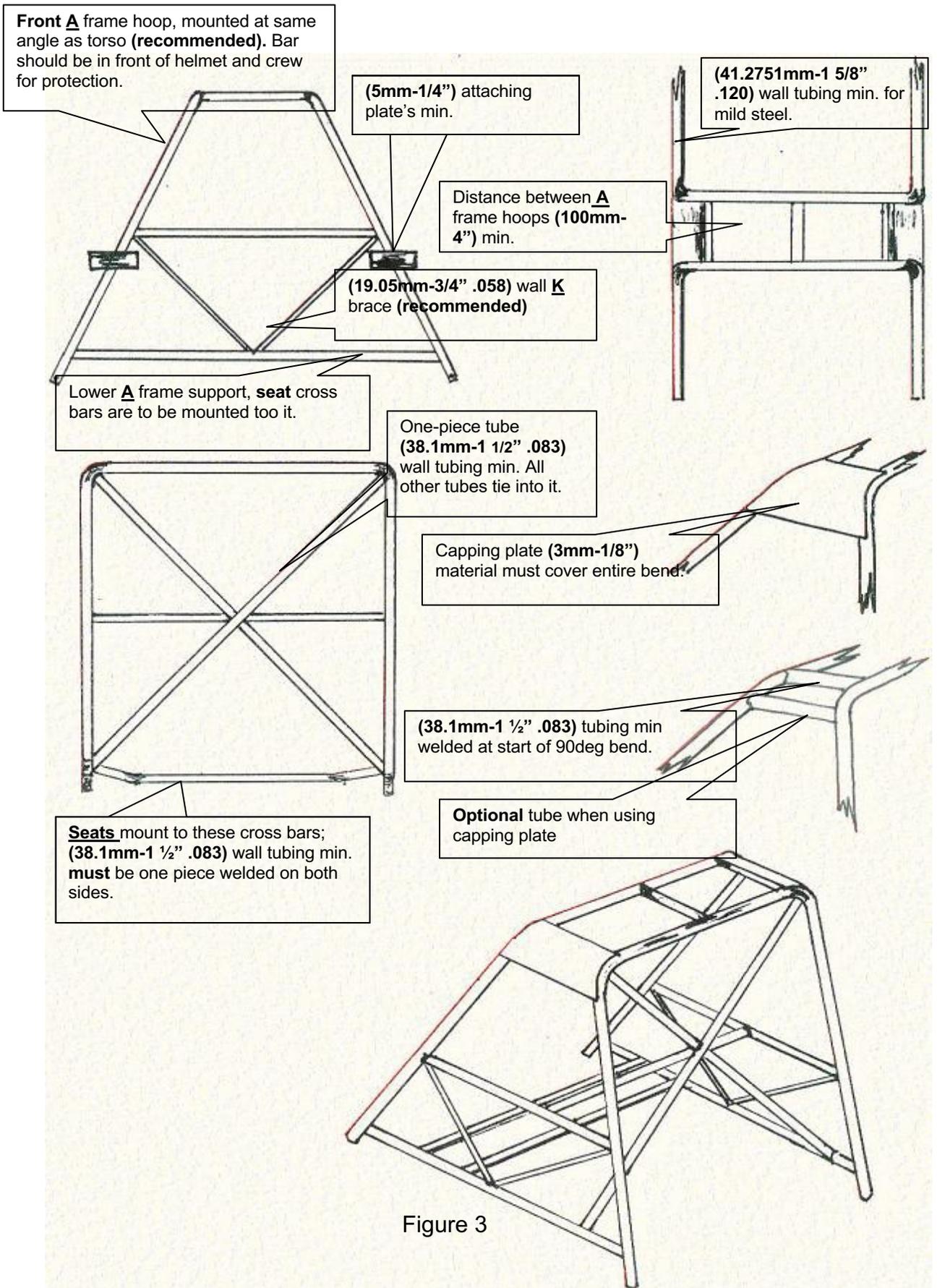
HELMET CLEARANCE



SIDE VIEW

Figure 2

# Roll cage diagrams (continued)



## 9. Jet Sprint Classes

### 9.1. Super Boats

- 9.1.1. All naturally aspirated engines must be a minimum of 6.5 litres displacement, and if any naturally aspirated engine is under seven litres displacement, it must be equipped with alloy heads, use methanol fuel and have multi carburettors or fuel injected induction system.
- 9.1.2. Forced induction engines must be a minimum of 3.8 litres displacement.
- 9.1.3. Under special circumstances it may be possible by written request to the committee, to have boats that do not comply to the above requirements, to be awarded Super boat status.
- 9.1.4. If Super boat status is granted, the boat will only be eligible to compete in the Super boat class for that season then would need to re-apply.
- 9.1.5. Boats must use Methanol fuel unless prior approval is granted. Boats using Methanol fuel shall display a red letter "M" on each side of the hull in bold lettering on a contrasting background. Minimum letter size shall be 7" or 17.5cm.
- 9.1.6. The minimum age for Super class competitors shall be 18 years of age for drivers and 16 years of age for navigators. Proof of age will be required on demand.
- 9.1.7. Injected or supercharged engines that require external fuel priming for starting purposes shall have one crew member identified as the primary starter for that boat. This person shall be equipped with and wear the following at all times whilst attending to starting duties on the boat ramp (including warm up facilities). Fireproof balaclava, minimum fireproof arm sleeves, eye protection. A single layer fire suit is deemed adequate arm protection and recommended. One primary starter may act for several boats. Penalty for missing safety equipment for primary starter whilst externally priming the fuel system is a DNS in the offending round. Applies to qualifying and elimination rounds.

### 9.2. International Group A

- 9.2.1. **Capacity** - 412 cubic inches (6.752cc) maximum swept volume.
- 9.2.2. **Engine Block** - Cast iron only.
- 9.2.3. **Configuration** - Maximum of 8 cylinders, internal combustion only. 2 valves per cylinder, pushrod operated. The nominal section of each cylinder must be circular.
- 9.2.4. **Camshaft & Rockers** - One camshaft only in OEM production location. No restrictions to valve lift. No restriction on rocker ratio. Shaft mount rockers are permitted. Offset rockers will be permitted, only to relieve the problem of pushrod to cylinder head interference created by some aftermarket heads and are NOT to be used to enhance the repositioning of the inlet tract, port or valve. Maximum offset shall be 6.35mm (1/4"). Devices that vary the valve timing whilst the engine is operating are prohibited.
- 9.2.5. **Exhaust** - No restriction on type. Exhaust flange adaptors are permitted as long as no material from the manifold, the adaptor or any gaskets or seals protrude into the port past its original outside face. Must meet AFJSA noise emission rules.
- 9.2.6. **Con Rods** - Must be of ferrous alloy material. External inspection only e.g. inspection by arthroscope or magnet test.
- 9.2.7. **Oiling System** - No restriction  
Dry Sump Systems; The crankshaft centre line to delta measurement cannot be less than 160mm. Wet Sump Systems; Vacuum pump permitted.

- 9.2.8. **Induction** - Any mass produced intake manifold is permitted. Inlet manifold must use OEM bolt pattern and position to mount to cylinder heads without the use of adaptors, spacers or slotting of bolt holes. No tunnel ram type manifolds permitted. No sheet metal type manifolds permitted. No part of the inlet manifold gasket may protrude into the port area.

The intake manifold must remain visually standard and unmodified from the outside.

Naturally aspirated only via a single 4-barrel carburetor with a maximum of 4 venturis. Carburetor throttle body bored or the butterflies may not exceed 1 11/16 inch diameter.

No additives may be discharged into the inlet tract. Any device that alters the configuration of the manifold / induction system, (e.g. moveable inlet rams) or exhaust while the engine is operating is prohibited.

- 9.2.9. **Cylinder Heads** - Cast Iron heads only. Must be O.E.M 23 degree valve angles +/- 0.5 degrees and port configuration etc. No High Port (raised runner) heads permitted (see fig 1).



Maximum distance of 2.500 " allowed from roof of port to block surface side of head as indicated by arrow. Use Felpro 1206 or 1207 intake gasket as height template but must not exceed height as shown in fig. 1

Porting is permitted but no material may be added to any part of the cylinder head casting and no part of the inlet or exhaust manifold gaskets may protrude into the ports.

No canted valve heads are permitted

Welding is permitted for crack repair purposes only but is limited in the port, intake and exhaust runner area to a maximum of 1 repair per cylinder head. Welding in the chamber area for crack repair only is limited to 2 chambers per head but must not alter the shape or size of the combustion chamber. Hardened Intake valve seat inserts may be fitted but valve centers and spacing must remain unchanged. Replacement of valve guides and seals are not considered to be a repair.

All machine work for valve guides, spring and valve seats must remain parallel & in original cylinder head manufacturers' position. No offsetting of valve guides is permitted.

Any machined surface must remain parallel to original surface.

Sleeves or tubes of any material may be fitted to either the head bolt or pushrod holes.

No cross matching of cylinder heads e.g. Ford heads to Chev blocks.

The following aftermarket cylinder heads are some of the heads that are permitted in international group A class:

Dart Iron Eagle

#10120010, 10310010, 10410010, 10510020, 10610020, 10710050, 10810050

Pro Action Iron Lightning

#223400080A, 223200080A, 223400000A, 223200000A, 223400020A,

223200020A, 223460020A, 223260020A, 223462220A, 223262220A,

223400035A, 223200035A, 223460035A, 223260035A, 223462235A, 223262235A

- 9.2.10. **Valve** - Maximum sizes – 2.125 inch intake, 1.625 inches exhaust. Valves may only be opened by mechanical action, and only closed by means of coil springs. Maximum distance of 2.500 " allowed from roof of port to block surface side of head as indicated by arrow. Use Felpro 1206 or 1207 intake gasket as height template but must not exceed height as shown in fig. 1

- 9.2.11. **Fuel** - Control fuel must be used when directed by the event controller. Ordinary pump unleaded fuels or fuel with a maximum octane rating of 105 are to be used. The use of oxygenated fuels are prohibited. All leaded fuels including Avgas are prohibited. The use of octane additives are prohibited.
- 9.2.12. **Harmonic Balancer** - Must be fully encased performance balancer with inner and outer circlipped together. Must have retaining bolt and washer fitted.
- 9.2.13. **Engine Mounts** - No Cast front engine mounts, must be fabricated steel or Aluminium. Engine plates are permitted.
- 9.2.14. **Seal Provision** - Each engine shall be provided with a means of fixing an engine seal.
- 9.2.15. **Note** - If you intend to make a modification, and you are unsure if that modification is permitted within this class, you should always send an email to the WCJSC secretary asking for a clarification on the ruling or modification.

### 9.3. LS Class - Sportsman

- 9.3.1. **Engine** - All Australian delivery style engine. Can be purchased from the USA or Australia, but must be the following LS series only;  
 - LS1, LS2, L77, L76, L98, LS3.  
 No LS7 Allowed.
- 9.3.2. **Crankshaft** - Standard cast crank. 3.622. +/- 002  
 Crank weight with reluctor wheel and 1 keyway – no spigot bearing, no crank gear.  
 LS1 – LS2 – L76 – 77 – 98 – LS3:  
 Minimum crank weight 22.5kg
- 9.3.3. **Conrods** - Standard LS1, LS2, L77, L76, L98, LS3 rods only - No titanium rod or alloy. Conrod minimum weight:  
 LS1 Minimum weight 600 Grams.  
 LS2 – L76 – 77 – 98 – LS3 Minimum weight 630 Grams.  
 Balancing must have one rod untouched.
- 9.3.4. **Pistons** - Piston to not protrude more than .009 from deck of block.  
 Standard piston or class Mahle-SRP piston allowed.  
 Max 010 thou bore upgrade from standard original block size.  
 Flat top only, no valve reliefs (Same as V8 utes they have a range from .002 to 010)  
 Min weight of piston, complete with pin, rings, oil rings & clips.  
 - Minimum Weight LS1 620 Grams.  
 - Minimum Weight L76 – 77 – 98 – LS2 640 Grams.  
 - Minimum Weight LS3 660 Grams.  
 One piston must remain untouched when balancing.
- 9.3.5. **Block** - Alloy factory block 5.7 - 6.0 - 6.2, no aftermarket blocks  
 Block bore Size - Bore size to match casting numbers.  
 - LS1=3.900"-3.910"  
 - LS2-L76-77-98=4.00"-4.010"  
 - LS3=4.065"-4.075  
 Max 010 thou bore upgrade with flat top only Mahle SRP (Same as V8 utes. They have a range from .002 to 010).  
 No lightening of block other than machine faces or honing process for normal engine building practises.  
 Engine main bearings, Rod and Cam bearings = Open.

- 9.3.6. **Cam & Lifters** - Hydraulic LS GM Lifters only. No tie bar lifters allowed.  
5/16 pushrod 7.350 to 7.425 only. 080 wall thickness. Standard can be used.  
Cam must be one of the following:
- 'Crow Cam' 8711762RH
  - 'GM Motorsport' GMM JS1 229-235-110.5
  - 'Kelford' SS108J 226-232-110
- 9.3.7. **Timing Chain** - Any standard GM or aftermarket IWIS LS single or double row chain.  
No variable cam timing.  
Cloyes timing set can be used Part Number. TGK364RCL
- 9.3.8. **Sump** - Sump Open.  
Dry sump allowed.  
The crankshaft centre line to delta measurement cannot be less than 160mm.  
Vacuum pump allowed on wet sumps only.
- 9.3.9. **Heads** - Following GM Head castings only;
- Min head CC 64cc for LS1 (casting 241-243-853 only). These heads can only be used on 5.7-6.0L.
  - Min head CC 64cc for LS2 (casting 243 only). These heads can only be used on 5.7-6.0L.
  - Min head CC 66cc for L76, L77, L98, LS3 (casting 0821-823-5364). These heads can only be used on 6.0-6.2L.
- 9.3.10. **All Heads** - Standard GM/Holden head gasket 051-053.  
No welding of heads even for repairs.  
Standard valves only. No aftermarket.  
LS1 – LS2 Valve sizes 2.00" inlet 1.55" exhaust.  
L76 – L77 – L98 – LS3 Valve sizes 2.165" inlet 1.59" exhaust.  
Standard valve location. Valve Angle 15 degree +/- 0.5 degrees.  
Standard or Standard replacement head bolts allowed. ARP head bolts allowed.  
Head studs allowed.  
Head Gasket part number GM or Victor Reinz / Mahle  
54660-26192PT – 157744 or 12498544 or 12622033-12589226  
.050" - .053" thickness.  
Old early LS1 can use the OEM fibre style gasket .050" - .053" thickness.  
No spring pocket modification.  
No Porting allowed.  
No changing of valve angles to deck face.  
No adding of any material.
- 9.3.11. **Rockers** - Standard GM LS1, LS2, L77, L76, L98, LS3 rocker gear with a bearing trunion upgrade allowed. Must be 1.7 ratio only. This will be checked with a tool at the race track regularly, as instructed by the Chief Scruitineer.
- 9.3.12. **Valve Springs** - Standard or PSI 1511ML Beehive springs. No Titanium.  
Double valve springs allowed as per WCJSC cam requirements.
- 9.3.13. **Inlet Manifold** - Standard manifold, must remain completely standard.  
No porting, no extrude honing, no machining, no drilling, no tapping. Drilling and tapping allowed only to block of factory vacuum ports that are not used.  
LS1 = 12560894, 12573572  
LS2 = 12589181  
L76 – 77 – 98 – LS3 = 12590124, 12602477, 12603477, 12686561.  
Throttle Body;  
Can use up to 92mm, cable or electric allowed
- 9.3.14. **Computer** - Open. Injectors Open.

- 9.3.15. **Exhaust** - Open, must use mufflers.
- 9.3.16. **Harmonic Balancers** - Must be fully encased performance balancer or standard with inner and outer circled together. Must have retaining bolt and washer fitted. Minimum weight 4.2kg.
- 9.3.17. **Fuel** - Control Fuel must be used when directed by the WCJSC.  
Ordinary pump unleaded fuel only, 98 octane max.  
The use of oxygenated fuels is prohibited.  
The use of octane additives are prohibited.
- 9.3.18. **Jet Unit** - Max 8.5inch.
- 9.3.19. **Seal Provision** - Each engine shall be provided with a means of fixing an engine seal.  
Engines can be requested for testing at any race event  
Must display receipt of purchase for any camshaft. Copy of receipt to be emailed to the secretary and stapled in the scrutineering book.  
WCJSC reserves the right to seal an engine on the day, and check at the end of the round.
- 9.3.20. **Note** – If you intend to make a modification, and you are unsure if that modification is permitted within this class, you should always send an email to the WCJSC secretary asking for a clarification on the ruling or modification.  
If it does not say you can use a part you must not be in belief that you could use an alternative part.  
Standard replacement parts only if not stated.  
All factory GM/Holden parts must be used unless it states open in the rule section.  
If in doubt you need to ask for clarification of the rules by the WCJSC.  
Minimum and maximum limits are set on certain items. **THIS DOES NOT MEAN** your engine will work if you go to all the minimums or maximums. Please work with the parts you purchase, and your engine builder to machine and configure what works with your engine, provided they are within the given tolerances.

#### **9.4. LS Class - AFJSA**

- 9.4.1. Refer to current rules set out by the AFJSA. All engines must be compliant to the current racing specifications as outlined in the AFJSA rule book at the time of racing.  
Note\* Should changes be made during the WCJSC season, boats must be compliant with any new rules and be re-scrutineered prior to racing.

#### **9.5. Control Fuel**

- 9.5.1. Control fuel will be provided at all international/interstate meetings by the organiser and paid for by competitors of the Class involved.
- 9.5.2. The scrutineer may be required to be in charge of, and oversee all refuelling operations. Fuel tanks are not required to be drained prior to the addition of control fuel provided that a tank has maximum capacity of not more than 30 litres.
- 9.5.3. The control fuel process may only be initiated by the race controller acting under instructions from the WCJSC.

## 10. Testing Procedures

### 10.1. General

- 10.1.1. At any meeting any engine may be tested at random without notice. The decision to conduct testing shall be made by the committee prior to the commencement of that meeting. Other boats may be tested, time permitting, as the chief scrutineer or his appointed deputy sees fit, but only after they have been eliminated for that day.
- 10.1.2. The crew of any boat found to have an illegal engine capacity will be disqualified and will lose all points and placing's gained since that boat's last capacity test. The crews holding lower placing's will move up in the finishing order one or more positions as required. Where boats are disqualified and the finish order reshuffled, the top three must still be tested prior to presentation.
- 10.1.3. Testing will be conducted by the chief scrutineer or appointed deputy and in the continual presence of the boat owner or designated representative.
- 10.1.4. Refusal to allow an engine to be tested will be taken as evidence of over-capacity and the stated penalty applied immediately.
- 10.1.5. The results of the capacity testing as detailed will be final and no protest will be entered into provided the equipment falls within its manufacturer set tolerances.
- 10.1.6. Note: All testing methods must be approved.

### 10.2. Testing Apparatus

- 10.2.1. A measuring flask of 1000cc's certified capacity (known brand name) and have sufficient height so as to have distinct and well-separated graduations.
- 10.2.2. A length of flexible hose 300mm to 500mm long with one end attached to the bottom of the measuring flask, the other end able to accept either a large or small spark plug hole fitting, drilled to allow fluid to pass.
- 10.2.3. One litre of testing oil, to be a 23ecognized upper-cylinder lubricant.

### 10.3. Method of Testing Engines

- 10.3.1. Engines to be capacity tested at the discretion of the scrutineer, whilst adhering to the manual of the testing machine.

### 10.4. Workshop Capacity Testing

- 10.4.1. Only one head of a "V" configuration engine need be removed to enable access to the cylinder bore for the purpose of accurately measuring the bore and stroke of that engine.  
The resultant calculated swept volume shall not exceed 412 cubic inches or 6752cc's for Group A.  
The resultant calculated swept volume shall not exceed 376 cubic inches or 6162cc's for LS Classes.
- 10.4.2. If resultant swept volumes exceed the above requirements, a cylinder head shall be removed for inspection.

## 11. Sportsmanship and Competitor Code of Conduct

### 11.1. General

- 11.1.1. There is a total commitment to promote and foster good sportsmanship within the jet sprinting movement. This is to assist in the creation of a strong, positive public image of a group of competitors with a professional attitude, providing exciting, spectacular entertainment.
- 11.1.2. All competitors, their crew and race officials are expected to understand and display, in public, all those qualities which define good sportsmanship.
- 11.1.3. Obvious public displays of bad sportsmanship by any member will be considered a breach of the code of conduct and subject to disciplinary action.
- 11.1.4. The code of conduct requires not only a public display of good sportsmanship, but compliance with the rules of racing and the contractual obligations of the individual competitors and their teams via the signed entry forms carrying conditions relating to behaviour and general codes of practise as outlined in these rules.
- 11.1.5. All personnel involved with an event, competitors, their crews and officials are required to function within the Code of Conduct, Ethics Policy and any other Policies implemented by the WCSJC.
- 11.1.6. The pits are a controlled-access area and an alcohol-free and smoking-free zone. Entry is confined to competitors who are entered on the day, pit crew, officials and those holding pit passes. Children must be under the control of a responsible adult at all times.

***PENALTY:*** Abuse of licence. Cancellation of licence for six months.

***PENALTY:*** Smoking or drinking alcohol in the pits - exclusion from the pits for the remainder of the meeting. Competitors or officials will be suspended for one meeting. Repeat offence - 12 months suspension.

- 11.1.7. There is a total ban on the consumption of alcohol and any other intoxicating substances by all boat crews and all event officials, including safety crews, for 8 hours prior to the commencement of briefing and for the duration of the meeting, or until they have completed their racing activities for the day. No crew member, or support crew member may consume alcohol whilst wearing racing apparel. Crews are required to have a zero blood alcohol content prior to racing and to comply with insurance conditions. Breathalyser testing of crews may occur, prior to commencement of racing. This ban applies to prescribed drugs and other performance-affecting substances. No alcohol may be consumed in the pit area by any person during racing.
- 11.1.8. A declared alcohol free zone refers only to the consumption of alcohol and/or prescribed drugs by any person in that area, and does not presume to enforce civil law relating to the possession or presence of it in a vehicle which may be parked in that area. However, any member who willingly breaks a civil law concerning prescribed substances in a manner which brings the sport into disrepute, may be deemed to be in a breach of the code of practice and can be penalised as provided for in the general rules of WCJSC.

***PENALTY:*** Consumption of alcohol during meeting: minimum one meeting ban.

***PENALTY:*** Competitors registering any blood/alcohol content prior to racing: - start denied until breathalyser registers zero.

- 11.1.9. Smoking is prohibited in the pit area. Any person smoking (Including E-Cigarettes) in the pit area may cause the disqualification of their associated boat. A crew smoking area may be established adjacent to the pit area at each track.

**PENALTY:** Disqualification for remainder of the days racing.

- 11.1.10. No competitor may abuse a race official. Any competitor, who has a dispute with any official on race day, must present the details of the problem to a class representative who may consult with the race controller for resolution.
- 11.1.11. Likewise, any competitor who has any complaint concerning the running of the race day must firstly present the details in person to a club committee member. If no committee members are present, then the complaint may be presented to a race official.
- 11.1.12. No official may abuse a competitor. If there is a perceived problem with the behaviour of a competitor, the matter must be brought to the attention of the race controller.

**PENALTY:** Abuse of official: disqualification for remainder of the day. Further penalty may be applied.

- 11.1.13. No competitor or crew shall be involved in any instance of dangerous behaviour, or conduct which deliberately causes or could cause disruption to a race meeting, nor may they take any action, verbal or otherwise which may be deemed to bring the sport into disrepute.

**PENALTY:** minimum: disqualification for the day - further disqualification possible at the discretion of the WCJSC committee.

### **PENALTIES**

- For any offence occurring on race day or as a result of scrutineering, the maximum penalty which can be imposed by the race controller shall be disqualification for that day. Additional penalties can only be imposed by the Club Committee following race day and after consultation with all parties concerned with the incident.
- A penalty for a breach of the rules may, at the discretion of the Committee, be in the form of a suspended penalty and shall remain current for a period of up to one year from the time of the offence. Any further breach of the rules within that time shall cause the suspended penalty to be immediately applied.
- Suspension penalties for one or more meetings shall apply from the next listed open meeting and if more than one shall be consecutive.

## **11.2. Rulings Overview**

- 11.2.1. The race controller and pit marshal shall have certain discretionary powers to deal with disputes and they may make a ruling concerning a dispute.
- 11.2.2. The ruling will be given after due and careful consideration of the issues involved and will be final. It will not be open to further discussion on the day.
- 11.2.3. Any ruling which affects the results of the day may not be challenged on that day, but can be subject to appeal by affected competitors as per the appeals rule.
- 11.2.4. Affected persons will be formally advised by the race controller or the Disputes Committee that they have been reported for a breach of the rules or the code of conduct.

## **11.3. Appeals**

- 11.3.1. Any member subjected to disciplinary action may lodge a formal appeal with the WCJSC within 7 days of a penalty being imposed.

- 11.3.2. Appeals must be lodged in writing with the Secretary.
- 11.3.3. The disputes committee will be comprised of the race controller, President, Vic President Technical and Scrutineer. In the event of an international event it will be the race controller, host country representative and the Commissioner.
- 11.3.4. Whenever possible and practical, the race controller will consult with the disputes committee when considering disciplinary action.
- 11.3.5. The race controller, may request a competitor to attend a meeting of the disputes committee, either during the event or at some other suitable time, to provide good reason why they should not have disciplinary action taken against them for a breach of the rules or code of conduct, which in the opinion of the race controller, could bring the sport into disrepute.
- 11.3.6. Failure to attend such a meeting will result in the immediate imposition of the appropriate penalty without right of appeal.
- 11.3.7. Notwithstanding the listed penalties, it is policy to apply penalties progressively. A warning may be issued followed by the prescribed penalty for a repeat offence.
- 11.3.8. A non-time related protest must be submitted in writing by a competing crew member and accompanied by a \$100.00 protest fee. It may be lodged immediately or at latest, within 15 minutes of the occurrence and handed to a class representative and the race controller. The disputes committee will hear the protest as soon as possible and if upheld, the fee will be refunded.
- 11.3.9. Any competitor who protests the eligibility of the engine of a competitor must submit a \$100.00 protest fee and shall be liable for all costs associated with the testing of that engine, including parts and labour if necessary, should it be proved to be legal. Payment (by the protestor) must be made for these associated costs prior to the protestors' next event. If the protest is upheld, the protest fee will be refunded and the owner shall bear all associated costs.
- 11.3.10. Members seeking information on rule interpretations must first consult with a class representative, but if none are available, then the race controller may be approached.
- 11.3.11. Any member subjected to disciplinary action may lodge a formal appeal within 7 days of a penalty being imposed. Refer to the WCJSC appeal rules.

## **12. Event Rules**

### **12.1. Signals**

- 12.1.1. Light signals will normally initiate starts, however flags may be used. A boat may not start until the starter gives the appropriate signal. This is a safety requirement and the driver and navigator must be satisfied that the previous boat is back in the pit area and clear of the spinout pool, the towboat is back in the pit pool and all safety crew groups are in position. (Note that the timing is triggered by the boat at a point some distance after the start lights and therefore does not commence with the display of the green light).
- 12.1.2. Each group of safety crew may have a red and green light. In this instance, unless the track is clear of boats, crew or unplanned obstacles, a red signal will be displayed and a start is not permitted. A green signal signifies that the particular section of track is clear and the safety group is in position.

- 12.1.3. Where it can be demonstrated that the event is efficiently controlled by two-way radios the requirement for the flag system may be waved in consultation with the race controller.
- 12.1.4. Due to the noisy environment around the track signals will be utilised by the starter and the safety crew. The starter has control of the start lights or flags which will be:

- RED** You may not start or pass this point under any circumstances.
- AMBER** A start is imminent, you should be idling toward the start line and are under the control of the starter.
- GREEN** You are cleared to start. The two and ten minute time limits do not apply for a normal start. (Time does not start until the timing beam is broken)
- ORANGE CIRCLE ON BLACK BACKGROUND** Signals fire on board boat.

**PENALTY:** *For jumping the lights or start signal or being out of position - 10 seconds added to the time for that run. If a dangerous situation is caused, a disqualification will occur.*

## **12.2. Race Procedure**

- 12.2.1. Each race event will commence with a roll call and crew briefing, the time of which will be advised to all drivers entered.
- 12.2.2. All competitors, both drivers and navigators, must attend the pre-race briefing, the track walk safety inspection and complete the entry form, pay race nomination fees and sign the liability waiver forms before racing.
- 12.2.3. Competitors must be in attendance at roll call and/or briefing. Competitors who suffer an incident outside their control, and who in the opinion of the race controller were making every reasonable effort to attend the event on time, may be allowed to compete. In this case the competitors will be given a full and separate briefing prior to competing. As part of the briefing all crew members must be invited to raise any concerns over course safety.

**PENALTY:** *Late to roll call on race day - disqualification for the day.*

- 12.2.4. Event, track or boat sponsors who compete as guest navigators must sign the waiver form prior to their run and wear all specified safety equipment.
- 12.2.5. While racing is in progress, each boat is to have one crew member at the boat or close by in the pit area, in case of a change to the running order.
- 12.2.6. There is a speed limit of 5km per hour or minimum idle in the pit pool and on entrance thereto, where a spin-out pool is provided each finishing boat must use this facility to reduce speed to idle, prior to entering the channel approaching the pits. If there is no spinout pool, an alternate procedure will be advised either at the crew briefing, or in the track supplementary regulations.

**PENALTY:** *Speeding in pits and/or creating a wash hazard or other danger - disqualification for the remainder of the race day.*

- 12.2.7. No person other than official licensed entrants and the tow boat driver shall drive or compete on the track on race day without the consent of the race controller.

**PENALTY:** *Disqualification for a period of up to one year for the crew involved.*

- 12.2.8. Boats will start from idle power in forward thrust and may not accelerate until given the start signal which will be when they are wholly within the start gate as indicated by the starter. Cones, on the bank adjacent to the start channel, will normally mark the start gate. A third cone will indicate the 10 metre - aborted start limit.

- 12.2.9. If upon initial acceleration a problem occurs with the engine or jet unit, the driver may request one re-start immediately by reducing power and raising an arm. The boat must return to the pit-pool via the shortest possible route to the spinout pool at reduced speed before rectifying the problem, e.g. weed in intake. Use of this rule to obtain an advantage will result in a DNF (Note that time limits may be applied to restart).
- 12.2.10. Only one re-start will be permitted per boat per round and the abort signal must be made within 10m of the start. (A marker will be positioned to mark this limit). This allowance is not meant to compensate for a poor start and will be at the discretion of the race controller.

***PENALTY:*** *Aborting the run more than 10m from the start - DNF (see also event rule)*

- 12.2.11. If a boat becomes grounded during a run, the crew may attempt to re-float their boat, only by manipulation of the engine and jet unit. They may not receive any outside assistance and no item of safety equipment, including safety harness, may be removed during this attempt. Timing will continue until the crew is successful or the driver turns off the engine and calls for assistance by raising an arm. If the attempt is successful, they may continue racing and can record a time. (There will be a 20 second time limit on re-floating your boat in this manner).

***PENALTY:*** *For removal of safety equipment or receiving outside assistance - DNF.*

- 12.2.12. When a boat is grounded and the assistance of the safety crew is required, the following procedure must be adhered to: The driver must shut off the engine and raise one arm to signify that assistance is required.

- 12.2.13. Assist the safety crew to re-float the boat by getting out if required by safety crew. Once back in the water, ensure that you have permission from the safety crew before you restart your engine and move back to the pits. Once re-started, drive back to the pit pool by the shortest route to the finish line at a speed only fast enough to prevent further grounding in shallow channels. Boats may not return to the pit pool via the start line channel unless indicated by the starter.

***PENALTY:*** *failure to comply DNF for next round.*

- 12.2.14. If a boat crew makes a turn in the wrong direction in any run, the driver may attempt to recover the course to complete the correct track. The recovery may be attempted around as many islands as needed but must be picked up from the last junction point from the right direction from where it went wrong. The time taken to complete the recovery will be included in the final time scored for that round. The time keeper will note on the time sheet that a correction was made during the run with a WW.

***PENALTY:*** *Failure to correct from the last correct intersection - DNF*

***PENALTY:*** *Attempting to correct more than one wrong way ruling in a run - DNF*

- 12.2.15. If the tow-craft is called for, but then not required, the boat may not proceed to the pits until the tow-craft has been turned around and returned to the pit pool. If a dangerous incident is created a penalty will be imposed. Once re-started, a crew may not continue to drive the rest of the course as practice.

***PENALTY:*** *DNF for the next round.*

- 12.2.16. Whilst racing, a boat may not pass through the finish line at any time other than at the conclusion of its run.

***PENALTY:*** *DNF*

12.2.17. During a run, if a crew notice any dangerous circumstance, distraction or an unusual object in the track, eg. a floating tyre, they can abort their run by slowing down, raising an arm and immediately returning to the finish via the quickest and safest route. If the safety crew can verify that there is an obstacle they will remove it and the crew will be allowed to re-start. The race controller is to decide on circumstance or unfair distraction. This allowance may not be misused to compensate for a bad run.

**PENALTY:** *If no obstacle or circumstance or unfair distraction found - no re-run and DNF.*

12.2.18. In the event of no primary or back-up time being recorded by the timekeepers for a particular run, that crew will be allowed a second run, which should be made as soon as possible and may be added to the next round. If a boat is unable to make a re-run due to mechanical problems, then it's previous best time at that meeting and on that track direction, will be recorded.

12.2.19. Once a crew has made their first run of the day they may not change their roles, that is, a driver cannot change places with the navigator. In the event of a crew member being unable to continue racing due to illness or injury and at the discretion of the race controller, substitute crew may be used provided that:

12.2.20. The substitute driver; may having completed all pre-competition formalities and already a competitor on the day can race another boat providing he/she is able to complete at least one qualifying round before commencing the elimination rounds. Any previous times recorded by that driver will be disregarded.

12.2.21. Once eliminations have commenced, a substitute navigator may be used, but only from a previously eliminated crew and only after it is established that the previous navigator is unable to continue. A driver may not be substituted once eliminations have commenced.

**PENALTY:** *Role changes or unauthorised substitution of crew: disqualification for the remaining rounds.*

12.2.22. A crew must be ready to start in the correct running order in each round. If there is a problem, the starter or pit marshal must be notified of the problem in advance of their start order. If sufficient notification is given, the crew will be allowed to start later in that round.

12.2.23. In the case of a "B" crew near the end of the running order, they will be allowed a start in the following round, with their time counting for the previous round.

12.2.24. If a problem with a boat occurs in a qualifying round, there is a two-minute time limit upon repairs. This time limit will commence from when the last boat in that particular round enters the pit pool at the conclusion of it's run and the time will be displayed on the main timing system display (where practical). In the instance where it is not practical to use the timing system for countdown purposes the race controller will be responsible for keeping time.

12.2.25. The time count ceases when the subject boat is moving toward the start line, under its own power, with both crew on board, all safety equipment in place and under control of the starter.

12.2.26. From the top16 down, the time limit shall be ten minutes and will apply from the time the affected boat is due to start in order, other boats will continue to race until the time has elapsed. If the affected boat cannot continue after ten minutes has elapsed, the timer will record a DNS.

- 12.2.27. The time count ceases when the subject boat is moving toward the start line under its own power ready to race.  
At all times, the pit marshal or starter must be kept informed as to the status of the boat.  
A time-out is declared if the scrutineer is required to inspect a damaged boat and he/she must be completely satisfied that the boat is safe and fit for racing.  
No further work may be carried out during a scrutineering "time out".

**PENALTY:** *Not notifying pit marshal or Starter of a problem or an inability to start in order - DNS.*

**PENALTY:** *Exceeding the two or ten minute time limits - DNS.*

### **12.3. Additional Scrutineering**

- 12.3.1. Any boat, which suffers a heavy impact or obvious damage in a racing incident, must be re-scrutineered before further competition can commence.
- 12.3.2. The re-scrutineering process will take place after any work to repair damage to the boat has been completed, but shall have time constraints such as meeting the appropriate time limits or qualifying rounds.
- 12.3.3. The boat may not be returned to the water until the scrutineer has declared it safe for competition.
- 12.3.4. In the absence of a scrutineer the race controller will re-scrutineer the boat.
- 12.3.5. The crew involved in a heavy impact incident must also be checked by the ambulance or first aid crew and declared fit to resume racing.

**PENALTY:** *Failure to have a boat re-scrutineered after a heavy impact incident disqualification for the remaining rounds.*

**PENALTY:** *Failure to obtain medical clearance after a heavy impact incident disqualification for the remaining rounds.*

### **12.4. The Rounds**

- 12.4.1. On race day, there will be a minimum of three (3) qualifying rounds, but normally four to call a qualifying event.
- 12.4.2. If the qualifying rounds are reduced for any reason once racing has begun, the first elimination will include all entrants affected. (Elimination rules apply to such rounds). Formation of the elimination rounds will be advised on the event programme, or at drivers briefing.
- 12.4.3. The cut progression will be advised prior to the running of that segment, but will normally be 6-3. Where there are insufficient numbers to make up an elimination round, the round will still be treated as such, until the relevant cut can be made. (Elimination rules apply to such rounds).
- 12.4.4. Due to a number of variables such as weather, accidents, crew and boat numbers, the race controller retains the right to vary the progression of the elimination cuts. Crews will be informed of variations in advance.
- 12.4.5. Regardless of the number of crews available, no crew may be included in the elimination rounds without recording a qualifying time.
- 12.4.6. During the eliminations, if two crews record equal times in a particular round and that time qualifies for the last spot in the next round, they shall both be included in that next round, even though it adds an extra boat to that round. The following cut however, will be as previously established.

- 12.4.7. In the elimination rounds if more than one crew records a DNF in any elimination round, their respective positions in that round will be considered equal. In all instances, a DNF will score higher than a DNS.
- 12.4.8. In the top 3, if both crews record equal times they shall have a run-off in the same order as before, to determine the winner. If necessary, this process shall be repeated until a result is achieved.
- 12.4.9. A season must consist of a minimum of four (4) qualifying events.

### 13. Championship Points

- 13.1.1. Points in the WCJSC championship will only be allocated at events designated as points scoring rounds.
- 13.1.2. All events published on the season race calendar are deemed to be Championship points scoring rounds.
- 13.1.3. For any team to gain championship points during the season and be eligible for the championship or event trophy presentations a boat crew must hold two current season competitive race licenses (fully paid).
- 13.1.4. If any event advertised on the calendar becomes a non points scoring round all teams will be advised of the change at least 28 days prior to the event.
- 13.1.5. In the case where a points scoring round is held in conjunction with another event (ie World Series/ East West Challenge) points will only be awarded to drivers who nominated to compete in the WCJSC round.
- 13.1.6. Championship points will be awarded on the following basis:

Finishing Position #	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>	13 <sup>th</sup>	14 <sup>th</sup>	15 <sup>th</sup>
Points Allocated	150	138	129	120	111	102	96	90	84	78	72	69	63	57	51

- 13.1.7. For any team to gain Finishing Position points in any nominated point scoring round, at least one successful qualifying run must be completed in that round.
- 13.1.8. One (1) bonus point will be awarded for each qualifying run attempted irrespective of their position. Bonus points are accumulated throughout the season and awarded based on the most qualifying rounds attempted.
- 13.1.9. For the purpose of bonus points only, a team is deemed to have competed when the boat passes the start beam in a round. A team does not need to complete a successful run to be awarded the 1 bonus appearance point. Bonus points are not accumulated to championship points and do not affect the final position for that round.
- 13.1.10. Drivers can only score points in their nominated class at any given round.

