

## 2012 SSP Road Warriors Specification Rules (4 & 6 Cylinders)

\*Please note these rules are subject to change.

**Changes or Additions for 2012 are in red.**

Any car may be checked for engine, chassis, oil, fuel, tires, wheels, rear ends or sound legality at any time by an SSP Technical Inspector or Official. **Upon entering car for SSP competition, the driver (and possibly the owner) is responsible for the legality of their car and will suffer all penalties resulting with the car violating these rules.** Refusal to submit a car, engine or parts for inspection or measurement upon the request of an SSP Technical Inspector will result in an immediate disqualification and possible suspension by SSP management.

No equipment or racecar will be considered as having been approved by reason of having passed through inspection "**unobserved.**" Regardless of a car passing prior inspections, compliance with all rules must be made at each post-race inspection. **No expressed or implied warranty of safety shall result from the technical inspection or approval.** Any rules or guidelines not covered will be governed at the discretion of the SSP management and the Technical Inspector.

**If this rulebook does not specifically say that you can change/modify/add something, then you must consider that the change/modification/addition illegal.**

**Enforcement of Specification Rules:** All SSP-approved weighing, measuring and testing devices used by the SSP Technical Inspector or Official are the standards that will determine compliance with the rules and regulations. A competitor's equipment, gauge or instrument will have no bearing on the enforcement of these rules.

**Impounding** - SSP officials reserve the right to impound any racecar or remove any component on a racecar (including the engine) at any time.

**Confiscation of Illegal or Unauthorized Components** - The use of illegal or unauthorized components on racecar will result in the confiscation of the said components. These components will then become the property of SSP and will not be returned. **Failure to surrender the illegal parts will lead to a minimum two (2) week suspension (mandatory) for the car owner, car and driver.** This will turn into an indefinite suspension until the said illegal component is turned over to SSP management.

**New Enforcement Procedures, Equipment or Methods:** Due to the rapidly changing technology of motorsports, SSP officials will continue to develop new procedures, equipment and methods to enforce the rules contained within this rulebook or succeeding rules bulletins. These procedures, equipment and methods will be based on common sense, consistency, impartiality and fair play. **These procedures, equipment and methods may be introduced at anytime without prior notice to the participants.**

**Driver Requirements:** All drivers must be at least fourteen (14) years of age to compete in this division. Drivers under eighteen (18) years of age must have a signed and notarized Parental Consent form by both parents or legal guardians and said documents must be in the hands of the SSP management before participation of said individual will be permitted.

**Concept:** The primary goals of this division are to have fun and to keep drivers safe. The Susquehanna Speedway Park has attempted to keep the car construction rules simple, but we reserve the right to require changes to any car that is built without fun and safety as the primary goals.

**Safety Requirements:** Driver must use a Snell approved helmet. Fire retardant suits are recommended. Minimum long sleeve shirt and long pants are required.

### **SAFETY EQUIPMENT FOR ALL DRIVERS**

**No express or implied warranty of safety shall result from publication of, or compliance with these rules and regulations.** They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to participants, spectators or others. Whenever there is a conflict between a safety provision provided herein and any other rule, the safety provision shall take precedence.

**1. HELMET:** SSP requires that a driver must wear an automotive racing type helmet of current standards of SA2000 or SA2005 rating or later any time he/she is on the track for slow laps, practice or racing conditions. Drivers without a helmet meeting the SSP minimum Snell standards may not be permitted on the racetrack in a racecar.

A helmet is designed to absorb energy once. If a significant impact has occurred to the helmet, it is highly recommended that it be sent back to the manufacturer for evaluation. Helmets are subject to inspection at each event by the technical inspector or other SSP official. A full-face helmet is highly recommended. Eye protection is mandatory when an open face helmet is used.

**Helmets with Radio Harnesses:** Many drivers compete in other racing series' that permit the use of radios. If a driver should use that helmet to compete in an SSP event, he/she must duct tape the connector end to the back of their helmet. This is the only way in which this helmet will be permitted without actually removing the entire radio harness from the helmet.

**2. FIRE SUITS:** All drivers must wear an SSP-approved fire retardant suit of Nomex or equivalent material any time they are on the track. A double layer or more is highly recommended. It is also recommended that a suit be kept free of grease, oil or other flammable substances. If the suit is two-piece, both the top and bottom must be worn at all times while operating a racecar (NO EXCEPTIONS!).

**3. FIRE EXTINGUISHERS:** An on-board fire extinguisher is highly recommended for your safety. If used, they must be securely fastened and within reach of the driver. It is also recommended to recharge the extinguisher at least once a year.

**4. NECK COLLARS:** All drivers under the age of 16 must wear a neck collar anytime he/she is on the track for slow laps, practice or racing conditions. Neck collars are highly recommended for all other drivers.

**5. OTHER SUGGESTED SAFETY EQUIPMENT:**

Some of these items are not required, but they are all highly recommended.

- 1) Flame retardant racing gloves, underwear, socks and shoes
- 2) Head sock (balaclava) and knee pads.
- 3) Steering wheel "nose pad" and roll bar padding.
- 4) Arm restraints and helmet restraint on the seat.
- 5) Safety wire on hood and trunk Zeus buttons and other nuts and bolts throughout the car.
- 6) Interior door pads, tunnel pads and other upholstery.

**FRAMES, BODY, SUSPENSION, etc. for ROAD WARRIORS:**

**1. GENERAL APPEARANCE OF THE CAR:** All competitors must present a neat and clean appearing car for any SSP event. Crash damaged cars must be repaired to the minimum technical standards before returning to competition. A Technical Inspector or SSP official may deny a car from competing if it does not meet the minimum acceptable standards as mentioned above. SSP management reserves the right to deny access in competition because of a sponsorship, advertisement, paint scheme and/or lettering on a car not in "good taste," or in the spirit of keeping this a "family entertainment" sport.

**2. COMPETING MODELS:** Any OEM three, four or six-cylinder car, van or truck is eligible (domestic or foreign) with a maximum 107.0" wheelbase. Front wheel or rear wheel drive (Four-wheel or all-wheel drives are not permitted). Two-seat sports cars, Jeeps, convertibles, VW (rear engine type), Saabs, "turbo" or "rotary powered" vehicles are not permitted. No "rear wheel drive" independent rear suspension permitted.

**3. WEIGHT SHIFTING DEVICES:** No devices (either mechanical, hydraulic, electric) for shifting weight is permitted.

**4. BALLAST:** No ballast may be added of any kind.

**5. FRAME: The following measurements are minimums.** Only those areas indicated will be subject to technical inspections. The top of the roll cage must be constructed high enough to cover the driver's helmeted head. No aluminum and/or soft metals are permitted. No bracing, push bars, trailer hitches or reinforcement of any kind allowed.

a) Frame must be the same make, model and year as body used except as noted in rule 6. No aftermarket frame kits permitted. No down tube frames permitted.

b) No part of chassis may be moved or relocated from its original position. The rear sub-frame must remain OEM stock, in stock position with stock dimensions. Rusted areas may be reinforced with a steel channel iron or tubing.

c) **Roll Cage Construction:** Roll cage must be a minimum of a four-post roll cage (6-point is recommended). Front and rear hoop are recommended and must be welded to the OEM stock frame, not the floor or body. The bars must be welded to the top of the frame and extend at least three-(3) inches above the driver's head. Two bars must run from the top of the cage to the rear frame section. The roll cage and door bars must be constructed of round steel of minimum 1.50" diameter tubing (minimum 0.095" wall thickness). No aluminum and/or soft metals are permitted. Must have roll bar from the floor to roof and left to right, welded to frame, or from the top have two braces to the rear, mounted ahead of the rear wheels.

d) All butt welds, joints and connections may have gusset plates for reinforcement.

e) A fuel cell protection bar is mandatory.

f) Any bracing that does not conform to these construction rules is subject to final approval by the Technical Inspector.

g) **Door Protection:** Must have either a plate/guardrail on or bar(s) inside the driver's door to protect the driver from side impact. If bars on inside, then driver's side door bars must have a minimum of three-(3) protective side bars, two-(2) bars on the opposite side of the cage. Sharp edges are not permitted. Must have the driver's door securely chained or welded shut. The passenger side door may remain open or welded/chained shut.

h) **Firewall:** The OEM stock metal front firewall is mandatory between the driver's compartment and the engine. A metal rear firewall is mandatory between the driver's compartment and rear end/fuel cell compartment. Holes in the front and rear firewalls must be completely covered with sheet metal. The trunk must be sealed completely from the driver's compartment.

i) **Floor:** Must have a full factory floor to back of driver's seat. In case of rust, the floor may be patched, but it may not be removed. A full factory floor must remain intact on all uni-body cars from front to back to prove originality of frame rail location.

j) **Radiator Support Bar:** A bar may be used to protect the radiator using a 3-piece design using a maximum 1.50" tubing constructed no wider than the frame rails and no higher than 10.0" off the top of the frame rails. A maximum of two bars may be attached to the top of the bumper from the protective hoop. Vertical bars may be installed between the two horizontal bars for the sole purpose of protecting the radiator. Rear bracing of hoop is optional. A wrecker hook up point must be included.

k) **Unibody Cars:** May use a frame of 8.0" in circumference (2.0" x 2.0" box tubing) to tie front and rear frame rails together. Roll cage must be attached to the box tubing frame. Minimum tubing size is 1 1/2" o.d.

l) **Engine Location & Mounts:** The engine must remain within the stock location and configurations as currently delivered by OEM. All mounts must remain as OEM stock types with the exception of an aftermarket racing type motor mount. Chains are permitted from the engine to the frame in case of engine mount failure.

m) **Metal Fatigue:** It is highly recommended to have the frame checked periodically by an expert for metal fatigue. Cracked or broken frames are strictly prohibited from any SSP events.

n) **Repairing Frames:** *The Technical Inspector reserves the right to disallow a repaired car from a competition that does not appear to be properly repaired.* Once a frame is repaired from its original form, SSP management and the Technical Inspector assume no liability for any injuries that may occur as a result of this repair regardless of the approval given to compete with that repaired frame.

**6. BODY:** The body and frame must remain factory OEM stock with stock firewalls, floorboards and body panels (unless otherwise noted). The body, firewall mounts and body mounts must be OEM stock in stock location on frame. All inner sheet metal must remain in place. All holes in firewall and floor boards must be sealed off. The insulation in the hood must be removed.

a) All cars must have complete bodies in the proper configuration for the make, model and year, including fenders, bumpers, roof, nosepiece, hoods and trunks. Front inner wells may be removed. The rubber grommets may be removed from the body mounts.

b) All OEM factory trunk and hood latches must be removed and replaced with straps, pins, or clips. Track personnel must have easy access to open the hood and trunk quickly.

c) Chopping, channeling or modifying is not permitted including the roof post.

d) **Exterior:** All headlights, taillights, glass and emblems must be removed. Must have the driver's door securely chained or welded shut. The passenger side door must open. All sheet metal used must be 22 gauge or thicker.

e) **Interior:** All flammable (plastic or fabric) material must be removed. Dash assembly is optional. Sheet metal work is not permitted in the driver's area from the dash to the rear of the seat. The interior sheet metal may not be boxed around the driver's seat.

f) **Inner Supports:** All body parts may have the inner supports removed however, it must be braced to be rigid if the inner support panel is removed. The rear window side panels, dash board and the inner roof panels may be removed completely for roll cage installation only.

g) **Grills:** The original grill may be removed but expanded metal or screen may be installed.

h) **Bumpers:** Both front and rear must remain stock OEM unless replaced with an I-beam, C-channel or L-channel with no sharp edges (and stay within the confines of the car body). End caps are mandatory. Stock bumper brackets may be welded. No sharp edges are permitted on the body or bumpers. Chains or cable to secure the bumpers are also highly recommended. Non-visible reinforcing pipe can be used behind bumper, but it must be securely fastened to the frame. Trailer hitches are not permitted. **All cars without a front or rear bumper will be removed from the race.**

i) **Rub Rails:** Permitted between the wheelbase only. A maximum 1.75" max round tube or 3.00" x 0.25" max flat steel welded to body. It may be no lower than the center of the hubs and no higher than the top of the tire. Must be tight against the body with

no sharp ends. Must be a single rail design and be attached flush with the body contours. At a distance of 18.0" from the rear wheel well, the rub rail may extend out from body to the outer edge of rear tire. Subject to the Technical Inspector inspection and approval.

j) **Mounting of Components:** All body components must be firmly attached to every car competing in any race. Any car may be black flagged or denied entry to start qualification or a race if any of the aforementioned items are not attached unless the Technical Inspector gives prior approval.

k) **Repairing of Components:** Body components may be repaired and must be approved by the Technical Inspector prior to returning to the speedway for competition. ***The Technical Inspector reserves the right to disallow a repaired car from competition that does not appear to be properly repaired.*** Once a body is repaired from its original form, SSP management and the Technical Inspector assume no liability for any injuries that may occur as a result of this repair regardless of the approval given to compete with that repair.

l) Airbags must be disconnected.

m) **The following items may be removed:**

- 1) Air conditioner condenser and pump
- 2) Inertia switch (fuel shut off for Ford)
- 3) Rear seat (must cover rear firewall with aluminum or steel)
- 4) Car radio and speakers

**7. WINDSHIELDS/WINDOW OPENINGS:** All cars must have an approved protection in front of the driver in the windshield opening with a minimum of three-(3) vertical bars (no less than 3/16" in diameter). A screen for protection is also highly recommended. All glass must be removed.

**Window Nets:** Full size window nets are mandatory at all times in the left side window unless approved arm restraints are used by the driver. The seat belt buckle method of mounting is recommended. Window nets must release from the top and be attached to the roll bars only. The side window areas must remain open at all times other than window nets. "Sprint car style window nets" are not approved in place of a full size window net.

**8. SEATS:** Only SSP-approved factory-manufactured metal racing seats may be used. No homemade seats will be permitted. Lightening the seat by anyone else other than the factory is not permitted. Lumbar supports and right side head restraints on the seat are highly recommended.

a) **Mounting of the Seat:** The seat may be moved within the driver's compartment (remaining within the same general area as the general design) without moving or changing existing bars in the frame. The seat must be mounted directly to the frame in four spots. When mounting the seat forward, use a flat piece of steel or aluminum behind the seat (don't just use bolts in encased tubing). The use of wood as supports or mounting brackets is not permitted. The presiding tech inspector shall have final approval of the mounting of the seat. SSP management and the Technical Inspector assume no liability for any injuries that may occur as a result of the mounting of a seat, regardless of the approval given to compete with that seat and its location.

**9. SAFETY HARNESS:** All cars must have an SSP-approved type of five-(5) point racing harness (minimum 3" wide) that is equipped with a quick release buckle unless otherwise designated. Be sure to regularly check your safety belts for damage such as fraying, tearing, etc. If this should occur, the safety belts should be replaced immediately. SSP endorses the belt manufacturer's recommendation that the belts be changed two (2) years after the date stamped on the SFI tag regardless of the number of times the car has been raced. The safety belts are similar to a helmet, in that they are designed for protection in only one major impact. If you have had a significant incident, the manufacturer strongly recommends immediate replacement of the belts. Also, make absolutely sure that your five-point safety harness is totally secured and that you have pulled the straps as tight as possible anytime you drive the car.

**10. BOLTS AND FASTENERS:** Only equivalent stock or upgraded steel fasteners and bolts may be used on the car. Fasteners may be drilled for safety wire but intentional weight saving modifications is not permitted. Aluminum, titanium or other exotic metal bolts are illegal.

**11. SPINDLES:** Stock OEM spindles only. Aftermarket spindles are not permitted.

**12. STEERING COMPONENTS:** The entire steering system must remain stock OEM "type", within the stock dimensions, steel thickness, location and configurations as currently delivered OEM for that make and model of car. Quick release/removable steering wheels and collapsible steering shafts are permitted to take the place of stock "OEM" type. Steering quickeners are permitted.

**13. SUSPENSION:** All suspension must be OEM stock components for that make and model of vehicle except for rules noted below. Stabilizer links may be threaded rod. All bushings should be rubber or polyurethane or solid.

- a) **Springs:** Front or rear springs may be altered or exchanged as long as they are OEM or OEM type for that make of vehicle. Aftermarket racing type springs are permitted. Spring rubbers are permitted.
- 14. SHOCKS & STRUTS:** All shocks and struts must remain OEM stock in OEM stock location as delivered for that particular car. Driver adjustable shocks are not permitted. Weight jacks are not permitted. If stock spring pockets are rusted or damaged, they may be remanufactured but must closely resemble stock and remain in original stock position.
- 15. DRIVETRAIN/TRANSMISSION:** The entire drivetrain and transmission system must remain stock OEM, within the stock dimensions, steel thickness, location and configurations as currently delivered OEM for that make and model of car. Automatic or manual transmission is permitted if it was delivered with that make and model of car. All forward and reverse gears must be operational. Flywheel, flexplate, clutch assembly and torque converter must remain unaltered. Transmission coolers are not permitted in the driver's compartment. Automatics must use a working stock appearing torque converter.
- 16. REAR ENDS:** Stock OEM rear ends, axles and gear for that make of car. Rear ends may be locked by welding the spider gears. Posi-traction as an OEM factory option is permitted. Any gear ratio is permitted. No "rear wheel drive" independent rear suspension permitted
- 17. BRAKES:** The entire brake system must remain stock OEM "type", within the stock dimensions, steel thickness, location and configurations as currently delivered OEM for that make, model and year of car unless otherwise noted below.
- a) **Brake Rotors:** Front and rear rotors/drums must be stock OEM style.
- b) **Brake Calipers:** OEM only brake caliper is permitted. Aftermarket brake pads are permitted.
- c) **Brake Lines:** Steel, aluminum, rubber or steel-braided brake lines are permitted. Plastic is not permitted unless OEM.
- d) **Brake Master Cylinder:** Aftermarket brake master cylinders are not permitted (stock OEM only).
- e) **Brake Bias or Proportioning Valves:** Brake bias or proportioning valves are not permitted. Complete elimination of the brake by a valve or similar at any wheel is not permitted.
- f) **Emergency Brake:** Must be disconnected.
- 18. WHEELS:** Any OEM automotive steel or aluminum wheel that has a maximum 15.0" diameter and 8.0" width is permitted (no aftermarket racing wheels). Heavy-duty wheel studs and lug nuts are highly recommended. Aftermarket "add-on" beadlocks are permitted on any OEM wheel. Bleeder or relief valves are not permitted in the wheels. Wheel spacers and wheel weights are not permitted.
- 19. TIRES:** Tires must be DOT standard production-maximum 60 series (no wider). No directional, high performance, racing, recaps or soft compound tires. Tires do not need to be the same size and profile on all four corners.
- a) **Hardness:** The composition and character of the tire may not be altered from original. This includes soaking, softening or recapping. Tire warmers and any other means of artificially warming tires are prohibited. NOTE: Anyone caught using or possessing tire softener in their hauler or pit area will be subject to penalties from SSP management.
- 20. FUEL CELL:** If gas tank is in front of rear axle tube, it may remain in place. If gas tank is behind the rear axle and exposed, it must be removed and placed in the trunk or place a plastic fuel cell or marine tank in trunk compartment. All tanks placed in the trunk must be fastened securely with a minimum of two solid steel straps around the entire cell (2" wide and 0.125" thick). The trunk must be sealed off from the driver with sheet metal. Fuel lines may not run through the driver's compartment. Any approved metal fuel tanks must be used and remain securely mounted in the rear compartment of the car. The fuel cell may not be any lower than the rear end housing. Fuel cool cans are not permitted.
- a) **Fuel Cap:** Make absolutely sure that you check the cap on your fuel cell for tightness before going onto the racetrack. The cap should fit snugly onto the cell.
- b) **Fuel Pump:** OEM electric fuel pumps are permitted for that make or model of car. Electric fuel pumps must shut off with the ignition.
- 21. MIRRORS:** Mirrors are not permitted.
- 22. RADIOS:** One-way or two-way communication radios are not permitted with the exception of the mandatory track Receiver radio on the track designated frequency only (Frequency 0000).
- 23. TRACTION CONTROL DEVICES:** No electronic or computerized wheel spin/traction control devices are permitted. Any driver caught using these devices will be suspended for a minimum of one-(1) year.

**24. CAR NUMBERS:** The car should have numbers of contrasting car color from the body that are a minimum height of 18.0" and width of 4.0" on both doors and a minimum height of 24.0" and width of 6.0" on the roof. Metallic or foil numbers are not recommended and highly discouraged. Scorers will not accept the responsibility for incorrect scoring of cars in which numbers are not clear or easily read from the Control Tower.

**25. MANDATORY SERIES SPONSOR DECALS and PATCHES:** Mandatory series sponsor decals (to be announced) must be prominently displayed in the approved locations at all SSP events. Driver's not displaying the proper decals will not be eligible for certain awards, prizes, etc including those offered at year-end.

**26. CONTINGENCY SPONSOR DECALS:** Contingency sponsor decals are optional, however contingency decals are mandatory and/or use of the product to be eligible for posted awards sponsored by the contingency sponsor.

### **ENGINE SPECIFICATIONS for ROAD WARRIORS:**

**1. ENGINES PERMITTED:** Engines must remain OEM stock for that year, make and model of the car used with no changes or modification unless written expressly within this set of rules. All factory identification numbers and/or part numbers must remain on crank and heads. Stock OEM carburetor/fuel injection system for that make and model of the car. No high performance or sports car engines of any kind are permitted. Turbo charged, super charged, rotary engines or engines utilizing variable cam-timing are not permitted. Solid mounting of the engine is permitted.

**2. RADIATOR:** Any OEM stock radiator is permitted. The radiator must remain in the engine compartment in the stock mounts.

**3. BATTERY:** The battery must be securely mounted in either the engine compartment or in the driver's or trunk compartment completely enclosed in a battery box. A battery shut-off switch is recommended and should be easily visible from outside the car and marked "on/off".

**4. EXHAUST SYSTEM:** OEM stock exhaust or chassis type headers only permitted with collector designed to exit the car from behind is permitted. Exhaust must extend beyond the firewall. Frame notching is not permitted! Header wrapping (tape) and ceramic coatings are permitted. "Up and over" or 180 degree headers are not permitted.

**5. OIL ADDITIVES:** Any competitor caught using any of the following combustion enhancing additives in the engine oil will be banned from all SSP events for a minimum of 60 days from the date of the infraction: hydrazine, toluene, dinitrotoluene, dioxane, propylene oxide, or nitropropane.

**6. FUEL:** Gasoline only is permitted. **Only use the amount of fuel needed for the length of the race (max. 5 gallons).** All fuel must be of the same specifications, specific gravity, color, smell of gasoline only according to Federal Standards of Purity, Grade A or AA. No additives of any kind permitted. The track reserves the right to take specific samples of fuel at any time for testing purposes. Any additives/mixing detected in fuel may result in a disqualification, fine, suspension, loss of purse and loss of points or any combination thereof.

a) **Laboratory Testing:** SSP has the ability to conduct laboratory analysis of fuels. Samples for lab analysis may be taken from a competitor's fuel tank at any time at the discretion of the Technical Inspector. Laboratory results will be the final determining factor of whether illegal performance additives are present in the particular fuel sample.

b) **The specific elements which will be searched for include:** alcohols (all types), aldehydes, aminodiphenyl, benzene (in excess of EPA limit), benzidine, beryllium compounds, bromine compounds, butadienes, chlorinated compounds, chromates, dioxanes, ethyl acrylate, ethylene oxide, hydrazine compounds, methylene dianiline, naphthylamine, nitrogen compounds (nitromethane, et al.), styrenes, toluidine and xylidine. Also added to this list will be substances deemed to exceed the Threshold Limit Values (TLV) or Biological Exposure Indices (BEI) as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

c) **Penalty for Fuel Rule Violations:** Any competitor (driver and/or owner) caught using any of the illegal fuel additives as previously mentioned is subject to a minimum 60-day suspension from the date of the infraction. Suspensions will be determined based on the chemical composition of the additive in question.

**7. GAUGES:** Only onboard gauges that record the following information are permitted - water temperature, lap timer, RPM, oil pressure and oil temperature. Direct reading oil temperature and oil pressure gauges must use steel braided lines, not plastic or rubber. Onboard telemetry systems are not permitted.

**8. AIR FILTERS:** Aftermarket air filters are permitted however, modifications or components to increase or restrict airflow to the carburetors or intake (such as velocity stacks, heat deflector shields, internal modifications not listed above, etc.) are not permitted.