

A SUMMARY OF ABRA RACING RULES FOR THE SPECTATOR

By Fred Farley - ABRA Unlimited Historian

SANCTION: Every Unlimited hydroplane race is sanctioned by the American Boat Racing Association. A sanction is a legal contract and official permission to stage an Unlimited race under the supervision and authority and with the cooperation and assistance of the ABRA.

MANAGEMENT: All responsibility for the actual conduct of the race itself shall be with the Chief Referee and not with the local race committee. The decisions of the Chief Referee in all matters connected with the running of the race (i.e., legality of starts and finishes, buoy fouls, etc.) shall be final.

COURSE: An Unlimited race course must be laid in waters at least 10 feet deep. There shall be an escape route outside each turn, in which no spectator boats are permitted. For all courses, a minimum of five buoys shall be located in each turn. The minimum number of buoys in each straightaway shall be five for a 2-1/2-mile course, four for a 2-mile course, and three for a 1-2/3-mile course.

BOATS: Each boat shall be a registered member of the ABRA Unlimited Class. An Unlimited hull shall be designed to function as a planing hull (i.e., a hull supported by a combination of hydrodynamic and aerodynamic forces generated at and above the surface of the water by the boat's forward motion). Hydrofoil or displacement-type hulls are not permitted. Any number of planing surfaces is allowed.

- An Unlimited hull shall measure between 28 and 32 feet in length. Any hull built new or substantially modified after 1992 must have a width of at least 12 feet and not more than 14-1/2 feet. The minimum dry weight for a T-55 turbine-powered boat is 6,575 pounds. The minimum dry weight for a piston-powered boat is 5,775 pounds.
- Directional control devices are restricted to submerged blade-type rudder and skidfin combinations.
- The propeller must have no more than three blades.
- Since 1989, all Unlimited Class hydroplanes have been required to use the aircraft-style F-16 safety canopy.
- To compete, a boat must pass a safety inspection. If a boat is involved in an accident, it must be inspected before being allowed to re-enter competition.

ENGINES: A single Lycoming T-55 L-7 gas turbine engine (or commercial derivatives thereof), a single aircraft V-12 piston engine (not exceeding 2,250 cubic inches), or any number of automotive or marine-type reciprocating engines may be used.

- The maximum fuel consumption of all turbine engines is 4.3 gallons per minute. All turbine engine parts are "stock" parts.
- Engines must be inboard-mounted.

TIME TRIALS: A boat must complete one lap at a minimum of 130 miles per hour to qualify for a race. For a Gold Cup race, a boat must complete two consecutive and continuously run laps at an average speed of at least 130 miles per hour.

- The fastest qualifier at a race receives 100 National High Points. The second fastest receives 80, third 70, fourth 60, fifth 50, sixth 40, and seventh through last place 30 points each.

DRIVER QUALIFICATION: A driver, if he has never before driven in or qualified for Unlimited competition, must have competed in at least four heats in any of the following inboard classes in the previous 36 months: 5-Litre, National Modified, Grand National Hydro, Grand Prix, or Unlimited Light.

- He must run up to fifteen laps in an Unlimited hydroplane before entering competition. At least ten of these laps must be above 130 miles per hour.
- A new driver must start in an outside lane for his first two heats of competition.
- All drivers must take and complete a certified scuba diving course. They must also successfully complete a capsule training program.

WHAT CONSTITUTES A RACE: All Unlimited races (except for the Gold Cup) consist of three Qualification Heats, one Provisional Heat (optional), and one Final Heat.

- In all heats, the boats will fight for starting lane positions.
- The Qualification Heats and the Provisional Heat are three laps; the Final Heat is five laps.
- The maximum number of boats that may start in any one heat or section shall be six. The Chief Referee may reduce this figure if necessary in the interest of safety.
- Boats not seeded to the Final Heat are eligible to run in the Provisional Heat. The winner of the Provisional Heat advances to the Final.
- All sections of the Qualification Heats must be declared completed before a race can be declared a contest.
- The Gold Cup race (in Detroit) consists of four Qualification Heats and one Final Heat. The Qualification Heats are four laps; The Final Heat is five laps.

METHOD OF SCORING POINTS: In each heat or section, a boat will be awarded that number of points for its position of finish. First-place is worth 400 points, second-place 300, third 225, fourth 169, fifth 127, sixth 95, and seventh 71.

QUALIFICATION HEATS: In each of the three Qualification Heats, the entries are divided by a blind draw into sections 1-A, 1-B, 2-A, 2-B, 3-A, and 3-B.

FINAL HEAT: The Final Heat field consists of those boats accumulating the highest point totals from the Qualification Heats, plus the winner of the Provisional Heat. Time trial order is used to break any point ties for determining eligibility for the Final Heat.

DETERMINING THE WINNER: The winner of an Unlimited hydroplane race is determined by the order of finish in the Final Heat.

NATIONAL HIGH POINTS: National High Points are awarded at all sanctioned ABRA races where a minimum field of three boats crosses the starting line in the first Qualification Heat.

- The total number of points scored by each boat in each sanctioned event is credited toward the National Boat Championship.
- The total number of points scored by a driver in any one boat is credited toward the National Driver Championship. A driver may score points in only one boat during any one sanctioned event.
- Should a boat be destroyed or declared unseaworthy by the Chief Referee, then the boat's replacement, if it carries the same U-number, will have its predecessor's National Points transferred to its credit.

GENERAL: The ABRA reserves the right to prohibit the use of any part, component and/or system it deems will give a team an unfair competitive advantage.

- No boat is allowed to leave the pits after the beginning of the one-minute warning period, prior to the start of a heat of racing.
- If a boat "jumps the gun" by crossing the starting line with less than 30 seconds remaining until the start of a heat, it must run an extra lap to be scored.
- A boat that strikes and thereby damages, dislodges, or destroys a buoy must run an extra lap to be scored. When an offending boat forces an unoffending boat into a buoy, then the offending boat shall be disqualified from the heat. (NOTE: When a buoy is dislodged or destroyed, it ceases to be a marker and may be disregarded.)
- During a heat of racing, a passing boat must move at least seven boat lengths ahead, which is considered one roostertail length, before altering course to the buoy line.
- The race will be stopped immediately if a driver enters the water or if a boat has encountered a flip, a rollover, or a severe impact with the water.
- The race may also be stopped if, in the opinion of the Chief Referee, an occurrence or situation on the race course makes competition hazardous to participants beyond the usual hazards of competition.
- Should a heat or section be stopped, it will be considered complete if the lead boat has completed at least half the number of laps scheduled. The position of boats running at the completion of the lap previous to the stoppage shall be used to determine the order of finish.

- The boat or boats responsible for a stoppage may not receive points in that heat or be allowed to participate in a restart of that heat.
- In the event of a race stoppage in the Final Heat, prior to the completion of the third lap, and a restart is not possible, the final order of finish will be determined by total accumulated points. In the event of a tie in points, time trial speed will be the determining factor.
- A fuel flow violation is judged to have occurred when a turbine-powered boat exceeds 4.3 GPM for more than five seconds. The boat then forfeits all points earned for that heat. Any boat found to have a fuel flow violation during the Final Heat is disqualified.
- An N2 speed violation is judged to have occurred when the maximum N2 RPM of 110% is exceeded for more than five seconds. Any turbine-powered boat found to have an N2 speed violation shall forfeit all points earned for that heat. Any boat found to have an N2 violation during the Final Heat is disqualified.
- A yellow flag displayed on the Judges' Stand designates the time between the five-minute and the one-minute warning period, prior to the start of a heat. A yellow flag is also used to indicate a hazardous condition on the race course, such as a stopped boat, which should command the drivers' attention and caution.
- A white flag designates the time between the one-minute warning and the start. A white flag also signifies that the leader has started the last lap.
- A green flag indicates that the race is under way and is displayed during all laps except the last (or white flag) lap.
- A checkered flag displayed at the finish of a heat indicates that the boat passing the Judges' Stand has completed the heat.
- A red flag signals that the race has been stopped or postponed and for the boats to immediately stop on the race course.
- A black flag means for the boats to return to the pits.
- The safety canopy must be opened within 60 seconds after a boat comes to a halt or the Chief Referee will stop the race.
- When a driver turns on his strobe light and clasps his hands above his head when his boat has come to a halt, he means that everything is okay and needs only routine assistance.
- When a driver waves both hands continuously above his head, it means that the driver is in danger and needs immediate assistance.
- When no signal whatsoever is received, it indicates that the driver is injured and requires immediate aid.