



VHORS SUPER STOCK RULES

Purpose of this document

The purpose of this document is to set forth the rules specific to VHORS Super Stock ("SS") Class racing. This document, either in electronic or printed form, represents the standing rules by which all VHORS Shootout participants shall abide for the VHORS Super Stock Class.

Overview

It is the desire and intention of your VHORS Rules Committee to encourage and increase participation in VHORS Super Stock Class. We believe that the means by which to accomplish this is to establish Rules so that all who choose to make and race Super Stock cars can do so on a competitive level and one that defines success not only by one's ability to set up a car for a given track, but also by one's driving skill. These Rules shall be interpreted with this in mind.

In the event of a conflict in the interpretation of these Rules, the interpretation favoring less modification is favored and shall prevail. Likewise, the interpretation which is closest to the spirit of this Rule is favored and shall prevail.

These rules are in effect for the entire VHORS Shootout and for every event which chooses to adopt VHORS Rules for the event.

These rules are based on the use of Aurora Thunder Jet OEM parts, new parts, after market parts, re-manufactured parts, and those made by "cottage industry" vendors. All parts must be specifically manufactured for the Thunder Jet chassis with the exception of wheels, tires and axles.

Rigorous honesty is the VHORS credo. Err on the side of caution. Your reputation in this small community is on the line if you are caught breaking the rules.

It is suggested that any questions or concerns regarding applicability of a rule to parts, manufacturers, modifications, adjustments or practices not specifically addressed or contemplated by the spirit and intent of these rules shall be presented to the Shootout Rules Committee at least seventy-two (72) hours prior to the race in question for a Rules interpretation. These interpretations will be made public in the FAQ page of the official VHORS website. The risk of assuming a compliance with the Rules is that an adverse race-day decision may not leave you adequate time to field a legal car.



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Regarding any Rules compliance issues after the doors open for a race, any present Shootout Rules Committee member(s) will address any questions or interpretations of the Rules, in consideration of the spirit and intent of the Super Stock Class, as set forth above. The decision of the Shootout Rules Committee will be final.

Definitions

False Start: A predetermined point on the host track at which every car starting the race must pass in order to declare the heat a valid race. Typically, this is a point after the first turn set.

Cottage Industry: Any manufacturer of T-Jet parts whose parts are not obtainable on the common mass retail market. Typically these products are obtainable directly from the manufacturer or specialized store or location, such as an online auction site, slot car show, etc, as opposed to from a distributor or authorized dealer.

Pre-Inspection: Inspection and/or disassembly of a racer's car by a Rules Committee and/or Tech Committee member, or a delegate responsible for car inspection at the event, prior to the event. All cars to be entered or entered in a race shall be subject to a Pre-Inspection. If a car passes pre-inspection, the car is deemed "legal" for the events of that day.

Post-Inspection: Inspection and/or disassembly of a racer's car by a Rules Committee and/or Tech Committee member, or a delegate responsible for car inspection at the event, immediately following a race event, in order to verify that the car is compliant with the rules for the event.

Track / Track Call: In the event of an accident during a race, or a de-slot in a location which is not easily reached by a Turn Marshal, either the Racer or a Marshal may call out "Track", which signals the host or track operator to halt the current. Drivers are not permitted to touch their cars, unless the "Track" call is for a mechanical malfunction, in which case the mechanical malfunction only shall be addressed on the car subject to the malfunction. The race will resume once the accident or de-slot is cleared or once the malfunction has been rectified.

Mechanical Malfunction: An occurrence by which the car or controller does not operate as intended. Examples of mechanical malfunction are: slipping gear, missing tire, meltdown, inoperable controller, etc.



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What constitutes “mechanical malfunction” is within the discretion of the Rules or Tech Committee Member, or his/her designee.

“On Market”: An “On Market” product refers to a new product manufactured by a Cottage Industry or established and known manufacturer and introduced to the market. Announcement of new products must be made to the VHORS Yahoo group 60 days prior to an event in order for that “On Market” product to be allowed at an event. The purpose of this rule is to encourage fairness of competition by ensuring that all new products are reasonably available to all. Please follow the link and register with the group.
(<http://groups.yahoo.com/group/VintageHoRacing>)

With respect to “On Market” car bodies, bodies must be from a production run that renders the body readily and freely available to the public in mass quantity for at least 60 days prior to the event. It is incumbent upon the manufacturer to prove the necessary announcement of the product and market availability as discussed above.

A sample of each “On Market” car body shall be submitted in final market ready form to the VHORS Shootout Rules Committee for consideration and possible approval at least 120 days prior to an event for consideration and possible approval.

All other items other than car bodies must be announced to the VHORS Yahoo group 60 days prior to the event, as discussed above.

Handling Pan: Any material added to the body the intent of which is to improve handling by attempting to replicate a handling pan.

Nonferrous: Any metal substance that does not contain iron, and therefore does not have magnetic properties.

VHORS Official: Any piece of equipment deemed by the Shootout Rules Committee to be acceptable for purposes of a measuring and/or operating function in support of the event and/or the event rules.

Race Specifics



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At any time, except during a race, and so as not to delay the start of any race, any racer may "challenge" another racer's car to verify whether or not it is in compliance with these Rules. If this Rule is abused to gain an advantage of any sort, the challenger's car shall be disqualified.

In the event of "challenges" in the Team Events, the above Rules shall apply, with the added conditions being that the entire team must present the challenge of another's car AND this challenge must be endorsed by a second Team before the car is subject to a compliance check.

After a race is completed, the top 4 finishers' cars shall be impounded by the Shootout Rules Committee or Tech Committee member (s) present at the time. These cars shall, as soon as practical after the conclusion of the race, be fully inspected for compliance with these Rules.

Cars General

SS:CO-01. Each racer may have up to two cars pre-inspected for the entire VHORS Super Stock Class event. After the cars have been inspected for an event, there shall be no substitutions or replacements. The only exception to the substitution/replacement Rule is where, in the judgment of the Shootout Rules Committee or Tech Committee member (s) present at the time, extreme circumstances are present, such as where a car becomes physically unfit for participation. Such a decision lies within the sound discretion of the Committee member (s) and is final.

SS:CO-02. Every fully assembled VHORS "SS" car shall weigh no less than 19.00 grams, and no more than 23.00 grams.

SS:CO-03. Each car shall pass freely through the Official Tech Block: 1 5/16" (1.3125") +/- .002".

SS:CO-03. Every component on the car shall meet the "On Market" requirement.

Bodies

SS:B-01. Bodies shall only be made of injection molded plastic or resin cast

SS:B-02. Bodies shall be molded or cast based on actually manufactured cars.



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SS:B-03. Bodies must be complete with full windows, bumpers, drivers, roll bars and other accessories which accompanied the car as originally manufactured.

SS:B-04. . Bodies must contain the original two screw posts. The original position of screw posts must remain intact and shall not be relocated to suit a different setup or wheelbase. Further, the posts shall be included and designed as part of the body specifically for mounting to an Aurora Thunder Jet Chassis. Some examples of acceptable bodies: Aurora, Bauer, Nu-Rora, Marx, Model Motoring, Playing Mantis/Johnny Lightning, Atlas, Road Race Replica, Fandango. This is not an exhaustive list.

SS:B-06. Body shall be fastened securely to the chassis using two screws.

SS:B-07. Bodies may be lightened to reduce weight; however, there shall be no holes present as a result of this process.

SS:B-08. Interiors may be removed from bodies that have a roof. The roof shall be replaced in its original position and securely fastened.

SS:B-09. OEM wheelbase shall be maintained.

SS:B-10. Screw posts may be cut, shaved or sanded to lower the body. The original position of the screw posts shall not be changed.

SS:B-11. Split or damaged screw post may be repaired using plastic or non-ferrous metal sleeves.

SS:B-12. Stripped screw posts may be repaired with plastic or non-ferrous metal inserts.

SS:B-13. Missing screw posts shall only be replaced with plastic and shall be positioned at the original OEM location.

SS:B-14. Windshields and windows may be sanded for purposes of allowing the body to sit lower on the chassis.

SS:B-15. Windows shall completely fill both the front and rear body window openings.



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SS:B-16. Side windows may be removed.

SS:B-17. Windows shall be made only of OEM injection molded plastic, acetate, Lexan or resin.

SS:B-18. Spoilers, scoops, wings, exhaust pipes, etc. may be added to enhance the car's appearance, but shall be made of the same material as the body, shall remain within the 1 5/16" width limit, and shall not be added for the purpose of enhancing the handling characteristics of the car.

SS:B-19. The thickness of body side walls, roofs, trunks, hoods, running boards, front and rear bumper areas (excluding separate bumper pieces) shall not exceed 1/8".

SS:B-20. Bodies shall have no modifications which appear to have the intention of replicating or approximating a handling pan.

Chassis

SS:C-01. Chassis must be stock Aurora Thunder Jet with all copper components.

SS:C-02. Non-ferrous bearings, bushings, shims, and spacers are permitted on the axle.

SS:C-03. Non-ferrous magnet shims are permitted except for sanded "Johnny Lightning/JL" magnets.

SS:C-04. There shall be no modifications to the chassis.

SS:C-05. Gear plate rails may be cut or sanded only for purposes of lowering the body, and shall only be cut or sanded to the level of the top surface of the gear plate.

SS:C-06. Brush springs may be adjusted only in their original configuration to change the tension on the brushes.

SS:C-07. Brush springs may be glued at to the chassis at a point no more than half the distance from the rivet point to the commutator brush hole in the chassis. No gluing shall be allowed from the point half the distance between the rivet and commutator brush hole to the brush hole. .



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SS:C-08. Guide pins shall be original design. They shall not be metal.

SS:C-09. Guide pins may be glued to chassis.

SS:C-10. Guide pins may be shortened in length to accommodate different tracks.

SS:C-11. Two mounting screws shall be used to hold the body securely on the chassis.

SS:C-12. The gear plate clamp may be bent (but not cut or otherwise altered) to improve fitment.

Pickup Shoes and Springs

SS: PSS-01. Pick up shoes and springs shall be solid copper and manufactured by Aurora, Model Motoring, American Line, or BSRT (model 504 only).

SS: PSS-02. Pick up shoe springs may be cut (coils removed) to desired length.

SS: PSS-03. Pick up shoe springs may be stretched to desired length.

SS: PSS-04. The pickup shoe may be bent, but only for the purposes of adjusting the original contact area to accommodate different rail heights of the various tracks.

SS: PSS-05. Pick up shoe travel may only be adjusted by 1) bending the front "window" portion of the shoe that hooks to the front of the chassis, 2) bending the rear hook which attaches to the chassis' copper hardware, 3) bending the hangers on the chassis into which the rear hook of the shoe connects or 4) adding heat shrinkable tubing to the top of the front window.

Magnets

SS:M-01. The only allowable magnets are stock Aurora or JL/R2.

SS:M-02. Magnets may be sanded for fitment.



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SS:M-03. JL/R2 magnets shall not be shimmed; stock Aurora magnets may be shimmed with non-ferrous material.

SS:M-04 Magnets may be matched .

SS:M-05. Magnets shall not be affixed to the chassis by any means.

SS:M-06. All paint on magnets shall have original factory paint. There shall be no substantial removal of paint.

SS:M-07. Painting of magnets shall not be allowed.

SS:M-08. Unpainted and unstriped magnets shall not be allowed.

SS:M-09. Spacing between magnets shall be at least. .700" +/- .002".

Armatures

SS:A-01. With the exception of SS:A-03 below, only original, stock, unaltered armatures, with gray tips shall be allowed.

SS:A-02. Armatures shall measure 15 ohms or greater at each pole.

SS:A-03. Armatures may be balanced. You may add weight, place a vertical notch in one, two or three poles OR you may grind/sand material from one, two or three poles to achieve balancing.

SS:A-04. Armatures shall not be trued. Traces of gray paint must remain visible on all exterior edges of poles.

Commutator Brushes

SS:CB-01. Commutator brushes shall be manufactured of a copper/carbon compound.

SS:CB-02. Both the top and bottom surfaces shall remain flat.



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SS:CB-03. Brushes shall remain unmodified from their original out of the package condition.

Gears

SS:G-01. The armature pinion, idler gear and driven gear shall be brass.

SS:G-02. The armature pinion gear shall have 14 teeth.

SS:G-03. The idler gear shall have 24 teeth.

SS:G-04. The driven gear shall have 24 teeth.

SS:G-05. The final pinion shall have 9, 12 or 14 teeth.

SS:G-06. The Crown gear shall have 15 teeth.

SS:G-07. The Crown gear shall not be metal.

SS:G-08 The crown gear “boss” may be sanded or trimmed to accommodate different gear ratios.

SS:G-09. The crown gear may be shimmed inside and/or outside the chassis.

SS:G-10. Gears may be soldered or glued to their respective shafts.

SS:G-11. Gears may be lapped and polished. They shall not be beveled or otherwise be altered.

Tires/Wheels/Axles

SS:TWA-01. Axle nuts, spacers or springs must be kept on the outer side of the chassis.

SS:TWA-02. Spacers shall be made only of plastic, copper, aluminum, brass, or steel.

SS:TWA-03. All four tires shall simultaneously touch the test track in the static position.



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SS:TWA-04. The width of the fully assembled tire/wheel/axle assembly shall not exceed 1-5/16".

SS:TWA-05. "Hub caps" or other wheel inserts shall fit entirely within the wheel.

SS:TWA-06. Lateral movement of the front tire/axle assembly shall not exceed 1/32" (.03")

SS:TWA-07. Shims may be used on the rear axle both inside and outside the chassis.

A Final Rule:

If anything is not specifically stated or addressed in the above rules it is NOT permitted.