

# SANDIA SPEEDWAY

## 2017 X-Mod Rules

### CHASSIS

1. Any Engine Part, all frame and suspension components will be steel, unless noted. No titanium or drilled attachment components. 1960 or newer full passenger car frame, may be cut off 36" (inches) in front of center of rear axle.
2. Frames will maintain original dimensions and remain intact, except notched for radiator placement weight jack, spring clearance, and mounting tabs. Maximum 2' x 4" lower frame may join rear suspension. No portion will be less than 4" from ground, except pan and front cross member.
3. 108" wheel base minimum, with a maximum width of no more than 78" outside tires.
4. Continuous roll cage, halo, and halo support will be a minimum of 1.501" x .095" steel tubing. Must have one cross car in halo. This configuration will be attached to main frame in 6 places. Driver's head will be below the halo while seated, three inches recommended.
5. Three door bars will be 1.5" x .095 welded to front and rear uprights, with vertical supports. Must have at least 1.25" right side cage bar angled or horizontal. Recommend door plates .049" drivers side from top door bar to bottom door bar, Rear post to 5" in front of seat.
6. Rub rail, vertical bar, or rear engine support will be added for foot protection.
7. Must have .250" x 2" plate or 1" x .095" tubing drive shaft hoop, welded 6" behind front of drive shaft.
8. No cage bars will protrude through hood. Main cage will be behind rear of engine.
9. Will have minimum of three .250" window bars in front of driver.
10. Two car front bumpers 1.25 x .065 minimum required. Lower bar will be no longer than lowest part of front frame horn and no wider than 1.5" on each side, 6.5" apart and parallel to ground. Upper bar directly above lower bar.
11. Nerf irons will not be wider than outside of rear tires, may not contain any sharp edges.
12. Rear bumpers can be straight, looped or turned forward. Forward turned bumpers can be no wider than 2" outside the rear tires, must be made of continuous hoops. All bumpers must protect fuel cell and line up with front bumpers. Straight bumpers must be no wider than 5" wider than outside rear frame rails. A looped bumper can extend to the body panels.
13. The centers of front and rear bumpers will be 18" high + or - 2.
14. 32 gallon fuel cell maximum with roll over valve. Must be mounted between rear frame rails and behind rear axle. Dimensions of 6" above ground, 4" in front of bumper. Must be mounted securely, in steel box, with 2" straps encircling entire cell. No bottom fuel pickups. One fuel filter maximum. Lower portion of rear bumper will protect **full** cell. Gasoline only.
15. All ballast will be mounted with two ½ inch diameter bolts, outside driver box, and painted white. All cars will weigh 2300 lbs minimum. Maximum weight will be 2650 after main events, will not be enforced after heat races, due to excess mud.

## SUSPENSION

16. Unaltered OEM front spindle, lower A-arm, drag link, inner tie rod ends, steering box, idler arm and pitman arm, sway bar. Steering box must remain in original bolt circle position. No rack and pinion systems. May weld shock mount on lower control arm. Weight jack will be centered in A-arm spring location.
17. May use fabricated upper A-arm with heim joint pivots, steel or aluminum cross shaft. Outer tie rod and tie rod sleeve can be replaced with .625" rod ends and sleeve tubing. May use bump steer spacer on outside of rod ends.
18. Steering and driver position will be on the left side of the driveline.
19. Any steel shock that retails for \$140 or less. Coil or leaf spring allowed. Coil springs will be at least 4.5" outer diameter. No torsion bars, air bags, or pressurized springs. One spring and shock absorber per wheel. Four shock absorbers total.
20. No wheelbase or weight jacking devices allowed in driver's compartment.
21. Three link or leaf springs or factory four link, with two upper arms only. All links will be solid, heim rods. Lower arms will be the same length no shorter than 16". The panhard bar will be a minimum of 19". Must be solid pull car with heims, no biscuits or springs.
22. Four wheel brakes at all times, Adjustable from front to rear only.
23. Ford, Chevy & Chrysler parts can be mixed & mounted for use. Brake calipers must be 100% unaltered.
24. No solid, drilled, scalloped or lightened rotors. May be drilled for mounting purposes only.

## ENGINES

25. 2005 to 2017 - Engine specifications are as follows:
  - i. 360 cubic inch displacement or less. Compression of 9.5 or less. 1% error.
  - ii. Stock type, stamped rocker arms only. No roller tip rocker arms.
  - iii. screw-in rocker arm studs are ok. 3/8 studs only with guide plates. No stud girdles of any kind.
  - iv. Poly locks are okay.
  - v. Must have cast iron two-barrel intake. No acid dipping, non pressure porting. The depth of the plenum will be measured. Deep side: 3.950" max. Short side: 2.030". We expect to see an unmodified runner to the back of the divider with ribs that stand up 150". We will use a caliper to measure bores and depth. An unaltered marine cast iron two-barrel intake will be allowed with Vortec heads. You can be disqualified or asked to race with a different manifold.
  - vi. If intake is illegal, you will lose all prize money for that night and points for season.
  - vii. Flat tappet camshafts only. No roller lifters.
  - viii. Aluminum water pumps and pulleys are allowed.
  - ix. After-market power steering pumps are allowed.
  - x. Must have cast iron cylinder heads, original valve angle and location. Valve springs: 1.250 max diameter, 195" wire, steel retainers, 5 full coils.
  - xi. Any distributor type ignition allowed, no crank trigger or magnetos allowed, no timing retard control allowed. All X-Mods will be required to use a rev limiter with a 7000 rpm chip. Chip must be out of driver's reach.
  - xii. Crankshafts cannot weigh less than 49 pounds. Must install 1" diameter pipe plug to inspect crankshaft or remove pan.
  - xiii. No titanium anywhere.
  - xiv. Tachometer may be claimed for \$300 by promoter and lead lap drivers.

## **CARBURETOR**

26. All cars must run an OEM two barrel Rochester carburetor or Holley 4412. The Holley 4412 will require carburetor adapter Speedway part #135-1934. 1 stock OEM carburetor gasket no more than ¼ “ thick under throttle plates. Throttle bore can be no larger than 1.725” and it must have sharp corner at the bottom of the bores, no modification at this point. May ONLY modify Rochester carburetor. The Holley cannot be modified.
27. Tracks have the right to swap intake and/or carburetor with any competitor after 2<sup>nd</sup> main event win. Tracks will have stock Chevy and stock Vortec type intake to trade with competitor. Same with Rochester two barrel.

## **DRIVE TRAIN**

28. Car must move forward and back with engine running. Quick change gearing or close ratio transmissions are not allowed. Bert, Brinn or Falcon okay.
29. Scatter-proof bell housing required on cars with lightweight flex plates, single clutch disc and full pressure plates.
30. Any passenger car- or truck-type is allowed. Aluminum is not permitted except lowering blocks, axle cap and drive plate. Quick change devices are not allowed. Nine-inch Ford is permitted. Floater recommended. Cambered rear ends are not allowed (one-piece drive flange only). Traction devices are not allowed (includes Gold Track, True Track or similar type components).
31. All wheels must be 8 “ wide, measured on the outside of the mounted tire bead. One bead lock is allowed on the right rear. Mud plug allowed any position.
32. The official tire is the American Racer KK704. Tires can be de-glazed with sanding pads or grinding discs. Re-grooving and siping is allowed.
33. No electronic engine adjustment devices. No wheel speed engine interface. No traction control. No brake engine electronics.

## **SAFETY EQUIPMENT**

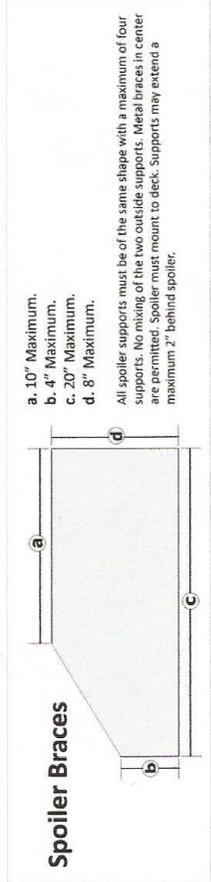
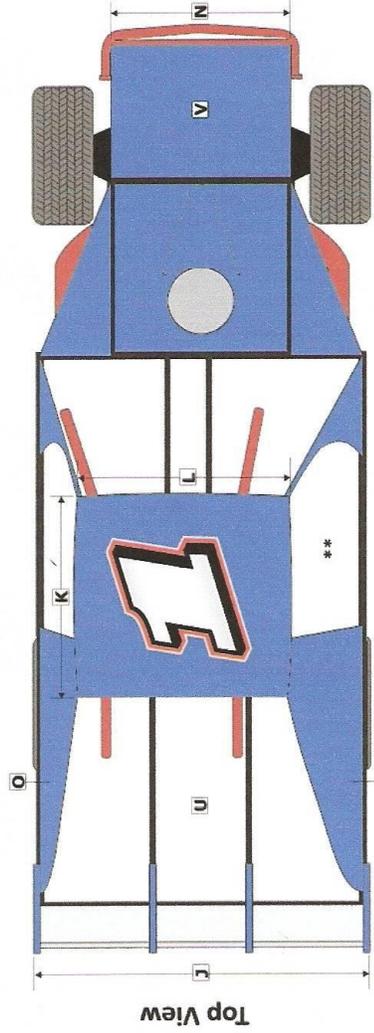
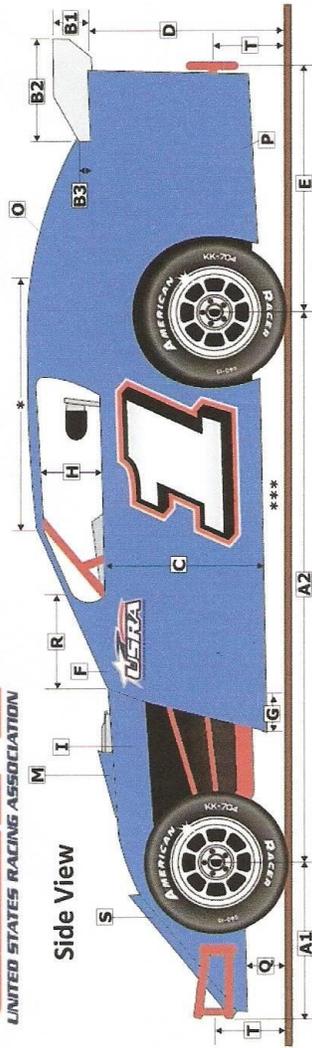
34. Helmets will be SA 2000 or newer.
35. Drivers will have SFI-approved, fireproof: gloves, shoes and double-layer suit.
36. Window net or arm restraints required.
37. A five-point seat belt system, properly mounted to cage. Replace within 24 months of punch date.
38. Halo and other interior tubing will be padded.

## BODIES

39. 125" aluminum or .060 steel floor recommended.
40. Fully enclosed cockpit, with cowling the same width, cannot extend past steering wheel.
41. Bodies can be made of steel, aluminum, or fiberglass.
42. Front, rear and side windows will resemble OEM production.
43. No mirrors allowed.
44. Nose piece can be no wider than front stub and stop at radiator.
45. May run side panels on nose piece. 2 inches above nose plate and to bottom of front stub.
46. Hood can be no wider than front stub, have a maximum slope of 3 inches.
47. Air filter protector can be no taller than 6 inches.
48. May run engine side panels parallel with frame, from rear of engine to nose piece.
49. Deck will be between 53" to 66" wide, 106" to 120" long, parallel with frame, and maximum slope of 6" front to rear. Half way uses up 50% of available slope.
50. Deck can extend 34" to 46" past center of rear axle. Rear of deck will be maximum of 38" from ground.
51. May slope deck for driver escape. Must be parallel with deck and use 90 degree turns if sloped more than 2 inches.
52. Roof may slope down at the front 5 inches. May be lower at the rear 2 inch maximum, and be 44" to 52" wide and 41" to 56" long.
53. Roof may be turned down a maximum of ½ inch for support at the rear.
54. Side window height will be 12" to 18" in height on both sides.
55. Front roof supports can be no longer than 20" and go no farther forward than front of door.
56. Rear roof sail panels must slope gradually to 5" maximum at rear and the same on both sides. May attach to spoiler.
57. 2 inch wings on front and 5 inch spoilers on rear will be allowed.
58. Top of door must be 72" from center or rear axle to motor plate. It can slope forward 8" at the bottom forward portion. The height will be a minimum of 22" tall to 30" maximum.
59. May use a maximum of 6" plastic at the bottom of doors. Must maintain 3" height above ground.
60. The tire must be visible looking down on the car, but the door can flare out at the bottom.
61. Cars will have a 20" tall and 4" wide numbers on the top and both sides. A number on the right side, rear panel is required.



# 2017 USRA MODIFIED BODY SPECIFICATIONS



- A1. 42" maximum.
- A2. 108" minimum.
- B1. 6" maximum (see Spoiler Braces diagram).
- B2. 21" maximum (see Spoiler Braces diagram).
- B3. 4" maximum (see Spoiler Braces diagram).
- C. 22" minimum, 37" maximum.
- D. 39" maximum.
- E. 48" maximum, 34" minimum.
- F. Top of door and deck to rear of block.
- G. Door may be extended 8" past block at bottom.
- H. 12" minimum, maximum 18".
- I. Hood sides 6" maximum.
- J. 53" minimum, 66" maximum (same front and back).
- K. 56" maximum, 40" minimum.
- L. 50" maximum, 44" minimum.
- M. 6" maximum.
- N. 42" maximum at bottom.
- O. Sill panels must be the same on both sides.
- P. Maximum 6" plastic skirt.
- Q. Minimum 7".
- R. 20" maximum and same on both sides.
- S. 2" maximum and same on both sides.
- T. 20" maximum, 16" minimum.
- U. Deck must remain flat from side to side, except for cockpit (maximum 8" rake from front to rear), if doors remain flat, only maximum 4" rake from rear of racing seat to rear of decking.
- V. Nose may not extend past front bumper.
  - \* 5" maximum front clearance and 2" back using level.
  - \*\* Driver may be asked to exit car with helmet on for safety.
  - \*\*\* 3" minimum ground clearance to body; 4" minimum for frame.

## Spoilers

**Option 1: Five (5) Inch Spoiler**—includes USMITS/USRA spec engine, 23-degree steel-headed flat tappet engine and GM CI525 crate engine. The maximum rear spoiler height shall be five (5) inches.