

SANDIA SPEEDWAY

2011-2014 Unlimited Modified Division Rules (Asphalt Only Revised 3/22/11)

These rules are designed to encourage a safe, competitive class that allows a limited amount of performance modifications while keeping a limit on spending. In no way will the rules be interpreted to allow a car that is technically superior to dominate the class or to be constructed in an unsafe fashion that poses a danger to the operator or other competitors. If a particular item is not stated as legal, you must assume that it is not legal. Any driver found outside the parameters or spirit of these rules will be sternly dealt with and faces fines, disqualifications and possible disbarment. Interpretation of any or all the rules is at the sole discretion of Sandia Speedway and its tech personnel. Let's keep it in the spirit of what these rules are designed for. Thank you in advance for your cooperation.

SMS requires that all Modified drivers run with transponders (rentals available from the track for only \$10) at all events. Transponders owned by drivers/car owners should be AMB compatible and can be tested during the practice sessions. Transponder results from each night will be available in the office within 10 minutes of the final event of the evening.

CAR RULES

1. FRAME:

- (A) No crew member or tech may lift the car or bounce the chassis to adjust frame height. Frame height will be measured at post-tech post scaling "as is".
- (B) 1964 or newer perimeter American rear-wheel drive passenger car frame only. No sports car frames.
- (C) Frame must be full and complete, cannot be widened or narrowed and must be able to support roll cage on both sides. Exceptions are:
 - weight jack in original center line of spring tower allowed
 - frame may be cut a maximum 36 inches forward from center of rear end housing
 - horns may be removed in front of steering box
 - front crossmember may be notched and boxed for radiator and/or steering clearance
 - opening in side may be widened for spring removal only
- (D) Maximum two inch wide by four inch tall frame stiffener may be welded directly to outside of left side frame rail.
- (E) Minimum wheelbase 108 inches, maximum 112 inches, both sides.
- (F) Maximum overall width shall not exceed 78 inches from outside of the tire to outside of tire.
- (G) No part of frame can be lower than four inches from ground except front crossmember.

2. ROLL CAGE:

- (A) Must consist of continuous hoops, minimum 1.75 inch O.D. tubing with minimum wall thickness of 0.095 inch for main cage, frame-mounted in at least six places, *low carbon or mild steel recommended.*
- (B) Must consist of a configuration of front or top, and rear hoops connected by tubing on sides or side hoops.
- (C) Driver's head must not protrude outside cage with helmet on.
- (D) Roll cage must be securely supported and braced with minimum one cross bar in top halo.
- (E) Foot protection bar required.
- (F) Main cage no further forward than rear of engine.
- (G) All bars forward of cage must be lower than hood.

3. DOOR BARS:

- (A) All door bars and uprights must be a minimum 1.5 inch O.D. with 0.083 inch wall thickness.
- (B) Minimum three driver side door bars, parallel to ground and perpendicular to driver, welded to front and rear of roll cage.
- (C) Passenger side must have at least one cross door bar, horizontal or angled, and one top door bar
- (D) Steel door plate, 18 gauge or 0.049 inch minimum thickness must be securely welded to outside of driver side door bars and cover area from top door bar to bottom door bar and from rear hoop down-post to five inches in front of seat and must be visible for inspection

4. DRIVER COMPARTMENT:

- (A) Must have minimum three windshield bars in front of driver. Lexan or aluminum cowl panel in front of driver can be no wider than cockpit and no farther back than steering wheel.
- (B) Minimum 0.125 inch aluminum or 0.060 inch steel complete floor pan required.
- (C) Aluminum high-back seat only and must be bolted in using minimum 0.375 inch bolts next to left side frame rail and ahead of rear tires. Bottom of seat can be no lower than bottom of frame rail.
- (D) Driver must be sealed-off from track, driveline, engine, fuel cell, canisters and pumps.
- (E) Oil coolers must not protrude above interior.
- (F) Accumulators cannot be mounted between driver and left-side door bars.
- (G) No driver-adjustable devices allowed while car is in competition except brake adjuster.

5. SAFETY:

- (A) All drivers must wear full-face helmets SA2005 or newer. Helmet must accompany racecar during inspection. Hans or Hutchens head and neck restraint device. Nomex helmet skirt and Nomex covered chinstrap are recommended.
- (B) It is required the driver wear a driving suit and gloves of fire resistant material that effectively cover the body. Fire retardant neck brace, shoes, and gloves are required. It is recommended the driver's suit be the best quality fire protection available. A two-layer fire suit SFI 5 rating minimum or better, and Nomex underwear tops & bottoms are recommended.
- (C) Roll bar padding is required in driver compartment. Fire retardant padding is **mandatory**.
- (D) Full-size driver-side window net 16x20. No string-type nets. Window net to be mounted so latch is at top front window.
- (E) Five point seat belts are required. It is highly recommended the driver carefully study seat belt manufacturer's installation guidelines. Belts must be replaced every two years and is subject to tech inspectors' approval.
- (F) Kill switch required within easy reach of driver. Switch must be clearly marked 'OFF' and 'ON'.
- (G) 360-degree drive shaft loop required and must be constructed of at least 1/8" by 2" steel, or 1" tubing mounted approximately 6" back from front yoke. Steel drive shaft and yokes are required. Drive Shaft must be painted white with car number visible.
- (H) All cars must be equipped with an on-board-fire suppression system that is fully charged and accessible to the belted driver.

6. ELECTRONICS:

- (A) No electronic monitoring computer devices capable of storing or transmitting information except tachometers are allowed on cars. No digital gauges allowed on car. No electronic traction control devices allowed; i.e. - Electronic or otherwise. The penalty is loss of all season points and \$1,000 fine. Penalty must be paid before any driver is allowed to compete in future series events. Only one ignition box is allowed on the car. The only allowed changes for the ignition box is one Rev-limiter setting. The setting can be accomplished through a single chip or internal box setting. No timing retard controls allowed. No magnetos.

7. EXHAUST:

- (A) Exhaust system must direct spent gasses away from vehicle cockpit and away from areas of possible fuel spillage.
- (B) All exhaust must go through headers.

8. BATTERIES:

- (A) Only one 12 volt battery is allowed.
- (A) Must be securely mounted and shielded.
- (B) All vehicles must have starter motor.
- (C) All cars must join lineup grid without being pushed, pulled or towed or will line up in scratch position

9. WEIGHT:

- (A) Weights added to vehicles must be securely mounted to chassis. Weight must be painted white with the car number visible.
- (B) Weight may not be located in the driver's compartment.
- (C) All added weight must be securely fastened with two 1/2" bolts minimum.
- (D) **Car weight is 2450# minimum with driver in the car at post-tech.**
- (E) **Left side weight is 58.0% maximum with driver in the car.**
- (F) No gun-drilled, tubular, hollow bolts, or hollow studs allowed anywhere on the racecar.
- (G) No carbon fiber, Kevlar, or titanium components allowed anywhere on the racecar.
- (H) **604 Crate Motor 2,350 POUNDS...60% Left side & any carb allowed**

10. TIRES AND WHEELS:

- (A) **The Asphalt Tires available at SMS.**
- (B) All wheels must be 8" wide steel wheels. No wide-five wheel adapters allowed. Aluminum or steel spacers allowed.
- (C) May use bead lock wheels. External steel bead lock only. Steel lug nuts required. Bleeder valves allowed
- (D) **6 Tires to start season or 1st race of year for each car...then new one tire per each race attended...serial numbers recorded...all tires are assigned to car not driver**
- (E) **8 Tires for Big Show use only is it is your 1st race at track....weekly or returning drivers only 4 new tires...all drivers then may use only 4 tires for remainder of races...**

11. FUEL SYSTEM:

- (A) Mechanical or belt driven fuel pump only mounted at front of engine.
- (B) Racing fuel cell required, maximum 32 gallon capacity, must be in minimum 20 gauge steel container.
- (C) Cell must be securely mounted behind rear axle, between rear tires, minimum of four inches ahead of bumper, minimum or 6 inches above ground.
- (D) Must mount with minimum 2 solid steel straps around entire cell, 2 inches wide and 0.125 inch thick.
- (E) All cell mounts must be steel, securely welded to frame/cage.
- (F) Protective tubing must cover rear end and extend past both sides of cell.
- (G) No part of cell shall be lower than protective tubing.
- (H) Fuel cell vents, including cap vent, must have check valves.
- (I) If fuel cell does not have aircraft style positive seal filler neck/cap system - a flapper, spring or ball type filler rollover valve is required.
- (J) Pick-up must be on top or right side of cell.
- (K) Limit of one fuel filter. No cool cans.
- (L) Air cleaner top/stud cannot direct air into carburetor.
- (N) One naturally aspirated two- or four-barrel carburetor only.
- (O) No adjustable throttle bore carburetor spacers.

12. FUEL:

- (A) Gasoline or Methanol allowed.
- (B) NO performance-enhancing additives.
- (C) Upper cylinder lube allowed with Methanol only.
- (D) NO fuel injection or electric fuel pumps

13. FRONT SUSPENSION:

- (A) No aluminum or fiberglass suspension or suspension pieces allowed.
- (A) All components must be steel, unaltered OEM in OEM location and replaceable by OEM parts.
Exceptions are:
 - tube-type upper A-frames with or without aluminum or steel cross shaft, mounts can be moved
 - Stamped steel OEM replacement lower A-frames
 - Rubber, nylon or steel lower A-frame bushings, no offset or bearing type
 - Welded or bolted shock mount on lower A-frame
 - OEM or OEM replacement ball joints allowed.
- (B) Lower A-frames must be right and left and of same design.
- (C) Lower A-frame mounts and bolt holes on frame must be within OEM specifications.
- (D) Sway bar must be approved OEM type.
- (E) No coil over shocks allowed. IMCA coil over kit will be allowed.
- (F) Rear of frame may be altered to accept leaf or coil springs, but not both; i.e. - One spring per wheel. Coil spring must be steel and at least 4.5" outside diameter. No torsion bars allowed.
- (G) No devices allowed that would enable driver adjustments to alter wheelbase or weight jacking while car is in competition. No air shocks or air bags allowed.
- (H) One shock per wheel only, must be steel bodied. Additional shocks in other locations permissible. No covers on suspension parts except clear cover on slider and a shield to protect the shocks. This shield can cover no more than the front half of the shocks. No Schrader valves allowed.
- (I) **Splined Sway Bars allowed 25 ADDITIONAL POUNDS**

14. STEERING:

- (A) No rack and pinion. All components must be steel, unaltered OEM. Exceptions are:
 - Outer tie rod end and adjustment sleeve may be replaced by a minimum 06.25 inch steel rod end and steel tube
 - Spindles can be ground for brake caliper clearance only
 - Unaltered OEM replacement Pinto spindles with "IMCA" raised cast
 - Bolt on spindle savers allowed
 - Steel steering shafts and knuckles only
 - Driver compartment steering may be modified but must be kept on left side.
- (B) Spindles must be right and left and of same design.
- (C) Quick release required – steering quickener and steering wheel may be aluminum.
- (D) Idler arm, pitman arm and center link must be OEM.

15. BRAKES:

- (A) Brakes must be fully operational on all four wheels.
- (B) No brake shut-off *or pressure sensitive devices* allowed.
- (C) Proportioning valve allowed front to rear only.
- (D) No scalloped rotors.
- (E) Rotors cannot be lightened.
- (F) Rotors may be re-drilled for different bolt pattern or larger studs.
- (G) Must be steel, approved OEM calipers, and they cannot be lightened.
- (H) **Brake fluid recirculation systems allowed.**

16. BODIES:

- (A) 1970 or newer American passenger car only. See table 1 Car Dimensions.
- (B) Aluminum, steel, or fiberglass full-size roof required. No wings, or ground effects are allowed anywhere but side p inside car except 5" rear spoiler. Cowl panel in front of driver can be no wider than cockpit and no farther back than the steering wheel.
- (C) Mirrors are allowed.
- (D) Firewall and floorboards are mandatory. Minimum .125" minimum or 16 gauge or .060" steel, complete floor is recommended. All body parts should be recognizable as factory production vehicle. Handmade body parts may be constructed of steel, aluminum, or fiberglass, but should be recognizable as a modified racecar.
- (E) All cars in competition must have a complete paint job.
- (F) The rear spoiler will not exceed five 5" in height. The measurement will be from the deck to the top of the rear spoiler. The rear spoiler will be attached to the deck and will not exceed the width of the rear deck lid. A maximum of four (4) supports may be installed on the front of the spoiler (see diagram 3 at page 12).
- (G) Windshields must be complete from dash to roof 14" minimum width and constructed of 3/16" Lexan. No side or rear windows allowed. Cars without windshields must have three bars minimum in front of driver.
- (H) Must have front windshield and rear window support posts
- (I) All cars must be numbered with large legible numbers on both sides and on the rooftop. Numbers on sides and top of car must be in contrasting color from body, be at least 4" thick and at least 20" high. Sponsors' names must not interfere with car numbers. One or two digit numbers must be visible by scoring personnel, no letters allowed.
- (J) (See diagram) No composite body panels allowed except roof rock guard and hood scoop. Body must be same width front to rear and parallel to OEM frame. Nose panel may be no wider or lower than two inches outside of front frame horns. Nose panel must remain within confines of front bumper.
- (K) No inner panels.
- (L) No car covers.
- (M) Driver and passenger side windows must have at least 12 inch opening (height and width) measured at center of window between lowest point at top of window, whether roof or roll cage, and highest point at bottom of window, whether interior or body.
- (N) May use Lexan in sail panels.
- (O) Roof must be fiberglass or aluminum full-size and rounded down in all directions (see diagram),
- (P) No dished roofs allowed
- (Q) Driver roof hatch allowed.
- (R) Maximum 1.5 inch rolled down rock guard allowed on roof front.
- (S) Maximum 6 inch plastic skirting allowed on bottom of doors and quarters.
- (T) No reflective doors or quarter panels.
- (U) On right side outside of tires must be widest part of car. On left side, body may be maximum one inch outside of rear tire for clearance.
- (V) Engine compartment will remain open (no side panels). Hood sides may have maximum 6" drop and must be enclosed at rear of hood. Hood scoop height restricted to 6" maximum.
- (W) Rear body fill panel must be at 8" minimum height and solid material. No panel in front of right door to engine compartment. No inner panel. No car covers.
- (X) Driver and passenger wide windows must have at least 12" opening measured from center to top of window. Driver may be asked to exit car with helmet on.
- (Y) Door panels may extend past engine block with the door top even with motor plate (see diagram).

17. TRANSMISSIONS/DRIVESHIFT:

- (A) Must have at least two forward gears and one reverse plus a neutral position. With engine running and car in neutral, driver must be able to engage car in gear and move forward, then backward.
- (B) OEM production type or approved aftermarket transmission allowed – two-speed, three-speed, four-speed and automatic. No five-speed (or more) transmissions, ‘in and out’ boxes, or quick change devices allowed.
- (C) Functioning shift levers must be in OEM location on all OEM production type transmissions.
- (D) Flexplates must be full, steel, unaltered OEM or OEM replacement.
- (E) Flywheel/flexplate must bolt to engine between clutch assembly and crankshaft and all driveline components within bellhousing must rotate while car is in gear.
- (F) Transmission must be one of the following designs:
 - **OEM Manual:** Must have a standard OEM case and working disc-type clutch or approved cone or disc-type coupler inside an explosion-proof steel bell housing. One flywheel only, minimum 8.5 inch diameter. Diameter of clutch disc must be a minimum of 5.5 inches. Clutch assembly must be steel, except housing, which must be steel and/or aluminum. Bell housing can have only a hole for throwout bearing lever or hose, must be 270 degrees around top of clutch and flywheel area. Standard or reverse mount starter allowed, must directly engage flywheel.
 - **Automatic:** Must remain in OEM or OEM replacement case with a functioning OEM appearing pump. Aluminum OEM bellhousing may be replaced with aftermarket explosion-proof aluminum bell housing. Original OEM bell housing must have approved scattershield constructed of minimum 0.125-inch by three-inch steel, 270 degrees around flexplate.
 - **Aftermarket Manual:** Must be approved aluminum case with internal clutch and use full, steel, unaltered OEM or OEM replacement flexplate. Internal clutch racing transmissions are allowed with any type of bell housing. Flywheel scatter shield suggested on aluminum bell housings. No coatings or paint allowed on transmission case.
 - **Drive Shaft:** Minimum two inch diameter steel drive shaft and must be painted white. Steel slip-yokes only. 360-degree drive shaft loop required and must be constructed of at least 0.25 inch by two inch steel or one inch tubing, mounted six inches back from front U-joint.

18. BUMPERS:

- (A) Center of top bumper bar, front and rear, must be 18", plus or minus 2" from ground clearance
- (B) Steel bumpers must be used both front and rear.
 - Two-bar front bumpers must be mounted frame end to frame end. It can be no wider than the outside frame horns.
 - The bottom loop must be parallel to the ground.
 - Top bar must be directly above bottom bar so bumper is perpendicular to ground.
 - Must be minimum 1.25" x .083" tubing and must be able to support car if lifted by wrecker.
 - Front bumper tubes 6.5" ±1" top to bottom.
- (C) Rear bumper must resemble one of three configurations:
 - (1) Straight bumpers can be no wider than 5" outside each frame rail.
 - (2) If the bumper is wider than configuration 1 the ends must be bent forward at a 90-degree angle. No sharp edges.
- (D) A bumper constructed in a loop design. Rear bumpers, nerf bars, and body panels may not extend beyond rear tires. No sharp edges.

19. REAR END:

- (A) Any approved OEM passenger car type or truck rear end may be used. Full floating Ford 9" is recommended
- (B) Quick-change rear ends with steel axle tubes allowed.
- (C) No aluminum or fiberglass suspension parts allowed except lowering blocks (axle caps.) Center section 1" inspection hole is recommended.

- (D) Full steel spool, steel axles, steel mini spool or welded spider gear configurations on. No cambered rear ends, steel drive flanges recommended..
- (E) No electronic or mechanical traction control devices allowed. *No Gold Trac or Detroit Lockers Allowed. Penalty is loss of points and \$1,000 fine.*

20. ENGINES:

- (A) Any American make engine may be used as long as rear of engine (bell housing flange) is mounted at least 72" forward from the rear axle center-line.
- (B) Engine offset must be kept within 2" of centerline of front cross member.
- (C) Engine height minimum will be 11" from ground to front center of crankshaft.
- (D) All engines used in competition must be conventional passenger car configuration without alterations.
- (E) Oil coolers must not protrude above interior. Recommend oil accumulators not be mounted between driver and left-side door in the drivers compartment.
- (F) Cooling system may be modified.
- (G) Any overflow tubes must be directed to minimum size 1 quart reservoir.
- (H) Radiators are to be mounted in front of engine only. **NO ANTIFREEZE.** A \$100 fine will be imposed on any car found with it.
- (I) Any American make steel engine block allowed.
- (J) Aftermarket and OEM performance blocks allowed.
- (K) Aluminum must be 23 degrees and will be assed a 50 lbs weight penalty of 50 lbs in front of engine plate.
- (L) OEM firing order not be required.
- (M) No crank triggers.
- (N) All engines must be able to be used in conventional passenger car without alterations.
- (O) Engine mounts cannot be removed or altered
- (P) Castings and fittings must not be changed.
- (Q) No machine-work on outside of engine.
- (R) 'Wet' sump oiling system or **single stage dry system using oil pan with no external oil tank add 75 Pounds to total weight.** Any current year IMCA legal car is allowed to compete but **must** comply with SMS weight rules.

TABLE 1: CAR DIMENSIONS

ITEM	MAXIMUM	MINIMUM	NOTES
A	---	108"	
B	38"		From ground to top of deck.
C	48"	34"	
D	120"	106"	
E		72"	72" max or not past back of block at top. Left side may extend forward to cover foot box if necessary.
F	30"	22"	
G	Hood 6" max drop (sides) sealed off from driver's compartment and max 3" rake.		
H	18"	12"	Opening on both sides.
I	6"		Scoop cannot extend past front of hood
J	66"	53"	Measured at top of interior deck, must be same front to back.
K	52"	44"	
L	56"	41"	
M	Tires must be the widest part of the car on right side.		
N	Driver's compartment must be totally sealed from engine & racetrack.		
O	Interior slope is 6" max. front to rear and flat across. If flat at front half of interior you have used up 50% of your 6" so from behind driver to rear you may only have 3". Top of interior must be flush with top of door and quarter panels. An optional escape hatch from driver to passenger door to provide 12" opening allowed.		

P	Nose piece no wider than frame horns and no further back than radiator and no lower than 6" to ground		
Q	19"		Same on both sides
R		2" minimum to ground	
S	4"	Must have gradual slope from roof to this point.	
T	Top of door must be no farther forward than motor plate. Can extend past motor plate in a gradual slope no farther than 8".		
U	66"	24"	No narrower than radiator
V	20"	16"	Ground to center of bumpers, front and rear
X		4"	Lowest part of chassis less front crossmember
Y		6.5"	Center to center
Z	1"		Curve at center – no tolerance

Using a four foot level, must have between ½" and 2" clearance at rear of roof, and ½" to 5" at front.

Rear panel must be solid, attached to deck and extend to quarter panes. It must be securely fastened with an 8" minimum, 90 degree angle.

2011 POINTS...PURSES...SCORING

1. All races fully invert based on highest average finish in A Mains. First Race of year Pill draw...First Race at track start scratch...
2. Top 3 to 5 cars go to Tech....except top 5 for big shows...no pre-tech
3. No Claims of any item by anybody at any price at any time...
4. Any Driver may protest any other car that they feel is in violation of any track rule...a \$100 Protest fee will be deposited with the protest by the driver lodging the protest along with a written request listing the rule that is being violated within 10 minutes of the end of the A main...the car being protested will be taken directly to the tech area immediately after the race where the car will be inspected...if a car is found to be in violation a \$500 Fine and a additional one race suspension will be assessed along with a loss of points and purses on the night of protest...if protest is upheld the \$100 Protest fee will be returned to the protesting driver...if driver refuses to take car to tech penalty shall be the same as is found in violation of track rule...if driver refuses to pay \$500 Fine they are banned from track until fine is paid...all Fines goes to Point Fund
5. \$10 to start the heat race goes to point fund.
6. No double points races or double purses if rained out...
7. All but one Races points count for Points Championship...lowest scoring race event thrown out of Points Total for year
8. If you start the heat but not the main you get 50 Points for the main
9. On two part races only...during break one tire maybe replaced for safety reasons if approved by Head Tech...car is moved to the rear of whatever lap it was last on if done during break

2011 PURSE SCHEDULE

11 REGULAR RACE PURSES

<u>Win \$400</u>	6 th	\$75	*Purses based on 13 car average count
2nd \$200	7 th	\$50	*Purses based on \$12,500 Sponsor funds
3rd \$150	8 th	\$50	\$50 Minimum Purse tow 100+ miles
4th \$125	9 th	\$25	\$100 Minimum Purse tow 250+ miles
5th \$100	10 th	\$25	\$35 Entry Fee *if more or less than 13 average car count

funds are added or subtracted from weekly purses

TWO 70 LAP SHOW PURSES July 3rd & Aug 20th

<u>Win \$1000</u>	6 th	\$150	Twin 35 lap w/20 min break
2nd \$500	7 th	\$125	for fuel and adjustments...
3rd \$350	8 th	\$125	\$75 Entry Fee 1
4th \$250	9 th	\$100	Twin 35 laps w/20 minute break for
5th \$200	10 th	\$100	fuel & adjustments...no tire change

WESTERN STATES CHAMPIONSHIP 100 Oct 15th

<u>Win \$2500</u>	6 th	\$200	11 th	\$100	28 Car A Main
2nd \$1000	7 th	\$175	12 th	\$100	\$95 Entry
3rd \$500	8 th	\$150			\$95 Entry Fee
4th \$350	9 th	\$125			Twin 50 laps w/20 minute break for
5th \$250	10 th	\$100			fuel & adjustments...no tire change

POINTS PER RACE

HEATS.....10 Lap Heats

1st	40 Points
2nd	35
3rd	31
4th	27
5th	24
6th	on back -3 points. Max 8 cars
**5	POINTS Most laps lead in Main

MAIN.....30 Lap Main

1st	100 points
2nd	90
3rd	85
4th	80
5th	76
6th	72
7 th	on back -3 Points

2011 POINTS SERIES FUND

CHAMPION	20%	6 th Place	7%
2nd Place	15%	7 th Place	6%
3rd Place	12%	8 th Place	5%
4th Place	10%	9 th Place	4%
5th Place	8%	10 th Place	3%

*10% of fund for trophy's for year's races

