

2009 - 2010
USA WATER SKI



USA
WATER SKI

TOWBOAT POLICY MANUAL

Policies and Guidelines

For the 2009-2010 Towboat Year

Member of the
UNITED STATES OLYMPIC COMMITTEE

STATEMENT OF PURPOSE REGARDING THE TESTING OF TOWBOATS

The American Water Ski Association (AWSA) is the three-event sport discipline of USA Water Ski (USA-WS). AWSA's National AWSA Towboat Committee is charged with the qualifying of boats for use in three-event water ski competition (slalom, tricks, and jump). The scope of boat testing and the future direction of all associated activities shall be guided by the following directives:

PERFORMANCE STANDARD

Boats to be used in competition must meet certain performance standards, which have been established by the AWSA Towboat Committee. Performance standards for 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 Water Ski Federation.

BOAT SELECTION

Through an annually administered program of boat testing, the committee (and appropriate sport division AWSA Towboat Committees) shall determine which boats meet the established performance standards and criteria and shall certify those boats as approved for use in tournaments sanctioned by USA Water Ski.

TOWBOAT PROGRAM

The committee shall use established standards and approvals as a basis for the program through 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 developed and compiled for committee 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 a goal of the tests to make data and comments on each boat available to that manufacturer for his own use. 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-WS seeks to cooperate with manufacturers by offering the testing process as a research tool whenever possible.

TESTING TECHNOLOGY

In order for the USA-WS 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-WS' position of leadership in setting standards for ski boat performance. The technical controller of the tests shall inform USA-WS of equipment needs, and funding for new technology shall be an annual item within the towboat program budget.

TEST FEES

USA-WS volunteers have invested a great deal of time and expertise in establishing and maintaining the professional quality of the tests. This significant pool of labor and technology has made it possible for USA-WS to carry on a well-run testing program while allowing the organization to benefit financially. It has also enabled USA-WS to keep the testing fees at a much lower level than would be possible if these services were purchased from an outside source. While the current situation is beneficial to both USA-WS and the manufacturers, changes in circumstances in the future could necessitate changes in policy regarding test personnel and test fees. The boat test budget and fees shall be determined by the USA-WS Executive Committee. A manufacturer can test multiple speed control systems on a specific towboat model with test fees to be determined by the USA-WS Executive Committee.

TEST INTEGRITY

In conducting the boat tests, the 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.

TOWBOAT TEST SYNOPSIS - 3 Event Boats

The USA Water Ski towboat evaluations are intended to qualify towboats for use in 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.

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, and must not exceed 230 feet to pull Record Capability tournaments. ***The distance required to pull a skier from 35.4mph to 38.2mph will also be measured and must not exceed 70 feet to pull Record Capability tournaments.*** Alternatively, a load device, 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 "distance to 36mph" 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 34 and 36 mph at 18.25m, 16m, 14.25m, 13m, and 12m line lengths. The average deviation must be less than .4 feet (.12m), and the maximum deviation will also be measured.

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) and, the maximum deviation will also be measured.

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 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 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 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 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 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 Water Ski's 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 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
- b) Align dB Meter with buoy #2 or #3 on the opposite side of the course from the buoy. That way the skier is furthest 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.

ON-WATER 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. 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 he desires, 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 his 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 period allowed during which to make changes to the boat.

During the allotted time period, 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 his 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.

BOAT PREPARATION FOR TESTING

It is the Committee's desire that all boats perform well and pass the boat tests easily. Often this is not the case, due to a lack of proper preparation. Each manufacturer needs to be aware of all requirements in the Policy Manual. He should review the series of tests to be performed, and be certain that his boat can meet the minimum test requirements. The boat itself is not ready until it has been fine tuned, just as each promotional boat should be. Tournament drivers expect the following:

Engine: Engines perform better with 10 to 20 hours of running time. Break them in.

Throttle: Must be smooth - not stiff.

Shift: Must not be stiff.

Steering: Not stiff, needs slight torque. Should turn equally to the right and left.

Speed Control: Must be installed and calibrated correctly. The test team will not set up or change software.

RETESTING

Manufacturers may request the AWSA Towboat Committee evaluate a change to an already Approved USA-WS Towboat after the completion of the USA-WS 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 31 and the subsequent USA-WS Towboat Test.

CATASTROPHIC SITUATIONS

Should a manufacturer experience serious difficulties, which impact his ability to have a boat on hand and in test-ready condition at the required time, he shall present the facts to the AWSA Towboat Committee and USA Water Ski 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 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 photographs documenting the completed changes. Boats which do not comply will be removed from the approved list. If three or more of these problems exist in a particular boat, the Committee will review the facts and may disqualify the boat.

2. Condition Requiring Improvement - When the 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" condition, the "USA-WS Approved" status for that boat is valid for only one year.

3. Performance of Promotional Boats - Throughout the year the 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, however, 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 USA Water Ski 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 TOURNAMENT TOWBOAT

- A boat model which passes the USA-WS Towboat Tests will be formally recognized and promoted by USA Water Ski as a USA Water Ski Approved Tournament Towboat. The use of "USA-WS Approved Towboat" and "AWSA Approved 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 USA-WS Towboat Tests will be eligible to receive invitations to USA Water Ski sanctioned events. Participation in specific events will be at the option of the local organizing body.
- The Pan American Region and International Water Ski Federation will be notified of all boats that have met USA-WS' test standards for pulling Record Capability Tournaments.

REQUIREMENTS FOR TESTING

A boat manufacturer may apply to have boats tested by USA-WS to determine if they meet USA-WS standards for pulling skiers in USA Water Ski-sanctioned tournaments (traditional, disabled, barefoot, collegiate, and kneeboard) and USA Water Ski-sponsored programs (i.e. training camps and clinics).

The manufacturer must meet the following criteria in order to participate in the USA Water Ski tests:

1. Current USA Water Ski Gold Corporate Member (\$1,000).
2. Current American Water Ski Educational Foundation Member. (\$100)
3. Current Water Sports Industry Association Member.
4. Coast Guard - and/or NMMA-Certification for each boat tested
5. Pay the appropriate testing fee for each boat model to be tested - specific payment dates and requirements will be established by USA Water Ski.
6. Be able to confirm that all financial obligations to USA Water Ski have been met in full before the start of the tests - specific dates and requirements will be established by USA Water Ski. A boat will not appear on the USA-WS Approved Towboats list (or in magazine) unless all fees have been paid.

GUIDELINES, POLICIES AND DEFINITIONS

Approved Categories

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

- **USA-WS Approved Tournament Towboat**

An USA-WS Approved Tournament Towboat is defined as a specific model that has successfully passed the USA-WS 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.

1. Changed or new models are required to physically test annually.
2. Unchanged models need physically test every three years.

A specific model that has passed the Towboat Evaluation Tests and successfully tows the National Championship Tournament earns the right to be called a **National Tournament Towboat**.

- **USA-WS Approved Boat**

An USA-WS Approved Boat is defined as a towboat capable of pulling slalom, trick and jump skiers on tournament type lakes, but it does not meet the more rigorous performance standards of a USA-WS Approved Tournament Towboat. It is not approved for use in Class N or above tournaments.

1. An unchanged model needs to physically test every three years
2. A model is determined by the wetted hull surface.
 - a) May be open or closed bow.
 - b) 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.
3. The fee for testing shall be determined by the USA-WS Executive Committee.

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 or hardware that impacts the skiers' pull in slalom, trick or jump.
- (e) There is a change in total weight of more than 10%.
- (f) Any other changes must be approved by the AWSA Towboat Committee prior to the boat tests.

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, 1.23:1, 1.5:1, etc.).
- (c) There is a change in propeller size, blade number or material (I.e.: bronze to stainless).

Towboat Changes

- 1. 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.
- 2. 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.
- 3. Bimini Tops: Bimini tops may be used during competition. Dual boats are not required to both have tops. If a bimini top physically affects the performance of the boat or the skier, no top will be used.
- 4. Wakeboard towers that do not affect the performance and handling characteristics of a towboat may remain attached to a USA-WS Approved

towboat during a USA-WS sanctioned event. The rope cannot be attached to the tower and the tower may not be used for towing skiers in an USA-WS 3-event tournament.

5. 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 in its second year of eligibility. 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.

Towboat Model

Any boat is considered to be a different model if any of the three following conditions exist:

1. The model is advertised as a different model by a manufacturer. This will be the case even if all physical and technical characteristics are the same as another model.
2. Changes in Non Propulsion System Items as defined in the definition of "New or Modified Towboat".
3. If a manufacturer chooses to market the same boat as 2 different models, they may get USA-WS Approved status for both boats by testing one boat only. Same boat means physically and technically the same boat. The boats may have a different cosmetic scheme or model name but must otherwise be identical. Documentation (to include photographs and narrative description of any differences between the two boats) must be submitted to and approved by the AWSA Towboat Committee prior to the towboat tests. The additional fee for the second boat will be determined by the USA-WS Executive and Finance Committee.

A manufacturer may add special graphics, endorsements or signatures and the boat will be considered the same model if it is advertised under the same model name and/or model number and the physical and technical specifications are the same.

Towboats Supplied "As Tested"

No equipment or device will be attached to any towboat that affects performance, handling, maneuverability unless such equipment has been tested as part of the USA-WS Approved Tournament Towboat tests or such equipment is otherwise tested and/or approved by Technical Committee and/or the AWSA Towboat Committee. This includes speed control devices, wakeboard towers, and extended pylons. Exceptions for

tournament use with respect to this policy may be made with joint approval of both the Chairs of the 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 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 4000 feet or greater, a 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.

Unchanged 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 need only be physically evaluated every three years, unless the model receives a "must improve", in which case, the model is only approved for one year.

Towboat Use: Model Year

- a) AWSA Nationals, AWSA Regionals, and Record Capability (Class E,L,R) tournaments may use a current year 2010 USA-WS Approved boat or a prior year 2009 USA-WS Approved boat.
- b) Class C, I, and N tournaments may use 2010, 2009, 2008, or 2007 Approved towboats (current and three years prior).
- c) In all instances where a boat older than the current model year is used, the manufacturer must also have a boat on the approved list for 2010.
- d) In cases where dual boats are required, both boats must be the same model and year.

Exceptions for Use – Approved Tournament Towboat

- a) 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-WS Tournament Towboat" for that event.
- b) Older Boats – If there are not sufficient numbers of approved boats available in an area for use, the LOC may apply to their Regional AWSA Towboat Committee member (or Chair(s) of the AWSA Towboat Committee) for use an OLDER model year towboat. Consideration will be given to the condition of the boat, speed control system and version of speed control software in the boat.

Towboat Credit

All eligible year Approved Towboats participating in USA-WS sanctioned tournaments will receive credit toward Regional and National Tournament participation. For 2010, this includes 2010, 2009, 2008 and 2007 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-WS Approved Tournament Towboats toward accumulating credits.
- b) For manufacturers that currently have a Record Tournament Capable USA-WS Selection of USA-WS approved boats to be used in specific tournaments will be at the option of the local organizing body.
- c) Towboat not used: A towboat manufacturer will receive credit for towing a particular USA-WS 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) Credit Period: Approved Towboat the towboat qualification earning period shall be July 1st through June 30th. For manufacturers that do not currently have a Record Tournament Capable USA-WS Approved Towboat, the credit earning period will begin at the conclusion of the USA-WS Boat Test and conclude the following June 31. The 20% quantitative requirement for participation in AWSA Regional and National Tournaments for these new boats will be calculated from the number of tournaments during that period.
- e) Manufacturers are encouraged to have their promotional team coordinators contact tournament sponsors to arrange for boat participation at tournaments. Sponsor information can be obtained from Regional Guide Tournament announcements. Manufacturers are also encouraged to develop a form for their promotional team member to verify towboat tournament participation. The form should be signed by the chief judge and chief driver at the tournament. The manufacturer will then have a backup system for verifying towboat participation.
- f) Tournament cancellation: A USA-WS approved towboat manufacturer will receive credit for towing a particular USA-WS sanctioned tournament if he 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 his boats at another USA-WS sanctioned tournament.
- g) Closed Tournaments: If a sanctioned tournament is not open to all USA-WS 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.

A tournament sanctioned as “open to all USA-WS Approved Towboats” that prohibits participation by a manufacturer shall be individually reviewed by USA-WS Headquarters and the AWSA Towboat Committee. Sanction forms for USA-WS sanctioned USA-WS events shall include a question asking if the tournament or clinic is open to all USA-WS Approved Tournament Towboats.

New Model Towboat Use Before Boat Tests

- a) If a manufacturer qualifies and participates in the previous year’s AWSA National Tournament he may use a new untested model towboat in tournaments between the current year’s AWSA Nationals and the subsequent USA-WS boat tests.
- b) The 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-WS Approved towboat which is unchanged may be used between the current year AWSA Regionals and the subsequent USA-WS Boat Tests.
- d) Subsequently if the boat receives USA-WS Approved status at the boat tests, it will receive credit toward qualifying for next year’s Regionals and Nationals for those tournaments pulled between Nationals and the boat tests.
- e) Any records set behind the boat prior to the boat tests would be pending until the boat receives USA-WS Approved status.

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-WS 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. Failure to pay when appropriate may result in loss of sanction.

Damage

A club (local organizing committee) is responsible for any damage to a towboat from the time it is delivered to the event site for use until it is returned to the promotional owner or his agent. In the event a towboat sustains damage at an event, a club (local organizing committee) is responsible for reimbursement to a promotional towboat owner of either his deductible or for repair costs up to a maximum of \$500.00. Cleaning costs are not considered damage. Failure to pay damages, when appropriate, may result in loss of sanction for this and future tournaments.

At tournaments which the club (local organizing committee) does not select the drivers for their tournament (i.e. Team Trials, Regionals, Nationals), the financial responsibility for reimbursement of insurance deductible or repair costs shall be shared equally among the club (local organizing committee) and the organization responsible for selecting the drivers for the event.

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 number of rounds.

Tournament Kits

Tournament kits shall contain a separate envelope marked for the Chief Driver. The envelope will contain all paperwork related to the use of boats, the official report form, and a return envelope. The Chief Driver is responsible for returning towboat forms directly to headquarters. Towboat forms may be enclosed with the tournament report sent to HQ.

Towboat Use Documentation and Performance Report

An unacceptable performance at a tournament does not count as credit towards qualifying a boat for the Regional Championships. 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, 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 cause for withholding credit. Included in this category are difficulties such as speedometers needing adjustment, 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.

Regional and National Towboat Inspection

All USA-WS approved towboats that qualify for use at a Regional or National Tournament will be inspected prior to the opening events to establish that they are in acceptable condition.

Regional and National Towboat Assignment Draw And Posting

- a) Regionals: The assignment of boats to events or groups of events shall be done by random draw. The draw for towboat use shall be done publicly and posted the day before the competition begins.
- b) Nationals: The grouping of events for towboat assignment shall be done by USA-WS headquarters and the assignment of groups shall be by random draw. The

towboat assignments shall be completed and posted by headquarters by July 1st preceding the respective Nationals. Based on a 3 year cycle, the groupings of events shall remain unchanged and the groupings will be rotated annually through the boats qualified to participate in the Nationals. Every 3 years USA-WS Headquarters will reevaluate the groupings to insure a relatively equal number of pulls for each group, and the groupings will again be assigned by random draw.

- c) 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”. 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.

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-WS Approved boat model/propulsion system combinations in USA-WS sanctioned tournaments. All of these USA-WS Approved combinations may receive and combine credit toward qualifying the single boat model for participation in the AWSA Regional and National tournaments. If a manufacturer qualifies to participate in the Regionals and Nationals he may bring any combination of USA-WS Approved towboat model/propulsion system combinations provided that the required number of each combination is provided:

- a) Regionals
A minimum of 1 of each boat model/propulsion system/speed control brand combination shall be supplied.
- b) Nationals
A minimum of 6 total boats from each manufacturer participating shall be supplied. In the case of multiple towboat model/propulsion system/speed control combinations being used, a manufacturer shall be required to provide a minimum of 1 of each combination to be used (unless otherwise lowered by the Chief Driver).
- c) 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.

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 Speed Control Committee. The manufacturer shall make such request in writing to the Speed Control Committee.

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.

Enhancing Wakes for the Trick Event Only

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 approve the boat with the manufacturer’s method of wake enhancement before it may be used in USA-WS sanctioned tournaments.

Hydrogate (Correct Craft)

When available the position of the Hydrogate is at the choice of the skier.

RULE 8 - EQUIPMENT

1. Performance Qualifications: Boats must have the performance necessary to obtain and maintain the required boat speeds (see boat speed) while towing a heavy skier under tournament conditions.
2. Overall length shall be approximately 6m. The beam shall not exceed 2.5m.
3. Towing Pylon: Boats shall be equipped with a towing pylon on the centerline of the boat, located between the transom and near amidship, 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.

4. Speed Measuring Device
 - Speedometer displays shall be positioned for maximum driver visibility. At least one speed indicating display shall be visible to the boat judge.
 - a) All USA-WS 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. The device shall also have a connection for a second optional display. 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
 - b) For other approved boats, speedometers which rely on pressure pitot type pickups shall be equipped with at least two independent accurate speed measuring devices.

8.02 Boats

(a) General: All tournaments, except Class F "Fun" tournaments, are required to use only AWSA-approved tournament towboats. Contact USA Water Ski Headquarters for approval requirements and details as set forth in the AWSA Towboat Manual.

(b) Added Weight: It is the duty of the boat judge, in consultation with the driver, to supervise adding a suitable weight in any event to even out boat balance, wakes, spray, or handling. This weight shall not present a hazard to the boat occupants or potential harm to the boat 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.

(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) National and Regional Tournaments: The selection of boats and the assignment of boats to specific events in the National and the U.S. Open tournaments shall be made by USA Water Ski Headquarters. National Towboat selection shall occur no later than July 1st. For Regionals, USA Water Ski Headquarters shall make the selection of boats, and the assignment shall be made by the Chief Judge and the Chief Boat Driver. The same boat and driver shall be used by all contestants in each Slalom and Jumping event, except in an emergency situation such as where time is a factor and similar boats and drivers of similar abilities are available and the Appointed Judges, by majority vote, may elect to use two boats and drivers in the same event in an alternating manner. *Alternating manner* shall mean the next available towboat will be used. However, in Jumping 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.

(e) Other Tournaments: At all other tournaments, the selection of towboats shall be established by the Chief Boat Driver with the approval of the Chief Judge from the available towboats. The same boat and driver shall be used by all contestants in each Slalom and Jumping event, except in cases where similar boats and drivers of similar abilities are available, in which case the Appointed Judges, by majority vote, may elect to use two boats and two drivers in the same event in an alternating manner. However, in Jumping and Slalom tie run-offs, only one boat and driver shall be used.

For Tricks, all types of boats furnished for the tournament will be made available by the tournament committee. Two 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 (i.e., inboard, 351 c.i.). 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 the 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 10.10(b)(4)) (See Rules Interpretations) 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 10.10(b)(4) and Interpretations)
- (g) Tournaments are only allowed to use speed control devices tested in conjunction with the towboats approved for use by the AWSA Towboat Committee. Approved towboats, including equipment as tested, are listed on the USA WS website under the Towboat section.
- (h) Software changes are permitted as approved by the AWSA 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.

PARTICIPATION IN REGIONALS, NATIONALS AND U.S. OPEN

Record Capability Approved Boat models which participate in 20% or more of the traditional class C or higher tournament events held during the preceding year in a given Region are invited to pull each of those 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. Boats participating at Regional and National Tournaments must meet these specific requirements:

A. REGIONALS

1. The boat must be a current year or previous year USA-WS Approved model.
2. Manufacturers must provide the appropriate number of boats as determined by USA Water Ski in conjunction with the chief driver for each respective Regional Tournament.
3. For each speed control system provided by the manufacturer at all 5 Regional Tournaments the software and hardware for each brand must be the same and must be the latest version that has been approved by the AWSA Towboat Committee as of July 1 directly preceding the respective Nationals.
4. If the above conditions are not met the chief driver of the Regional Tournament shall inform the Regional EVP and the EVP shall decide if the boats have met the requirements to participate.

B. NATIONALS

1. Boats must be a current year or previous year USA-WS Approved model.
2. USA-WS, in conjunction with the Chief Driver of the National Tournament, shall determine the number of boats required.
3. Speed Control requirements are the same as Regionals.

A boat model that pulls the National Championships will be recognized by USA-WS (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-WS to participate in the U.S. Open Water Ski Championships and other major national and international competitions sponsored and organized by USA-WS.

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.

A boat model which has qualified to pull the National Championships will be recommended and supported by USA-WS 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.

REGIONAL TOURNAMENT QUANTITATIVE REQUIREMENTS

It is required that each towboat manufacturer pull 20 percent of the events in a particular region to be considered to tow the Regional Championships. A manufacturer can achieve the 20% participation requirement to pull Regional Championships based on all towboat models – not just a single model. Manufacturers will receive towboat credit for use (or available for use) at a tournament – regardless of speed control system installed.

Quantitative Qualification for Regional Participation (i.e., 20% rule) will be based on the total number of tournament events (traditional and intercollegiate) held during the preceding one-year cycle. The reporting period for unchanged boat models shall be July 1st through June 30th the following year.

Towboats pulling sanctioned intercollegiate tournaments receive credit in the same manner as they do for traditional three-event tournaments. Collegiate tournaments are added to the base number of traditional tournaments held in a given season, and credits count towards the required 20 percent qualification to pull three-event Regionals. Also, boats pulling the Disabled Nationals and/or the Disabled Worlds (if held in the United States) shall be given credit towards the traditional Regionals for the region in which that disabled tournament is held. Novice tournaments and clinics will not count for credit.

Unchanged Boats - Credit earning period July 1, 2009 through June 30, 2010

Required Events (20%) to Pull the 2010 Regional Championships

	Slalom	Trick	Jump
East	11	6	5
Midwest	19	13	11
South	23	12	11
South Central	17	7	7
West	26	11	9

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