2026 WILD WEST WATERCROSS

IJSBA - REGION 2 RACING SERIES

GENERAL, SAFETY, AND TECHNICAL RULEBOOK

GLOSSARY & GUIDE

GENERAL RACE RULES

Governance: While on the water, a competitor shall be governed by all IJSBA rules, from the time of leaving the pits and until returning to the pits.

Scoring Stand access: The owner of a competing boat, or his crew, shall not be allowed on the premises used and occupied as the Scoring Stand by the Race Committee after the preparatory signal has been given until the last boat has finished the race. If requested to come to the Scoring Stand, the owner or crew may do so, but shall immediately depart there from when the matter which prompted the request has been attended to. Failure to leave the Scoring Stand when requested will be subject to disqualification of the boat owned or operated by the party so refusing. The Race Committee may designate a riders' representative to act as agents for all riders in matters that come before the Race Committee and Race Director.

Incident liability: No owner, rider, contestant, or representative thereof will hold any other owner, rider, contestant, or representative thereof liable for any personal injuries or damage resulting from an accident of racing occurring in a sanctioned race, except as a result of deliberate collision or other premeditated acts of unsportsmanlike nature. The question whether the act was deliberate or premeditated shall be determined by the Race Director, subject to review by the IJSBA.

Suspended person's participation: No person who has been expelled from IJSBA sanctioned race or who is under suspension from the IJSBA sanctioned event shall be permitted to officiate or assist in any capacity in connection with a sanctioned race or participate in such race as a committee member, rider, mechanic, or holder.

FLAG SIGNALS

The use of flags is the primary communication between racers and officials. Flags will be displayed on the starting tower and by course officials. It is the rider's responsibility to pay attention to the flags displayed. Riders not adhering to flag signals may be disqualified or penalized. All flags should be a minimum of two feet by two feet in size. Brief descriptions as to their purpose are as followed:

Green Flag: Signifies the course is clear and the race is in progress.

Yellow Flag: Signifies there is a hazard on the course. When a yellow flag is displayed, riders should continue racing in a safe manner being mindful that a hazard exists on the course. Competitors may be penalized if they race in an unsafe or improper manner in the vicinity of the hazard. This would include not slowing down or staying a safe distance from a downed rider or stalled watercraft.

Red Flag: Signifies an immediate stop to the race in progress. Regardless of where riders are on the course they are to return to the starting line unless otherwise instructed at the riders'

meeting or by a race official. The Race Director has the discretion of stopping a race at any time for any reason deemed necessary to ensure the safety of the event.

Black Flag: This flag signifies to the designated rider that they are to immediately leave the course and report to the Race Director. The black flag does not signify a penalty or disqualification. In the event that the designated rider does not obey the black flag penalties may be given.

Blue Flag w/Diagonal Yellow Stripe: Signals that a rider is being overtaken and lapped by a faster rider. The slower rider must make way for the overtaking rider(s) to pass safely. Failure to obey this flag may result in a penalty.

Crossed Checkered and White Flags: Signals the midpoint of the race. If an event has an odd number of laps this display will occur on the even numbered lap that is past the mid-point in the race. (In a 7 lap event this would be displayed on lap 4).

White Flag: Signifies one lap is remaining in the race or event.

Checkered Flag: Signifies the completion of the race or event. Passing the checkered flag indicates the finish of the race. Red Flag and Checkered Flag: If the red flag is shown with the waving checkered flag, it signifies the end of the race before the full competition of laps due to an extreme hazard on the track.

COURSE MARKINGS, NEGOTIATION AND PENALTIES

Overview: The course will be marked with a set of clearly identifiable floating markers. While some Event Organizers use different colors than those listed below, the following is the basic description of buoy colors and their meaning at the majority of races. Every boat must negotiate the course without destroying, damaging, or dislodging any buoy unless forced to do so by another boat. In that event, only the offending boat will be disqualified or penalized at the discretion of the Race Director.

YELLOW Buoy: A yellow buoy indicates a right handed turn. Two or more yellow buoys may be put in a line to form a large sweeping right-hand turn.

RED Buoy: An orange buoy indicates a left turn. Two or more orange buoys may be put in a line to form a large sweeping left-hand turn.

Penalty Buoy: The penalty buoy is to be used in the case of a missed buoy. The penalty buoy may be any color buoy that is designated by the Race Director and stands out and away from all other buoys on the race course. If a rider fails to properly negotiate, or misses a buoy, that rider must properly negotiate the penalty buoy instead of reattempting the missed buoy. The penalty buoy must be negotiated on the same lap that the missed buoy occurred unless the penalty buoy is not located as the last buoy on the course. In this case the penalty buoy may be negotiated on the following lap. Only one missed buoy per lap may be rectified by negotiating the penalty buoy.

Checkered Buoys: Checkered buoys indicate the Start/Finish line. A rider must pass through these buoys for a lap to be counted.

White/Other Color Buoys: These buoys are special purpose markers and are used to mark such things as the outside lane of a racecourse utilizing a two-lane split start, turns on the Slalom event or the merge lane in the case of a “split” type racecourse. Long “hot-dog” inflatables are also used to establish a merge lane on a split-type racecourse. Other Color buoys are often used on the outside of the racecourse to control boat traffic from entering the racecourse. The specific purpose of specially colored buoys will be reviewed by the Race Director during the rider’s meeting.

Negotiating Buoys: Every rider must clearly negotiate the nose of their watercraft around every buoy defining the race course without destroying, damaging, or dislodging any buoy unless forced to do so by another watercraft. In that event, only the offending competitor may be disqualified or fined at the discretion of the Race Director.

Missed Buoys: Any buoy not cleared by the nose of the watercraft will be considered a missed buoy. Riders missing a buoy are subject to a penalty. Closed-course competitors missing a buoy will be assessed a one lap penalty unless they follow the approved procedure for negotiating the penalty buoy. Crossing over the line created by the merge lane buoys constitutes a missed buoy.

Missing a checkered / finish line buoy cannot be rectified by negotiating the penalty buoy and is an automatic 2 position penalty. If a rider misses a buoy without making any attempt to negotiate the buoy, it will result in a one lap penalty unless the racer takes the makeup buoy.

Under no circumstances should a rider circle back in an attempt to renegotiate a missed buoy. Renegotiating a missed buoy will result in a penalty and possible disqualification from the race.

Finishing an event: The rider and their watercraft will be considered as a unit to constitute a finish. Upon the completion of a race riders should continue through the finish line being mindful that other riders are still racing behind them. After crossing the finish riders are to leave the course immediately in a safe and controlled manner. Riders may be required to report to the technical inspection area for post-race inspection.

Switching Boats between Races – Closed Course: The use of a second or backup watercraft in a second moto, semi-final, or final will be allowed provided that there is damage to the first watercraft that makes it unusable or a hazard. Once a switch has been made to a second watercraft, switching back to the initial watercraft at that event must be approved by the tech inspector. The second watercraft must meet all class and safety regulations. For those choosing to switch boats between a moto and/or final, the rider will be penalized his or her line position and must report to the Race Director. The Race Director will instruct the competitor that has switched boats what position on the line he or she will line up in. Failure to notify the Race Director and Technical Director for switching boats will result in a penalty and/or disqualification.

Switching Boats during a race – Closed Course/Supercourse/Offshore/Endurance: Once a competitor officially starts a race switching to a secondary boat is prohibited.

SAFETY REQUIREMENTS GENERAL SAFETY RULES

The following General Safety Rules will apply to all IJSBA and WILD WEST WATERCOSS sanctioned events and classes. All IJSBA members and other event participants, including but not limited to owners, mechanics, pit crew, sponsors, and Event Organizers are considered to be fully aware of all safety rules and will be expected to adhere to them at all IJSBA sanctioned events.

EVENT AND RACE COURSES

Race Director authority: The Race Director shall have authority to stop or conclude any event(s) he or she deems necessary to ensure the safety of participants, spectators and/or officials, or because of technical problems.

Participant responsibility: The IJSBA does not certify or inspect every course used at IJSBA sanctioned events. Participants are responsible for their safety at IJSBA sanctioned events, and the participant should determine their own ability and skill level regarding being able to negotiate each particular race course, as well as their watercraft being suitable for racing. Participants that have concerns about the safety of the race course, doubt the competence of the officials, doubt the competence of fellow participants, doubt their own ability to compete or their watercraft, should not participate in the event and request the return of their entry fee before practice for the event begins.

Public waterways: IJSBA sanctioned events take place on public waterways that may use routes used by other boaters. IJSBA and its event organizers are not responsible for the conditions of the waterway or for the actions of other individuals that may be using the public waterway.

Organizer responsibility: IJSBA does not attend each and every race that is run under its sanction. The organizer of the event is solely responsible to ensure that all rules relating to safety and compliance with IJSBA General Safety Rules are followed and to organize a safe competition. The organizer of the event is responsible for purchasing the required insurance through IJSBA's official insurance carrier.

SAFETY GEAR

Rider responsibility: It is the responsibility of the riders to select protective equipment that will conform to IJSBA guidelines and provide adequate protection. Even though race rules committees and IJSBA develop guidelines, IJSBA does not endorse or guarantee specific products or manufacturers of protective equipment. Racers must rely on their own judgment in the selection of helmets and other apparel for protection and durability.

Equipment approval: The Race Director of an event shall have the authority to prohibit the use of any helmet, personal flotation device (life jacket), back protection or other equipment which the Race Director may consider unsafe, insufficient protection or inadequate.

Required when riding: All riders must wear complete safety gear, including life jacket and helmet, while operating a watercraft on the water at a sanctioned event. All stand up and sport riders must have an approved back plate protector during competition. Exceptions: Pro Freestylists are not required to wear a helmet or back protector during competition.

Helmets
Required when riding: It is mandatory for all participants taking part in practice and competition to wear a full face protective helmet.

Chin guard: Helmets with bolt-on face chin guards are not allowed.

Face shield: Full face shields shall be allowed providing the shield is pivoting with no locking apparatus. A quick release capability is acceptable in lieu of a pivoting mechanism. The face shield must be made of a shatterproof material.

Certifications: The helmet must conform to one of the following recognized standards and have a label affixed certifying its approval:

USA: Snell M2010, M2015 or DOT FMVSS 218 Europe: ECE 22-05 ‘P’, ‘NP’ or ‘J’ Japan: JIS T 8133 : 2007 Full

Approval: All helmets must be approved during pre-race inspection and are required to be in sound condition with no alteration to their construction.

Fitment: The helmet must be properly fastened, be of a good fit, and be in good condition. The helmet must have a chin strap type ‘retention system’. It is recommended that the rider perform the following fit check prior to operating their watercraft: Verify the helmet fits well on the rider’s head, that it is not possible to slip the retention system over the chin when fully fastened and, that it is not possible to pull the helmet over the rider’s head by pulling it from the back of the helmet.

Prohibited styles: No plastic, bicycle type, BMX, or similar designed headgear will be allowed.
Emergency features: It is recommended that all helmets used in competition be equipped with a commercially manufactured emergency helmet removal device and that all competitors display the following information on the base of the helmet: name, drug allergies and blood type. It is

also advisable to carry this information on a small card and add any pertinent information such as epilepsy, diabetes, current medications and past medical problems.

Life Jackets

Certification: A U.S. Coast Guard approved, type I or III, full jacket personal flotation device (life jacket) will be worn by all participants at all times while on the water. Every rider shall certify his or her floatation equipment to function properly when requested by a IJSBA/WWWX official.

Inflatables prohibited: Inflatable-type PFDs are not allowed.

Buckle recommendation: It is recommended that all jackets have buckle-type straps across closures.

Back protection

Device requirements: Spinal column protection devices (back protector) can be rigid or of soft material that is capable of absorbing and distributing an impact sufficiently to reduce injury. Devices must not be capable of absorbing water.

Devices must adapt to the anatomical bend of the athlete's spine and lay flat against the body. The top edge of the back protector has to be situated in the area of the spinal column. Fastening of the back protector may take place with a stomach belt, straps or suspenders. The maximum thickness has to be in the middle part and should not exceed 45 mm; the thickness reduces towards the edges of the back protector. The back protector may be worn exclusively under the competition suit.

Recommendation: It is recommended that all competitors wear back protection.
Ski class requirement: All Ski competitors with the exception of freestylists are required to wear a spinal column protection device.

Device requirements: Spinal column protection devices (back protector) can be rigid or of soft material that is capable of absorbing and distributing an impact sufficiently to reduce injury. Devices must not be capable of absorbing water.

Rider responsibility: It is the sole responsibility of the competitor to insure he or she has adequate back protection.

Eye protection: Eye protection in the form of shatterproof goggles is highly recommended for all competitors.

Footwear: Footwear is highly recommended for all competitors.

OPERATOR SAFETY

No competitor shall participate in a IJSBA sanctioned event with any type of splint, including but not limited to, a cast or brace applied to his or her body, without written approval from a doctor and approval by the Race Director of the event.

Drugs / Alcohol: No person shall be allowed to operate a watercraft if it is determined that the individual is under the influence of alcohol or drugs.

Drug testing: Random tests for drugs and alcohol may be conducted at the discretion of IJSBA AND WILD WEST WATERCROSS OFFICIALS.**SEE SUBSTANCE ABUSE POLICY**

Denial of participation: It is the Race Director's authority to deny participation of any competitor that, if in the opinion of the Race Director, the competitor may be hazardous to the other participants, spectators, or themselves.

Improper conduct: If the Race Director deems that any participant is exhibiting dangerous or unsportsmanlike conduct at any time during a sanctioned event, the participant may be fined, penalized, or removed from an event.

Signaling after separation: Competitors separated from their watercraft should wave a hand over their head and give a thumbs up to signal race officials that they are uninjured and "okay".

Competitor interference: After crossing the finish line, a competitor/watercraft shall not interfere with any other competitor/watercraft still in the race so as to affect the time of such watercraft at the finish or create a safety hazard.

PERSONAL WATERCRAFT SAFETY REQUIREMENTS

Lanyard/stop switch: All watercraft must have a properly working, lanyard/tether engine stop switch installed. Modifications made to the lanyard-/tether engine stop switch, using tape, wire or any other material whatsoever that can be removed by the rider or pit crew during or immediately following a competition event are not allowed. Engines may idle at any time, provided that the lanyard is connected.

Water discharge: All external water discharge ports/bypass outlets must deflect water downwards or in a fashion that will sufficiently disperse water without causing a hazard to other riders.

Pre-race inspection: All watercraft will be required to pass a pre-race safety inspection before being allowed to practice or compete. The Technical Director or Race Director may remove a watercraft from competition that does not meet safety requirements.

Damaged safety equipment: Damaged or broken safety equipment not detected before or during a race is not grounds for disqualification after completion of that race, unless the rider is black flagged during that event.

Nose bumper: It is mandatory that all watercraft be equipped with permanently affixed nose bumpers except for watercraft not equipped with bumpers as original equipment. If plastic or metal hull supports are used, all edges must be smooth so as not to create a hazard.

Tow loop: All watercraft must have a flexible tow loop or tow strap attached to the bow of the watercraft. The tow loop should be made of some type of flexible material (example: plastic coated braided steel, nylon strap, etc.) so as not to create a hazard. Watercraft equipped with tow hooks that protrude beyond the plane of the hull must remove the tow hook. It is the rider's responsibility to provide an adequate tow strap on the front of their watercraft. Racers failing to have a tow strap on their watercraft, or having a tow strap that breaks while in tow, may be fined and/or disqualified at the discretion of the Race Director.

Single rider: The maximum number of riders per watercraft in a competition event is one, with the exception of Vintage Superchicken class. Multiple riders may be allowed for events such as a poker run provided the watercraft is coast guard approved for the number riders on board.

CLOSED COURSE GENERAL PROCEDURES

GENERAL STARTING PROCEDURES

Additional Starting methods: Additional start or restart methods not listed in this section may be used with the prior approval of WWWX.

Practice starts: No warm-up or practice starts will be allowed during the staging process.

Starting method penalty: A competitor may be penalized if their method of starting interferes with another competitor's start.

Damaged watercraft: If a watercraft that is damaged to the extent that it creates a hazard to spectators, participants or the competitor may be prohibited from competition at the discretion of the Race Director

Course entry: All watercraft must enter the race course, for both practice and racing, through the starting area only. Entry from the pit area is not allowed.

Holders and Mechanics: Ski classes are allowed one (1) holder for the start plus one (1) mechanic in the staging area. Junior Ski 10-12 class riders are allowed two (2) holders for the start plus one (1) mechanic in the staging area. Runabout, Sport, and X2 classes are allowed

two (2) holders for the start plus one (1) mechanic in the staging area. The Race Director may allow more holders depending on water conditions. Once the 2 minute card is shown, the mechanics must move to the back of the starting area. All other persons except officials or designated media personnel must be out of the starting area.

Staging: Watercraft must be pushed or ridden at idle to the starting line. All competitors must assemble in the “staging area” and be ready to race while the race prior to their race is in progress. It is the competitor’s responsibility to know which heats and at which times they are scheduled to compete.

Position forfeiture: If a competitor is not on the line at the 1⁄2 way point of the race prior to theirs, the competitor forfeits their position on the line or may receive an alternate penalty at the discretion of the Race Director.

Back to back Races: If a competitor is competing in a back to back race, a representative of the competitors must be on the starting line in their place unless other arrangements have been made with the staging official.

Race Forfeiture: If a competitor is not at the starting line at the start of their event they forfeit their opportunity to race the event.

Number of riders per race: The maximum number of watercraft per Closed Course heat should not exceed 20 racers.

If a dual start first turn course design is used:

Position assignment: The method for determining starting lineup in a heat or qualifying race is through a random selection by the computer/software and determines the lineup for the first heat/moto. If race software is not available, positions will be drawn through other methods. The number drawn will be the starting position, from the pole to the outside. The pole position is always the position closest to the first turn buoy. Starting-line positions for main events are determined by finish positions in heat or qualifying races. At the Race Director’s discretion, competitors may be given their choice of starting-line position for main events based on their qualifying position. If a split start is used: The inside pole will be position 1 with all odd number positions progressing away from the pole on the inside split (1,3,5,7...); The outside pole will be position 2 with all even number positions progressing away from the pole on the outside split (2,4,6,8...).

SHORE START: The race start procedure for a shoreline start is as follows:

Positioning: All watercraft are required to be at a dead stop until the green light is shown. Running starts are not allowed.

Start: The starting card is displayed by the starting official (starter) and is used to signal the riders for the start of an event. On the light board, “red light” means engines off, in staging.

“Yellow light” means to start your engine, clear out watercraft, and be ready for the light to turn green. “Green light” means race has started.

“2 Minute Hold”: A single 2 minute start delay (2 Minute Hold) may be granted per race start or restart. A delay will only be granted while the “2” card is displayed. Once the starter has displayed the “1” card the start of the race cannot be delayed. Both boat and competitor must be on the starting line in order to receive a two-minute hold.

Starting stance – Ski: Ski competitors are not allowed to place knees or feet in the tray before the race starts. Both feet must remain flat on the ground. The exceptions are Junior Ski 10-12 competitors are allowed to have both knees in the tray prior to the start of the race.

Starting stance – Runabout: Runabout and Sport class competitors may sit or stand for the start. **Racing stance – Ski**: All ski riders must be in the standing position immediately after the start of the race and well before reaching the first turn buoy.

Starting aids: No competitor or Holder will be allowed to use special devices (milk crates, cinder blocks, rocks, ropes) to aid his or her starting procedure unless all competitors are given the same opportunity and it is announced by the Race Director. Competitors not obeying these rules will be penalized.

MOVING/ROLLING START – PACE BOAT: The race start procedures for a moving/rolling start are as follows:

Staging: Competitors will line up behind the pace boat in the order that is determined before the start of the race. Pole position is the first position closest to the inside of the first turn buoy. Starting positions may also be determined by the finish of previous heat or qualifying races.

Start procedure: When all competitors are aligned in their correct positions, the course marshal will blow his whistle and display a green flag in the horizontal position. This signals all competitors to start their engines and proceed forward at a slow pace behind the pace boat. When watercraft are lined up to the satisfaction of the course marshal, the course marshal will wave the green flag to signal the start of the race.

“2 Minute Hold”: There will be a 2 minute hold allowed prior to the green flag being displayed horizontally. Once the green flag is displayed horizontally a competitor may not call for a 2 minute hold. The competitor will signal for a 2 minute hold by waving their hand above their head and signaling the course marshal. Only one 2 minute hold will be granted unless the race is officially restarted. If difficulties develop after the green flag drops, the competitor may continue to race or withdraw from the race. If a competitor withdraws to the pit area during the race, the competitor is not eligible for a second start in the event of a restart.

Alignment: Boats may not be more than one boat length ahead or behind each other for the start. Competitors failing to align themselves properly behind the pace boat at the start of the race will be penalized with a false start.

Starting position - Ski: Ski competitors must keep at least one knee in the tray until the course marshal officially starts the race. In rough water the course marshal may require competitors to keep both knees in the tray before the race is officially started. Competitors will be penalized one (1) lap for standing up in the tray before the course marshal waves the green flag and officially starts the race. All competitors must be in the standing position immediately after the race is started and well before the first turn buoy.

False starts: In the event of a false start, the race will not be red flagged. The competitor who jumped the green light will automatically be docked ONE LAP. If multiple people jump the green light, all will be docked one lap, and the race will be red flagged and restarted. The only time we will restart or red flag a start is if there was a crash caused or major major mess up by a rider that penalizes another rider. Whoever caused the red flag will be penalized.

False start definition: A false start shall be defined as follows:
Any competitor who brings his watercraft on plane before the green flag is waived; Any competitor who aligns himself more than one (1) machine length ahead of one or more of other machines in the starting lineup; Any competitor that fails to align himself with the pace boat.

Starting method penalty: The course marshal may disqualify or penalize a competitor if the competitor's method of start interferes with other competitors.

MOVING/ROLLING START – SHORE/FLAG TOWER

Start Procedure: The shore / flag tower start procedure is the same as that previously listed moving / rolling start procedure except that the green flag signals will be displayed from a flagging tower or another previously determined position on the shore. The course marshal will stage the competitors behind the pace boat at which point the competitors will watch for the starting signal from the shore / flag tower.

GENERAL RESTART PROCEDURES

Reasons for a restart: A race may be restarted at the discretion of the Race Director and may be from any number of reasons such as: a jumped start, loose buoy, an accident on the first lap involving several competitors, a competitor not holding their line to the first turn, or a downed competitor whose presence potentially creates a hazard. **Red Flagged start:** In the event of a red flagged start all competitors will immediately return to the starting line in a safe manner. The competitor causing the restart of a race may be penalized at the discretion of the Race Director.

Restart eligibility: If the race is restarted, competitors that were not on the starting line with their watercraft at the time of the original start are not eligible to participate in a restart. As long as both the watercraft and competitor are on or behind the starting line, even if the competitor never enters the race, the competitor is eligible to participate in a restart as long as the race is stopped before two laps have been scored. If the lead competitor has completed their third lap and the race is stopped, a competitor that has not entered the race is not eligible to participate in the restart. In the case of multiple restarts, competitors not on or behind the starting line for

each of the previous starts are not eligible to participate in the race. Racer that causes the red flag restart (because of injury), will NOT be able to compete for the rest of the day.

Total restart: Any race restarted with less than three completed laps will be given a total restart. Competitors will be assembled at the starting line in the same order as the original start. Scoring from any completed laps will be negated. Any competitor penalized on the original start will be required to restart under the same penalty.

COURSE & PIT REGULATIONS COURSE REGULATIONS

Riding Tune-Up/Practice Area: On the water tuning will be performed in the proper area only when available. Competitors must consult with the Race Director to determine the proper tune-up area at each event. The tune-up area should be held in an area, completely free of obstructions, which provides adequate and safe run-off areas at the end so competitors may slow down and exit safely. All competitor entry fees must be paid before a competitor may use the designated tune-up area. All competitors and pit crew using the tune-up area must have signed the Release and Waiver of Liability, Assumption of Risk and Indemnity Agreement and be wearing the event specific wristband. All appropriate safety gear and tethers are required in the tune-up area. Riders in this area must obey local boating laws and must ride in a safe manner.

Riding on the Race Course: Riding on the racecourse at any time other than a rider's scheduled practice or race is not allowed without permission from the Race Director. This includes before, during and after a racing event.

Reckless/Dangerous Riding: Riding in a reckless or unsafe manner, unnecessary bumping, crowding, chopping, blocking, deliberate striking of another rider, damaging of a course marker buoy, or unsportsmanlike conduct on or off the race course, may result in a penalty and possible expulsion from the event. The Race Director may at his discretion impose penalties on an entire team or group of individuals depending on those involved in the infraction

Blocking: The deliberate blocking of a faster machine is not allowed. The Race Director may at his discretion impose a penalty for such an infraction.

Spin Outs: In the event of a spinout the rider is allowed to continue the event but must wait until the course is clear and may not impede the progress of any other rider while turning around and rejoining the race. At no time is a rider allowed to drive in the wrong direction on the race course.

Obstruction: In the event that a watercraft becomes disabled on or near the racecourse, it is the responsibility of the rider to move their watercraft from the course in a safe manner as soon as possible.

Passing: When passing it is the responsibility of the overtaking rider to do so in a safe manner without causing the rider being passed to alter their course

Lapping: Riders being lapped may continue racing but are required to move over and provide the overtaking rider the most direct route to pass. If lapped riders do not adhere to the blue flags, they may be removed or black flagged from the event for impeding race leaders.

On-Course Assistance: Only course officials may provide assistance to a rider on the race course. In the event of a mechanical failure, the watercraft must be pulled completely off of the course prior to receiving assistance. Riders re-entering an event must do so in a safe manner or be subject to a penalty at the discretion of the Race Director. Competitors receiving on course assistance may receive a lap penalty.

PIT REGULATIONS

Pit Vehicles: Motorized support vehicles (pit bike, motorcycle, mini bikes, go-peds) will be allowed in the pit area only when they are authorized by the Race Director. Such vehicles are limited to the purpose of transporting watercraft and equipment only and are subject to a maximum speed of 5mph.Operators may be required to wear a helmet. Participants abusing the privilege may be fined and/or have vehicles impounded. Minimum age rules may apply at some events for pit vehicles.

Pit Vehicle Identification Plate: At certain events pit vehicles may be required to have the competitor's race number affixed to the front and back of the pit vehicle for easy identification by WWWX race officials. Notice will be provided for events having this requirement.

Pit Passes/Wristbands: All competitors, mechanics, and other pit crew members must sign the Pro Watercross Waiver and Release and wear the appropriate pit pass at all times while participating in the event. Improper usage of pit passes will be grounds for discipline and/or fine.

Animals: No aggressive animals will be allowed at the race site. All animals must be on a leash. Some event sites may not allow animals on the site at all or on the beach area. If so, event organizers should publish the rule on web sites and flyers and all competitors must abide by the published rules.

Fire Extinguishers: At least one dry chemical fire extinguisher must be readily accessible in each rider’s pit area where fuel is present.

Fuel Containers: All fuel containers should be marked “Flammable” or “Gasoline” and be placed in a safe area at least 15 feet from any open flame.

No Smoking: Smoking is not permitted in the pit areas or near any fuel containers.

Inspection of Fuel Containers: Fuel containers will be subject to inspection by and approval of the Race Director and local fire marshal, if applicable.

Fuel Disposal: Under no circumstance is the disposal of fuel or lubricants allowed. Any competitors, mechanics, and other pit crew members disposing of fuels or lubricants in the pit area, on the racecourse or race site by pouring or spilling fuels or lubricants will be subject to penalty and/or fine.

DISPLACEMENT GUIDE

Runabout Categories

RUNABOUT OPEN - Stock hull, modified engines, pumps, and electronics. 2000cc if powered by a four stroke engine (forced induction & naturally aspirated watercraft)

RUNABOUT NA - 2000cc if powered by a four stroke naturally aspirated engine. 1300cc if powered by a two stroke engine.

RUNABOUT 1100 STOCK & RUNABOUT REC LITES - 1100cc if powered by a four stroke naturally aspirated engine.

Ski Categories

SKI GRAND PRIX - 1500cc if powered by a four stroke naturally aspirated engine. 1100cc if powered by a four stroke forced induction engine. 1300cc if powered by a two stroke engine.

SKI GP2 - 1200cc if powered by a four stroke naturally aspirated engine. 1300cc if powered by a two stroke engine. Triple and Twin cylinder engines only.

SKI STOCK - 1500cc naturally aspirated Kawasaki SXR1500 engines only. IJSBA Stock class rules.

SKI 4-STROKE LITES - 1050cc naturally aspirated Superjet engine only. IJSBA Stock class rules.

SKI LITES - 701/760cc Yamaha or 810cc Kawasaki twin-cylinder two stroke engines. IJSBA Lites class rules.

Sport Classes

SPORT SPEC - 720cc or 701/760cc twin-cylinder two stroke engines only. IJSBA spec class rules.

SPORTABOUT - Stock hulls, stock hoods. 2-strokes engines only. 1100cc-1300cc for triple cylinder engines, 800cc for runabout twin cylinder engines. Engines, pumps, and electronics can be aftermarket or modified. See rules below.

Vintage Classes

VINTAGE SKI OPEN - 785cc twin-cylinder two stroke engines only. Modified hulls, engines, pumps, and electronics allowed.

VINTAGE 550 MOD - 600cc twin-cylinder Kawasaki 550 based engines only. Modified hulls, engines, pumps, and electronics allowed.

VINTAGE 550 LIMITED - 550cc twin-cylinder Kawasaki 550 engines only. Stock hulls, no sponsons, no engine modifications, single carb, stock pump, stock electronics.

VINTAGE X2 LIMITED - 650cc twin-cylinder Kawasaki 650 engines only. No modified hulls. Stock engine, stock electronics, and stock pumps.

SUPERCHICKEN - 650cc-810cc if equipped with a Kawasaki twin-cylinder two stroke engine.

COMPETITION CLASSES:

SKI GRAND PRIX

SKI MODELS ALLOWED:

- **KAWASAKI SXR1500**
- **YAMAHA 4-STROKE SUPERJET**
- **KOMMANDER (K1, K1R, GP1)**
- **PROWATERCRAFT (ProForce 1, PF2.0, PF3)**
- **FAST POWERSPORTS (F1, X1, GP1R, F16)**
- **SPECTRUM**
- **BULLETT (V2,V3,V4,V5, V6)**
- **VK Composites Hyperion**

Competitors in this class are allowed modifications to gain maximum machine and engine performance. This category of competition is intended to encourage intense aftermarket development. Watercraft competing in this class must conform to the specifications which follow. The Ski Grand Prix Class is intended as the most elite and most competitive Ski Class. Due to the speeds and precision handling needed for GP class racing, it is highly recommended that all competitors must have an Expert or Pro license prior to participating.The maximum

displacement for a Ski equipped with Two Stroke engines is 1300cc. The maximum displacement of naturally aspirated Four Stroke engines is 1500cc. The maximum displacement for Four Stroke turbocharged or supercharged engines is 1100cc. Forced Induction Four Stroke Engines with a displacement of 900cc or less must have a device to release all boost pressure above 11 psi. Forced Induction Four Stroke Engines with a displacement above 900cc must have an IJSBA approved device to release all boost pressure above 9 psi.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks, which protrude beyond the plane of the hull, must be removed.

The top deck may be modified or aftermarket All watercraft in the GP classes, regardless of displacement, may utilize an aftermarket hood.

If the watercraft is equipped with footwells, the footwells must be blocked off, during competition, allowing no indentation into the footwell sides.

The hull may be modified or aftermarket but cannot exceed the length or width of the upper deck component of the bond flange as measured by a plumb bob (bumpers removed). Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

Intake grate may be modified or aftermarket. Intake grate is required and must be the full- length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard.

Aftermarket trim tabs, either fixed, automatic and/or rider controlled, may be used. Original equipment trim plates that are detachable from the hull may be removed or replaced when installing aftermarket trim tabs. All hull extensions mounted on the hull’s transom will be considered as a trim tab. All edges must be radiused so as not to create a hazard.

Replacement bumpers may be used provided a hazard is not created.

A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables are allowed.

Ski Handlepole (and mounting bracket) may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Engine compartment foam may be removed, modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation. The number, type, and placement of rings on the piston may be changed.

OEM crankcases may be interchanged between homologated watercraft of any OEM manufacturer. Internal modifications to the fuel, oil and/or water exposed surfaces are allowed. Bearing and seal surfaces may not be modified. Filler material may be added to hollow pockets in the base gasket areas. Ignition/stator mounting area modifications are limited to spot facing, drilling and tapping threads for the purpose of mounting an aftermarket or modified ignition system.

Additional carburetor pulse line fittings may be installed. The crankcase drain system may be removed or plugged. Additional mounting holes, not to exceed 10.00mm diameter, are allowed provided they do not penetrate the internal surface of the cases.

Base gasket and intake surfaces may be machined. Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. External modifications to the crankcase finish (plating, polishing and/or painting) are allowed for cosmetic purposes only. No other external modifications or external repairs will be allowed.

Cylinder and cylinder head may be modified or aftermarket.
Crankshaft assembly may be modified or aftermarket. Stroke and rod length may be changed.

Engine bed and motor mounts may be modified or aftermarket. The engine may be repositioned in the hull. Engine gaskets may be modified or aftermarket.

Exhaust system (i.e., manifold, head pipe, expansion chamber, waterbox, muffler(s), etc.) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. Exit location of the exhaust gases may be relocated to the transom below the bond flange. No tuned portion of the exhaust system shall protrude outside the hull.

The cooling system may be modified or aftermarket. Aftermarket cooling lines and water bypass systems may be used. Bypass fittings may be modified, aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, solenoids, etc.). Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

Replacement starter motor and bendix may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment. Stripped threads can be repaired.

Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket crankcase pressure operated fuel pumps may be used. Fuel fillers may be relocated internally.

Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

Aftermarket fuel-injection systems are allowed provided the following regulations are adhered to: High-pressure fuel hose meeting SAE J30R9 must be used; A.N. threaded-type fittings or equivalent and non-removable, crimped-type clamps must be used on the high-pressure portion of the system (hose clamps, tie wraps, are not allowed), only metal-type fuel filters may be used on the high pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race

director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

Intake silencer may be removed.

Reed valve assemblies may be modified or aftermarket. Rotary valves may be modified or aftermarket.

Ignition system, electrical box, flywheel and flywheel cover may be modified or aftermarket. Battery charging circuit may be disabled and/or removed.

An additional battery and battery box may be used. Batteries must fit into a proper battery box and be securely fastened. Batteries may be relocated.

Engine temperature sensor assembly may be disconnected and/or removed.

Engine blocks may be interchanged between homologated watercraft of any OEM manufacturer except in the case of the 1500cc based Kawasaki SX-R which must use the engine block furnished by the manufacturer. Original OEM engine blocks must be used. Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

Repairs to the cylinder head affecting one cylinder bank are allowed. The head gasket surface may be machined.

Aftermarket valve train components are allowed, providing the original method of activation is maintained (if originally activated by a camshaft, they may not be converted to solenoid activation). Valves may be shimmed with OEM or aftermarket shims. Valve springs may be modified or aftermarket.

Camshaft(s) may be aftermarket. The number of camshafts must be the same as original. Original bearing type and dimensions must be used. Cam timing may be changed. Cam gears, tensioners, chain or belt may be modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation.

Crankshaft may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

Engine balancing assemblies may be modified, aftermarket, or removed.

Aftermarket connecting rods made of ferrous materials are allowed. Rod length may be changed.

Exhaust system (manifold, connecting pipes, hoses, muffler) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. No tuned portion of the exhaust system may protrude outside of the hull. Exit location of the exhaust gases may be relocated to the transom below the bond flange.

The cooling system may be modified or aftermarket. Additional cooling lines may be added. Aftermarket water bypass systems may be used. Cooling system bypass fittings may be modified or aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (thermostats, pressure regulators, solenoids). Manually controlled devices (by means of actuation) that alter the flow of cooling water during operation are not allowed. Original cooling system thermostat may be removed, modified or aftermarket. Cooling system flush kits are allowed.

Baffles in oil reservoirs may be modified. The addition of baffles in oil reservoirs is allowed. Oil pumps may be modified or aftermarket.

Valve cover may be replaced for cosmetic purposes and/or weight reduction only.

Replacement starter motor and bendix may be used.

Replacement engine mounts may be used.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, fuel filters, oil filters, clamps and fasteners) shall not be restricted to original equipment. Stripped threads may be repaired. Fasteners may integrate locking mechanisms.

FOUR-STROKE 1100 CC AND LESS

Engine blocks may be interchanged between homologated watercraft of any OEM manufacturer so long as the displacement of the donor engine was 1100 or less as furnished by the manufacturer. Original OEM engine blocks must be used. Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port

diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

Repairs to the cylinder head affecting one cylinder bank are allowed. The head gasket surface may be machined.

Aftermarket valve train components are allowed, providing the original method of activation is maintained (e.g., if originally activated by a camshaft, they may not be converted to solenoid activation). Valves may be shimmed with OEM or aftermarket shims. Valve springs may be modified or aftermarket.

Camshaft(s) may be aftermarket. The number of camshafts must be the same as original. Original bearing type and dimensions must be used. Cam timing may be changed. Cam gears, tensioners, chain or belt may be modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation.

Crankshaft may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

Engine balancing assemblies may be modified, aftermarket, or removed.

Aftermarket connecting rods made of ferrous materials are allowed. Rod length may be changed.

Exhaust system (manifold, connecting pipes, hoses, muffler) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. No tuned portion of the exhaust system may protrude outside of the hull. Exit location of the exhaust gases may be relocated to the transom below the bond flange

The cooling system may be modified or aftermarket. Additional cooling lines may be added. Aftermarket water bypass systems may be used. Cooling system bypass fittings may be modified or aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (thermostats, pressure regulators, solenoids). Manually controlled devices (by means of actuation) that alter the flow of cooling water during operation are not allowed. Original cooling system thermostat may be removed, modified or aftermarket. Cooling system flush kits are allowed.

Baffles in oil reservoirs may be modified. The addition of baffles in oil reservoirs is allowed. Oil pumps may be modified or aftermarket.

Valve cover may be replaced for cosmetic purposes and/or weight reduction only.

Replacement starter motor and bendix may be used.

Replacement engine mounts may be used.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, fuel filters, oil filters, clamps and fasteners) shall not be restricted to original equipment. Stripped threads may be repaired. Fasteners may integrate locking mechanisms.

The original fuel injectors may be modified to increase fuel-flow rate. Aftermarket fuel injectors that increase fuel flow are allowed provided they must not increase airflow into the combustion chamber. Fuel rail and fuel regulator may be modified or aftermarket. Additional fuel injectors may be added. Aftermarket fuel pumps are allowed provided that when the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off fuel pumps are allowed. High-pressure fuel hose meeting SAE J30R9 must be used; only metal type fuel filters may be used on the high-pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system.

Throttle body may be modified or aftermarket. The number of butterflies may be increased but may not exceed the number of cylinders. Intake manifold assembly may be modified or aftermarket.

Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. Carburetors may be used in addition to or in place of the fuel-injection system. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket air-pulse-pressure operated fuel pumps may be used.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

TURBOCHARGER/SUPERCHARGER

In the Ski GRAND PRIX Class, a turbocharger or Supercharger may only be affixed as long as under 1100cc.

Turbocharger housing must be of the full circulating, water-jacket type at all times when the engine is running. Aftermarket turbochargers and superchargers may be used provided a hazard is not created. Original turbocharger or supercharger may be modified. Aftermarket turbochargers and superchargers may be added to originally normally aspirated watercraft. All hoses and pipes may be modified or aftermarket. Where the Race Director, or Technical Inspector, cannot determine if a turbocharger is sufficiently water-jacketed then a heat wrap and/or additional cooling mechanisms may be added to ensure safety.

Intercoolers may be modified or aftermarket.

A boost pressure-relief valve must be set to release all pressure above 11 PSI for engines with displacements 900cc or less and 9PSI for engines with displacements above 900cc.

Boost sensors may be modified or aftermarket.

DRIVELINE

Impeller, impeller housing, stator vane assembly, pump mounting plate and/or pump shoe may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket.

Overall length of the complete pump and nozzle assembly may be no more than 50.00mm longer than original equipment. Aftermarket nozzle trim systems may be used. Additional cooling fittings may be installed. Visibility spout must be removed or plugged. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet.

Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump.

SKI GP2

SKI MODELS ALLOWED:

If 2-Stroke (older model hulls only)
- **Kawasaki SXR Hull (all years)**
- **Yamaha Superjet Hull (all years)**
- **Bullett Racing (V2-V3)**
- **Kommander (K1, K1R, GP1)**
- **ProWatercraft (PF1, PF2.0)**
- **Trinity Composites (Vector)**

- Polaris Octane

If 4-Stroke (older & newer model hulls allowed)
- Yamaha Superjet (2021+)
- Bullett Racing (V4-V6)
- Kommander (GP1)
- ProWatercraft (PF2.0, PF3.0)
- Fast Powersports (F1, X1, GP1R, F16)
- Spectrum
- VK Hyperion

Competitors in this class are allowed modifications to gain maximum machine and engine performance. This category of competition is intended to encourage intense aftermarket development. Watercraft competing in this class must conform to the specifications which follow. The Ski Grand Prix 2 class is intended as the second most elite and most competitive Ski Class. Due to the speeds and precision handling needed for GP2 class racing, it is highly recommended that all competitors must have an Expert or Pro license prior to participating. The maximum displacement for a Ski equipped with Two Stroke engines is 1300cc. The maximum displacement of naturally aspirated Four Stroke engines is 1200cc. Forced Induction Engines are NOT ALLOWED. Naturally aspirated only!

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks, which protrude beyond the plane of the hull, must be removed.

The top deck may be modified or aftermarket All watercraft in the GP classes, regardless of displacement, may utilize an aftermarket hood.

If the watercraft is equipped with footwells, the footwells must be blocked off, during competition, allowing no indentation into the footwell sides.

The hull may be modified or aftermarket but cannot exceed the length or width of the upper deck component of the bond flange as measured by a plumb bob (bumpers removed). Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

Intake grate may be modified or aftermarket. Intake grate is required and must be the full- length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard.

Aftermarket trim tabs, either fixed, automatic and/or rider controlled, may be used. Original equipment trim plates that are detachable from the hull may be removed or replaced when installing aftermarket trim tabs. All hull extensions mounted on the hull's transom will be considered as a trim tab. All edges must be radiused so as not to create a hazard.

Replacement bumpers may be used provided a hazard is not created.

A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables are allowed.

Ski Handlepole (and mounting bracket) may be modified or aftermarket provided it functions as originally designed. Handlepole attaching point may be reinforced.

Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Engine compartment foam may be removed, modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation. The number, type, and placement of rings on the piston may be changed.

OEM crankcases may be interchanged between homologated watercraft of any OEM manufacturer. Internal modifications to the fuel, oil and/or water exposed surfaces are allowed. Bearing and seal surfaces may not be modified. Filler material may be added to hollow pockets in the base gasket areas. Ignition/stator mounting area modifications are limited to spot facing, drilling and tapping threads for the purpose of mounting an aftermarket or modified ignition system.

Additional carburetor pulse line fittings may be installed. The crankcase drain system may be removed or plugged. Additional mounting holes, not to exceed 10.00mm diameter, are allowed provided they do not penetrate the internal surface of the cases.

Base gasket and intake surfaces may be machined. Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. External modifications to the crankcase finish (plating, polishing and/or painting) are allowed for cosmetic purposes only. No other external modifications or external repairs will be allowed.

Cylinder and cylinder head may be modified or aftermarket.
Crankshaft assembly may be modified or aftermarket. Stroke and rod length may be changed.

Engine bed and motor mounts may be modified or aftermarket. The engine may be repositioned in the hull. Engine gaskets may be modified or aftermarket.

Exhaust system (i.e., manifold, head pipe, expansion chamber, waterbox, muffler(s), etc.) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. Exit location of the exhaust gases may be relocated to the transom below the bond flange. No tuned portion of the exhaust system shall protrude outside the hull.

The cooling system may be modified or aftermarket. Aftermarket cooling lines and water bypass systems may be used. Bypass fittings may be modified, aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, solenoids, etc.). Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

Replacement starter motor and bendix may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment. Stripped threads can be repaired.

Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket crankcase pressure operated fuel pumps may be used. Fuel fillers may be relocated internally.

Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the

engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

Aftermarket fuel-injection systems are allowed provided the following regulations are adhered to: High-pressure fuel hose meeting SAE J30R9 must be used; A.N. threaded-type fittings or equivalent and non-removable, crimped-type clamps must be used on the high-pressure portion of the system (hose clamps, tie wraps, are not allowed), only metal-type fuel filters may be used on the high pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

Intake silencer may be removed.

Reed valve assemblies may be modified or aftermarket. Rotary valves may be modified or aftermarket.

Ignition system, electrical box, flywheel and flywheel cover may be modified or aftermarket. Battery charging circuit may be disabled and/or removed.

An additional battery and battery box may be used. Batteries must fit into a proper battery box and be securely fastened. Batteries may be relocated.

Engine temperature sensor assembly may be disconnected and/or removed.

Engine blocks may be interchanged between homologated watercraft of any OEM manufacturer. Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

Repairs to the cylinder head affecting one cylinder bank are allowed. The head gasket surface may be machined.

Aftermarket valve train components are allowed, providing the original method of activation is maintained (if originally activated by a camshaft, they may not be converted to solenoid activation). Valves may be shimmed with OEM or aftermarket shims. Valve springs may be modified or aftermarket.

Camshaft(s) may be aftermarket. The number of camshafts must be the same as original. Original bearing type and dimensions must be used. Cam timing may be changed. Cam gears, tensioners, chain or belt may be modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation.

Crankshaft may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

Engine balancing assemblies may be modified, aftermarket, or removed.

Aftermarket connecting rods made of ferrous materials are allowed. Rod length may be changed.

Exhaust system (manifold, connecting pipes, hoses, muffler) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. No tuned portion of the exhaust system may protrude outside of the hull. Exit location of the exhaust gases may be relocated to the transom below the bond flange.

The cooling system may be modified or aftermarket. Additional cooling lines may be added. Aftermarket water bypass systems may be used. Cooling system bypass fittings may be modified or aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (thermostats, pressure regulators, solenoids). Manually controlled devices (by means of actuation) that alter the flow of cooling water during operation are not allowed. Original cooling system thermostat may be removed, modified or aftermarket. Cooling system flush kits are allowed.

Baffles in oil reservoirs may be modified. The addition of baffles in oil reservoirs is allowed. Oil pumps may be modified or aftermarket.

Valve cover may be replaced for cosmetic purposes and/or weight reduction only.

Replacement starter motor and bendix may be used.

Replacement engine mounts may be used.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, fuel filters, oil filters, clamps and fasteners) shall not be restricted to original equipment. Stripped threads may be repaired. Fasteners may integrate locking mechanisms.

FOUR-STROKE 1200 CC AND LESS

Engine blocks may be interchanged between homologated watercraft of any OEM manufacturer so long as the displacement of the donor engine was 1100 or less as furnished by the manufacturer. Original OEM engine blocks must be used. Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

Repairs to the cylinder head affecting one cylinder bank are allowed. The head gasket surface may be machined.

Aftermarket valve train components are allowed, providing the original method of activation is maintained (e.g., if originally activated by a camshaft, they may not be converted to solenoid activation). Valves may be shimmed with OEM or aftermarket shims. Valve springs may be modified or aftermarket.

Camshaft(s) may be aftermarket. The number of camshafts must be the same as original. Original bearing type and dimensions must be used. Cam timing may be changed. Cam gears, tensioners, chain or belt may be modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine displacement must not exceed class designation.

Crankshaft may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

Engine balancing assemblies may be modified, aftermarket, or removed.

Aftermarket connecting rods made of ferrous materials are allowed. Rod length may be changed.

Exhaust system (manifold, connecting pipes, hoses, muffler) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. No tuned portion of the exhaust system may protrude outside of the hull. Exit location of the exhaust gases may be relocated to the transom below the bond flange

The cooling system may be modified or aftermarket. Additional cooling lines may be added. Aftermarket water bypass systems may be used. Cooling system bypass fittings may be modified or aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (thermostats, pressure regulators, solenoids). Manually controlled devices (by means of actuation) that alter the flow of cooling water during operation are not allowed. Original cooling system thermostat may be removed, modified or aftermarket. Cooling system flush kits are allowed.

Baffles in oil reservoirs may be modified. The addition of baffles in oil reservoirs is allowed. Oil pumps may be modified or aftermarket.

Valve cover may be replaced for cosmetic purposes and/or weight reduction only.

Replacement starter motor and bendix may be used.

Replacement engine mounts may be used.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, fuel filters, oil filters, clamps and fasteners) shall not be restricted to original equipment. Stripped threads may be repaired. Fasteners may integrate locking mechanisms.

The original fuel injectors may be modified to increase fuel-flow rate. Aftermarket fuel injectors that increase fuel flow are allowed provided they must not increase airflow into the combustion chamber. Fuel rail and fuel regulator may be modified or aftermarket. Additional fuel injectors may be added. Aftermarket fuel pumps are allowed provided that when the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off fuel pumps are allowed. High-pressure fuel hose meeting SAE J30R9 must be used; only metal type fuel filters may be used on the high-pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system.

Throttle body may be modified or aftermarket. The number of butterflies may be increased but may not exceed the number of cylinders. Intake manifold assembly may be modified or aftermarket.

Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. Carburetors may be used in addition to or in place of

the fuel-injection system. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket air-pulse-pressure operated fuel pumps may be used.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

DRIVELINE

Impeller, impeller housing, stator vane assembly, pump mounting plate and/or pump shoe may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket.

Overall length of the complete pump and nozzle assembly may be no more than 50.00mm longer than original equipment. Aftermarket nozzle trim systems may be used. Additional cooling fittings may be installed. Visibility spout must be removed or plugged. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet.

Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump.

SKI STOCK CLASSES *(& Veterans 35+ Stock)*

- **YAMAHA 4-STROKE SUPERJET**
- **KAWASAKI SXR1500**

SSK.1 SKI STOCK CLASS COMPETITION Intended to promote interest in Ski type personal watercraft competition, at a baseline level, and to enable individuals to become active competitors with relatively modest investment and maintenance costs. Watercraft competing in these classes must conform to the specifications which follow. Note: classes may be offered that have greater restrictions than these Stock Class Provisions. THE SKI STOCK CLASS COMPETITION IS EXCLUSIVELY FOR THE 1500CC BASED KAWASAKI SX-R & YAMAHA TR1 4-STROKE SUPERJET.

SSK.1.1 All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if the changes allow for no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer. NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

SSK.1.2 Original equipment parts may be updated or backdated to newer original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications.

SSK.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.).

SSK.1.4 Engine fuel must consist of gasoline meeting the criteria allowed (see Appendix).

SSK.2 HULL

SSK.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed. S

SK.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). Other than for the use of fasteners and the placement of allowable relocated parts (i.e., ECU), the bulkhead may not be modified.

SSK.2.3 All watercraft may be equipped with a maximum of four sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50in). No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm (1.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

Sponsons may be attached to the inside of the bond flange, but no part of the sponson may extend more than 38.00mm (1.500 in.) below the lower part of the bond flange (bumper removed). Sponsons attached to the inside of the bond flange shall not protrude outside the bond flange (bumper removed) when measured in a level horizontal plane. Sponsons attached

to the inside of the bond flange may be recessed so long as the entire portion of the sponson below the bond flange maintains 6mm (0.24 in.) The total sponson length shall be limited to 1,524 mm (90 in) in a single or two sponson configuration. The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

SSK.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

SSK.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100.00mm (3.94 in.) beyond the end of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagram in Appendix.)

SSK.2.6 Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created (i.e., aluminum in place of plastic). See Glossary of Terms for definition of Replacement and Replica.

SSK.2.7 Replacement bumpers may be used provided a hazard is not created.

SSK.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

SSK.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will be allowed. Handlepole (and mounting bracket) may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

SSK.2.10 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

SSK.2.11 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

SSK.2.12 Engine compartment ventilation tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged (i.e., when the tube is removed, the opening may not be larger than stock). Vents may be shielded or plugged. No other modifications to the hood will be allowed.

SSK.2.13 Ballast weight may be added within the normally exposed areas of the hull to alter the handling of the watercraft provided a hazard is not created. Only weight consisting of constant mass (i.e., water or other fluid is not allowed) that does not require the modification or relocation of any parts will be allowed unless such modification or relocation is specified by other rules.

SSK.3 ENGINE — FOUR-STROKE

SSK.3.1 Engines may be bored. Replacement piston assemblies may be used provided the original compression ratio, dome profile, skirt length and shape and type of material are not changed. Nonconforming pistons (i.e. skirt shape that is not an exact replica of the OEM piston) may be approved by the IJSBA but such approval must be obtained in writing. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed class designation unless otherwise noted. Chamfering of

cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.). Cylinder head combustion chambers may be cleaned by bead blasting with valves seated in place. Intake and exhaust ports may not be bead blasted or cleaned with abrasive material such as steel wool or Scotch-Brite®. Repairs to the cylinder head affecting one cylinder bank are allowed.

SSK.3.2 Crankshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

SSK.3.3 Camshaft(s) must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions. Camshaft timing may be changed. Adjustable timing sprockets may be affixed to camshafts.

SSK.3.4 Intake and exhaust valves may be shimmed with OEM or aftermarket shims. Valves and valve seats are not restricted to OEM providing that any replacement valves or seats maintain the OEM weights and dimensions.

SSK.3.5 Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and after market water bypass fittings may be added. Additional supply from the propulsion pump is allowed. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not

be added to the engine block. Any existing fitting which does not have a water supply line (i.e. anode) maybe replaced with a water supply line so long as the thread diameter is not changed. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, etc.). Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

SSK.3.6 Valve cover may be modified or replaced for cosmetic purposes and/or weight reduction only.

SSK.3.7 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts.

With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. The base gasket cannot be thicker than 0.8mm (0.032in). Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as supplied by the manufacturer. 2) Stripped threads must be repaired to the original size. 3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms. SSK.3.8 Aftermarket valve springs and valve spring retainers may be used.

SSK.4 AIR/FUEL DELIVERY — FOUR-STROKE

SSK.4.1 Electronic fuel-injection systems: Flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. If not equipped with an airflow sensor, the ducting between the flame arrestor and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. Idle control may be modified to change or cease idle speed. Oil catch cans may be added to the fuel system.

SSK.4.2 Carbureted induction systems: Flame arrestors that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications will be allowed.

SSK.4.3 Fuel injectors and fuel pump must remain stock.

SSK.5 IGNITION AND ELECTRONICS — FOUR-STROKE

SSK.5.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

SSK.5.2 The original electronic control unit may be reprogrammed so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

SK.5.3 Aftermarket spark plugs with a different heat rating may be used.

SSK.6 DRIVELINE

SSK.6.1 Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM internal diameter specifications

may be used. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

SSK.6.2 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (e.g., pump stator, reduction nozzle, etc.).

4-STROKE LITES CLASSES

- YAMAHA 4-STROKE SUPERJET

FSKL.1 FOUR STROKE SKI LITES CLASS COMPETITION

Intended to promote interest in contemporary Ski type personal watercraft competition, at a baseline level, on watercraft that are widely sold through the common retail market. The focus of this category is to enable individuals to become active competitors with relatively modest investment and maintenance costs. Watercraft competing in these classes must conform to the specifications which follow. Note: classes may be offered that have greater restrictions than these Stock Class Provisions. Four Stroke Ski Lites is based off of OEM Ski PWC with a maximum displacement of 1100cc as furnished by the manufacturer. Only SKI originally equipped with Four Stroke Engines are allowed in the Four Stroke Ski Lites Class. At the time of this posting the only homologated watercraft for Four Stroke Ski Lites is the Yamaha Superjet produced 2021 and after.

FSKL.1.1 All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if the changes allow for no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer. NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

FSKL.1.2 Original equipment parts may be updated or backdated to newer original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications.

FSKL.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.).

FSKL.1.4 Engine fuel must consist of gasoline meeting the criteria defined (see Appendix).

FSKL.2 HULL

FSKL.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

FSKL.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). Other than for the use of fasteners and the placement of allowable relocated parts (i.e., ECU), the bulkhead may not be modified.

FSKL.2.3 All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50in). No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm (1.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

Sponsons may be attached to the inside of the bond flange, but no part of the sponson may extend more than 38.00mm (1.500 in.) below the lower part of the bond flange (bumper removed). Sponsons attached to the inside of the bond flange shall not protrude outside the

bond flange (bumper removed) when measured in a level horizontal plane. Sponsons attached to the inside of the bond flange may be recessed so long as the entire portion of the sponson below the bond flange maintains 6mm (0.24 in.) . The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

FSKL.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full- length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 11.00mm (0.47 in.) below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

FSKL.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100.00mm (3.94 in.) beyond the end of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagram in Appendix.)

FSKL.2.6 Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created (i.e., aluminum in place of plastic). See Glossary of Terms for definition of Replacement and Replica.

FSKL.2.7 Replacement bumpers may be used provided a hazard is not created.

FSKL.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

FSKL.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will be allowed. Handlepole (and mounting bracket) may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

FSKL.2.10 Padding and/or mat kits may be added and custom painting is allowed. Integrated grab handles, within the tray area, may be covered. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

FSKL.2.11 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

FSKL.2.12 Engine compartment ventilation tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged (i.e., when the tube is removed, the opening may not be larger than stock). Vents may be shielded or plugged. No other modifications to the hood will be allowed.

FSKL.2.13 Ballast weight may be added within the normally exposed areas of the hull to alter the handling of the watercraft provided a hazard is not created. Only weight consisting of constant mass (i.e., water or other fluid is not allowed) that does not require the modification or relocation of any parts will be allowed unless such modification or relocation is specified by other rules.

FSKL.3 ENGINE — FOUR-STROKE FSKL.3.1

Engines may be bored. Replacement piston assemblies may be used provided the original compression ratio, dome profile, skirt length and shape and type of material are not changed. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.). Cylinder head combustion chambers may be cleaned by bead blasting with valves seated in place. Intake and exhaust ports may not be bead blasted or cleaned with abrasive material such as steel wool or Scotch-Brite®. Repairs to the cylinder head affecting one cylinder bank are allowed.

FSKL.3.2 Repairs may be made to cracked or damaged cylinders by installing a cylinder sleeve. The head gasket surface of the cylinder block may be machined only to allow for the installation of the new sleeves (see appendix for description). A thicker head gasket must be utilized to return the block deck height to within .155mm (.006in) of original height. The repair must offer no additional performance gains. FSKL.3.3 Crankshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

FSKL.3.4 Camshaft(s) must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions. Camshaft timing may be changed. Adjustable timing sprockets may be affixed to camshafts.

FSKL.3.5 Engine and Oil Cooler water cooling systems must remain as OEM. Water strainers (filters) may be modified or aftermarket. Intercooler assembly/housing must remain OEM. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed. Any fitting (anode, etc.) may be replaced with a water supply

FSKL.3.6 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used

but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. The base gasket cannot be thicker than 0.8mm (0.032in). Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as

supplied by the manufacturer. 2) Stripped threads must be repaired to the original size. 3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms. 4) Replacement hoses and fuel lines may not provide any other function than original equipment hoses. Changes in temperature tolerances are allowed.

FSKL.3.6 Exhaust manifolds that have previously been drilled or tapped may be used so long as the holes are filled or capped. Aftermarket hose/piping may be used for routing the exhaust from the water box to the exhaust outlet pipe, this allows for modifying or removing the OEM restrictive sound suppression system which is part of that assembly. No modification to the water box or exhaust manifold outlet are allowed.

FSKL.3.7 IJSBA Approved aftermarket valves, valve springs, and valve spring retainers may be used.

FSKL.4 AIR/FUEL DELIVERY — FOUR-STROKE

FSKL.4.1 Electronic fuel-injection systems: Flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. If not equipped with an airflow sensor, the ducting between the flame arrestor and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. All portions of the intake manifold, including screens or other filtering or spark suppressing devices, must remain as originally equipped. Idle control may be modified to change or cease idle speed. Oil catch cans may be added to the fuel system..

FSKL.4.2 Fuel injectors and fuel pump must remain stock as furnished by the manufacturer.
FSKL.5 IGNITION AND ELECTRONICS — FOUR-STROKE

FSKL.5.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

FSKL.5.2 The original electronic control unit may be reprogrammed so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

FSKL.5.3 Aftermarket spark plugs with a different heat rating may be used.

FSKL.6 DRIVELINE

FSKL.6.1 Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM internal diameter specifications may be used. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

FSKL.6.2 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (e.g., pump stator, reduction nozzle, etc.).

SKI LITES (& Juniors, Womens Lites)

- KAWASAKI SXR800 (all years)
- YAMAHA SUPERJET (1996-2020)
- KAWASAKI 750SX/SXI (all years)

SKL.1 LITES CLASS COMPETITION

Intended to promote interest in Ski type personal watercraft competition, at a baseline level, and to enable individuals to become active competitors with relatively modest investment and maintenance costs. Watercraft competing in these classes must conform to the specifications which follow. Note: classes may be offered that have greater restrictions than these Stock Class Provisions. Ski Lites is a class exclusively for Kawasaki SX-R, Yamaha SuperJet, AND Kawasaki 750 SX/SXI. Only SKI equipped with Two Stroke Engines will be allowed in the Ski Lites Class.

SKL.1.1 All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if the changes allow for no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer.

NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

SKL.1.2 Original equipment parts may be updated or backdated to newer original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications.

SKL.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.).
SKL.1.4 Engine fuel must consist of gasoline meeting the criteria (see Appendix).

SKL.2 HULL

SKL.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

SKL.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). Other than for the use of fasteners and the placement of allowable relocated parts (i.e., ECU), the bulkhead may not be modified.

SKL.2.3 All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50in). No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm (1.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

Sponsons may be attached to the inside of the bond flange, but no part of the sponson may extend more than 38.00mm (1.500 in.) below the lower part of the bond flange (bumper removed). Sponsons attached to the inside of the bond flange shall not protrude outside the bond flange (bumper removed) when measured in a level horizontal plane. Sponsons attached to the inside of the bond flange may be recessed so long as the entire portion of the sponson below the bond flange maintains 6mm (0.24 in.) The total sponson length shall be limited to 1,524 mm (60 in) in a single or two sponson configuration. The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

SKL.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full-length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 11.00mm (0.47 in.) below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

SKL.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100.00mm (3.94 in.) beyond the end of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagram in Appendix.)

SKL.2.7 Mounting brackets for hull extensions or trim tabs, that may be allowed in other categories, may be left intact during Ski Lites competition but the extensions or trim tabs may not be used in Ski Lites.

SKL.2.6 Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created (i.e., aluminum in place of plastic). See Glossary of Terms for definition of Replacement and Replica.

SKL.2.7 Replacement bumpers may be used provided a hazard is not created.

SKL.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

SKL.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will be allowed. Handlepole (and mounting bracket) may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

SKL.2.10 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

SKL.2.11 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

SKL.2.12 Engine compartment ventilation tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged (i.e., when the tube is removed, the opening may not be larger than stock). Vents may be shielded or plugged. No other modifications to the hood will be allowed.

SKL.2.13 Ballast weight may be added within the normally exposed areas of the hull to alter the handling of the watercraft provided a hazard is not created. Only weight consisting of constant

mass (i.e., water or other fluid is not allowed) that does not require the modification or relocation of any parts will be allowed unless such modification or relocation is specified by other rules.

SKL.3 ENGINE — TWO-STROKE

SKL.3.1 Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Non-conforming pistons (i.e. skirt shape that is not an exact replica of the OEM piston) may be approved by the IJSBA but such approval must be obtained in writing. Replacement piston assemblies must weigh within ±25.00% of original equipment. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.). The maximum displacement that may be achieved, on a Two Stroke engine, in Ski Lites is 850cc.

SKL.3.2 Crankshaft may be rebuilt using replacement counterweights, crank pins, bearings and connecting rods. Counterweights, crank pins and connecting rods made of non- ferrous metals are not allowed. Stroke and rod length may not be changed. Counterweights on non-rebuildable style crankshafts may be machined to accept a press-through crank pin. Replacement bearings must maintain their original type and dimensions. Replacement counterweights must resemble the original part (i.e., holes and/or pockets not existing on the original part may not be on the replacement part). Total weight of the crankshaft assembly must be within ±5.00% of original equipment. Crankpins may be welded and/or keyed to the counterweights.

SKL.3.3 Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. No other modifications or repairs are allowed.

SKL.3.4 External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

SKL.3.5 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any engine components.

SKL.3.6 Exhaust system must remain stock as supplied by the manufacturer. An insert may be added to reduce the inside diameter of the stinger portion of the exhaust system. Cooling lines may be added to the insert only. A cooling line may be added to the stinger portion of the exhaust system where an insert is not utilized.

SKL.3.7 Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and after market water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread

diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, etc.). Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

SKL.3.8 Replacement starter motor and bendix may be used. SKL.3.9 Replacement engine mounts may be used. SKL.3.10 Oil-injection system may be disconnected or removed.

SKL.3.11 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. 2) Base gasket cannot be thicker than 0.8mm (0.032in). 3) Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer.

Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as supplied by the manufacturer. Engines that have a displacement of less than 780cc shall be allowed a minimum head gasket thickness of .75mm (0.03 in) with a tolerance of —--10% and a base gasket thickness of .5mm (0.02 in) with a tolerance of +/- 10%. 2) Stripped threads must be repaired to the original size. Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms.

SKL.3.12 Cylinders may be interchanged between homologated watercraft of the same manufacturer subject to restrictions announced by the IJSBA. Any modifications to the cylinder or crankcase must be approved, in writing, by the IJSBA.

SKL.3.12 does not provide for a displacement within 10% of the maximum allowable displacement (850cc) then an aftermarket cylinder sleeve may be utilized. The aftermarket sleeve must maintain the same port sizes and specifications as the original OEM cylinder sleeve.

SKL.4 AIR/FUEL DELIVERY — TWO-STROKE

SKL.4.1 Aftermarket flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine standards may be used. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications will be allowed.

SKL.4.2 The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel pickup, fuel filler, fuel filter, fuel tap assembly and relief valve must be used and cannot be modified. Fuel

petcock may be bypassed. Additional fuel filters may be used. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

SKL.4.3 Reed valve petals may be modified or aftermarket. Reed cage assemblies must remain as originally equipped by the manufacturer.

SKL.5 IGNITION AND ELECTRONICS — TWO-STROKE

SKL.5.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

SKL.5.2 The original electronic control unit may be modified or aftermarket so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

SKL.5.3 Ignition timing may be altered by slotting the ignition trigger mounting plate. An adapter plate may be used for the sole purpose of relocating the ignition trigger.

SKL.5.4 Aftermarket spark plugs with a different heat rating may be used.

SKL.6 DRIVELINE

SKL.6.1 Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM internal diameter specifications may be used. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

SKL.8.2 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (e.g., pump stator, reduction nozzle, etc.).

RUNABOUT OPEN

SKI MODELS ALLOWED:

YAMAHA, SEADOO, KAWASAKI

RSS.1 SUPERSTOCK CLASS COMPETITION

Intended to promote interest in personal watercraft competition with opportunities for very high modifications and performance while maintaining many of the OEM features of the watercraft.

Watercraft competing in this class must conform to the specifications which follow. Competitors must possess an Expert or Pro license to compete in this category. Only Four Stroke Engines are permitted in this category of racing.

RSS.1.1 All watercraft must remain strictly stock (all Limited Class provisions are allowed in Superstock Class unless otherwise noted), except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. intercooler end caps, brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if they allow for no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer. NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

RSS.1.2 Original equipment parts may be updated or backdated with original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications. (Refer to Model Homologation listing online).

RSS.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.). See Section Appendix.
RSS.1.4 Engine fuel must consist of gasoline meeting the criteria defined in Appendix.

RSS.2 HULL

RSS.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

RSS.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). Handles, drop-in type storage buckets, bolt-on type mirrors and gauges may be modified, aftermarket or removed provided a hazard is not created. Drop-in type buckets are defined as being able to be removed without the use of any tool. Other than for the use of fasteners and the placement of allowable relocated parts (i.e., Exhaust, ECU), the bulkhead may not be modified.

RSS.2.3 All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50 in.). No part of

the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 63.5mm (2.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

RSS.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the fulllength type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area of the hull. All leading edges must be radiused so as not to create a hazard.

RSS.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 177.80mm (7.00 in.) beyond the end of the original equipment plate. The extension must be connected to the radiused portion of the pump plate so as not to create a hazard. (See diagram in Appendix.) Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

RSS.2.6 Aftermarket fixed-position trim tabs may be used. Original equipment trim plates that are detachable from the hull may be removed or replaced when installing aftermarket trim tabs. Trim tabs cannot exceed the width of the planing surface or extend rearward more than 100.00mm (3.94 in.) beyond the end of the original planing surface. Manual or automatic trim tabs attached to the hull or ride plate are not allowed. All hull extensions mounted on the hull’s transom will be considered as a trimtab. All edges must be radiused so as not to create a hazard. Fins, skegs, rudders and other appendages that may create a hazard are not allowed.

RSS.2.7 Replacement bumpers may be used provided a hazard is not created.

RSS.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

RSS.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables will be allowed.

RSS.2.10 7.2.10 Seat assembly may be aftermarket. Seat height may be changed.

RSS.2.11 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the area above the hull bond flange may be polished, shot peened or painted.

RSS.2.12 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

RSS.2.13 Engine compartment foam may be removed, modified or aftermarket. Only floatation foam within the engine compartment may be removed. Only foam that can be removed without modification to any other part or parts, except where rules allow the parts to be modified, is allowed. Parts may not be relocated based on the removal of the foam. The hull's inner liner or deck may not be cut or modified to remove foam. Removal of foam between layers of the hull and/or deck is not allowed.

RSS.2.14 Engine compartment ventilation tubes may be modified, aftermarket, relocated on the original equipment ducting, or removed. Inlet and outlet openings may not be enlarged (i.e., when the tube is removed, the opening may not be larger than stock). Vents may be shielded or plugged. No other modifications to the hood will be allowed (covers and cowlings are included in this restriction).

RSS.2.15 Handles, drop-in type storage buckets, bolt-on type mirrors and gauges may be modified, aftermarket or removed provided a hazard is not created.

RSS.2.16 Ballast weight may be added within the normally exposed areas of the hull to alter the handling of the watercraft provided a hazard is not created. Only weight consisting of constant mass (i.e., water or other fluid is not allowed) that does not require the modification or relocation of any parts will be allowed unless such modification or relocation is specified by other rules.

RSS.2.17 Original equipment braking devices may be disabled for safety purposes. Reverse buckets may be removed or disabled.

RSS.3 ENGINE — FOUR-STROKE

RSS.3.1 Engine blocks may be interchanged between homologated watercraft of any OEM manufacturer except in the case of the 2017 Kawasaki SX-R which must use the engine block furnished by the manufacturer. Original OEM engine blocks must be used. Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

RSS.3.2 Pistons may be aftermarket. The entire crankshaft assembly, including connecting rods, may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

RSS.3.3 The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

RSS.3.4 External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

RSS.3.5 Engine, Intercooler, and Oil Cooler water cooling systems may be modified or aftermarket. Additional water cooling lines and after market water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Intercooler assembly/housing must remain OEM in stock class, additional cooling supply lines and bypass fittings may be added to the OEM Intercooler Housing. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Volume changes to OEM water supply fittings are not allowed. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Intercooler pressure relief valves (mechanical) are allowed for the purposes of regulating water pressure. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, etc.). Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

RSS.3.6 Replacement starter motor and bendix may be used.

RSS.3.7 Replacement engine mounts may be used.

RSS.3.8 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) and thickness as their OEM counterparts 2) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms.

RSS.3.9 Camshafts may be modified or aftermarket.

RSS.3.10 Valves may be modified or aftermarket. Valve seats may be modified. Springs may be modified or aftermarket. Pushrods may be modified or aftermarket. Replacement valves, pushrods, and seats may not be titanium unless originally equipped.

RSS.3.11 Blow off valves may be added to extend engine life. A vacuum line and fitting may be added to the intake manifold to accommodate a blow off valve.

RSS.3.12 Aftermarket valve spring retainers may be used.
RAL.3.13. The exhaust system may be aftermarket providing a hazard is not created.

RSS.4 ENGINE — TWO-STROKE

RSS.4.1 Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed class designation (e.g., 550cc in 550 Limited, 800cc in 800 Limited, etc.). Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.) Cylinders may be machined to accept girdle system cylinder heads.

RSS.4.2 Crankshaft may be rebuilt using replacement counterweights, crank pins, bearings and connecting rods. Counterweights, crank pins and connecting rods made of non-ferrous metals are not allowed. Stroke and rod length may not be changed. Counterweights on non-rebuildable style crankshafts may be machined to accept a press-through crank pin. Replacement bearings must maintain their original type and dimensions. Replacement counterweights must resemble the original part (i.e., holes and/or pockets not existing on the original part may not be on the replacement part). Total weight of the crankshaft assembly must be within ±5.00% of original equipment. Crankpins may be welded and/or keyed to the counterweights.

RSS.4.3 Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Crankcase drain and cable may be removed and plugged. No other modifications or repairs are allowed.

RSS.4.4 External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

RSS.4.5 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any engine components.

RSS.4.6 Cylinder head and gasket may be modified or aftermarket.

RSS.4.7 Exhaust manifold, head pipe, expansion chamber, gaskets and hose between expansion chamber and OEM waterbox may be modified/altered or aftermarket. Exhaust location of the exhaust gases may be relocated. Original size opening must be maintained for exhaust exit. Original equipment waterbox must be used and may not be modified. No tuned portion of the exhaust shall protrude outside the hull. The through-hull exhaust outlet flap may be removed. Two Stroke and Four Stroke Runabout Limited classes: Removal of the plastic resonator is allowed.

RSS.4.8 Cooling system may be modified or aftermarket. Aftermarket cooling lines and water bypass systems may be used. Additional cooling supply lines and fittings may be added to the pump. Bypass fittings may be modified, aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, solenoids, etc.). Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

RSS.4.9 Replacement starter motor and bendix may be used. RSS.4.10 Replacement engine mounts may be used. RSS.4.11 Oil-injection system may be disconnected or removed.

RSS.4.12 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following:

1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. The base gasket cannot be thicker than 1.52mm (0.060in).

2) Stripped threads must be repaired to the original size.

3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms.

RSS.4.13 Cylinders may be interchanged between homologated watercraft of the same manufacturer subject to restrictions announced by the IJSBA. Any modifications to the cylinder or crankcase must be approved, in writing, by the IJSBA.

RSS.5 AIR/FUEL DELIVERY — FOUR-STROKE

RSS.5.2 The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock assembly may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

RSS.5.3 Throttle bodies must remain stock as supplied by the manufacturer. No changing of throttle plate angles and/or modifications to the throttle body housing. Intake manifold assembly may be modified or aftermarket.

RSS.5.4 Electronic fuel-injection systems: Flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. If not equipped with an airflow sensor, the ducting between the flame arrestor and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. No modifications to the turbocharger and supercharger system, if applicable, are allowed.

RSS.5.5 Carbureted induction systems: Flame arrestors that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications will be allowed.

RSS.5.6. Fuel pumps may be modified or aftermarket provided a hazard is not created. Fuel pressure regulators may be modified or aftermarket for safety purposes. Fuel return lines must be installed in the fuel pump assembly without modification to the tank. The Race Director or Technical Director shall have final discretion as to whether a fuel return line has been installed sufficiently for safe use in competition.

RSS.5.7 Fuel injectors may be modified or aftermarket. RSS.5.8 Aftermarket Valve Spring Retainers may be used so long as OEM valve springs are used.

RSS.6 TURBOCHARGER/SUPERCHARGER

RSS.6.1 Turbocharger housing must be of the full circulating, water-jacket type at all times when the engine is running. Aftermarket turbochargers and superchargers may be used provided a hazard is not created. Original turbocharger or supercharger may be modified. Aftermarket turbochargers and superchargers may be added to originally normally aspirated, four stroke, watercraft. All hoses and pipes may be modified or aftermarket. Where the Race Director, or Technical Inspector, cannot determine if a turbocharger is sufficiently water-jacketed then a heat wrap and/or additional cooling mechanisms may be added to ensure safety.

RSS.6.2 Intercooler may be modified or aftermarket. RSS.6.3 Boost pressure-relief valve may be modified or aftermarket. RSS.6.4 Boost sensor may be modified or aftermarket.

RSS.7 AIR/FUEL DELIVERY — TWO-STROKE

RSS.7.1 Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any altitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket crankcase-pressure-operated fuel pumps may be used. Additional carburetor pulse line fittings may be installed on the crankcase.

RSS.7.2 Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/offtype fuel pumps are allowed.

RSS.7.3 Aftermarket fuel-injection systems and components are allowed provided the following regulations are adhered to: High pressure fuel hose meeting SAE J30R9 must be used; A.N. threaded type fittings or equivalent and non-removable, crimped- type clamps must be used on the high-pressure portion of the system (i.e., hose clamps, tie wraps, etc. are not allowed); only metal-type fuel filters may be used on the high-pressure portion of the system; all other in-line filters must be installed on the low pressure portion of the system. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

RSS.7.4 The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock assembly may be removed and/or after-market parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

RSS.7.5 Flame arrester(s) which satisfy United States Coast Guard, SAE-J1928 Marine or UL-1111 Marine backfire flame arrester test standards must be installed. Aftermarket flame arresters satisfying one of these test standards will be allowed. Intake silencer may be removed.

RSS.7.6 Reed valve assemblies may be modified or aftermarket. Rotary valves may be modified or aftermarket.

RSS.8 IGNITION AND ELECTRONICS — FOUR-STROKE

RSS.8.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

RSS.8.2 The original electronic control unit may be modified or aftermarket so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

RSS.8.3 Ignition timing may be altered by slotting the ignition trigger mounting plate. An adapter plate may be used for the sole purpose of relocating the ignition trigger.

RSS.8.4 Aftermarket spark plugs with a different heat rating may be used.

RSS.8.5 AFR gauges may be affixed to the exhaust system providing the AFR gauge is not attached to, or can communicate with, the ECU or any automatic tuning device on the watercraft.

RSS.9 IGNITION AND ELECTRONICS — TWO-STROKE

RSS.9.1 RPM limiter function may be bypassed or eliminated. CDI units may be modified or aftermarket. Ignition timing may be changed. Modifications to the original equipment ignition pickup mount will be allowed. The original equipment charging system must be used. No other ignition system modifications will be allowed.

RSS.9.2 Flywheel cover may be modified to accept a crankshaft-end bearing support.

RSS.9.3 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

RSS.9.4 Engine temperature sensor may be disconnected and/or removed.

RSS.9.5 Relocation of electrical components (e.g., battery, box or housing) is allowed in order to fit an aftermarket exhaust system (only the strict minimum needed). Modification will be subject to Race/Tech Directors' approval.

RSS.10 DRIVELINE

RSS.10.1 Impeller housing, stator vane assembly, pump mounting plate and/or pump shoe may be modified or aftermarket. No titanium driveshaft, impeller housing or stator vane assemblies. Impeller may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket. Overall length of the complete pump and nozzle assembly may be no more than 50.00mm (1.97 in.) longer than original equipment. Aftermarket nozzle-trim systems may be used. Additional cooling fittings may be installed. Visibility spout must be removed or plugged. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump.

RUNABOUT NATURALLY ASPIRATED

RNA.1 RUNABOUT STOCK CLASS COMPETITION

Intended to promote interest in personal watercraft competition and to enable individuals to become active competitors with low investment and maintenance costs while maintaining conservative speeds with a diverse amount of historical watercraft. This category of competition combines Four Stroke powered Stock Class watercraft with Two Stroke powered Limited Class watercraft.

RNA.1.1 All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. intercooler end caps, brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if the replacements/modifications result in no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer. NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

RNA.1.2 Original equipment parts may be updated or backdated to original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications. Models with the same designation

(i.e. RXP-X, SHVO, etc.) will generally be considered the same model unless restricted in the homologation listing (See Appendix).

RNA.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.). RNA.1.4 Engine fuel must consist of gasoline meeting the criteria defined (See Appendix).

RNA.2 HULL

RAS.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

RNA.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). Drop-in type storage buckets may be modified, aftermarket or removed provided a hazard is not created.

RNA.2.3 All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50in).

No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm (1.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

RNA.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

RNA.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate.

Modified and aftermarket plates must not extend more than 177.80mm (7.00 in.) beyond the end of the original equipment. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages that create a hazard will not be allowed. (See diagram in Appendix.)

RNA.2.6 Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created (i.e., aluminum in place of plastic). See Glossary of Terms for definition of Replacement and Replica.

RNA.2.7 Replacement bumpers may be used provided a hazard is not created.

RNA.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

RNA.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will be allowed.

RNA.2.10 For Two Stoke Powered Watercraft:

Original equipment seat base must be used. Seat cover may be changed. The OEM seat height cannot be changed by more than +/- 12.7mm (0.5 in). Seat must remain OEM, seat cover can add no more than .5 inch in thickness in any direction.

For Four Stroke Powered Watercraft: Seat assembly may be aftermarket. Seats must adhere to the provisions in the Appendix for Aftermarket Seats.

RNA.2.11 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted. RAS.2.12 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

RNA.2.13 Engine compartment ventilation tubes must remain as originally equipped.

RNA.2.14 Original equipment braking devices may be disabled for safety purposes. Reverse buckets may be removed or disabled (modified to disable reverse function is acceptable so long as a hazard is not created) but trim motors must remain in place.

RNA.3 ENGINE — FOUR-STROKE

RNA.3.1 Engines may be bored. Replacement piston assemblies may be used provided the original compression ratio, dome profile, skirt length and shape and type of material are not changed. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.). Cylinder head combustion chambers may be cleaned by bead blasting with valves seated in place. Intake and exhaust ports may not be bead blasted or cleaned with abrasive material such as steel wool or Scotch-Brite®. Repairs to the cylinder head affecting one cylinder bank are allowed.

RNA.3.2 Repairs may be made to cracked or damaged cylinders by installing a cylinder sleeve. The head gasket surface of the cylinder block may be machined only to allow for the installation of the new sleeves (see appendix for description). A thicker head gasket must be utilized to return the block deck height to within .155mm (.006in) of original height. The repair must offer no additional performance gains.

RNA.3.3 Crankshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

RNA.3.4 Camshaft(s) must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions. Camshaft timing may be changed.

RNA.3.5 Aftermarket valve springs and valve spring retainers may be used.

RNA.3.6 Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and aftermarket water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Engine water cooling systems may be modified or aftermarket. Additional supply from the propulsion pump is allowed. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the engine block. Any existing fitting which does not have a water supply line (i.e. anode) may be replaced with a water supply line so long as the thread diameter is not changed. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, etc.). Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

RNA.3.7 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a

thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. The base gasket cannot be thicker than 0.8mm (0.032in). Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as supplied by the manufacturer. 2) Stripped threads must be repaired to the original size. 3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms. 4) Replacement hoses and fuel lines may not provide any other function than original equipment hoses. Changes in temperature tolerances are allowed.

RAS.3.8 Exhaust manifolds that have previously been drilled or tapped may be used so long as the holes are filled or capped. Exhaust flanges may be removed. RAS.3.9 IJSBA Approved aftermarket valve springs and valve spring retainers may be used.

RAS.4 ENGINE — TWO-STROKE

RNA.4.1 Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Non-conforming pistons (i.e. skirt shape that is not an exact replica of the OEM piston) may be approved by the IJSBA but such approval must be obtained in writing. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed class designation (e.g., 550cc in 550 Stock, 850cc in 850 Stock, etc.) unless otherwise noted. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.).

RNA.4.2 Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. No other modifications or repairs are allowed.

RNA.4.3 External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

RNA.4.4 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any engine components.

RNA.4.6 Cylinder head and gasket may be modified or aftermarket.

RNA.4.7 Exhaust manifold, head pipe, expansion chamber, gaskets and hose between expansion chamber and OEM waterbox may be modified/altered or aftermarket. Exhaust location of the exhaust gases may not be relocated. Original size opening must be maintained for exhaust exit. Original equipment waterbox must be used and may not be modified. No tuned portion of the exhaust shall protrude outside the hull. The through-hull exhaust outlet flap may be removed. Two Stroke and Four Stroke Runabout Limited classes: Removal of the plastic resonator is allowed.

RNA.4.8 Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and aftermarket water bypass fittings may be added. OEM water bypass fittings may be

modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Any valves used within the entire cooling system must be of the

fixed type or automatic (e.g., thermostats, pressure regulators, etc.). Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

RNA.4.7 Replacement starter motor and bendix may be used. RNA.4.8 Replacement engine mounts may be used. RNA.4.9 Oil-injection system may be disconnected or removed.

RNA.4.10 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. The base gasket cannot be thicker than 0.8mm (0.032in). Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as supplied by the manufacturer.

RNA.5 AIR/FUEL DELIVERY — FOUR-STROKE

RNA.5.1 Electronic fuel-injection systems: Flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. If not equipped with an airflow sensor, the ducting between the flame arrester and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. All portions of the intake manifold must remain as originally equipped. Units where a ribbon system is employed as the OEM flame arresting device may have the ribbon removed so long as airflow passage is not increased and sufficient flame suppression is achieved by the air filter. An aftermarket part may be used to retain OEM airflow specifications. The allowance for this provision is not negated if any sales literature or product description defines the part or kit as performance enhancing. No modifications to the turbocharger and supercharger system, if applicable, are allowed.

RNA.5.2 Carbureted induction systems: Flame arrestors that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be

removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications will be allowed.

RNA.5.3 Fuel injectors and fuel pump must remain stock as furnished by the manufacturer. A fuel pressure may be installed for safety purposes.

RNA.6 AIR/FUEL DELIVERY — TWO-STROKE

RNA.6.1 Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any altitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be

modified or aftermarket. Aftermarket crankcase-pressure-operated fuel pumps may be used. Additional carburetor pulse line fittings may be installed on the crankcase.

RNA.6.2 Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off type fuel pumps are allowed.

RNA.6.3 Aftermarket fuel-injection systems and components are allowed provided the following regulations are adhered to: High pressure fuel hose meeting SAE J30R9 must be used; A.N. threaded type fittings or equivalent and non-removable, crimped- type clamps must be used on the high-pressure portion of the system (i.e., hose clamps, tie wraps, etc. are not allowed); only metal-type fuel filters may be used on the high-pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

RNA.6.4 The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock assembly may be removed and/or after-market parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

RNA.6.5 Flame arrester(s) which satisfy United States Coast Guard, SAE-J1928 Marine or UL-1111 Marine backfire flame arrester test standards must be installed. Aftermarket flame arresters satisfying one of these test standards will be allowed. Intake silencer may be removed.

RNA.6.6 Reed valve assemblies may be modified or aftermarket. Rotary valves may be modified or aftermarket.

RNA.7 IGNITION AND ELECTRONICS — FOUR-STROKE

RNA.7.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

RNA.7.2 The original electronic control unit may be reprogrammed so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

RNA.7.3 Aftermarket spark plugs with a different heat rating may be used.

RNA.8 IGNITION AND ELECTRONICS — TWO-STROKE

RNA.8.1 RPM limiter function may be bypassed or eliminated. CDI units may be modified or aftermarket. Ignition timing may be changed. Modifications to the original equipment ignition pickup mount will be allowed. The original equipment charging system must be used. No other ignition system modifications will be allowed.

RNA.8.2 Flywheel cover may be modified to accept a crankshaft-end bearing support.

RNA.8.3 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

RNA.8.4 Engine temperature sensor may be disconnected and/or removed. RAL.8.5 Relocation of electrical components (e.g., battery, box or housing) is allowed in order to fit an aftermarket exhaust system (only the strict minimum needed). Modification will be subject to Race/Tech Directors' approval.

RNA.9 DRIVELINE

RNA.9.1 Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM internal diameter specifications may be used. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

RNA.9.2 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (e.g., pump stator, reduction nozzle, etc.).

RNA.9.3 Two Stroke Watercraft Only: Impeller housing, stator vane assembly, pump mounting plate and/or pump shoe may be modified or aftermarket. No titanium driveshaft, impeller housing or stator vane assemblies. Impeller may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket.

Overall length of the complete pump and nozzle assembly may be no more than 50.00mm (1.97 in.) longer than original equipment. Aftermarket nozzle-trim systems may be used.

Additional cooling fittings may be installed. Visibility spout must be removed or plugged. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump.

RUNABOUT 1100 STOCK

MODELS ALLOWED:

- **YAMAHA EXR**
- **YAMAHA EX**
- **YAMAHA JETBLASTER**
- **SEADOO SPARK**

All watercraft must remain stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not allowed.

Original equipment parts may be updated to newer original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications. Unless offered as the same identical part in the OEM parts/repair manual, parts may not be backdated.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (nylon strap, rope) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm. The interior portion of a hull may not be reinforced. The texture of the exterior surface of the hull need not be consistent with OEM characteristics so long as the shape remains exactly the same as OEM. Drop-in type storage buckets may be modified, aftermarket or removed provided a hazard is not created.

All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Sponsons shall not protrude from the side of the hull by more than 100.00mm when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 2.50in. No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm. Aftermarket or modified sponsons must exceed 6mm in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

Intake grate may be modified or aftermarket. Intake grate is required and must be the full length type with at least one bar running parallel to the drive shaft. All leading edges must be radiused so as not to create a hazard.

Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 7.00 in. beyond the end of the original equipment. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages must not create a hazard.

Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created.

Replacement bumpers may be used provided a hazard is not created.

A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket and the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will also be allowed.

Original equipment seat base must be used. Seat cover and seat shape may be changed. The OEM seat height cannot be changed by more than 2”. Seat must remain OEM, seat cover can add thickness in any direction.

Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Original bilge pump may be modified or disconnected. Aftermarket bilge drainage systems that do not create a hazard are allowed.

Engine compartment ventilation tubes must remain as originally equipped.

Original equipment braking devices may be disabled for safety purposes. Reverse buckets may be removed or disabled (modified to disable reverse function is acceptable so long as a hazard is not created) but trim motors must remain in place.

ENGINE

Engines may be bored. Replacement piston assemblies may be used provided the original compression ratio, dome profile, skirt length and shape and type of material are not changed. Chamfering of cylinder ports must not exceed 1.00mm at a 30 degree maximum angle. Cylinder head combustion chambers may be cleaned by bead blasting with valves seated in place. Intake and exhaust ports may not be bead blasted or cleaned with abrasive material such as steel wool or scotch-brite pads. Repairs to the cylinder head affecting one cylinder bank are allowed.

Repairs may be made to cracked or damaged cylinders by installing a cylinder sleeve. The head gasket surface of the cylinder block may be machined only to allow for the installation of the new sleeves. A thicker head gasket must be utilized to return the block deck height to within .155mm of original height. The repair must offer no additional performance gains.

The crankshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

ECU may be modified or aftermarket.

The camshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions. Camshaft timing may be changed.

Engine and Oil Cooler water cooling systems must remain as OEM. Filters may be modified or aftermarket. Intercooler assembly/housing must remain OEM. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

Replacement of general maintenance parts (gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment. The base gasket cannot be thicker than 0.8mm. Head gaskets must be no thinner than .005mm than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm than the OEM thickness as supplied by the manufacturer.

Stripped threads must be repaired to the original size. Fasteners may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms. Replacement hoses and fuel lines may not provide any other function than original equipment hoses. Changes in temperature tolerances are allowed.

Electronic fuel-injection systems: Flame arresters must be installed. If not equipped with an airflow sensor, the ducting between the flame arrester and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. All portions of the intake manifold must remain as completely stock. Units where a ribbon system is employed as the OEM flame arresting device may have the ribbon removed so long as airflow is not increased and sufficient flame suppression is achieved by the air filter. An aftermarket part may be used to retain OEM airflow specifications.

Carbureted induction systems: Flame arrestors must be installed. Carburetor jets, needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications are allowed.

Fuel injectors and fuel pumps must remain stock.

Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

The original electronic control unit may be reprogrammed so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added, although engine temperature sensors may be disabled.

Aftermarket spark plugs with a different rating can be used.

Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM diameter may be used. Visibility spout must be removed or plugged.

No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening will be allowed on any driveline components, pump stator, and/or nozzle.

RUNABOUT REC LITES

Seadoo Spark, Newest Model Jetblaster, Old Model EX (not EXR)

RRL.1 RUNABOUT REC LITES CLASS COMPETITION

Intended to promote interest in stock personal watercraft competition and to enable individuals to become active competitors with low investment and maintenance costs. The goal of Stock Class racing is to have nearly identical characteristics to the watercraft that come off of the showroom floor with a focus on provisions for safety and handling in a competition environment. Watercraft competing in these classes must conform to the specifications which follow which will be strictly interpreted. Note: classes may be offered that have greater restrictions than these Stock Class Provisions. Such class offerings must be named to differentiate the applicable rules (i.e. Showroom Stock, etc.)

Runabout Rec Lites is a Stock Class designed for runabouts that are intended for the entry level recreation market. To be eligible for the Rec Lites division, the qualifying runabout must be powered by a naturally aspirated four stroke engine and have a base Manufacturers Suggested Retail Price, in the United States, of less than $10,000 USD. As of January 1, 2021 there are two models eligible for participation in the Runabout Lites Class: The Sea-Doo Spark (all years and models) and the Yamaha EX (all years and models excluding the EXR). This category is for naturally aspirated watercraft powered by a four stroke engine. Runabouts, competing in Rec Lites Classes , must weigh within a difference of no more than 10 lbs (4.54 kg) lighter than the OEM weight as determined by IJSBA.

RRL.1.1 All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. intercooler end caps, brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if the replacements/modifications result in no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules. Hull Identification Numbers must be displayed as furnished by the manufacturer.

NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

RRL.1.2 Original equipment parts may be updated or backdated to original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications. Unless reoffered to as the same identical part in the OEM parts/repair manual, parts may not be backdated. (Refer to Model Homologation listing online)

RRL.1.3 Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.). See Section 19.5 (pg. 78).
RRL.1.4 Engine fuel must consist of gasoline meeting the criteria defined in Section 19.4.3

RRL.2 HULL

RRL.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

RRL.2.2 Hull and deck repairs may be made. However, these repairs must not alter the original configuration by more than 2.00mm (0.08 in.). The interior portion of a hull may not be reinforced. The texture of the exterior surface of the hull need not be consistent with OEM characteristics so long as the shape(s) remain exactly the same as OEM. Drop-in type storage buckets may be modified, aftermarket or removed provided a hazard is not created.

RRL.2.3 All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50in). No part of the sponson shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 38.00mm (1.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.) The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

RRL.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

RRL.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 177.80mm (7.00 in.) beyond the end of the original equipment. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages must not create a hazard. (See diagram in Appendix.)

RRL.2.6 Replacement trim plates may be used. Only replica parts that offer handling characteristics the same as stock are allowed. Material shall not be restricted to original equipment provided a hazard is not created (i.e., aluminum in place of plastic). See Glossary of Terms for definition of Replacement and Replica.

RRL.2.7 Replacement bumpers may be used provided a hazard is not created.

RRL.2.8 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

RRL.2.9 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables will be allowed.

RRL.2.10 Original equipment seat base must be used. Seat cover may be changed. The OEM seat height cannot be changed by more than +/- 12.7mm (0.5 in). Seat must remain OEM, seat cover can add no more than .5 inch in thickness in any direction.

RRL.2.11 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

RRL.2.12 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

RRL.2.13 Engine compartment ventilation tubes must remain as originally equipped.

RRL.2.14 Original equipment braking devices may be disabled for safety purposes. Reverse buckets may be removed or disabled (modified to disable reverse function is acceptable so long as a hazard is not created) but trim motors must remain in place.

RRL.3 ENGINE

RRL.3.1 Engines may be bored. Replacement piston assemblies may be used provided the original compression ratio, dome profile, skirt length and shape and type of material are not changed. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.). Cylinder head combustion chambers may be cleaned by bead blasting with valves seated in place. Intake and exhaust ports may not be bead blasted or cleaned with abrasive material such as steel wool or Scotch-Brite®. Repairs to the cylinder head affecting one cylinder bank are allowed.

RRL.3.2 Repairs may be made to cracked or damaged cylinders by installing a cylinder sleeve. The head gasket surface of the cylinder block may be machined only to allow for the installation of the new sleeves (see appendix for description). A thicker head gasket must be utilized to return the block deck height to within .155mm (.006in) of original height. The repair must offer no additional performance gains.

RRL.3.3 Crankshaft must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

RRL.3.4 Camshaft(s) must remain stock. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions. Camshaft timing may be changed.

RRL.3.5 Engine and Oil Cooler water cooling systems must remain as OEM. Water strainers (filters) may be modified or aftermarket. Intercooler assembly/housing must remain OEM. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Electronically controlled valves or water injections systems are not allowed unless originally equipped. Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed. .

RRL.3.6 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type

(e.g., sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer. The base gasket cannot be thicker than 0.8mm (0.032in). Head gaskets must be no thinner than .005mm (0.002in) than the OEM thickness as supplied by the manufacturer. Head gaskets must be no thicker than 1.55mm (0.06in) than the OEM thickness as supplied by the manufacturer. 2) Stripped threads must be repaired to the original size. 3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms. 4) Replacement hoses and fuel lines may not provide any other function than original equipment hoses. Changes in temperature tolerances are allowed.

RRL.4 AIR/FUEL DELIVERY

RLS.4.1 Electronic fuel-injection systems: Flame arresters that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. If not equipped with an airflow sensor, the ducting between the flame arrester and throttle body may be modified or aftermarket. If originally equipped with an airflow sensor, the ducting may be modified or aftermarket between the flame arrestor and airflow sensor. Modifications to the airflow downstream of the airflow sensor are not allowed. All portions of the intake manifold must remain as originally equipped. Units where a ribbon system is employed as the OEM flame arresting device may have the ribbon removed so long as airflow is not increased and sufficient flame suppression is achieved by the air filter. An aftermarket part may be used to retain OEM airflow specifications.

RRL.4.2 Carbureted induction systems: Flame arrestors that meet USCG, UL-1111 or SAE J-1928 Marine backfire flame arrester test standards must be installed. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. No other carburetor modifications will be allowed.

RRL.4.3 Fuel injectors and fuel pump must remain stock as furnished by the manufacturer.

RRL.5 IGNITION AND ELECTRONICS

RRL.5.1 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

RRL.5.2 The original electronic control unit may be reprogrammed so long as it does not offer any additional inputs or outputs than the original unit, and it must connect with the original connections. No additional sensors may be added (e.g., exhaust gas temperature, detonation sensors, etc.). Engine temperature sensors may be disabled.

RRL.5.3 Aftermarket spark plugs with a different heat rating may be used.

RRL.6 DRIVELINE

RRL.6.1 Impeller may be modified or aftermarket, providing that the original diameter is maintained. Replacement wear rings that are within OEM internal diameter specifications may be used. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

RRL.6.2 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (e.g., pump stator, reduction nozzle, etc.).

SPORT-ABOUT OPEN

This is a completely new class, exclusive to WWWX as we are trying to revive two once very prominent classes in region 2 racing. This conglomerate class combines the old school Runabout 800 class, and merges it with the Sport Open division.

- 2Stroke Engine Only!
- OEM Hulls Only!

Ski Types Allowed in this Class:

1. Yamaha Waveblaster 1, triple cylinder engines, allowed up to <1300cc Max.
2. Yamaha Waveblaster 2, triple cylinder engines, allowed up to <1300cc Max.
3. Yamaha Wave Raider, twin & triple cylinder engines, allowed up to <1100cc Max.
4. Kawasaki XI & XIR, twin & cylinder engines, allowed up to <1100cc Max.

5. Kawasaki Gen2 X2, triple cylinder engines, allowed up to <1300cc Max.
6. Kawasaki SS, twin or triple cylinder engines, allowed up to <1100cc Max.
7. Seadoo XP, Seadoo 787 limited twin cylinder engine, allowed up to <800cc Max.
8. Seadoo HX, twin or triple cylinder engines, allowed up to <1100cc Max.
9. Polaris Pro 785, triple cylinder engines, allowed up to <800cc Max.
10. Polaris SL750, twin or triple cylinder engines, allowed up to <1100cc Max.
11. Polaris Hurricane, triple cylinder engines, allowed up to <1100cc Max.

All other sport & small 2-stroke runabout watercrafts, if not eligible for this class, can compete in either RWB, Sport Spec, or Runabout NA, depending on specs

Due to the speeds and precision handling needed for GP class racing, it is highly recommended that all competitors must have an Expert or Pro license prior to participating.

The maximum displacement for a Ski equipped with Kawasaki & Yamaha triple cylinder 2-stroke engines is 1300cc. The maximum displacement for Seadoo HX with twin (951cc) and triple cylinder 2-stroke engines is 1100cc. The maximum displacement for runabouts with triple cylinder engines is 1100cc, and twin cylinder 2-stroke engines are 800cc.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (nylon strap, rope, etc.) so as not to create a hazard. Tow hooks, which protrude beyond the plane of the hull, must be removed.

The OEM top deck, hull, and hood may **NOT** be aftermarket or modified. Must run OEM configuration and hull for this competition class.

If the watercraft is equipped with footwells, the footwells must be blocked off, during competition, allowing no indentation into the footwell sides.

The hull may be reinforced but cannot exceed the length or width of the upper deck component of the bond flange as measured by a plumb bob (bumpers removed). Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

All watercraft may be equipped with a maximum of two sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. Fiberglassing sponsons in IS okay, but double stacking sponsons is not allowed.

Intake grate may be modified or aftermarket. Intake grate is required and must be the full- length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm below the flat plane of the pump intake area. All leading edges must be radiused so as not to create a hazard.

Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard.

Aftermarket trim tabs, either fixed, automatic and/or rider controlled, may be used. Original equipment trim plates that are detachable from the hull may be removed or replaced when installing aftermarket trim tabs. All hull extensions mounted on the hull's transom will be considered as a trim tab. All edges must be radiused so as not to create a hazard.

Replacement bumpers may be used provided a hazard is not created.

A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables are allowed.

Steering systems may be modified or aftermarket.

Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Engine compartment foam may be removed, modified or aftermarket.

Engines may be bored. Aftermarket piston assemblies are allowed. Engine porting is allowed for "sport" watercraft, but "runabout" watercraft are not allowed to be ported. Engine displacement must not exceed class designation. The number, type, and placement of rings on the piston may be changed.

OEM crankcases may be interchanged between homologated watercraft of any OEM manufacturer. Internal modifications to the fuel, oil and/or water exposed surfaces are allowed. Bearing and seal surfaces may not be modified. Filler material may be added to hollow pockets in the base gasket areas. Ignition/stator mounting area modifications are limited to spot facing, drilling and tapping threads for the purpose of mounting an aftermarket or modified ignition system.

Additional carburetor pulse line fittings may be installed. The crankcase drain system may be removed or plugged. Additional mounting holes, not to exceed 10.00mm diameter, are allowed provided they do not penetrate the internal surface of the cases.

Base gasket and intake surfaces may be machined. Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. External modifications to the crankcase finish (plating, polishing and/or painting) are allowed for cosmetic purposes only. No other external modifications or external repairs will be allowed.

Cylinder and cylinder head may be modified or aftermarket. Crankshaft assembly may be modified or aftermarket. Stroke and rod length may be changed. OEM cases must be used for that specific engine.

Engine bed and motor mounts may be modified or aftermarket. The engine may be repositioned in the hull. Engine gaskets may be modified or aftermarket.

Exhaust system (i.e., manifold, head pipe, expansion chamber, waterbox, muffler(s), etc.) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. Exit location of the exhaust gases may be relocated to the transom below the bond flange. No tuned portion of the exhaust system shall protrude outside the hull.

The cooling system may be modified or aftermarket. Aftermarket cooling lines and water bypass systems may be used. Bypass fittings may be modified, aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, solenoids, etc.). Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

Replacement starter motor and bendix may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment. Stripped threads can be repaired.

Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used. Intake manifold assembly may be modified or aftermarket. Aftermarket crankcase pressure operated fuel pumps may be used. Fuel fillers may be relocated internally.

Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

Aftermarket fuel-injection systems are allowed provided the following regulations are adhered to: High-pressure fuel hose meeting SAE J30R9 must be used; A.N. threaded-type fittings or equivalent and non-removable, crimped-type clamps must be used on the high-pressure portion of the system (hose clamps, tie wraps, are not allowed), only metal-type fuel filters may be used on the high pressure portion of the system; all other in-line filters must be installed on the low-pressure portion of the system. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

Intake silencer may be removed.

Reed valve assemblies may be modified or aftermarket. Rotary valves may be modified or aftermarket.

Ignition system, electrical box, flywheel and flywheel cover may be modified or aftermarket. Battery charging circuit may be disabled and/or removed.

An additional battery and battery box may be used. Batteries must fit into a proper battery box and be securely fastened. Batteries may be relocated.

Engine temperature sensor assembly may be disconnected and/or removed.

Internal modifications to the oil and/or water exposed surfaces will be allowed. The head gasket surface of the cylinder block may be machined.

The original cylinder head casting must be used. Intake and exhaust runners may be modified. Material may be added to the runners. Intake and exhaust ports may be modified. Port diameters and shapes may be changed. Combustion chambers may be modified. Material may be added to the combustion chamber. The original number of intake and exhaust valves must be the same as original.

Repairs to the cylinder head affecting one cylinder bank are allowed. The head gasket surface may be machined.

Crankshaft may be modified or aftermarket. Total weight of the crankshaft must be within +/5.00% of original equipment. Replacement bearings or bearing shells are allowed, providing they maintain their original type and dimensions.

Engine balancing assemblies may be modified, aftermarket, or removed.

Aftermarket connecting rods made of ferrous materials are allowed. Rod length may be changed.

Exhaust system (manifold, connecting pipes, hoses, muffler) may be modified or aftermarket. Through-hull exhaust may be modified or aftermarket, providing a hazard is not created. No tuned portion of the exhaust system may protrude outside of the hull. Exit location of the exhaust gases may be relocated to the transom below the bond flange.

Valve cover may be replaced for cosmetic purposes and/or weight reduction only.

Replacement starter motor and bendix may be used.

Replacement engine mounts may be used.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, fuel filters, oil filters, clamps and fasteners) shall not be restricted to original equipment. Stripped threads may be repaired.

SPORT SPEC (Womens Sport Spec)

SKI MODELS ALLOWED:

- YAMAHA WAVEBLASTER 1
- KAWASAKI GEN-2 X2
- KAWASAKI GEN-1 X2
- SEADOO HX
- POLARIS HURRICANE

Waveblasters may use a 701cc engine or a 760cc engine. If a 760 cylinder, the *Zeeltronic* ignition system is not allowed. Zeel is allowed on 701cc cylinders, (>190psi). Gen 1 Kawasaki X2 may run up to 1100cc engine. Gen 2 X2s may run a 800cc engine package, up to 810cc (>190psi). Seadoo HXs must run an OEM 720 HX engine (>175psi).

SPORT SPEC CLASS COMPETITION

Intended to promote interest in personal watercraft competition with a limited number of modifications, and to enable individuals to become active competitors with a relatively modest investment. Watercraft that are eligible to compete in this class are: Kawasaki X2 (Pre 05); Kawasaki X2 (05-07); Sea Doo HX and Yamaha Waveblaster 701. Polaris Hurricane is allowed continued legacy participation in this division courtesy of support from Short Block Technologies. Watercraft competing in this class must conform to the specifications which follow. These rules are specifically outlined for each individual model to promote closed competition.

The Kawasaki Gen 1 - X2 (pre 2005) will have two options: Option 1) Kawasaki Gen 1 - X2 (old style, pre 2005) are allowed to update to 750 or 800 Kawasaki engines and electronics; and are to follow IJSBA Open class rules. (810cc limit) OR Option 2) Kawasaki Gen 1 - X2 (old style, pre 2005) may upgrade to a Kawasaki 900 or 1100 motor, exhaust, electronics and carbs. Carburetors, jets, needles/seats may be replaced. Aftermarket flame arrestors and adaptors are allowed. REMAINING motor and electronics must remain OEM as from factory. All other modifications are to follow IJSBA Open Class rules.

All watercraft must remain strictly stock, except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. Some original equipment components may not comply with IJSBA rules.

NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

Original equipment parts may be updated or backdated with original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications. (Refer to Model Homologation listing on page 10- 11.) Sound level shall not exceed 86 dB(a) at 22.86m (75 ft.). Engine fuel must consist of gasoline meeting the criteria defined in Appendix.

HULL:

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed. Hull and deck repairs may be made. However, these repairs must not alter the standard configuration by more than 2.00mm (0.08 in.). Hull, bulkhead and deck may be internally reinforced.

Fasteners may be installed through the hull, bulkhead and deck for the purposes of securing components to interior surfaces, provided a hazard is not created. Bulkhead may be cut for exhaust or electrical routing. Fire extinguisher, fuel petcock and choke holes may be filled or capped.

All watercraft may be equipped with a maximum of four sponsons. Original equipment sponsons may be modified, aftermarket, repositioned or removed. Overall length of each sponson shall not exceed 91.45cm (36.00 in.). length shall be limited to 1,524 mm (60 in) in a single or two sponson configuration (per side). The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition. Sponsons shall not protrude from the side of the hull by more than 100.00mm (3.94 in.) when measured in a level horizontal plane. The vertical channel created by the underside of the sponson shall not exceed 63.5mm (2.50 in.). No part of the sponsons shall extend downward below the point at which the side of the hull intersects the bottom surface of the hull by more than 63.5mm (2.50 in.). Aftermarket or modified sponsons must exceed 6mm (0.24 in.) in thickness. All leading edges must be radiused so as not to create a hazard. Sponsons may not be attached to the planing surfaces of the hull. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. (See diagrams in Appendix.)

The decision of the Technical Director and/or Race Director regarding modifications will be final. Any question regarding the legality of modifications should be directed to the IJSBA or IJSBA affiliate prior to use in competition.

Intake grate may be modified or aftermarket. Intake grate is required and must be the full-length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area of the hull. All leading edges must be radiused so as not to create a hazard.

Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100.0mm (3.94 in.) beyond the end of the original equipment plate. The extension must be connected to the radiused portion of the pump plate so as not to create a hazard. (See diagram in Appendix.)

Fins, rudders, skegs and other appendages that may create a hazard will not be allowed. Pump shoes may be aftermarket but may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area of the hull.

Aftermarket fixed-position trim tabs may be used. Original equipment trim plates that are detachable from the hull may be removed or replaced when installing aftermarket trim tabs. Trim tabs cannot exceed the width of the planning surface or extend rearward more than 100.00mm (3.94 in.) beyond the end of the original planning surface. Manual or automatic trim tabs attached to the hull or ride plate are not allowed. All hull extensions mounted on the hull’s

transom will be considered as a trim tab. All edges must be radiused so as not to create a hazard. Fins, skegs, rudders and other appendages that may create a hazard are not allowed.

Kawasaki Generation 1 X2 (pre 2005) may add front hull fills providing these fills do not exceed 36 inches in length measured from the front most surface of the hull towards the rear of the hull. Replacement bumpers may be used provided a hazard is not created.

A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line.

The battery box may be relocated.

Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables will be allowed.

Seat height may be changed and/or covered but must utilize OEM stock base. The base may have holes providing they do not add additional airflow to the engine compartment. Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the area above the hull bond flange may be polished, shot peened or painted.

Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed. Floatation Foam may be removed, modified or aftermarket.

Engine compartment ventilation tubes may be modified, aftermarket, relocated on the original equipment ducting, or removed. Inlet and outlet openings may not be enlarged (i.e., when the tube is removed, the opening may not be larger than stock). Vents may be shielded or plugged. No other modifications to the hood will be allowed. Polaris Hurricane hood/mirror cowling may be replaced providing it does not create additional airflow to engine compartment

ENGINE:

All spec eligible Engines may be bored with a MAX of 1mm. Yamaha Waveblaster may upgrade to 701 62T style cylinders. Pre-1996 Yamaha Waveblaster may be updated to 1996 and newer engine components. Yamaha 760 cylinders may be used subject to restricted provisions in the Ignition section of Sport Spec Rules.

Replacement piston assemblies may be used provided the original port timing, dome profile, skirt length and shape and type of material are not changed. Replacement piston assemblies must weigh within ± 5.00% of original equipment. Chamfering of cylinder ports must not exceed

1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.) Cylinders may be machined to accept girdle system cylinder heads.

Replacement starter motor and bendix may be used. Replacement engine mounts may be used. The crankshaft may be rebuilt using replacement counterweights, crank pins, bearings and connecting rods.

Counterweights, crank pins and connecting rods made of non-ferrous metals are not allowed. Stroke and rod length may not be changed. Counterweights on non-rebuildable style crankshafts may be machined to accept a press-through crank pin. Replacement bearings must maintain their original type and dimensions.

Replacement counterweights must resemble the original part (i.e., holes and/or pockets not existing on the original part may not be on the replacement part). Total weight of the crank- shaft assembly must be within ± 5.00% of original equipment. Crankpins may be welded and/or keyed to the counterweights.

Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Crankcase drain and cable may be removed and plugged. No other modifications or repairs are allowed. External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any engine components.

Kawasaki, and Yamaha Cylinder heads and gasket may be modified or aftermarket providing they do NOT exceed 190lbs of compression. Kawasaki, and Yamaha aftermarket or OEM head domes must not go below .040 head squish clearance at any point. Sea Doo HX heads may be modified but may not go below .051 head squish clearance and may not exceed 175lbs of compression. Drop down style domes are not allowed on any model.

Kawasaki and Yamaha Exhaust manifold, head pipe, expansion chamber, gaskets and all hoses between expansion chamber and exhaust exit may be modified/altered or aftermarket. Only exhausts originally manufactured as wet style systems will be allowed. Exhausts originally intended as dry type systems may NOT be used. No water jacked chambers are allowed. Exhaust exit may be relocated to the rear of the hull. Kawasaki, Yamaha and Polaris waterbox may be relocated and aftermarket. SeaDoo HX may update / backdate to either year OEM factory HX waterbox. SeaDoo HX may plug water fittings on OEM waterbox. No spray bars may be added to the HX waterbox.

Flow control valves may be used. No tuned portion of the exhaust shall protrude outside the hull. Through hull exhaust outlet flap may be removed. Electronic water injection is NOT allowed on any model. Sea Doo HX must retain unmodified stock HX exhaust system and waterbox. Sea Doo HX may not use stinger sprayers or water injectors. Sea Doo HX must use stock from factory water routing, no additional water bypasses will be allowed.

Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following:

1) Replacement gaskets may be used. Base gasket must remain OEM thickness for each individual model or as outlined in service manual.

2) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms.

3) Sea Doo HX may upgrade to larger bolts or studs for the exhaust system.

AIR/FUEL DELIVERY:

Polaris Hurricane and Yamaha Waveblaster Carburetor(s) may be modified or aftermarket provided they do not vent or spill fuel at any altitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Sea Doo HX must retain stock carbs from that model; but may be rejetted and de-choked. Aftermarket primer may be used.

Polaris Hurricane, Kawasaki X2 (05-07), and Yamaha Blaster Intake manifold assembly may be modified or aftermarket. SeaDoo HX must retain the OEM intake manifold from the factory. SeaDoo HX may not adjust timing by rotating stator plate. factory; lines must line up as from factory. Aftermarket crankcase-pressure-operated fuel pumps may be used. Additional carburetor pulse line fittings may be installed on the crankcase.

Modified or aftermarket vapor/air separators must not exceed 2 in. x 6 in., and must have a return line to the fuel tank open at all times. Additional fuel reservoirs may not be used. Aftermarket or modified electric fuel pumps, not exceeding 4 psi, may be used. When the engine is shut off or stops, the fuel pump must automatically stop. No manually operated on/off-type fuel pumps are allowed.

The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel filler and relief valve will not be restricted to OEM upon approval by IJSBA. Fuel fillers coming from other OEM watercraft will automatically be approved so long as no hazard is created by the installation. The fuel pickup, fuel filter and fuel petcock assembly may be removed and/or after-market parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

The fuel tank shall not be restricted to the original equipment, as supplied by the manufacturer, so long as the replacement is an unmodified tank from another homologated PWC and the tank fits securely in the watercraft without causing a hazard. Original equipment fuel filler and relief valve must be used and cannot be modified. Aftermarket fuel tanks not coming from another homologated PWC may be allowed by the race director so long as it is demonstrated that the aftermarket fuel tanks meet or exceed the strengths and safety standards of an OEM fuel tank.

Flame arrester(s) which satisfy United States Coast Guard, SAE-J1928 Marine or UL-1111 Marine backfire flame arrester test standards must be installed. Aftermarket flame arresters satisfying one of these test standards will be allowed. Intake silencer may be removed. Reed valve assemblies may be modified or aftermarket. Reed spacers may be added. SeaDoo HX Rotary valve must remain in OEM stock from the factory and retain the factory rotary timing.

IGNITION AND ELECTRONICS:

RPM limiter function may be modified. Yamaha model CDI units may be modified or aftermarket provided ignition timing is not manually adjustable. Yamaha units which do not have 760 cylinders may use an IJSBA approved programmable ignition so long as charging features are maintained. Kawasaki Gen 2 (2005- 2007) model CDI may be modified or aftermarket AND programmable. ALL original equipment charging systems must be used. Timing may not be advanced at the stator plate - ALL models must line up stator with factory set mark on cases. Kawasaki X2 may use an ignition jumper for the heat sensor. Flywheels must be OEM stock and unmodified as provided from the factory. Coils, plug wires and plug caps may be aftermarket. No other ignition system modifications will be allowed.

Replacement batteries are allowed but must fit into the original equipment battery box and securely fastened.

Engine temperature sensor may be disconnected and/or removed.

DRIVELINE:

Stator vane assembly must remain in OEM stock from the factory. SeaDoo HX may use OEM plastic pump housing provided it retains the small diameter hub and the same amount of veins. Polaris Hurricane my update to the factory superseded Polaris 6 vein pump. Pump mounting plate and/or pump shoe may be modified or aftermarket. Titanium driveshafts are not allowed. Impeller may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket. Overall length of the complete pump and nozzle assembly may be no more than 50.00mm (1.97 in.) longer than original equipment, whether using spacers or extended nozzles. Aftermarket nozzle-trim systems may be used. Kawasaki, Polaris and Yamaha models may add additional cooling fitting. Visibility spout must be removed or plugged. Silicone adhesive sealant or alike may be used in addition to original equipment seal to seal pump inlet. Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump. SeaDoo HX must retain OEM unmodified 720 flywheels. Kawasaki X2 may use aftermarket pump cones.SeaDoo HX may use older style carrier assembly with grease fitting.

VINTAGE SKI OPEN

SKI MODELS ALLOWED:

- YAMAHA ROUND NOSE SUPERJET (96-07)
- YAMAHA SQUARE NOSE SUPERJET
- KAWASAKI 440/550 (all years)
- KAWASAKI 650SX (all years)
- KAWASAKI 750 SX/SXI/PRO
- PJS & COBRA HULLS

2-stroke twin cylinder engines up to 785cc allowed.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (nylon strap, rope). Tow hooks which protrude beyond the plane of the hull must be removed.

Hull and deck repairs may be made for repair or structure support. These repairs must not alter the original configuration. All watercraft may be equipped with a maximum of two sponsons (front and rear). OEM sponsons may be modified, aftermarket, repositioned or removed. Aftermarket or modified sponsons must not exceed the bond flange in thickness. All leading edges must be rounded so it does not create a hazard. Fiberglassing sponsons into the hull is allowed, but adding a second set of bolt-on sponsons on top of the fiberglassed sponsons is not allowed. Double stacking sponsons is not allowed.

Rudders, skegs and other appendages that may create a hazard will not be allowed. Sponsons attached to the inside of the bond flange shall not protrude outside the bond flange (bumper removed) when measured in a level horizontal plane.

Intake grate may be modified or aftermarket. Intake grate is required, with at least one bar running parallel to the drive shaft. Grates may not extend more than 11.00mm below the flat plane of the pump intake area. All edges must be rounded so as not to create a hazard. Rideplate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100mm beyond the end of the original equipment plate.

Replacement bumpers may be used provided a hazard is not created. Must be a replacement OEM bumper rail, or a stick on bumper rail. Rubber and/or plastic only.

Handlebars, throttle lever, cables, and grips may be modified or aftermarket. Handlebar chin pad cover may be modified or aftermarket. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The

handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables are also allowed.

Handlepole may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

Mat kits (hydroturf/jettrim) may be added for extra support and grip. Hull custom painting and graphics kits are allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Original bilge pump may be modified or disconnected. Aftermarket bilge drainage systems that do not create a hazard are allowed.

Engine vent tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged. Vents may be shielded or plugged. Aftermarket and/or lightweight hoods are allowed in the Vintage Ski Open class.

Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Non-conforming pistons. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed class designation (785cc).

Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Must run OEM cases. No other modifications or repairs are allowed.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only.

Modifications such as grinding, surfacing, polishing, machining, shot peening will be allowed on any engine components.

All Modified or aftermarket exhaust systems are allowed.

Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and aftermarket water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Cooling system flush kits are allowed.”

Aftermarket starter motors and bendix may be used. Aftermarket engine mounts may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer.

Aftermarket flame arresters may be used. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. Modified, swapped, or aftermarket carburetor setups are allowed. The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel pickup, fuel filler, fuel filter, fuel tap assembly and relief valve must be used and cannot be modified. Fuel petcock may be bypassed. Additional fuel filters may be used. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened, unless approved by safety tech inspection.

Ignition may be aftermarket, ignition timing may be altered by slotting ignition trigger mounting plate. An adapter plate may be used for the sole purpose of relocating the ignition trigger. (Total losses are OK).

Aftermarket spark plugs with a different heat rating may be used.

Pump assemblies may be modified or aftermarket. Impeller may be modified or aftermarket. Replacement wear rings are allowed. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

Grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (pump stator, reduction nozzle, etc.)

VINTAGE 550 MOD

SKI MODELS ALLOWED:

- **KAWASAKI JS440**
- **KAWASAKI JS550**
- **KAWASAKI 550SX**
- **COBRA HULLS**
- **PJS HULLS**

OEM Kawasaki cylinder based 2-stroke twin cylinder engines up to 600cc.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (nylon strap, rope). Tow hooks which protrude beyond the plane of the hull must be removed.

Hull and deck repairs may be made for repair or structure support. These repairs must not alter the original configuration. Wide trays and aftermarket hoods are allowed.

All watercraft may be equipped with a maximum of two sponsons (front and rear). OEM sponsons may be modified, aftermarket, repositioned or removed. Aftermarket or modified sponsons must not exceed the bond flange in thickness. All leading edges must be rounded so it does not create a hazard. Fiberglassing sponsons into the hull is allowed, but adding a second set of bolt-on sponsons on top of the fiberglassed sponsons is not allowed. Double stacking sponsons is not allowed. Rudders, skegs and other appendages that may create a hazard will not be allowed. Sponsons attached to the inside of the bond flange shall not protrude outside the bond flange (bumper removed) when measured in a level horizontal plane.

Intake grate may be modified or aftermarket. Intake grate is required, with at least one bar running parallel to the drive shaft. Grates may not extend more than 11.00mm below the flat plane of the pump intake area. All edges must be rounded so as not to create a hazard.

Rideplate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100mm beyond the end of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate so as not to create a hazard. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

Replacement bumpers may be used provided a hazard is not created. Must be a replacement OEM bumper rail, or a stick on bumper rail. Rubber and/or plastic only.

Handlebars, throttle lever, cables, and grips may be modified or aftermarket. Handlebar chin pad cover may be modified or aftermarket. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be

padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables are also allowed.

Handlepole may be modified or aftermarket provided it functions as originally designed. Handlepole attaching points may be reinforced.

Mat kits (hydroturf/jettrim) may be added for extra support and grip. Hull custom painting and graphics kits are allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Original bilge pump may be modified or disconnected. Aftermarket bilge drainage systems that do not create a hazard are allowed.

Engine vent tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged. Vents may be shielded or plugged. Aftermarket and/or lightweight hoods are allowed in the Vintage Ski Open class.

Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Non-conforming pistons. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed class designation (600cc).

Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Must run OEM cases. No other modifications or repairs are allowed.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only. Modifications such as grinding, surfacing, polishing, machining, shot peening will be allowed on any engine components.

All modified and/or aftermarket exhaust systems are allowed.

Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and aftermarket water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Cooling system flush kits are allowed.”

Aftermarket starter motors and bendix may be used. Aftermarket engine mounts may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer.

Aftermarket flame arresters may be used. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. Modified, swapped, or aftermarket carburetor setups are allowed. The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel pickup, fuel filler, fuel filter, fuel tap assembly and relief valve must be used and cannot be modified. Fuel petcock may be bypassed. Additional fuel filters may be used. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened, unless approved by safety tech inspection.

Ignition may be aftermarket, ignition timing may be altered by slotting ignition trigger mounting plate. An adapter plate may be used for the sole purpose of relocating the ignition trigger. (Total losses are OK).

Aftermarket spark plugs with a different heat rating may be used.

Pump assemblies may be modified or aftermarket. Impeller may be modified or aftermarket. Replacement wear rings are allowed. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

Grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (pump stator, reduction nozzle, etc.).

Vintage 550 Limited

VSKL.1 Intended to promote interest in vintage personal watercraft competition with a traditional limited performance level while having access to performance parts historically available from the aftermarket industry. Watercraft competing in this class must conform to the specifications which follow.

DISPLACEMENT: The maximum displacement for Vintage Ski Limited is 558 CC. Original Kawasaki 550 engine cases must be used.

VSKL.1.1 All watercraft must remain strictly stock (all Stock Class provisions are allowed in Limited Class unless otherwise noted), except where rules allow or require substitutions or modifications. Changes or modifications not listed here are not permitted. The IJSBA may allow additional modifications to Stock Classified PWC which provide for replacement/reinforcements to parts and components (i.e. brackets, fittings, etc.) that have known failure risks in race conditions. Such changes will only be allowed if they allow for no volume or performance gains. Such allowances are only legal if published by the IJSBA. Some original equipment components may not comply with IJSBA rules.

Hull Identification Numbers must be displayed as furnished by the manufacturer. NOTE: When rules permit or require equipment to be installed, replaced, altered or fabricated, it is the sole responsibility of the rider to select components, materials and/or fabricate the same so that the watercraft operates safely in competition.

VSKL.1.2 Original equipment parts may be updated or backdated with original equipment parts of the same model. The part must be a bolt-on requiring no modifications to that part or any other parts except where rules allow substitutions or modifications

VSKL.1.3 Sound level shall not exceed 86 dB(a) at 22.86m.
VSKL.1.4 Engine fuel must consist of gasoline meeting the criteria defined in Appendix.

VSKL.2 HULL

VSKL.2.1 All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (e.g., nylon strap, rope, etc.) so as not to create a hazard. Tow hooks which protrude beyond the plane of the hull must be removed.

VSKL.2.2. The hull and top deck must remain as originally furnished by the manufacturer
VSKL.2.3 No aftermarket sponsons are permitted. OEM rear sponsons may be removed.

VSKL.2.4 Intake grate may be modified or aftermarket. Intake grate is required and must be the full length type with at least one bar running parallel to the drive shaft. Grates may not extend more than 12.00mm (0.47 in.) below the flat plane of the pump intake area of the hull. All leading edges must be radiused so as not to create a hazard.

VSKL.2.5 Pump cover plate may be modified or aftermarket. An extension may be added to the rear of the plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100.0mm (3.94 in.) beyond the end of the original equipment plate. The extension must be connected to the radiused portion of the pump plate so as not to create a hazard.

Aftermarket Hull extensions ARE allowed, as long as they do not exceed 114mm in length.

(See diagram in Appendix.) Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

VSKL.2.6 Replacement bumpers may be used provided a hazard is not created.

VSKL.2.7 A soft, flexible water-spray deflector may be attached to the hull sides or to the bond flange provided a hazard is not created. No part of the deflector may extend beyond the perimeter of the original equipment bumper or side moldings as measured by a plumb line. No splash guard may extend past a vertical line measured from each side of the hull crossing the front most (bowside) of the hood.

VSKL.2.8 Handlebar, throttle, throttle cable, and grips may be modified or aftermarket. Handlebar cover may be modified or removed. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Aftermarket steering cables will be allowed. Handlepole must remain OEM. Handlepole bracket may be aftermarket. Handlepole attaching point may be reinforced.

VSKL.2.9 Padding and/or mat kits may be added and custom painting is allowed. The surface finish of any metal component outside the area above the hull bond flange may be polished, shot peened or painted.

VSKL.2.10 Original bilge pump may be modified or disconnected. Aftermarket bilge draining systems that do not create a hazard are allowed.

VSKL.2.11 Engine compartment foam may be removed, modified or aftermarket. Only floatation foam within the engine compartment may be removed. Only foam that can be removed without modification to any other part or parts, except where rules allow the parts to be modified, is allowed. Parts may not be relocated based on the removal of the foam. The hull’s inner liner or deck may not be cut or modified to remove foam. Removal of foam between layers of the hull and/or deck is not allowed.

VSKL.2.12 Ballast weight may be added within the normally exposed areas of the hull to alter the handling of the watercraft provided a hazard is not created. Only weight consisting of constant mass (i.e., water or other fluid is not allowed) that does not require the modification or relocation of any parts will be allowed unless such modification or relocation is specified by other rules.

VSKL.3 ENGINE

VSKL.3.1 Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Replacement piston assemblies must weigh within ±25.00% of original equipment. Engine displacement must not exceed 558cc. Chamfering of cylinder ports must not exceed 1.00mm (0.04 in.) at a 30 degree maximum angle. (See diagram in Appendix.)

VSKL.3.2 Crankshaft may be rebuilt using replacement counterweights, crank pins, bearings and connecting rods. Counterweights, crank pins and connecting rods made of non-ferrous metals are not allowed. Stroke and rod length may not be changed: 110mm rods & 60mm stroke

only. Counterweights on non-rebuildable style crankshafts may be machined to accept a press-through crank pin. Replacement bearings must maintain their original type and dimensions. Replacement counterweights must resemble the original part (i.e., holes and/or pockets not existing on the original part may not be on the replacement part). Total weight of the crankshaft assembly must be within ±5.00% of original equipment. Crankpins may be welded and/or keyed to the counterweights.

VSKL.3.3 Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Crankcase drain and cable may be removed and plugged. No other modifications or repairs are allowed.

VSKL.3.4 External modifications to the engine finish (e.g., plating, polishing and/or painting) are allowed for cosmetic purposes only.

VSKL.3.5 No internal modifications of any kind, including grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any engine components.

VSKL.3.6 Cylinder head and gaskets may be modified or aftermarket.

VSKL.3.7 Exhaust manifold, head pipe, expansion chamber, gaskets and hose between expansion chamber and waterbox may be modified/altered or aftermarket. Exhaust location of the exhaust gases may not be relocated. The original size opening of the exhaust exit may not be increased to greater than 2 inches. No tuned portion of the exhaust shall protrude outside the hull. The through-hull exhaust outlet flap may be removed. Removal of the plastic resonator is allowed.

VSKL.3.8 Cooling system may be modified or aftermarket. Aftermarket cooling lines and water bypass systems may be used. Additional cooling supply lines and fittings may be added to the pump. Bypass fittings may be modified, aftermarket and/or relocated but must be directed downward and/or rearward so as not to create a hazard for other riders. Any valves used within the entire cooling system must be of the fixed type or automatic (e.g., thermostats, pressure regulators, solenoids, etc.). Manually controlled devices (by any means of actuation) that alter the flow of cooling water during operation are not allowed. Cooling system flush kits are allowed.

VSKL.3.9 Replacement starter motor and bendix may be used.

VSKL.3.10 Replacement engine mounts may be used.
VSKL12.3.11 Oil-injection system may be disconnected or removed.

VSKL.3.12 Replacement of general maintenance parts (e.g., gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (e.g., sheet, o-ring, etc.) as their OEM counterparts. The base gasket cannot be thicker than 1.52mm (0.060in). 2) Stripped threads must be repaired to the original size. 3) Fasteners (e.g., bolts, nuts and washers) may not be substituted with titanium pieces unless originally equipped. Fasteners may integrate locking mechanisms.

VSKL.4 AIR/FUEL DELIVERY

VSKL.4.1 One single carburetor is permitted. Carburetors may be modified or aftermarket provided they do not vent or spill fuel at any attitude with or without the engine running. The number of venturis cannot exceed the number of cylinders. No slide-type carburetors. Aftermarket primer may be used.

Intake manifold assembly may be modified or aftermarket. Aftermarket crankcase-pressure-operated fuel pumps may be used. Additional carburetor pulse line fittings may be installed on the crankcase.

VSKL.4.4 The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel filler and relief valve must be used and cannot be modified. The fuel pickup, fuel filter and fuel petcock may be removed and/or aftermarket parts may be used. Additional fuel filters may be used and fuel cell foam may be added to the original equipment fuel tank. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

VSKL.4.5 Flame arrester(s) which satisfy United States Coast Guard, SAE-J1928 Marine or UL-1111 Marine backfire flame arrester test standards must be installed. Aftermarket flame arresters satisfying one of these test standards will be allowed. Intake silencer may be removed.

VSKL.4.6 Reed valve assemblies may be modified or aftermarket.

VSKL.5 IGNITION AND ELECTRONICS

VSKL.5.1 RPM limiter function may be bypassed or eliminated. The CDI unit must remain OEM. The original equipment charging system must be used. No other ignition system modifications will be allowed.

VSKL.5.3 Flywheel cover may be modified to accept crankshaft-end bearing support. No aftermarket flywheels are allowed.

VSKL.5.4 Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened.

VSKL.5.5 Relocation of electrical components (e.g., battery, box or housing) is allowed in order to fit an aftermarket exhaust system (only the strict minimum needed). Modification will be subject to Race/Tech Directors' approval.

VSKL.6 DRIVELINE

VSKL.6.1 Impeller may be modified or aftermarket. Pump nozzle and directional nozzle may be modified or aftermarket. Overall length of the complete pump and nozzle assembly may be no more than 50.00mm (1.97 in.) longer than original equipment.

VSKL.6.2 Additional cooling fittings may be installed. Visibility spout must be removed or plugged. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet.

VSKL.6.3 Couplers, bearing housing and driveshaft may be modified or aftermarket provided they maintain a 1:1 drive ratio between the engine and the pump.

VINTAGE X2 LIMITED

KAWASAKI GEN-1 X2

OEM based twin engine, 650cc.

All watercraft must have a flexible tow loop attached to the bow. The tow loop should be made of a flexible material (nylon strap, rope). Tow hooks which protrude beyond the plane of the hull must be removed.

Hull and deck repairs may be made for repair, handling, and structural support. No modified bottom hulls, or front-fill modifications allowed.

All watercraft may be equipped with a maximum of two sponsons (front and rear). OEM sponsons may be modified, aftermarket, repositioned or removed. Aftermarket or modified sponsons must not exceed the bond flange in thickness. All leading edges must be rounded so it does not create a hazard. Fiberglassing sponsons into the hull is allowed, but adding a second set of bolt-on sponsons on top of the fiberglassed sponsons is not allowed. Double stacking sponsons is not allowed. Rudders, skegs and other appendages that may create a hazard will not be allowed. Sponsons attached to the inside of the bond flange shall not protrude outside the bond flange (bumper removed) when measured in a level horizontal plane.

Intake grate may be modified or aftermarket. Intake grate is required, with at least one bar running parallel to the drive shaft. Grates may not extend more than 11.00mm below the flat plane of the pump intake area. All edges must be rounded so as not to create a hazard.

Rideplate may be modified or aftermarket. An extension may be added to the rear of the pump cover plate but shall not exceed the width of the original equipment plate. Modified and aftermarket plates must not extend more than 100mm beyond the end of the original equipment plate. The sides of the extension must be connected to the radiused portion of the pump plate

so as not to create a hazard. Fins, rudders, skegs and other appendages that may create a hazard will not be allowed.

Replacement bumpers may be used provided a hazard is not created. Must be a replacement OEM bumper rail, or a stick on bumper rail. Rubber and/or plastic only. Must have a padded front nose bumper.

Handlebars, throttle lever, cables, and grips may be modified or aftermarket. Handlebar chin pad cover may be modified or aftermarket. Aftermarket switches and switch housings may be used. The steering shaft, steering shaft holder and handlebar holder may be aftermarket. The handlebar must be padded at the mounting bracket or, if it has a crossbar, the crossbar must be padded. Quick-turn steering modifications to alter steering ratio are allowed. Aftermarket steering cables are also allowed. The steering system may be modified or aftermarket.

Mat kits (hydroturf/jettrim) may be added for extra support and grip. Hull custom painting and graphics kits are allowed. The surface finish of any metal component outside the hull area above the bond flange may be polished, shot peened or painted.

Original bilge pump may be modified or disconnected. Aftermarket bilge drainage systems that do not create a hazard are allowed.

Engine vent tubes may be modified, aftermarket, or removed. Inlet and outlet openings may not be enlarged. Vents may be shielded or plugged. Must run OEM X2 hood.

Engines may be bored. Replacement piston assemblies may be used provided the original port timing, compression ratio, dome profile, skirt length and shape and type of material are not changed. Non-conforming pistons. Engine displacement must not exceed class designation (650cc).

Repairs to cracked or punctured crankcases may be made provided only one damaged area affecting one cylinder bank has been repaired. Must run OEM cases. No other modifications or repairs are allowed.

External modifications to the engine finish (plating, polishing and/or painting) are allowed for cosmetic purposes only. Modifications such as grinding, surfacing, polishing, machining, shot peening will be allowed on any engine components.

Engine porting of any kind is NOT allowed. Aftermarket “stroked” cranks are not permitted.

Any and all modified/aftermarket exhaust systems are allowed.

Engine water cooling systems may be modified or aftermarket. Additional water cooling lines and aftermarket water bypass fittings may be added. OEM water bypass fittings may be modified or relocated. All bypass fittings must be directed downward and/or rearward so as not

to create a hazard for other riders. Additional cooling supply lines and fittings may be added to the pump. Pump water inlet covers and water strainers (filters) may be modified or aftermarket. Additional cooling supply lines may be added to water inlet covers that are removable from the engine block. Existing fittings may be aftermarket or modified so long as the OEM thread diameter is maintained. Fittings may not be added to the cylinder head, cylinder, or crankcase. Cooling system flush kits are allowed."

Aftermarket starter motors and bendix may be used. Aftermarket engine mounts may be used. Oil-injection systems may be disconnected or removed.

Replacement of general maintenance parts (gaskets, seals, spark plugs, spark plug wires, spark plug caps, wiring, water hoses, fuel lines, clamps and fasteners) shall not be restricted to original equipment providing the following: 1) Replacement gaskets may be used but must be of the same type (sheet, o-ring, etc.) as their OEM counterparts. With the exception of head gaskets and base gaskets, all replacement gaskets must maintain a thickness of plus or minus 20% of the OEM gasket thickness as furnished by the manufacturer.

Aftermarket flame arresters may be used. Carburetor jets (replaceable type), needle valves and needle valve springs may be changed. Choke may be removed provided additional air intake for the engine is not created. Aftermarket primer systems may be installed. Modified, swapped, or aftermarket carburetor setups are allowed. The entire fuel system is a closed system. The watercraft must not vent or spill fuel at any attitude with or without the engine running. Original equipment fuel tank, fuel pickup, fuel filler, fuel filter, fuel tap assembly and relief valve must be used and cannot be modified. Fuel petcock may be bypassed. Additional fuel filters may be used. Fuel tank filler cap may be modified or aftermarket provided a hazard is not created.

Must run a single-carburator fuel intake system. Dual carb setups are **NOT** permitted.

Replacement batteries are allowed but must fit into the original equipment battery box and be securely fastened, unless approved by safety tech inspection.

Ignition timing may be altered by slotting the ignition trigger mounting plate. An adapter plate may be used for the sole purpose of relocating the ignition trigger. (NO total losses allowed, must be charged). Must use OEM 650cc electronics, no 750/800 electronics allowed.

Aftermarket spark plugs with a different heat rating may be used.

Pump assemblies must be the OEM x2 140mm pump. Impeller may be modified or aftermarket. Replacement wear rings are allowed. Aftermarket pump nozzles and pump stuffers are allowed. Silicone adhesive sealant may be used in addition to original equipment seal to seal pump inlet. Visibility spout must be removed or plugged.

Grinding, surfacing, polishing, machining, shot peening, etc., will be allowed on any driveline components (pump stator, reduction nozzle, etc.).