

SR1 UTV CLASS RULE BOOK

(Revised 12/2020)

Rulebook will be enforced by inspection for vehicles competing in any series that includes the SR1 UTV Class in its race format.

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INTRODUCTION

The SR1 UTV Class was developed and created by Weller Racing in 2009 as a result of a growing need for an exciting “drivers’ class” in the UTV division of off road and short course racing. The Yamaha Rhino was the first UTV to be modified into an off-road racing machine, and it is this rugged, highly versatile machine that is responsible for UTV racing being what it is today – a fun, economical way for people to become involved in the sport of off-road racing.

Realizing a growing need for a fun and much faster class of racing, Weller Racing developed an economical way to transplant a Yamaha R1 street bike motor into most pre-existing Pro/Mod race Rhino chassis, without the need for extensive modification.

As the class has developed, certain model years of Kawasaki ZX-10 motors mounted in the Kawasaki Teryx UTV chassis have also been added, creating even more opportunities for aspiring SR1 racers!

Another recent addition due to high demand has been the development of the production Weller Racing SR1 base center frame, which has solved the issue of long waits for backordered frames and increased costs from the factories. With the availability of these chassis, it has allowed for a great number of brand new SR1s to be built from the ground up – increasing the numbers of our class and allowing for builds to be finished in a much shorter time frame.

With its high HP motor, six-speed manual transmission, two-wheel drive handling characteristics and strict specifications, the SR1 is not only a fun, powerful, and challenging class for drivers, but it is also be exciting to watch and has breathed new life into the SxS racing community!

Over the years, our goal has been to keep each SR1 *very* similar (much like a “spec” class) in power and handling in an effort to keep the racing action close, and to prevent the class from becoming a money and horsepower contest.

This has been an exciting class to be a part of, attracting both professional and completely new racers from all walks of life. The SR1 class has been a part of the Lucas Oil National Series, the Lucas Oil Regional Series in Utah, Arizona, and So Cal, and with short course continuing to change and evolve throughout 2021, we are looking to expand into even more series throughout the next couple of years.

Let us go racing!

QUICK SPECS

Chassis: Production Yamaha Rhino base center frame

Production Kawasaki Teryx base center frame

Production Weller Racing SR1 base center frame

Motor: Yamaha R1 (2002 – 2014) – in Yamaha Rhino frame or Weller SR1 frame Kawasaki

ZX-10 (2004 - 2010) – in Kawasaki Teryx frame or Weller SR1 frame Transmission: Yamaha

R1 factory gearbox or Kawasaki ZX-10 factory gearbox Suspension: Max shock length not to exceed 10" of shaft travel (front and rear) *Max width:* 78" wide (outside of tire to outside of tire at the widest point) *Max length:* Not to exceed 83" from center of front hub to center of rear hub. *Min Weight:* 1600 lbs. *with driver*

Max Tire Size: 26" diameter

Drive Train: Direct Chain Drive (no differentials/ FNR boxes)

Motor Posit: Center Mounted (must use Weller Racing engine mounts)

Clutch: Floor or shifter mounted factory clutch

SECTION ONE:

SR1 UTV Class Definition & Requirements

SR1: *A highly modified Yamaha Rhino, Kawasaki Teryx, any year of production chassis, having a Yamaha R1/ Kawasaki ZX-10 (transplanted) power plant. Must have mid/ long-travel suspension and a modified race chassis that meets general Pro/Mod UTV specifications for safety according to the sanctioning body, and that meets SR1 Class rules for eligibility.*

Required:

- A full body including bed sides and bumpers *
- Window Nets *
- Full doors *
- A-arm suspension front and rear *
- Roof *
- Nerf bars *
- Race seat (s) *
- 5-point harness (one for each occupant) *
- Helmet, hand & eye protection *
- Fire suit *
- Head restraint system (as approved by racing organization) *
- Fire extinguisher *
- Safety fuel cell (12 gallon max) *
- Aftermarket roll cage (no stock/bolt on cages allowed) *

- Minimum weight 1600lbs with driver

----Please Note---

These are basic requirements and definitions. Please read the remainder of this rule book for additional guidelines and specifications.

SECTION TWO

SR1 Class Safety and Specifications

Wheels & Tires

Maximum tire size allowable is 26" outside diameter. No multiple tires per corner permitted. Tires will be visually checked for condition and must be considered reasonably safe prior to competing.

Tires can only be a 6-ply minimum sidewall, knobby UTV specific all-terrain style tire. No Hoosier or Hoosier-style tires are permitted in the SR1 class. Must have a minimum tread depth of 11/32 inch or deeper when new.

Steering:

All steering components must be in good condition and in proper working order.

The steering components must contain the stock steering type (rack and pinion). Power steering/electrical assist is permitted and encouraged in the SR1 class.

Brakes:

Brakes must be in a safe working condition and be able to apply adequate force to lock up all four tires. Turning or cutting brakes will NOT be permitted. The three-disc factory braking system is allowed, as is an alternative 4-wheel braking system.

Shock Absorbers:

There must be at least one and only one shock absorber per wheel in working condition at the start of the race. Shock absorber mounting points may be moved, but shocks are not to exceed a total travel length of 10", front and rear.

Bump Stops:

Suspension bump stops must be of the solid type.

Torsion System:

Currently the only torsion system that is acceptable is a coil-over shock.

Suspension:

All a-arm mounting points must remain in the stock location on the factory frame (as well as the Weller Racing Production SR1 chassis) and in the same position as delivered from the manufacturer; however, they may be reinforced for strength through the use of gussets and plates. A-arms are to be no less than +6 inches over stock. Stock suspension, or any suspension under +6 inches over stock will not be allowed in the SR1 Class for obvious safety reasons. Trailing arms or other style arms other than OEM are not allowed. Total width from outside of tire to outside of tire cannot exceed 78".

Wheel Spacers:

Wheel spacers will be permitted, but total width, from outside of tire to outside of tire cannot exceed 78".

Fuel:

Required:

Any of the following commercially available fuels may be used:

Service station pump gasoline (the type normally used in passenger vehicles for highway use)

Racing gasoline as manufactured and available to the public

Commercial aviation gas

Restricted:

No alcohol, Oxygenated Fuels, Nitrous Oxide (NOS), Nitromethane, or Methanol fuels are permitted.

Fuel tanks:

Safety fuel cells are to be utilized for all SR1 class vehicles. Stock fuel tanks are to be removed completely. All fuel tanks must be securely mounted in accordance with the race series in which the SR1 class is participating in. Fuel tank must be filled from and vented to the outside of the vehicle. The maximum fuel capacity is 12 gallons.

Fuel Filler, Vents & Caps:

Required:

Fuel filler lines and positive-locking non-vented fuel filler caps must be located and secured in such a manner as to prevent being knocked off or open during movement, rollover, or accidental impact.

Design and installation must be in such a manner to prevent fuel escaping from pickups, lines, fillers, and breather vents if vehicle is partially or totally inverted. Fuel breather lines must have a rollover check valve incorporated in the fuel cell. The vent line must extend to the highest point of the roll-cage or run in a vertical loop nearest the fuel cell, across the width of the vehicle, and down below the belly pan of the vehicle or 3 inches below the fuel cell, whichever is lower.

OPTIONAL PLACEMENT: The vent line may be wrapped one full loop around the outside of the fuel cell near the top of the fuel cell and then down below the vehicle 3 inches below the lowest point of the fuel cell. Where the vent line attaches to the fuel cell there must be a loop above the fuel cell that extends 4 inches higher than the top of the fuel cell. The breather line must be vented outside of driver's compartment and be directed away from the engine and exhaust system. All fuel fillers attached to the frame or body panel must use a flexible coupling to the tank. All fuel fillers must be surrounded by a boot or splashguard (body panel is acceptable as a splashguard if sealed). Boot or splashguard must direct fuel spillage to outside of vehicle and away from driver's

Compartment, engine, and exhaust. A fuel filler rollover-check-valve must be incorporated into all fuel cells.

Restricted:

Monza/flip-type caps are strictly forbidden.

Recommended:

It is highly recommended that all detachable fuel filler caps have a flexible strap or chain attached between it and the frame of the vehicle.

Safety Harnesses:

Required:

All vehicles must have a heavy-duty type five-point fast release latch seat belt, anti-submarine strap and shoulder straps with metal-to-metal buckles and connectors for each occupant. The five-point harness system shall consist of one 2-inch-wide anti-submarine strap, one 3-inch-wide seat belt and two 3-inch-wide shoulder straps. All mounting parts of belts must be mounted to chassis.

Restricted:

No push button type harnesses permitted.

No “Y” type shoulder belts permitted.

Safety Nets:

Required:

Approved safety nets are mandatory on all vehicles. If passenger/ co-driver is allowed, a safety net must be installed on passenger side of vehicle. Nets must be installed on the inside of the roll cage to prevent them from being damaged or coming off in the event of a roll over or slide on the side. Nets must be installed so that the occupants can release the netting unassisted and exit the vehicle regardless of the position of the vehicle. Net installation must meet with the approval of the chief technical inspector of current series.

Seating:

Required:

All vehicles must have at least one seat (passenger seat is optional) designed specifically for racing applications, manufactured by a recognized racing seat manufacturer.

Stock seats must be completely removed. All seats must be securely mounted to frame of vehicle and be properly reinforced in such a manner as to keep seat from moving in relationship to the frame.

Ignition:

Required:

Each vehicle must have a positive action on/off switch in good working order.

The switch must be labeled “ignition” on/off and be located on the left-hand side of the dash panel, from the outside of vehicle. All electric fuel pumps with independent switches must be labeled “fuel” on/off and be within easy reach of driver and from outside of vehicle.

Batteries

Required:

Batteries must be securely mounted with metal-to-metal tie downs or metal brackets. Wetted fiber or gel cell batteries only. Liquid lead acid batteries are not permitted.

Restricted:

Batteries may be in the driver’s compartment if enclosed by factory engine cover or adequate fire wall. Batteries will be considered as being in the driver’s compartment if there is no firewall between the battery and the driver.

Starter:

Required:

All vehicles must be self-starting by use of an onboard electric starter.

Overall Measurement Restrictions:

Required:

The maximum width of the SXS, measured from outside of tire to outside of tire is 78 inches.

The maximum overall wheelbase not to exceed 83" from center of front hub to center of rear hub.

Engine Location

Required

SR1 class vehicles must have engines mounted utilizing the Weller Racing SR1 Mounting Plates to ensure equal placement and must be mounted between the driver and passenger seats. Rear mounted /forward mounted and motors mounted sideways will not be allowed. Mounting plates are available at www.wellerracing.com.

Engine Specs:

Required:

All SR1 class vehicles must use stock Yamaha R1(2002 - 2014) / Kawasaki ZX-10 (2004 - 2010) engine cases and cylinder heads, as well as stock engine internals, including transmission components. There can be *no internal modifications* made to any R1 / ZX-10 engine for the SR1 Class. This means that all parts between the air filter and the exhaust header must remain as created and released from the factory for that motor's particular year of production. Clutch plates and springs will be the *only* exception to this rule. Aftermarket clutch plates and springs will be allowed to help lengthen the life of the clutch. Air filter modifications and aftermarket exhaust systems will be allowed. Engine displacement may not be increased beyond the stock displacement for that engine's model year. All engines must use the factory EFI system they were designed for (according to the year of production). There will be *no modifications* to throttle bodies allowed.

Keeping these motors stock will be key to ensuring this class stays competitive and affordable.

Exhaust:

Required:

Exhaust systems must be a minimum of 6 inches away from fuel lines and 18 inches away from fuel filler. Aftermarket headers and mufflers may be used.

Controllers:

Allowed:

Only factory ECU's are permitted at this time in the SR1 class. No aftermarket ECUs are allowed. Factory ECU can be flashed / tuned.

Transmission:

Required:

Every vehicle must use the stock Yamaha R1 / Kawasaki ZX-10 transmission and clutch design that came with the motor currently being used. Aftermarket clutch plates and springs will be allowed. Every vehicle must use either a clutch pedal mounted on the floor or a clutch lever mounted to the shifter, as well as a stick shift style shifter. *Electric paddle shifters and automatic clutch systems / shift interrupters are not allowed at this time.*

Fluid Coolers:

Required:

Oil coolers and radiators located ahead of the driver and co-driver or in the passenger compartment must have a shroud that will prevent liquids from blowing back or leaking onto the driver and/or co-driver in the event of a rupture or leakage.

Auxiliary Equipment:

Required:

All vehicles must start race with a functional generator or alternator, fan, water pump (water cooled vehicles) and a complete functional electrical system.

Superchargers & Turbochargers:

Restricted:

Superchargers or turbochargers will not be permitted.

Chassis & Body:

Required:

All SR1 class vehicles must utilize the stock Rhino, Teryx, or Weller SR1 chassis and maintain an appearance like stock, so that the vehicle is recognized as a Rhino/Teryx/SR1. The chassis may be modified for durability and strength but must retain the stock width, length, and configuration. All chassis joints must be welded to frame securely. *No stretched chassis will be allowed.*

Doors:

Required:

Must have 'X', 'A', Ladder, or diagonal design bracing in door area. 'X' or 'A' or diagonal designs must use a minimum 1.5" outside diameter, .095" wall thickness 4130 chromoly or 1018/1012 CDS/DOM. Ladder design must use a 1.5" diameter, .095" wall thickness for main rails and 1.25" diameter x .095" wall thickness for rungs.

Doors that latch and/or open and close are not allowed.

Roll cages:

Required:

An aftermarket roll cage is required in the SR1 class. No seamed tubing is allowed.

Roll-cage Design:

All roll-cages must be designed and constructed with one front vertical hoop, one rear vertical hoop, two interconnecting top bars, two rear down braces, two wings' wang bars ("B" pillar) constructed of 1.0" 0.95 chromoly or 1.0" 1.20 DOM, one diagonal brace and all necessary gussets. The two top interconnecting bars must be placed as far to the outside of the top section of the front and rear hoops as possible. Rear down braces and diagonal brace must angle a minimum of 30 degrees from vertical. At the bottom of the diagonal brace there must be a cross member of the same tubing material and dimensions as the hoop. All roll-cage components (hoops, braces, gussets, etc.) must have a minimum of 3-inch clearance from the component to the vehicle occupant's helmets when occupants are seated in their normal riding positions.

Minimum tubing diameter and thickness is 1.5" diameter by .095.

Roll-cages must be securely attached to the frame or body. All intersecting points must be gusseted and braced. Gussets must be installed at all major intersections, including diagonal and rear down braces, where single weld fractures can affect occupant's safety. Gussets may be

constructed of minimum .090-inch x 3-inch x 3-inch flat plate or tubing gussets made of same material and thickness as roll cage.

Top left half of roll cage above driver's head must have one 1 ½ inch x .095 inch 'X' diagonal bracing bars and/or be covered with .125-inch minimum aluminum plate. 3. If plate is used, a single diagonal bar is sufficient.

4. Plate must be attached with 2 bolts on each of the four sides.

All portions of the roll bar or bracing that might come into contact with the vehicle occupant's helmets must be padded.

Entire roof must be covered with sheet metal or .063-inch minimum

aluminum. *Material:*

Roll cage construction material may be DOM or 4130 chromoly. NO seamed tubing.

All welds must be of high quality and craftsmanship with good penetration and with no undercutting of parent material. Stress relief all welded intersections by flame annealing.

Driver's Compartment:

Required:

The vehicle occupants must be able to enter and exit, unassisted and with great ease, the driving compartment with the vehicle in any position. Firewalls and/or bulkheads must separate the driving compartment from any fuels, engine fluids and acids. Vehicle must make use of an engine cover that covers motor and protects occupant(s).

Bumpers:

Required:

Must have front and rear bumpers attached securely to frame. Bumpers must be **ROUNDED** and have no open ends, nor any sharp/pointed edges. Sharp and/or open edges are dangerous to other drivers and will not be allowed in SR1 class competition.

The SR1 Class will also require nerf bars to be installed on both sides of vehicle.

Mirrors:

Recommended:

A rear-view mirror is recommended on all vehicles usable for the co-driver. Mirrors should have at least 6 square inches of mirror surface. Mirror should have a reasonably unobstructed view of area behind vehicle.

Fenders:

Required:

Fenders must be securely attached to vehicle at the time a race begins. The removal of fenders during competition for any reason other than damage incurred during the competition will result in disqualification.

Hoses:

Required:

All fuel and brake line hoses including metal lines and fittings must be clamped and/or safety wired.

Identification Markers, Numbers, and Stickers:

All SR1 Class vehicles in competition must be identified with the correct class vehicle numbers in accordance with the series being run and be displayed in the proper locations as instructed per series rules. The only deviation from these numbers allowed is the #1 plate for the current SR1 Class Champion.