

# **Constitution and Bylaws**

**of the**

**Klamath Trinity River Racers**

**2021**

## **Article 1**

This Organization Shall be called the Klamath Trinity River Racers Association or KTRRA.

## **Article 2**

Purpose:

The purpose of this constitution and bylaws shall be to protect and promote the interests of the KTRRA. This document shall aid elected officers, racers, members, sponsors, spectators and everyone else in acquiring a thorough knowledge of the rules and regulation of KTRRA. This constitution shall be the initial governing document, which will supersede all previous rules and regulation used by the association.

## **Article 3**

Membership:

The membership or KTRRA shall not be limited in size. Members must meet and maintain the following requirements:

1. KTRRA rules in this document shall be the sole governing rule but the KTRRA may reference APBA general safety and racing rules as contributing guidance to KTRRA rule(s)and regulations.
2. Drivers must be at least 18 years of age to race; 16 years of age to practice.
3. Drivers who are required to wear corrective eye lenses while operating a vehicle are also required to wear them while operating or racing a boat.
4. Before a new driver can race, they must have driven for a period of more than 30 days prior to their first race and/or approval by the safety committee.

5. Before a new driver can race, they must be approved by a Safety Crew member or an Officer.
6. No driver shall operate a boat under the influence of drugs or alcohol either during practice or race day. No alcohol will be consumed from midnight before the race day until the driver and his boat have cleared inspection. Race officials may not consume alcohol until one hour after completion of race and all boats have cleared inspection.
7. All racers must read this constitution, sign, and return the certification page to an elected officer before they can participate in any event. Certification must occur annually.
8. All Rookies must have a one inch wide white cross on helmet for their first full year, minimum five races. It must be ear to ear and front to back.
9. There will be membership categories for boat owners and non-racing members.
10. All members have voting privileges regarding the following KTRRA matters: 1) Business activities; 2) changes in the association's direction or current purpose; 3) Nominating and electing officers; 4) Determining race schedules; 5) Promoting race events; 6) Organizing racing events; 7) Selecting volunteer officials for racing events.
11. Only Boat owner members, however, may vote on matters impacting "racing rules".

## **Article 4**

### **Fees & Dues:**

There shall be an annual fee of \$250 for racing members. This fee guarantees voting privileges (after the participation in 3 races), participation in all KTRRA races, and eligibility for prize money. This fee is due by the first race of the season and covers all entry fees for any races sponsored by KTRRA in that calendar year. This fee will consist of the following:

1. KTRRA/APBA insurance (APBA membership required but not included with this fee)
2. If a racer chooses, KTRRA entry fees for the current year KTRRA sponsored racing events is \$120 dollars per event if the initial \$250.00 fee is not paid by the first race.

3. A rookie driver is not required to pay a fee for their first race. The following races may be paid for on a per race basis or pay the initial \$250.00 to cover all KTRRA race events.
4. There will be a \$50.00 fee for boat owners who are not drivers. Boat owners may hold an office in KTRRA.
5. There will be a \$125.00 non-racer annual membership fee. Non-racers who have paid the annual membership fee may hold an office in KTRRA.
6. The KTRRA fee is paid for the driver. Driver points will be kept for the driver.

## **Article 5**

### Governing Body:

The governing body of the KTRRA shall be elected officers from Oregon and California. The elected officers shall comprise of a President, Vice-President, Secretary, Treasurer and Risk Manager/Sgt. at Arms. These officers shall be elected by majority vote by those members in attendance at the yearend meeting during election years. In order to be considered for an elected office you must be a good standing member of KTRRA and you must be nominated by another member. No person shall hold more than one KTRRA elected officer position unless the position becomes unexpectedly vacant due to resignation, relocation, health, etc. And, vacant position shall be filled at the next official KTRRA membership meeting in the same manner as other elected officials in this Article. KTRRA governing officers may on an interim basis fill the vacant position to continue urgent official KTRRA business. If more than one person is nominated for a position, a majority vote by those present will determine who will be elected. Each position will be voted on one at a time. Each officer will serve a two year term with even numbered years being election years. Any eligible members (drivers and owners) excluding the president shall vote on any issue. The president can only vote to break ties. A safety committee shall be voted on every even year. All elections shall be by secret ballot voting.

### Elected Position Definitions:

PRESIDENT.

By virtue of the trust placed in the president by his peers, the Office of President must exemplify the highest standards of professionalism, good sportsmanship and exemplify and promote the highest code of ethics. A wide variety of tasks, including but not limited to signing all correspondence, checks, and other executive functions may be required of the individual filling this role. Serving on the grievance and vetting committees, crafting and refining legislation and representing KTRRA to the media and communities where we race as well as the broader racing community are fundamental to this office. Duties also include any actions necessary to keep the club running between meetings.

#### VICE PRESIDENT.

The duties of the vice-president shall include, but are not limited to, seek to enhance the ethical and professional standards of the KTRRA. The Vice-President shall act on behalf of the President when the president is unable to do so and shall work closely with the other members of the board of directors to insure smooth, efficient and professional transaction of KTRRA business.

#### SECRETARY

Records the minutes of all meetings, In charge of all documents and archives, handle official correspondence. Secretary shall work closely with the President and other members of the board of directors to insure smooth, efficient and professional transaction of CORRA business.

#### TREASURER.

The treasurer shall be responsible for the daily financial records and accounting for all KTRRA business. The treasurer shall deliver financial statements to the general membership at the year-end meeting and be prepared to provide all financial records to the board of directors at any time. The treasurer shall be one of three authorized signers on the KTRRA checking account. The other being the

President and unless the President isn't available the Vice-President. Two signatures shall be required on all checks drawn on the KTRRA account. All records shall be held for a minimum of five years. The treasurer shall, at all times work closely with the other members of the board of directors to insure smooth, efficient and professional transaction of KTRRA business.

#### SERGEANT-AT-ARMS.

Shall insure that rules and procedures are followed at all KTRRA events, seek to maintain order at all meetings. Act as the driver representative in the event of an official grievance. Serve as a member of the grievance committee.

#### RACE DIRECTOR.

Assist in obtaining permits from local authorities, raises funds/oversee fundraising committee take pictures of the race course and pits for insurance and sanctioning. Arrange police, ambulance, safety personnel and fire department during the race. Oversee the pits to ensure smooth interaction with local authorities.

#### REFEREE.

Represent APBA at the race, makes final determinations of rules disputes only after official grievance submission(s). Referee decisions may be appealed to the KTRRA Board by the end of the race event and a decision will be made within one week of the infraction.

#### INSPECTOR.

Inspects equipment and fuel based on KTRRA rules and procedures.

#### SAFETY COMMITTEE.

Tests and certifies new member drivers after they have demonstrated proficiency and checks pit safety compliance, checks all race boats prior to all races ensuring compliance with KTRRA safety regulations.

There shall be a Grievance Committee for any KTRRA matters to be resolved. This committee will not make rule changes. It will be called the Grievance Committee and will be made up of the elected officers.

## **Article 6**

### Meetings:

KTRRA shall conduct at least three annual meetings for its membership. The location of meetings shall be determined by KTRRA membership at the previous meeting. When at all possible, the location site shall try to accommodate all members. All members shall be notified of a meeting no later than 14 days to the next meeting by written letter, telephone, or email. Members shall be required to attend the scheduled meetings; however, those not in attendance will forfeit their right to vote on any rule changes, official elections, or constitutional amendments when applicable for that meeting. No voting shall be done by proxy vote. Members must be in attendance to vote. Changes to the constitution will require a  $\frac{2}{3}$  vote with a quorum, of 7 members. All KTRRA members and Honorary members shall have a right to vote at any officially noticed KTRRA meeting. For the purpose of this section, "Honorary Member" means, any past Hydroplane Racer that has raced for 10 seasons or more in aggregate and has been active and served or participated in any KTRRA official capacity within the last 24 months. All racers must attend the drivers meeting at each race. This meeting will be exactly one hour before the race (unless otherwise notified such as Boatnik). The location will be announced on race day at the location in which the boats will be launched. Drivers not in attendance will be moved to the last place start position(s) for the start of the race. Alcohol will not be allowed at any of the above meetings or in the hot pit area.

## **Article 7**

### Motor Restriction:

1. American made Mercury stock production with a maximum of 45 cubic inch (four cylinders) displacement.
2. Stock engine with no internal modifications or use of parts that might enhance engine performance except as follows:
  - a. Balancing by grinding on crank, rods, and pistons okay. No drilling! No excessive material removing allowed!

- b. Modified flywheel with no restrictions.
- c. Modified exhaust, DEQ approved type if possible, no modification to exhaust or intake ports. Factory machine marks to be present.
- d. No re-routing of the cold water system, except (3) 1/8 inch holes can be drilled from the bottom of the jacket to the hot water exit side. This matches some stock Mercury blocks. Water to be exited from exhaust side water chamber only.
- e. Single and dual, metal or fiber reeds okay.
- f. 5/32" maximum opening at the end of the reed stop, no modification to reed block pedal port opening.
- g. Two-blade props only.
- h. A pin may be added to hold the reed block in place.
- i. Cylinder boring is allowed with restrictions. Any standard or oversized two or three ring piston combination, that meets mercury marine specifications, with stock compression can be used, but not to exceed .090ths, combined total oversize of the four pistons.
- i. Two .030 and two .015 over pistons can be used to achieve 45 cubic inches.
- j. Maximum compression reading (four rope pulls). These compression readings are not the maximum compression limits allowed, they are just a signal for the inspector that a motor may be illegal if the compression reading is above the following.
  - i. Two ring pistons (130 lbs) maximum
  - ii. Three ring pistons (140 lbs) maximum
- k. Carburetor jets cannot exceed .063 or #63s.
- l. A fixed position standard magneto or 12 volt or self energized fixed position electronic ignition will be used.
- l. Must have an automatic electric kill switch attached to throttle.
- m. No electric start. Rope pull by driver only. Check with safety committee.

- n. Permissible fuels for use shall consist of no more than 93 octane leaded or unleaded gasoline and oil only. Gasoline may be aviation gasoline, automobile gasoline of either leaded or unleaded varieties, and includes automobile racing gasoline as long as it does not contain alcohol, nitrates, oxygen bearing compounds or 10 other such power booster additives. Gasahol is not a legal fuel. Oils may be petroleum or synthetic and cannot contain any additives or power boosters. Any driver using fuel which does not meet this rule will be disqualified for that days racing only.
- o. Any Two-Stroke premix oil without oxidizers, no octane boosting additives allowed, must also meet fuel rule “n” in testing.
- p. Motors must be bolted, clamped and tied (shock cord, etc.) to transom.
- q. Must have a working “Lanyard Kill Switch” permanently attached to life jacket and must be used at all times while operating a boat.
- r. Any racing design gear housing with 1 to 1, or 1 tooth under drive ratio, with or without water pump. Minimum length of lower unit skeg 3” consisting of a minimum of 10 square inches of surface area.
- s. Any other work or modification has to be approved by the club inspector.
- t. The top five boats of each race can be inspected and will have a seal applied to the block after passing inspection. Engines that have been sealed will not be retested unless protested. Drivers may choose to have their engines checked and sealed prior to any race.
- u. Any aftermarket pistons and components are approved for use with the same applicable restrictions as listed in this article. They must be an aftermarket reproduction that is built to the same specs as mercury components.
- v. Due to the scarcity of some connecting rods all rods may be ground in balancing but one rod must be very lightly touched in the grinding process to prevent over grinding for lighter rods.

## **Article 8**

### **Boat restrictions:**

1. Boats must be at least 13’6” (actual built size) no additions to make length. All



boats are to be constructed of wood. Two lines of carbon fiber may be added to the construction of the cockpit sides for reinforcement.

2. No wings allowed.

3. No automatic motor tilt systems.

4. No external adjustments from cockpit.

5. No motor lifts.

6. No thrust bars.

7. No devices operated from the cockpit other than the throttle and the steering wheel.

8. Stationary center fin must have a total of 35 sq inches and be no shorter than 5".

Full fin recommended.

9. Boat, driver, motor and accessories must have a finish weight of at least 575lbs excluding water. There will be a mandatory weigh-in for each boat at their first race of the season.

10. Steering, throttle, and kill switch must all pass safety inspection yearly before each boat's first race.

11. Gas tank must be secured.

12. All boats must have a functional paddle.

13. Any boat not up to specifications listed above will be disqualified until fixed.

14. All racers must start and finish in the same boat.

15. All drivers are responsible for meeting the minimum requirements set forth in article 8 section 9. Scales will be brought to some races for spot-checking weight.

Top 5 finishers may be spot checked after any sanctioned race.

16. Any boat ran in the Kilo's must be compliant to all KTRRA rules and regulations as a competition boat. Any boat ran in the kilo's must have competed in at least one KTRRA race.

## **Article 9**

Safety:

1. Life jackets must be worn at all times while operating a boat.
2. Life jackets must be "A" type (For use in an open cockpit and by an unrestrained occupant. Maximum boat speed is less than 100 mph) certified Jacket 75% orange in color and must be in good shape and inspected yearly, and after an accident.
3. Helmets must meet Snell 2010 or newer (SA, M, K, CMR/CMS 2007, CMH); SFI competition 31.1 and 31.2 specs. Currently the upper 50% of the helmet must be a solid color of orange, fluorescent red, fluorescent green or yellow in color and worn at all times while operating a boat. KTRRA does not recommend the use of full face helmets.
4. All boats must have a working lanyard kill switch attached to the driver.
5. Rules of the water will be discussed at each driver's meeting before the race.
6. Practice days and warm ups:
  - a. Down river boat has right of way.
  - b. Always stay to the right.
  - c. Use caution when entering or exiting pit area.
  - d. Run (turn) counter clockwise when doing laps.
7. Any boat that is in front of another boat(s) has the right of way on the course and the passing boat must use discretion.
8. Any boat that has a prop on can only start motor with the prop in the water.
9. It is up to the driver to find boat holders for each start and restart of the race.
10. Boat holders can only enter the water waist deep, and must sign a release waiver.
11. If you are not on the starting line three minutes prior to when the race is scheduled to start, you will be disqualified for that event. If you are on the starting line and can't get started, you will have 2 minutes after the start of the race to get started (this means on the bank engine shut off).
12. A safety committee will be decided on every even year by the club. There will be 3 members. The purpose of the safety committee is to observe and advise drivers as to the safety rules and practices at race sites and practice sessions. Their duties also include observing and advising rookies to qualify them for their first racing start. The safety

committee reports to the KTRRA Risk Manager who is also a safety team member. Members of this committee shall not serve as an elected officer of the KTRRA concurrently except for the KTRRA Risk Manager..

13. The KTRRA or APBA inspector will inspect all racing equipment and review and enforce KTRRA safety and category rules.

14. No drivers may be under the influence of alcohol during operation of the boat. And, shall not consume any alcoholic beverages or intoxicants midnight before the race and 1 hour after any time trial or race. Racers may be subject to spot or random alcohol testing.

15. No smoking allowed in pit area.

16. All racing teams shall have in their pit at least one 5 pound fire extinguisher.

17. Drivers must wear a Kevlar(or kevlar-like) cut suit while racing and during practices.

18. The referee and safety committee handles safety rules and any issues related to the course or an incident that took place during the race will be reported to the designated referee by the driver's representative.

19. In the event of an accident a driver that stops to help a victim may regain the position he/she were in before stopping.

## **Article 10**

Infractions and Protests:

Gas may be purchased by another driver prior to the race. This should be done as early as possible and no later than 2 hours before the start of the race. Only once a year an engine case split inspection may be performed by and at the discretion of the Inspector and/or Referee. This inspection will be conducted as soon as the race concludes at a site determined by the officials. If the inspector finds the motor to be illegal, penalties are as follows:

1. Driver and owner will be disqualified for that event.
2. Driver and owner will forfeit prize money and points for that race.

3. Driver and owner will not be allowed to race until the problem is resolved.
4. Driver and owner must pay \$100.00 each to the club as a fine. If driver is the owner then the fine is \$200.
5. If driver or owner is caught cheating twice, they will be disqualified from racing for one year from the date of the infraction on top of the penalties assigned.
6. Every race must have a driver representative for any complaints, protests, safety issues, or any other issues that may require the referee's decision. This is designed for on course issues. Protests by drivers need to be brought to the driver's representative, not directly to the referee.
7. Any current KTRRA member can have a racer inspected to the specifications described in Article 7.
8. Any racer or club member with voting privileges can pay \$100 dollar fee and have the race inspector conduct a complete inspection including fuel as described in Article 7. The party protesting must also pay cost of the protest (off site fuel test etc.). If the engine or fuel is found to be illegal the driver or owner of the illegal boat must reimburse the protesting party. The driver and owner of the illegal boat will also be subject to all penalties and fines described in Article 10.

## **Article 11**

Rookie:

A rookie is a racer that has started in less than 5 races. A rookie racer must wear a white cross over the top of their helmet, front to back and side to side, until they have competed in 5 races. Rookies are not allowed to draw for starting positions during their first 5 races unless there are other rookies at this time. In this case the rookies will draw for starting positions among themselves and will be placed at the back of the pack. Starting at the back of the pack only applies to the first start of all races in which the driver is considered a rookie. After starting 5 races a rookie may request permission from the safety committee to enter the drawings for starting positions and only if approved may the rookie have his name submitted for drawing starting positions.

Each year the club determines who will be named the rookie of the year by determining which rookie has the most points at the end of the season. Also, a rookie must have raced in three KTRRA races before the end of their first season to be considered for rookie of the year. If a rookie only raced two races during their first race season they must wait until they complete a third KTRRA race in a following season to be considered for rookie of the year. The race season in which they race their third race will be the season in which they can be considered for rookie of the year.

## **Article 12**

Rules:

Rules can only be changed by a majority vote in the club at a yearend meeting or a special meeting called by officers. Rules of the day, such as course restrictions, will be announced at the drivers meeting.

Rules are as follows:

There will be no racing where boats will meet head on unless separated by a buoy line. Each race will consist of laps (amount determined by each course). Each lap will have two legs. Each leg will have a start and finish (Example 1: point A to point B; point B to point A / Example 2: point A to point B: point B to point C).

A sweep boat will start and run the course immediately after the last boat has left the starting line, and the sweep boat will only stop for a combined time of 2 minutes per leg. Boats unable to start at the beginning of any leg must wait until the next leg to re-start (this assumes that there is another start at that location). Any driver that breaks down during a leg may try to re-start until he is passed by the sweep boat. (In races W/O a sweep boat if you kill the motor you cannot re-start.). You can re-start after all boats have passed on the next leg (before the sweep boat passes by). On the last leg, the race is over if passed by the sweep boat. The sweep boat will not pass as long as your boat is under

power with the exception that the race official in the sweep boat may ask the driver to pull over in a safe pace if the boat is determined to be impeding the progress of the race. Mechanical work will be allowed but the race will be started 2 minutes after the sweep boat has arrived. There will be no refueling, starting (firing motor) or removing the boat from the water between legs (unless otherwise stated while waiting to re-start).

The race winners will be determined as follows:

1 st

- 1pt

2 nd

- 2pts

3 rd

- 3pts

Etc.

Points will be awarded for the finish position of each leg. The racer with the fewest points at the end of the race will win. If a tie occurs the last leg ran will determine the winner in all positions. Boats that finish all legs will be considered first for finish placement. If 30% of the boats should drop out on any leg due to an accident, that leg will not count. All legs before and after the accident will be counted toward each racer's total points.

If you do not finish every leg during a race day you will be scored only for the legs completed and placement. Example; if two boats complete five of six legs, the boat traveling farthest on the fifth leg will place the highest.

All boats that start the race, and leave the starting area, will score season points.

Example; there are twenty entries and the first boat out of the race only goes two miles they will place twentieth.

Even in the event that a race is canceled in the middle of the event the points will count toward each racer's total points for the season.

The end of each race is determined by the first boat to finish. One hour after the first boat finishes the race is officially over. Awards or awards ceremonies may be given or

conducted any time after the race has concluded but are unofficial until the one hour time period has elapsed to allow for protest(s) or rules violation assessments. All protests must be filed within one hour of the first boats finish.

- Any boat that is broke down on the side of the river has the responsibility of notifying the sweep boat if they intend to file a protest.

Sweep boat will leave immediately after last boat leaves the starting line. A total wait time of 2 minutes.

A two day race will have points awarded as follows: quarter points for day 1 time trials  
Two day races will be scored as two separate races with points for each day. Total prize money may be split between both race days.

Races can be one or two day events with day one being a qualifier for quarter points awarded for fastest to slowest time recorded or a race for 0.625 points. The qualifier will consist of single boat timed runs over a shorter course. One day races will follow the same format as day two of the two day event. The finish for the race on day two will be for full CORRA championship points as follows:

1st = 500 pts.

2nd =  $500 - (500 * .15) = 425$  pts.

3rd =  $425 - (425 * .15) = 361.25$  pts.

4th =  $361.25 - (361.25 * .15) = 307.06$  pts.

5th =  $307.06 - (307.06 * .15) = 261$  pts.

6th =  $261 - (261 * .15) = 221.85$  pts.

etc.

If, in case of a tie for year end championship points, all ties and winner will be determined by the most bonus points (total legs won entire season).

Rookies will start in back of the pack until they have made three qualified starts. The start draw for the race will be held at the drivers meeting the morning of the race except for Boatnik where the draw is held on a day previous to the race.

#### Starting Procedures

1. All boats will be pointed at an angle into the river in the direction of the start.

2. There will be a maximum of two boat holders per boat.
3. If a boat does not have a boat holder that boat must start in the back of the lineup.
4. All boat holders must stand in the bight (on the inside if the boat facing the direction of the course) or at the transom.
5. The boat holders must stand (hold) in the back half of the boat they are holding.
6. No boat holder shall be over waist deep in the water while holding a boat.
7. One boat holder will signal to the starter that they are ready for the start as the starter points to the boat.
8. The driver is responsible for the placement of his boat and boat holders.
9. Boat holders will either attend the primary drivers meeting or a meeting at the end of the course that they are working conducted by a race official.
10. All boats must be spaced safely apart taking into consideration space available for the start. Recommend at least six foot spacing between boats.
11. If boat holders are not present at the drivers meeting or boat holders meeting, that boat will start at the back of the lineup after starter has given them starting instructions.
12. While time trial/qualification runs are officially underway, all boats must remain on the trailer with engines un-fired. Trailered boats may start their engine to "warm-up" before the green flag or after the checkered flag never during an active run.
13. Drivers who did not attend or participate in time trials will start at the rear of the drawn starting line-up but before rookies of the second day's race. exceptions are mechanical failure prior to their timed run, time trials cancelled prior to run due to course closure, time constraints or general safety concerns.
14. Each racer will have only 1 fully timed run for time trials. Racer may make an additional timed run, time permitting, if racers initial run was incomplete due to an unforeseen temporary course closure, or mechanical failure prior to the completion of their full timed run.



## Article 13

### Fuel Testing and Procedures:

Digatron fuel meter testing will be used at all races. The inspector may test the fuel of the top six finishers and or select other boats at random. Fuel tanks must have an opening sufficient for a Digatron fuel meter probe to pass unobstructed into the fuel tank. 1.050" is the diameter of the probe. At each race location, the inspector may purchase a sample of local gasoline, mix it with TC III oil at a ratio of 8:1 and test it according to the Digatron Fuel Meter Instructions below. If the test fuel exceeds the 0 Digatron threshold, the higher reading will become the maximum limit of the day with a plus (+) of 5 for fluctuating variables in environmental conditions at each race site location. The source and grade of the gasoline must be announced when registration opens. When the local fuel rule is used, the gasoline must have an octane rating no higher than 93. Fuel testing equipment must be available to all competitors one hour before the drivers' meeting. Competitors are encouraged to have their fuel checked prior to the race. However, fuel testing prior to the race does not excuse competitors from fuel testing following the race.

All fuel violations are single race day disqualifications only and do not constitute a violation or penalty set forth in Article 10, section 5.

Fuel testing procedures are, in preferred order:

- Digatron Fuel Meter
- Specific Gravity
- Water Solubility

Instructions for each of the above are as follows:

### Digatron DT-15/47FT/FT-64 Fuel Meter Instructions –

The purpose of this test is to measure certain electrical properties of the fuel sample and determine if they are within the permissible limits. The test procedures described herein are in accordance with the instructions supplied by the Digatron fuel meter manufacturer. Before performing your fuel testing, ensure that the fuel meter is in good working order:

1. Sensor Condition -Visually check the sensor and its connecting wire to assure that it has not been damaged.
2. Battery Condition -When the meter is on, the words "LO BAT" will appear in the upper left corner of the display if the battery needs to be replaced or recharged. Do not use the meter if the "LO BAT" is displayed, as its readings will not be accurate.
3. The recommended fuel test procedure using the DT-15,47FT & FT-64 is as indicated below:
  - a. Turn the meter on and allow it to warm up at least 15 minutes before doing any testing. This will allow the internal components to stabilize at their normal operating temperature.
  - b. Attach the sensor's connecting wire to the meter. Hold the sensor's connecting wire and lower the sensor into the calibration liquid—Cyclohexane (C<sub>6</sub>H<sub>12</sub>)—such that the sensor is completely submerged. Take care to assure that the sensor is not in contact with the container. Gently wiggle the sensor wire to displace any air bubbles that may be trapped between the sensor plates. Using the knob on the front of the meter, adjust until "-75" is shown on the display.

- c. Remove the sensor from the calibration liquid, and blow any excess liquid from between the plates. Lower the sensor into the fuel sample, in the fashion described in item “b” above.
  - d. Observe the reading on the meter’s display. If the reading is zero or a negative number, the fuel is legal. If the reading is greater than zero (a positive number), the fuel is not legal.
4. FT-64 calibration instructions:
- a. Press Exit/Power button.
  - b. Press Set button and hold 2 seconds. SEL/SEL will start blinking.
  - c. Press both Light and Set buttons at the same time to enter the calibration mode.
  - d. Place probe in appropriate amount of cyclohexane in a plastic or glass container.
  - e. Press the Up or Down arrows to adjust to -75.0.
  - f. Press the Exit/Power button to exit calibration.
5. The electrical characteristics of gasoline change somewhat with temperature. As such, it is important that the temperature of the calibration liquid and the fuel sample be within about 15 degrees F of each other. When a fuel sample is found to be illegal, per the above procedure, it is recommended that the following additional steps be performed:
- a. Clean the sensor with some spray-on brake cleaner and allow it to air-dry at least 30 seconds.
  - b. Re-check the calibration setting (-75) of the meter in Cyclohexane and adjust if necessary.
  - c. Allow the fuel sample to stabilize to the same temperature as the Cyclohexane and then repeat the test as described in item 3 above. During the course of the day, it is recommended that the calibration setting in Cyclohexane be occasionally checked. It is interesting to note that the calibration reading of “-75” in Cyclohexane has a corresponding reading when the sensor is in air, although this corresponding air reading varies somewhat with each particular meter. As such, the specific corresponding air reading for the particular meter being used can be a useful reference during the time between occasional Cyclohexane calibration checks.

### **Specific Gravity Testing Instructions -**

The purpose of this test is to measure the relative density of a fuel sample and determine if it is within the permissible limits. Two pieces of special equipment are required to perform this test:

1. Specific gravity hydrometer(s) which cover the range of 0.750 -0.800 (at 60F).
2. A clear glass container, which is at least as tall as the hydrometer. A “graduated cylinder” works well for this purpose.

The recommended fuel testing procedure is as indicated below:

1. Assure that the glass container and hydrometer are clean.
2. Place the glass container on an essentially level surface and fill with the fuel that is to be tested. The depth of the fuel should be equal to or greater than the length of the hydrometer.
3. Carefully insert the hydrometer into the fuel sample with the weighted end facing down. Take care to minimize the contact between the hydrometer and the container.

4. When the hydrometer has reached a stable free float in the fuel sample, read the specific gravity from the scale within the hydrometer. This is done by visually sighting along the upper surface of the fuel and reading where the scale crosses the fuel's surface. Record this reading.
5. Measure the temperature (F) of the fuel. The specific gravity characteristics of fuel (gasoline and oil) change somewhat with temperature. As such, the maximum permissible specific gravity reading will change as the fuel temperature changes. The minimum Specific Gravity reading for fuel is .700. Below is a listing of the maximum permissible specific gravity readings and their corresponding fuel temperature:

Fuel Temperature (°F)	Maximum Permissible Specific Gravity Reading
40°	0.785
50°	0.780
60°	0.775
70°	0.771
80°	0.776
90°	0.761
100°	0.757
110°	0.752

### Water Solubility Testing Instructions -

The purpose of this test is to determine if water-soluble additives are present in a fuel sample. The only piece of special equipment necessary to perform this test is a graduated container. It is recommended that a good quality clear glass graduated cylinder be utilized, with a capacity of 100 ml and subdivisions of 0.1 ml (or less). The recommended fuel testing procedure is as indicated below:

1. Assure that the graduated cylinder is clean.
2. Place the graduated cylinder on an essentially level surface.
3. Pour approximately 60 ml of the fuel sample into the graduated cylinder.
4. Carefully measure and record the amount of fuel in the graduated cylinder using the scale on the cylinder.
5. Slowly pour approximately 35 ml of water into the graduated cylinder.
6. The liquid in the cylinder will separate into two layers. The water will settle to the bottom of the cylinder, carrying water-soluble additives with it. Froth may form in the lower layer. Allow time for the froth to clear.
7. Measure and record the total amount of liquid in the graduated cylinder using the scale on the cylinder.
8. Subtract the amount of fuel in the cylinder (step 4) from the total liquid (step 7) to determine the exact amount of water that was added. Record this result.
9. Carefully measure and record the amount of liquid in the lower layer of the graduated cylinder using the scale on the cylinder.
10. If the amount of liquid in the lower layer (step 9) is greater than the amount of water added (step 8), the fuel contains water-soluble additives and is not legal.

## **Article 14**

### Race funds and Prize money

1. Every race must have a minimum of \$1500 for prize money. This minimum balance for prize money is to be distributed as follows:

1 st- \$500,

2 nd- \$400,

3 rd- \$300,

4 th- \$200,

5 th- \$100.

Races that collect more prize money can be dispersed as seen fit by the race organizer. Under special conditions the minimum prize money can be waived by a ruling of the club officers (board of directors) and shall be announced to all KTRRA membership 14 days before the race event. KTRRA or Race Director may use up to but no more than \$1000 of each respective race event entry fees collected to ensure the event is financially sound.

All racers must pay KTRRA club dues and insurance fees before competing each year. If a driver fails to pay their insurance fees and their KTRRA club dues, either single event or season, they will not be allowed to participate in the event.

## **Article 15**

### Year-end Awards:

1. Year End awards will consist of the; 'KTRRA 'High-Point' Championship' and the acknowledgement, and award, shall also be presented to the KTRRA Season runner-up, and third-place points finisher(1st-3rd), Rookie of the Year and a Hard Luck Award.
2. Points will be kept for drivers. Driver's points will be kept for the drivers finish for each event.