USA Water Ski & Wake Sports

AWSA TOWBOAT POLICY MANUAL

Policies and Guidelines

For the 2026 - 2027 Towboat Year

Member of the
UNITED STATES OLYMPIC COMMITTEE

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TOWBOAT POLICY

Approved Towboat Categories

For purposes of AWSA Rules and Towboat Policies & Guidelines, the term “USA Water Ski Approved Towboat” and “AWSA Approved Towboat” shall be interchangeable.

USA Water Ski Approved Tournament Towboat

An USA Water Ski Approved Tournament Towboat is defined as a specific model that has successfully passed the three-event Approved Tournament Towboat evaluations. All boats undergo a series of 11 tests and sub-tests which include power and acceleration and centerline deviation. Only boats meeting Power and Acceleration standards for Record Capability Tournaments will be allowed to pull class E, L and R tournaments. See section Towboat Testing Program for testing and approval requirements.

A specific model that has passed the USA Water Ski Towboat tests and successfully tows the National Championship Tournament earns the right to be called a **National Tournament Towboat**.

USA Water Ski Approved Ski Boat

USA Water Ski Approved Ski Boat is defined as a towboat capable of pulling skiers in most environments including smaller manmade or tournament type lakes. A USA Water Ski Approved Ski Boat does not have to meet the more rigorous performance standards of a three-event Approved Tournament Towboat. A USA Water Ski Approved Ski Boat may be used for sanctioned practices, exhibitions, Basic Skills Clinics or Grass Roots Class F Fun Days and Fun tournaments. The Approved Ski Boat may not be used for three-event tournaments with a Class C or higher sanction classification.

Approval Status

An approved Tournament Towboat or Approved Ski Boat will be considered “approved” for a subsequent year as long as the boat remains ***unchanged*** (see Definitions) and the USA Water Ski / AWSA License fee is paid for the subsequent year by the manufacturer. The boat will not have to undergo any retesting.

Towboat Use: Model Year

a. AWSA US Nationals and AWSA Regionals may use a 2027 USA Water Ski Approved Tournament Towboat or a prior year 2026, or 2025 USA Water Ski Approved Tournament Towboat. (Current year plus 2 additional years).

b. Record Capability (Class E, L, R) tournaments and Class C tournaments **may use any prior year** USA Water Ski Approved Tournament boat equipped with Zero Off (rev R or rev S). The LOC and Chief Driver are responsible for ensuring the boat is in good operating condition, including required insurance.

c. In cases where dual boats are required, both boats must be the same model and year.

Exceptions for Use – Approved Tournament Towboat

Exceptions for use of any other boat not on the "approved list" may be made by the Chair(s) of the AWSA Towboat Committee. The boat shall be considered an "Approved USA Water Ski Tournament Towboat" for that event.

Reimbursement to Boat Owners for Costs Incurred for Use

A Local Organizing Committee (LOC) must reimburse boat owner(s) for use of a boat for any event (excluding Regionals and Nationals), on an hourly basis. This provision includes promo boats, individually owned boats, club owned boats, etc. The *recommended* reimbursement rate is $50 (Fifty dollars) per hour of use, recorded from the boat's hour meter. The boat must be an Approved Tournament Towboat with valid insurance as required by USAWSWS. *The boat owner has the option to decline reimbursement and/or make other arrangements.*

All payments from the LOC to the boat owner are reimbursement for costs incurred and not compensation for tax purposes. Reimbursement by the LOC to the boat owner is separate from any consideration a towboat owner may receive from a manufacturer.

New Model Towboat Use Before Boat Tests

a. If a manufacturer qualifies and participates in the previous year's AWSA National Tournament, the manufacturer may use a new or modified untested model towboat in tournaments between the current year's AWSA Nationals and the subsequent USA WSWS Towboat tests.

b. The new or modified untested boat must be the same model or the model intended to replace the manufacturer's current Nationals Towboat.

c. A new model year USA Water Ski Approved Tournament Towboat which is unchanged may be used prior to the Towboat Tests provided an exception is requested of the AWSA Towboat Committee and subsequently granted. (Rationale – allows a promotional boat owner to sell a current year boat in early to mid- season and take delivery of an unchanged new model year boat and still meet tournament commitments.)

d. Subsequently if the boat receives USA Water Ski Approved status at the boat tests, it will receive credit toward qualifying for next year's Regionals and Nationals.

e. Any records set behind the boat, prior to the boat tests, would be pending until the boat receives USA Water Ski Approved Tournament Towboat status.

Towboats Supplied “As Tested"

Towboats and any devices shall only be used “as tested”. Speed Control Systems, engine settings, etc. shall not be changed from the configuration as set by the manufacturer and tested by the Committee. No equipment or device will be attached to any towboat that affects performance, handling, or maneuverability unless such equipment has been tested as part of the Towboat tests or such equipment is otherwise tested and/or approved by AWSA Technical Committee and/or the AWSA Towboat Committee. This includes speed control devices, wakeboard towers, and extended pylons. Trim tabs, cavitation plates or other similar devices affixed to the hull that are adjustable must have a mechanism of verifying their position.

Exceptions for tournament use with respect to this policy may be made with joint approval of both the Chairs of the AWSA Technical Committee and the AWSA Towboat Committee. Where such new equipment will be attached to a towboat, a tournament sponsor should request an exception as indicated above from the Chairs of the AWSA Technical and AWSA Towboat Committees. Such use shall be for data gathering purposes. Risk management, safety, maneuverability, and technical issues are to be assessed to ensure that safe conditions are maintained and exercised.

For any tournament held at an elevation of 2000 feet or greater, or at a site with a short setup (less than 2000 feet), the tournament sponsor may request an exception to the “AS TESTED” policy, by submitting a formal request to the Chair of the AWSA Towboat Committee. The Chair may grant a change in "pitch" only (i.e. A change from a 14x18 to a 14x16 or from a 14x16 to a 14x14, etc.). The propeller must be the same manufacturer, same material, and same number of blades.

Towboat Credit

All eligible year Approved Towboats participating in USA Water Ski sanctioned tournaments will receive credit toward Regional and National Tournament participation. For 2027, this includes 2027, 2026, 2025 and 2024 boats.

a. Credits for quantitatively qualifying for Regionals and Nationals shall be by manufacturer, not by specific model. An individual manufacturer may use any of its USA Water Ski Approved Tournament Towboats toward accumulating credits.

b. Credit Period: The towboat qualification period shall be January 1st through December 31st of the year preceding the US Nationals.

   Regional Participation (i.e., 20% rule) will be based on the total number of AWSA tournament events held in the year preceding year described in the paragraph above (Credit Period).

c. Towboat not used: A towboat manufacturer will receive credit for towing a particular USA WSWS sanctioned tournament if he can provide documented

evidence that he was invited to provide towboats for the tournament in question, accepted, and that the towboats were made available in sufficient time and in acceptable condition for use in the tournament, but were not used.

d. The selection of USA Water Ski approved boats to be used in specific tournaments will be at the option of the local organizing body.

e. Manufacturers are encouraged to have their promotional team coordinators contact tournament sponsors to arrange for boat participation at tournaments. Manufacturers are encouraged to develop a form for their promotional team members to verify towboat tournament participation. It is suggested that the form should be signed by either the chief judge or chief driver at the tournament. The manufacturer will then have a backup system for verifying towboat participation.

f. Tournament cancellation: A USA Water Ski approved towboat manufacturer will receive credit for towing a particular USA WSWS sanctioned tournament if a manufacturer can provide documented evidence that he was invited to provide towboats for the tournament in question and accepted, but that the tournament in question was cancelled with insufficient time (less than four weeks) to make other arrangements for use of their boats at another USA WSWS sanctioned tournament.

g. Closed Tournaments: If a sanctioned tournament is not open to all USA Water Ski Approved Tournament Towboats the tournament will NOT be included in the total number of tournaments used to determine the 20% quantitative requirement. Those boats participating in the closed tournament will NOT receive credit from that tournament toward qualifying quantitatively for Regionals and Nationals.

   If a towboat manufacturer contacts a sponsor of a tournament advertised as “OPEN” to all towboats and is told not to bring a boat or that the boat cannot be used at that particular site, the tournament will be pulled from the list to determine the 20% eligibility requirement. No other boats used in that tournament will receive credit.

   A tournament sanction advertised as “OPEN to all USA Water Ski Approved Tournament Towboats” that prohibits participation by a manufacturer shall be reviewed by USA WSWS Headquarters and the AWSA Towboat Committee for future sanction consideration.

International Qualification

A boat model which has qualified to pull the National Championships will be recommended and supported by USA WSWS to be invited to pull IWWF Championships. A minimum of 6 Pan American Region sanctioned tournaments must be pulled to qualify a specific boat model for international approval. The five U.S. Regional Tournaments and the U.S. National Championships are Pan American Region Sanctioned Tournaments.

Towboats Used in Practice

Promotional towboats are not to be used other than to tow competitors at sanctioned tournaments unless arrangements are made between towboat owners and sponsors. While a tournament sponsor may offer paid ski practice, it is not part of the USA WSWS sanctioned tournament, and therefore the sponsor is responsible for supplying boats used in practice, unless arrangements have been made with a promotional boat owner to supply his boat for practice. Any arrangement for use in practice does not alter the number of boats the manufacturer must supply for the tournament should a boat be damaged accidentally during practice. Financial responsibility for damage occurring during practice is determined by the agreement between the sponsor and the boat owner.

Towboat Responsibility and Care

1. **Custody and Control**
   The Local Organizing Committee ("LOC") assumes full custody, control, and responsibility for any towboat loaned to the LOC for use during a sanctioned event. This responsibility commences upon check-in of the boat at the event site and continues until the boat has been checked out and returned to the owner or designated representative.

2. **Condition Documentation**
   Prior to use, it is suggested the LOC (or Chief Driver) and the towboat owner jointly complete and sign the *AWSA Towboat Check-In / Check-Out Form*, available under *AWSA Towboat Resources* on the USA Water Ski & Wake Sports website. It is further recommended that the LOC record a video by walking around the boat and take detailed photos to document the boat's condition, including any pre-existing damage, prior to initial use.

3. **Standard of Care**
   The LOC shall exercise due care in the launching, docking, handling, operation, storage, and transport of the towboat, trailer, and accessories. The boat shall be returned to the owner:
   a) Clean.
   b) In equal condition to that recorded at the time of check-in.

4. **Damage and Liability**
   The LOC shall be financially responsible for any loss or damage occurring during its period of custody, including but not limited to:
   a) Gel coat scratches, scuffs, or cracks.
   b) Interior tears, stains, or abrasions.
   c) Trailer, cover, or bimini top damage.
   d) Any other mechanical or cosmetic damage resulting from misuse, neglect, or improper handling.
   e) The LOC's financial liability for such damage shall be limited to a maximum of Three Thousand Dollars ($3,000.00) per incident.

5. **Shared Responsibility**
   For events where the LOC does not select the event drivers (including but not limited to Team Trials, Regional, or National Championships), the financial responsibility for repair or reimbursement shall be shared equally between the LOC and the organization responsible for driver selection.

Towboat Use Documentation and Performance Report

A boat shall receive credit for the events pulled unless its performance is deemed unacceptable for tournament use. Such factors are boats exhibiting inadequate power to maintain speed, boats with major handling, engine, throttle, speed control, steering, tracking or balance problems, plus any serious safety conditions or factors which cause excessive rerides or prohibit the driver from doing a satisfactory job.

Other problems should also be noted in comments but should not be the cause for withholding credit. Included in this category are difficulties such as minor vibrations, personal dislike of a particular boat design, and problems that develop during the tournament which are not the fault of the promotional boat owner. In cases where credit is questionable, the AWSA Towboat Committee will investigate and make the final determination.

Speed Control: Use

Speed Control systems should be used in a manner that ensures that all skiers receive a fair and impartial ride. Sufficient throttle shall be applied to ensure that the system is fully engaged and that there is additional “overhead” or throttle available to allow the system to add any additional throttle as needed. The driver shall not in any way limit or block the throttle once the system is engaged.

Speed Control: Updating hardware and software

A manufacturer can use approved hardware and software from a currently approved model on a prior year approved model with the approval of the AWSA Towboat Committee. The manufacturer shall make such a request in writing to the AWSA Towboat Committee.

PARTICIPATION IN AWSA REGIONALS & US NATIONALS

Approved Tournament Boat models which participate in 20% or more of the traditional class C or higher tournament events held during the preceding year in a Region are invited to pull the AWSA Regional Championships where it has qualified. Boat models that participate in all 5 AWSA Regional Championships and receive a positive performance report from four (4) of the five (5) Regions will be approved to pull the National Championships. A manufacturer can achieve the 20% participation requirement based on all towboat models used during the year (not limited to a single model).

Quantitative Qualification for Regional Participation (i.e., 20% rule) will be based on the total number of AWSA tournament events for slalom, trick and jump held in the year preceding the credit period. For example, the period for manufacturers to earn credit towards qualifying for the 2028 Regionals and Nationals is Calendar Year 2027. The 20% requirement calculation is determined using the total events, for class C or higher tournaments, held during the **prior calendar year 2026.**

(BASED ON EVENTS HELD DURING 2026 CALENDAR YEAR)

Required number of events to pull the 2028 Regional Championships

REGION	Slalom	Trick	Jump
East	9	4	4
Midwest	13	8	7
South	12	6	5
South Central	9	4	4
West	21	9	5

Towboats pulling Class C or higher sanctioned Collegiate tournaments or the Disabled Nationals and/or the Disabled Worlds (if held in the United States) receive credit toward the 20 percent qualification. Novice or grassroots tournaments and clinics will not count for credit.

A boat model that pulls the National Championships will be recognized by USA WSWS (and may be promoted by the manufacturer) as a National Tournament Towboat.

A boat manufacturer which has qualified and has pulled two (2) consecutive National Championships will be eligible to be invited by USA WSWS to participate in the U.S. Open Water Ski Championships and other major national and international competitions sponsored and organized by USA WSWS.

Upon payment of the appropriate sponsorship fees, the manufacturer may promote and market that specific boat model as an Official Towboat of the U.S. Open Water Ski Championships.

Regional and National Tournaments

If a manufacturer qualifies to participate in the Regionals and Nationals, he may bring any combination of USA Water Ski Approved Tournament Towboat model/propulsion system combinations provided that the required number of each combination is provided:

1. The following number of boats, at a minimum, shall be supplied by each manufacturer. Note: The number of boats is based upon the actual number of lakes that will be used for the Regional or National Tournament.

   2 Lakes – 2 boats of the same or similar Horsepower
   3 Lakes – 3 boats of the same or similar Horsepower
   4 Lakes – 4 boats of the same or similar Horsepower

2. A manufacturer may not interchange propeller types (i.e. nibral, stainless steel, machined brass) or propeller size / pitch on the same boat provided for use at the Regional and National Tournaments.

Regional and National Towboat Assignment Draw And Posting

1. **Regionals:** The assignment of boats to events or groups of events can either:1) follow the National Towboat draw for that year's National Championships (recommended); or 2) be selected by random draw. If done by random draw, the draw shall be done publicly and posted at least one day prior to the start of competition.

2. **US Nationals:** The towboat assignments shall be posted by USA WSWS headquarters by March 1 of that year National Tournament.

The grouping of events for towboat assignments shall be done by USA WSWS headquarters and the Chair(s) of the AWSA Towboat Committee. The number of groups created will be determined by the number of qualified towboats (i. e., 3 manufacturers-3 groups / 4 manufacturers- 4 groups). Age divisions / Open / MM shall be spread with the goal of balancing the number of skiers and skiing level between all qualified manufacturers.

The divisions in each group shall remain unchanged and the towboats will be rotated annually through the boats qualified to participate in the Nationals. For example, boat one will move down the list to the second group; boat 2 will move to the third group and boat 3 will move up to the first group (or 4 groups in the case of 4 qualified boats).

EXAMPLE: Every 4 years USA WSWS Headquarters and the Chair(s) of the AWSA Towboat Committee will reevaluate the numbers in each of the groups to ensure a relatively equal number of pulls for each group. If the number of skiers in each group needs to be rebalanced, the Age divisions / Open / MM will be reassigned, and a new random draw done to assign qualified towboat manufacturers to the respective groups.

For AWSA Regional and National Championship Tournaments each qualifying boat manufacturer may provide one “high horsepower jump specific boat”. The 35 MPH jump events in those tournaments shall be equally divided among those manufacturers providing a “high horsepower jump specific boat”. At the discretion of the Chief Boat Driver and Chief Judge, the high horsepower boat may also be used to pull other jump events. If no “high horsepower boats” are available, the 35 MPH jump events shall be included in the random draw by all the qualifying manufacturers.

Assignments Declined – Regionals/Nationals

A boat manufacturer may decline to pull any division at Regionals or Nationals. Any event declined will be redrawn. Only the manufacturer may initiate such an action.

Regional and National Towboat Inspection

All USA Water Ski Approved Tournament Towboats that qualify for use at a Regional or National Tournament will be inspected prior to use and its condition recorded on the Towboat Check In Form.

DEFINITIONS

Event

Event shall mean a slalom, trick or jump event. Multiple rounds are not to be counted as separate events. One credit per tournament may be earned regardless of the number of rounds.

New or Modified Towboat

A towboat model tested at the preceding year's towboat test will be considered "new or modified" when any of the following conditions are met:

1. Non-Propulsion System Related Items

   (a) The towboat hull / plug has been changed or modified in any way from the gunnel downward. This includes changes to spray rails, strakes, etc. This also includes a change in the size or location of the stability fins or shaft location.

   (b) A change is made from a closed deck to an open bow, or vice versa.

   (c) There is a change in engine placement or location.

   (d) A change in speed control software version or hardware that impacts the skiers' pull in slalom, trick or jump.

   (e) There is a change in total weight of the boat more than 10%.

2. Propulsion System Related Items

   (a) There is a change in the engine manufacturer or model as tested from the previous year. This includes cubic inch displacement, horsepower, carburetion/EFI, engine management system (ECM), etc.

   (b) There is a change in transmission gearing (e.g., 1:1, 1.25:1, 1.5:1, etc.).

   (c) There is a change in propeller size, blade number or material (i.e.: bronze to stainless).

3. Any other changes must be approved by the AWSA Towboat Committee prior to the boat tests.

Unchanged Towboat Model

A specific boat model is unchanged or unmodified if that particular boat model does not meet the criteria for a "New or Modified" Towboat. An unchanged model does not need to be retested, unless the model receives a "must improve", in which case, the model is only approved for one year.

Towboat Changes

a. Throttle linkage changes: Modifications to the throttle linkage are allowed but must be a matter of owner responsibility and preference. If dual boats are used, performance must be equal.

b. External fixtures: Trim tabs, cavitation plates or other similar devices affixed to the hull that are adjustable must have a mechanism of verifying their position. Devices shall be used “as tested”.

c. Bimini Tops: Bimini tops may be used during competitions. If a bimini top physically affects the performance of the boat or the skier, no top will be used.

d. Wakeboard towers that do not affect the performance and handling characteristics of a towboat may remain attached to a USA Water Ski Approved towboat during a USA WSWS sanctioned event. The rope cannot be attached to the tower and the tower may not be used for towing skiers in an USA WSWS three-event tournament.

e. For minor changes in propulsion system components, a manufacturer may submit a request to the AWSA Towboat Committee that the change be considered “minor” and request that the boat be excluded from a physical retest. Documentation of the proposed change and effect on the towboat performance shall be submitted to the committee. The AWSA Towboat Committee shall make its determination of testing based on the information provided by the manufacturer, performance of the current model in tournaments, and data from the prior year boat test. The decision shall be final and will be made on an individual boat basis. Examples of such changes might be a small horsepower change, EFI modifications, etc.

Interchanging Propulsion Systems

A manufacturer may test different propulsion system combinations (i.e. engines, propellers, and transmissions) in the same hull. A manufacturer may use any of these USA Water Ski. Approved Tournament Towboat model/propulsion system combinations in USA WSWS sanctioned tournaments. All of these USA Water Ski Approved Tournament Towboat combinations may receive and combine credit toward qualifying the single boat model for participation in the AWSA Regional and National tournaments.

WAKE ADJUSTMENTS

NAUTIQUE
Hydrogate
MicroTuners

MASTERCRAFT
Trick Ballast

ADDED WEIGHT FOR TRICKS

Nautique Hydrogate – 2018 & Earlier

The Nautique Hydrogate can be set in one of two positions, slalom or tricks/jump (may not be set in between modes).

- Tricks: The default position is the trick mode. The skier has the option of using slalom mode. It is the skier's responsibility to inform the boat crew when choosing the slalom option. The skier may choose to change the setting between passes.
- Jump: The default position is the jump mode. The skier has the option of using slalom mode. It is the skier's responsibility to inform the boat crew of slalom option prior to leaving the dock. In Class C tournaments only, the skier may choose to change the setting between jumps.
- Slalom: The gate will remain in slalom mode.

Nautique Hydrogate & MicroTuners – 2019 & Later

The Nautique Hydrogate has 11 settings (Zero to Ten – inclusive).

- Slalom: The gate will remain in slalom mode. Microtuners - There will be NO RE-RIDES for a setting different than requested, as long as the adjustment for the line length is within the Matrix provided by the company. If a rope length is selected that changes the MicroTuner setting (for example the proper rope length should have had the MicroTuners deployed and the chosen length did not deploy them), then a reride will be allowed. If a complete pass was made, there will be no reride.
- Tricks: The Trick Hydrogate will be 0 to 10. The default setting is Trick mode (10). The Hydrogate may be adjusted to a setting from 0 to 10 of Slalom (0), Middle 1 to 9 or Trick mode (10). The skier may choose to change the setting between passes.
- Jump: The Jump Hydrogate will be 0 to 10. The default setting is Jump mode (10). The Hydrogate may be adjusted to a setting of Slalom (0), Middle 1 to 9 or Jump mode 10. It is the skier's responsibility to inform the boat crew of his Hydrogate setting prior to leaving the dock. It will remain in that position for his/her turn.

Ski Nautique Ballast System – Tricks Only

If equipped, the ballast system starting level may be chosen by the skier (0%, 25%, 50%, 75%, or 100%). The skier may select +/- 50% for his second pass based on his first pass selection. The LOC along with the CJ may set a maximum upper ballast level. If so, the skier may not exceed that limit when selecting a second pass change.

Drivers should check to ensure that the ballast system is empty for slalom or jump events as there are situations where water may still be in the tanks.

MasterCraft Ballast/ Weight System – Tricks Only

The ProStar is approved in Tricks: 1) with a weight system; and 2) without a weight system. If the boat is used with the ballast/weight system, it must be configured as it was tested and approved.

2021 & Later – If weighted, two options: 1) **200** pounds total, using **two sets** of weight bags **totaling 100lbs each** installed in each of the two rear compartment trays; or 2) **100** pounds total, using **two sets** of weight bags **totaling 50lbs each** installed in each of the two rear compartment trays.

2020 & Earlier – If weighted, the configuration must include a full ballast / fat sack in the bilge; under the floor compartment / middle judges' seat (150lbs). In addition, **150lbs** total in the stern using **two sets** of weight bags **totaling 75lbs each** installed in each of the two rear compartment trays).

Rear storage compartment trays are located inside the top loading access doors at the back of the boat.

The ProStar is not approved with any other configuration, in other words, a user cannot simply put weight on the boat floor.

Rules Regarding Enhancing Wakes for the Trick Event

A manufacturer may alter his boat to enhance the wake for the trick event. The method of wake enhancement must be verifiable. The committee must test and approve the boat with the manufacturer's method of wake enhancement before it may be used in USA WSWS sanctioned tournaments.

Here are the applicable rules from AWSA and IWWF regarding adding ADDITIONAL weight for the trick event:

AWSA - 8.02 (b) Boats

> Rule 8.02(B)(1) - Added Weight: It is the duty of the boat judge, in consultation with the driver, to supervise adding a suitable weight, in the passenger compartment, side to side to even out boat balance, wakes, spray, or handling. In addition, weight not exceeding 50 lbs. may be added to the bow of the boat for purposes of leveling the boat. This Any added weight shall not present a hazard to the boat occupants or potentially harm the boat's interior.
>
> For tricks, the skier may place a tournament-supplied weight of between 20-50 kg (44-110 pounds) in the boat (either on the floor by the feet of the release operator or behind the engine cover) with side to side positioning as decided by the skier or release operator.

IWWF – 15.11 Tricks

> The skier may place a tournament supplied weight of between 20 - 50 kg in the boat on the floor side to side by the feet of the pin man or behind the engine cover. If a manufacturer can supply something to enhance the wake and it is the same for all skiers, then it will be allowed.

The IWWF rule is different from the AWSA Rule -- in that IWWF specifically allows the towboat manufacturer to “supply something to enhance the wake”. Our interpretation of this rule is that it applies only to the towboat manufacturer – and not to any official or other individual. This provision was used previously at the World Championships where MasterCraft in consultation with the Chief Judge and Driver added weight.

AWSA has no similar provision – as such, all boats must be used as tested and approved. The Towboat policy provides an option for towboat companies to enhance the wake specifically for tricks but states it must be tested and approved.

GENERAL EQUIPMENT & PERFORMANCE REQUIREMENTS

General Performance and Equipment Requirements

a. Performance Qualifications: Boats must have the performance necessary to obtain and maintain the required boat speeds while towing a heavy skier under tournament conditions.

b. Overall length shall be approximately 6m. The beam shall not exceed 2.5m.

c. Towing Pylon: Boats shall be equipped with a towing pylon on the centerline of the boat, located between the transom and near midship, which shall be a minimum of 65 cm. (25 1/2") and a maximum of 1.2m. (47 1/4") above the water when the boat is standing still with no occupants aboard.

   The entire pylon assembly shall be of fail-safe construction, designed to withstand a minimum loading of 600 kg. (1323 lbs.) through an angle of 70 deg. from the stern on both sides.

   The towing pylon shall have an area integrated in its design for attachment of a trick release mechanism. It is recommended that this area be included both above and below the tow rope attachment location and be located as required to ensure clearance of the rope and /or trick release mechanism from the engine housing. This area for attachment of the trick release shall be cylindrical with a diameter of 50.8 mm (2.00 inches) +0.00 mm, -0.25mm (0.010 inches) and with a minimum height of 28mm (1.10 inches). A centering hole with a diameter of 6.00 mm (0.236 inches), +0.35mm (0.014 inches) -0.00mm and a minimum depth of 1.80 mm (0.070 inches) shall be located on the centerline of the attachment area height and be oriented toward the front of the towing pylon. See the diagram in the appendix.

d. Speed Measuring Device

   1. Speedometer displays shall be positioned for maximum driver visibility. At least one speed indicating display shall be visible to the boat judge.

   2. All USA Water Ski Approved Tournament Towboats must be equipped with a Speed Control Device (See Rule 8.10). The speed control device shall have at least one display indicating actual boat speed. In the case of boats using GPS or a paddlewheel for measuring speed, a single GPS or paddlewheel pickup may be used to supply one or more speed indicating displays.

8.02 Boats

A. General: All tournaments, Class ***C*** and higher, are required to use only AWSA-***A***pproved ***T***ournament ***T***owboats. Contact USA-WSWS Headquarters for approval requirements and details as set forth in the AWSA Towboat Manual.

B. 1. Added Weight: It is the duty of the boat judge, in consultation with the driver, to supervise adding a suitable weight, in the passenger compartment, side to side to even out boat balance, wakes, spray, or handling. In addition, weight not exceeding 50 lbs. may be added to the bow of the boat for purposes of leveling the boat. This Any added weight shall not present a hazard to the boat occupants or potentially harm the boat's interior.

2. For tricks, the skier may place a tournament-supplied weight of between 20-50 kg (44-110 pounds) in the boat (either on the floor by the feet of the release operator or behind the engine cover) with side-to-side positioning as decided by the skier or release operator.

3. If equipped, the ballast system starting level may be chosen by the skier (0%, 25%, 50%, 75%, or 100%). The skier may select +/- 50% for his second pass based on his first pass selection. The LOC along with the CJ may set a maximum upper ballast level. If so, the skier may not exceed that limit when selecting a second pass change.

C. Boat Availability: Any boat that is to be used in the tournament shall remain available until the end of the tournament unless released by the Chief Judge. Only designated persons may occupy official towboats during competition.

D. Boat Selection: For the National and U.S. Open Tournaments, the selection of boats and the assignment of boats to specific events shall be made by USA-WSWS Headquarters. National Towboat selection shall occur no later than July 1st. For Regionals, USA-WSWS Headquarters shall make the selection of boats, and the assignment shall be made by the Chief Judge and the Chief Boat Driver. At all other tournaments, the selection of towboats shall be made by the Chief Boat Driver, with the approval of the Chief Judge.

E. Boat Use in Each Event: The same driver and boat shall be used by all contestants in each Slalom and Jumping event. However, in cases where two drivers of similar abilities and two boats of the same model, manufacturer and engine size are available, the Chief Judge may decide to use two drivers and two boats in the same event in an alternating manner. An alternative manner shall mean the next available towboat will be used. However, in Jump and Slalom tie run-offs, only one boat and driver shall be used. For the tricks event, the skier may select a boat from any of the designated towboats, and multiple teams of drivers and boat officials may be assigned to the Tricks event at the option of the Chief Judge.

F. Towboat Breakdown: When a towboat breakdown occurs, the Chief Driver with the concurrence of the Chief Judge may select a similar towboat to complete the event. For the purpose of towboat malfunction, "similar" shall mean an AWSA-approved

tournament towboat of the same power and design. For Regionals, Nationals and Cash Prize tournaments, any substitute towboat shall be of the same model and manufacturer. However, when running dual boats, the event may be continued with one boat, or if substitution is necessary, the two boats continuing the event must be of the same model and manufacturer.

8.10 Speed Control

A. All tournaments Class C and above are required to use speed control.

B. The principal job of the speed control is to provide independence from the manual operator and to give speeds as close as possible to ideal times.

C. The boat judge and driver shall jointly agree on the setting of the speed control and the allowed adjustments, with the goal of having the device produce ideal times for each pass. If agreement cannot be reached the Chief Judge, or his designee, shall make the decision.

D. A table showing the allowed ranges for all adjustable speed control parameters, and the circumstances under which each of these may be changed, and by whom, is provided in the Appendix.

E. If the speed control unit becomes inoperable and cannot be quickly repaired, and a replacement boat or unit is not available, the tournament shall be continued with manual driving with no other effect.

F. When the speed control cuts out or fails to operate properly or there is otherwise a deviation from normal operation (i.e., a malfunction), the skier is entitled to a reride for failure of tournament-supplied equipment (See 7.01, 9.10 and 10.10B4)**.** If the time is out of tolerance due to a malfunction of tournament supplied equipment the skier may accept the highest score with a good time or receive an optional reride with a protected score equal to the highest score with a good time (See rule 10.10B4)**.** If the skier supplies his own 80# jump switch, then the skier shall accept responsibility for any malfunction of the switch, including malfunctions that produce an out of tolerance time. When a malfunction results in a fast time and the skier is at maximum speed, the jump shall be scored as a pass. When a malfunction results in either a slow time or a fast time and the skier is below maximum speed, the skier shall accept the distance as his score, with no option of a reride.

G. Tournaments are only allowed to use speed control devices tested in conjunction with the towboats approved for use by the Towboat Committee. Approved towboats, including equipment as tested, are listed on the USA-WSWS website under the Towboat section.

H. Software changes are permitted as approved by the Towboat Committee at any time during the season, except that no changes that affect skier pull will be permitted between July 1 and the conclusion of that year’s National Tournament.

TOWBOAT TESTING PROGRAM

STATEMENT OF PURPOSE REGARDING THE TESTING OF TOWBOATS

The AWSA Towboat Committee, a sport discipline within USA Water Ski & Wake Sports (USA WSWS), is charged with the qualifying of boats for use in three-event water ski competition (slalom, trick and jump). The scope of boat testing and the future direction of all associated activities shall be guided by the following directives.

PERFORMANCE STANDARDS

Boats to be used in competition must meet certain performance standards, which have been established by the AWSA Towboat Committee. Performance standards for three-event tournament use shall be those which allow skiers, drivers, and officials to perform up to their maximum ability in water ski situations. The Committee shall review these standards annually and change or add to them as deemed necessary. If the change impacts recognized international standards, the change will be made in coordination and cooperation with the International Waterski & Wakeboard Federation. (IWWF).

BOAT SELECTION

Through an annually administered program of boat testing, the AWSA Towboat Committee shall determine which boats meet the established performance standards and criteria and shall certify those boats as approved for use in three-event tournaments sanctioned by USA WSWS.

TOWBOAT PROGRAM

The AWSA Towboat Committee shall use established standards and approvals as a basis for the program to determine which boats qualify to participate in Regional and National Championships. Any boat which passes the Towboat Evaluations, shows commitment to tournament use, and demonstrates skier acceptance may achieve participation at the National level, thereby promoting a measure of open competition in the tournament boat market, as deemed desirable in the original committee mandate.

TEST RESULTS

During the testing process a considerable amount of information is collected and analyzed for the AWSA Towboat Committee's use. While the tests are held for the purpose of determining boat performance, it is desirable that, as much as possible, the boat manufacturers benefit from the testing information as well. It shall be the goal of the tests to make data and comments on each boat and provide it to the respective manufacturers. In all other respects, test data are confidential and may not be used by manufacturers for promotional purposes.

RESEARCH AND DEVELOPMENT

The testing program shall support and promote the advancement of water skiing by investigating, encouraging, and testing innovations in boat design and related equipment. USA WSWS seeks to cooperate with manufacturers by offering the testing process as a research tool whenever possible.

TESTING TECHNOLOGY

For the USA WSWS boat tests to remain successful and produce useful and accurate information, which is verifiable, a continuing process of systems upgrading is necessary. Incorporating applicable improvements in technology is seen as an investment in the future of the tests and will help ensure USA WSWS position of leadership in setting standards for ski boat performance. The AWSA Towboat Committee shall inform USA WSWS of equipment needs, and funding for new technology shall be an annual item within the towboat program budget.

LICENSE / TEST FEES

Annual license fees are determined by the USA WSWS Executive Committee.

License Fees are $10,000 for the First Towboat Model and $3,000 for any additional Towboat Model (Revised 2021). There are no additional fees for testing additional engines, transmissions, or propeller combinations on the same model.

The fee is paid annually, regardless of if a towboat model is physically tested. There are no fees to participate in the annual towboat tests other than the annual license fee. Testing occurring outside of the annual testing or any retesting after the annual towboat tests shall be paid for by the manufacturer requesting the test.

TEST INTEGRITY

In conducting the boat tests, the AWSA Towboat Committee is charged with safeguarding the integrity, quality, and independence of the tests as they serve to assure the quality and performance of boats for tournament use. The Committee members and all test personnel shall strive to be unbiased as well as uncompromising in applying the standards set, and in all aspects of decision making.

SPORT DIVISIONS

The AWSA Towboat Committee will assist other Sport Divisions in establishing on-site operational procedures for testing of boats. The AWSA Towboat Committee will make the test site and equipment available to other Sport Divisions. Sport Division test criteria and evaluation procedures will be developed in cooperation with the AWSA Towboat Committee.

APPROVED TOURNAMENT TOWBOAT

The USA Water Ski towboat evaluations are intended to qualify towboats for use in three-event sanctioned USA Water Ski competitions and sponsored programs. The technical aspects of the evaluations are designed to measure and test a towboat's performance under simulated tournament conditions. Each test has specific performance criteria, and all towboats must meet or exceed these pre-determined performance standards.

APPROVED TOURNAMENT TOWBOAT TESTS

1. POWER AND ACCELERATION

The object of these tests is to determine whether a boat has adequate power to pull slalom and jump events. The distance required to pull a skier from a deep-water start on a competition slalom ski and accelerate to 36 mph will be measured. This distance may not exceed 250 feet for Class C events and must not exceed 230 feet to pull Record Capability tournaments. The distance required to pull a jump skier at maximum jump speed for the jump event will also be measured (acceleration from 35.4mph to 38.2mph) and must not exceed 70 feet to pull Record Capability tournaments. A load device (drone), capable of consistently simulating the resistance of a skier throughout the designated course may be used to replace the skier. If a boat passes the power & acceleration test portion, its power will be further tested during the slalom and jump deviation tests. Failure to meet these marks indicates lack of appropriate power. All drivers will observe the adequacy of power while pulling skiers under tournament conditions. This testing includes the ability to consistently obtain times within the allowed tolerances for slalom and jump courses.

2. SLALOM COURSE CENTERLINE DEVIATION

The amount of boat path deviation, which will be influenced by the pull of a slalom skier, will be measured. Two factors will be measured: average deviation and maximum deviation from the boat's path. Measurements will be made with a skier skiing at speeds of 32.3mph (52kph), 34.2mph (55kph) and 36mph (58kph) at 18.25m. 16m, 14.25m, 13m, 12m, and alternatively 11.25m line lengths. The average deviation must be less than .4 feet (.12m).

3. JUMP COURSE CENTERLINE DEVIATION

The amount of boat path deviation, which will be influenced by the pull of a jump skier, will be measured. Two factors will be measured: average deviation and maximum deviation from the boat's path. Measurements will be made with the skier skiing at maximum division speed and actually jumping over the ramp or skiing through a set of buoys that simulate a jump ramp. The average deviation must be less than .8 feet (.24m).

4. SLALOM SPRAY

While running the slalom course, boat spray should not significantly affect the skier's performance. Since this test is subjective, comments from the test skiers, all experienced competitors, will be recorded for the manufacturer's information. If all testing skiers independently agree that the spray has significant negative effect, the AWSA Towboat Committee will review the data and may disqualify the boat.

5. SLALOM WAKE

The slalom wake and rooster tail should not significantly affect the skier's performance. Since this test is subjective, comments from the test skiers, all experienced competitors, will be recorded for the manufacturer's information. If all testing skiers independently agree that the wake has significant negative effect, the committee will review the data and may disqualify the boat.

6. TRICK WAKE

The trick wake and table should not have a significant negative effect on the skier's performance. The rooster tail height will be evaluated to ensure that the release person or judge/camera person has adequate view of the ski on the water directly behind the boat. Since this test is subjective, comments from the skiers, all experienced competitors, will be recorded for the manufacturer's information. If all testing skiers independently agree that the wake and table have significant negative effect, the committee will review the data and may disqualify the boat.

7. JUMP WAKE

The jump wake and pull should not have significant negative effect on the skier's performance. Since this test is subjective, comments from the skiers, all experienced competitors, will be recorded for the manufacturer's information. If all testing skiers independently agree that the wake and pull have significant negative effect, the AWSA Towboat Committee will review the data and may disqualify the boat.

8. DRIVABILITY

While pulling slalom, jump and tricks, the boat's combination of power package, design characteristics, speed control, and instrumentation should not negatively affect a driver's ability to give smooth, consistent pulls within required record capability tolerances. Comments and evaluations from the test drivers will be recorded. The AWSA Towboat Committee will review the data, and should significant problems be agreed upon, the boat may be disqualified.

9. HANDLING AND MANEUVERABILITY

Each boat will be required to make a series of turns forming a "figure eight" pattern with circle diameters of 75 feet. Two passes will be made, one at 17 mph and one at 26 mph, both within the same described pattern. The boat will then be required to make a 180 degree turn at 36 mph within the 150 ft. diameter course. This pattern will be repeated in the opposite direction at 36 mph. Each boat's performance will be monitored to ensure that all maneuvers are made safely and under control. All turns, both left and right, must be completed successfully to pass this test. See test forms for course diagram.

10. ENGINEERING

The object of this test is to determine whether a boat's design will in any way hinder the performance of officials or skiers, or whether it presents any obvious safety hazards. The boat will be examined and analyzed from a tournament driver's perspective in areas such as human engineering and practicality for tournament usage. Comments from the drivers will be recorded for the manufacturer's use and information. Serious deficiencies will be noted and if, after presentation of the findings to the manufacturer, the problem cannot be corrected, the boat may be disqualified.

11. SOUND LEVEL TESTING

For the purpose of knowing that boats passing USA WSWS tests are not in violation of generally accepted maximum noise level standards, the noise produced by boats during typical tournament situations will be measured. Specifically, measurements will be taken from shore with a sound level meter during slalom deviation passes. Neither the average sound level for 36 mph passes nor the average sound level for 34.2 mph passes may exceed 75 dB(A). Failure to meet this standard constitutes a disqualification for the boat. Testing is done from shore as follows:

a) Place dB meter at a point 125 feet from centerline of the slalom course and;
b) Align dB Meter with buoy #2 or #3 on the opposite side of the course from the buoy. That way the skier is farthest from the sound meter in order to minimize noise from the ski and skier.

12. ENGINE STANDARDIZATION (by protest only)

Bore, stroke, compression, camshaft specifications and other features of the engine in each test boat will be subject to analysis by an independent source that will be on site at the evaluations. Data collected will be compared to the homologation specifications provided in advance by the engine manufacturer.

APPROVAL

- A boat model which passes the three-event towboat tests will be formally recognized and promoted as a USA Water Ski Approved Tournament Towboat. The use of "USA Water Ski Approved Tournament Towboat" and "AWSA Approved Tournament towboat" shall be interchangeable. The manufacturer may use this designation to advertise and market his boat to the public.

- A boat model that successfully passes the three-event Towboat tests will be eligible to receive invitations to USA WSWS sanctioned events. Participation in specific events will be at the option of the local organizing body.

- The Pan American Region and the IWWF will be notified of all boats that have met the three-event test standards for pulling Record Capability Tournaments.

DURING TESTING

1. During Power and Acceleration, Slalom Centerline Deviation, and Jump Centerline Deviation tests, two representatives of the boat being tested will be allowed to observe the testing of their products only.

2. At the conclusion of Power and Acceleration, Slalom Deviation and Jump Deviation testing, results will be communicated to the manufacturer's representatives, if available. Other test results will not be available until after final analysis.

3. For the Power and Acceleration test, each model will be allowed three attempts to pass. If the boat fails, the manufacturer or his representative on the test site will be notified of the failure. The AWSA Towboat Committee Chairman will determine the specific time period allowed during which to make changes to the boat.

During the allotted time period, the manufacturer may make any changes, the nature of which must be clarified to the AWSA Towboat Committee Chairman. The AWSA Towboat Committee Chairman is to be notified when modifications have been completed.

The boat will then be allowed three additional attempts to pass the test. If the boat does not pass, it will be disqualified. At the manufacturers option, the manufacturer may elect to have the boat continue with the remaining tests for performance analysis only.

4. The propeller may be changed as an alteration to complete the Power and Acceleration test. The propeller with which the boat passes Power and Acceleration will be recorded and must then be used for the remainder of the tests. Thereafter no propeller changes are allowed.

5. For the Sound Level Test, noise output will be measured and recorded during the Slalom Deviation testing. If the boat fails the test, the manufacturer or his representative will be notified of the failure. The AWSA Towboat Committee Chairman will determine the specific time allowed during which to make changes to the boat.

   During the allotted time, the manufacturer may make changes to the noise reduction system, the nature of which must be clarified to the AWSA Towboat Committee Chairman. The AWSA Towboat Committee Chairman is to be notified when modifications have been completed.

   The boat will then be retested by means of simulated slalom passes at the appropriate speeds. If noise levels again exceed the maximum allowable decibels, the boat will be disqualified. At the manufacturer's option, the manufacturer may elect to have the boat continue with the remaining tests for performance analysis only.

   Following modifications and successful completion of the sound level testing, the Committee reserves the right to require retesting of Power and Acceleration.

RETESTING

Manufacturers may request the AWSA Towboat Committee evaluate a change to an already approved AWSA Tournament Towboat after the completion of the AWSA Towboat tests. The Committee has the ability to determine the testing process and policies for the proposed change to be evaluated on a case-by-case basis. All costs incurred for retesting shall be paid by the manufacturer requesting the test. No changes will be evaluated or authorized between June 30 and the subsequent AWSA Towboat Test.

CATASTROPHIC SITUATIONS

Should a manufacturer experience serious difficulty, which impacts his ability to have a boat on hand and in test-ready condition at the required time, the manufacturer shall present the facts to the AWSA Towboat Committee and USA WSWS personnel. The Committee will consider the circumstances on a case-by-case basis and will work with the manufacturer to arrive at the most appropriate solution. Problems falling into this category are those such as catastrophe at the manufacturing plant immediately prior to the tests, and serious damage to the test boat occurring in transit, after arrival at the test site, or during the testing process.

FINAL ANALYSIS

1. Conditional Pass - When the AWSA Towboat Committee identifies a problem, which would cause a boat to fail, but which they feel could be easily and completely corrected by the manufacturer without testing verification, the boat will receive a "Conditional Pass". The manufacturer will be notified of the situation and the desired correction. If the manufacturer agrees to make the required changes, he will be given until December 1 of that year to submit documentation of the changes including photographs. Boats which do not comply will be removed from the approved list. If three or more of these problems exist in a boat, the Committee will review the facts and may disqualify the boat.

2. Condition Requiring Improvement - When the AWSA Towboat Committee identifies certain problems which they feel are serious enough to warrant change, but which involve redesign of some type, they may issue a warning stating the condition "MUST BE IMPROVED" the following year. If a boat has a “must improve”, the “AWSA Approved” status for that boat is valid for only one year.

3. Performance of Promotional Boats - Throughout the year the AWSA Towboat Committee reviews field reports detailing boat performances in sanctioned tournaments. It is acknowledged that most manufacturers experience some problems with individual promotional boats from time to time. The Committee will note repeated difficulties, which form a pattern indicating a design problem with a particular model. These findings will be taken into consideration along with data from the actual test boat. Repeated field problems from year to year will be considered as an indication that promotional boats do not meet the established standards. Such a determination could be cause for failure.

4. Boats Supplied As Tested - Boats supplied in the field for use in three-event Class C and above sanctioned events are to be identical to the boat supplied for the tests. The engine, gear ratio, and propeller of the test boat are recorded and published and may not be altered. Photographs and hull measurements are also taken for the purpose of verification and should design changes be made after the boat tests; the boat will be removed from the approved list.

APPROVED SKI BOAT

An Approved Ski Boat is defined as a three-event type towboat capable of pulling skiers in most environments including smaller manmade or tournament type lakes. The Approved Ski Boat does not have to meet the more rigorous performance standards of an Approved Tournament Towboat. An Approved Ski Boat may be used for sanctioned practices, exhibitions, Basic Skills Clinics or Grass Roots Class F Fun Days and Fun tournaments. The Approved Ski Boat may not be used for three-event tournaments with a Class C or higher sanction classification.

A model is determined by the wetted hull surface and may be either an open or closed bow. The boat may be equipped with any engine/transmission/propeller combination approved by the AWSA Towboat Committee. The AWSA Towboat Committee may approve other engine /transmission / propeller combinations without physically testing. If a change is made to the wetted surface, engine, transmission or propeller, the manufacturer needs to contact USA WSWS and inquire if the boat model needs retesting.

Licensing fees shall be determined by the USA WSWS Executive Committee

APPROVED SKI BOAT - TESTS

Each test has specific performance criteria, and all ski boats must meet or exceed these pre-determined performance standards.

1. SOUND LEVEL TESTING

For the purpose of knowing that boats passing the USA WSWS Towboat tests are not in violation of generally accepted maximum noise level standards, the noise produced by boats during typical use will be measured. Specifically, measurements will be taken from shore with a sound level meter during slalom deviation passes. Neither the average sound level for 36 mph passes nor the average sound level for 34.2 mph passes may exceed 75dB(A). Failure to meet this standard constitutes a disqualification for the boat. Testing is done from shore as follows:

a) Place dB meter at a point 125 feet from centerline of the slalom course.
b) Align dB Meter with buoy #2 or #3 on the opposite side of the course from the buoy. That way the skier is farthest from the sound meter to minimize noise from the ski and skier.

2. POWER AND ACCELERATION

These tests are to determine whether a boat has adequate power to pull skiers. The distance required to pull a skier from a deep-water start on a competition slalom ski and accelerate to 36 mph will be measured. This distance may not exceed 300 feet. A load device (drone), capable of consistently simulating the resistance of a skier throughout the designated course may be used to replace the skier. If a boat passes the power & acceleration test portion**,** its power will be further tested during the slalom deviation tests. Failure to meet these marks indicates lack of appropriate power. All drivers will observe the adequacy of power while pulling skiers under normal conditions.

3. CENTERLINE DEVIATION

The amount of boat path deviation, which will be influenced by the pull of a slalom skier, will be measured. Two factors will be measured: average deviation and maximum deviation from the boat's path. Measurements will be made with a skier skiing at speeds 32.3mph (52.3kph), 34.2mph (55kph) and 36mph (58kph). At 32.3mph, 34.2 mph and 36.0 mph skiers will use line lengths of 18.25m. 16m, 14.25m, 13m. The average deviation must be less than .8 feet (.24m).

4. SPRAY

The boat spray should not significantly affect the skier. Since this test is subjective, comments from the skiers will be recorded for the manufacturer's information. If all skiers independently agree that the spray had a significant negative effect, the committee will review the data and may disqualify the boat.

5. WAKE

The wake and rooster tail should not significantly affect the skier's performance. Since this test is subjective, comments from the skiers will be recorded for the manufacturer's information. If all skiers independently agree that the wake had a significant negative effect, the committee will review the data and may disqualify the boat.

6. DRIVABILITY

While pulling a skier, the boat's combination of power package, design characteristics, speed control (if installed), and instrumentation should not negatively affect a driver's ability to give smooth consistent pulls. Comments and evaluations from the test drivers will be recorded. The committee will review the data, and should significant problems be agreed upon, the boat may be disqualified.

7. HANDLING AND MANEUVERABILITY

Each boat will be required to make a series of turns. The boat will be required to make a 180 degree turn at 17mph within a 100 ft. diameter course and at 26 mph within a 100 ft. diameter course. The boat will then be required to make a 180 degree turn at 36 mph within the 150 ft. diameter course. This pattern will be repeated in the opposite direction at each speed. Each boat's performance will be monitored to ensure that all maneuvers are carried out safely and under control. All turns, both left and right, must be completed successfully to pass this test.

8. ENGINEERING

The object of this test is to determine whether a boat's design will in any way hinder performance or whether it presents any obvious safety hazards. The boat will be examined and analyzed from a driver's perspective in areas such as human engineering and practicality for skiing. Comments from the drivers will be recorded for the manufacturer's use and information. Serious deficiencies will be noted and if, after presentation of the findings to the manufacturer, the problem cannot be corrected, the boat may be disqualified.

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