



TURKEY DERBY XLIX

4 CYLINDER DIVISION

R U L E B O O K

THE RULES BELOW ARE THE GENERAL GUIDELINES FOR ALL CARS
THAT COMPETE IN THIS DIVISION AT TURKEY DERBY 2022.

IF THESE RULES DO NOT CLEARLY SAY THAT SOMETHING IS LEGAL, ASSUME THAT IT IS NOT PERMITTED.

WALL OFFICIALS RESERVE THE RIGHT TO ADJUST OR AMEND THE RULES IN THE BEST INTEREST OF
SAFETY AND/OR COMPETITION.

TECH QUESTIONS? Call Rob Hyer at (732) 824-4507

REQUIRED SAFETY EQUIPMENT

- The use of a HANS DEVICE or Hans-like device is MANDATORY. 5 year expiration.
- Window net MANDATORY.
- 5-point Harness MANDATORY. SFI 38.1 Belts good for 2 years.
- Full face Helmets are MANDATORY. Must have Snell SA 15 or newer sticker. NO motorcycle M Helmets.
- Driver must wear a one piece fire suit and flame retardant underwear. Both must be in good condition, no rips or holes! SFI 5. Driving gloves and driving shoes required.
- Full containment seat MANDATORY.
- Roll bar padding must meet SFI 45.1 specs.
- Fire Extinguisher MANDATORY. Unused and fully charged at all times. Must be within Driver's reach.
- Seat Belts expire 2 years from manufacture date. Make sure you are current!
- All other New Jersey State Safety Regulations MUST BE STRICTLY ADHERED TO.

RACECEIVER FREQUENCY 467.8125

**ALL CARS MUST PASS A GENERAL SAFETY AND TECH INSPECTION BEFORE
GOING OUT FOR PRACTICE.**

****FUEL CELLS MUST BE CENTERED AND AS FAR FORWARD AS POSSIBLE. NJ State Police rule.**

*****STOCK MEANS STOCK!*****

MOTORS MUST MEET WALL STADIUM 2022 4-CYLINDER RULES.

SECTION A: ENGINES

1. **ENGINE AND COMPONENTS:** Original manufacturer parts for specific make and model. The only modifications allowed to an engine are listed in the following paragraphs. **Any other modifications will be deemed illegal.**
2. Engine must be in its original mount and position. Solid motor mounts are allowed in its original
3. No rotary engines. No turbos or super charged engines. No high performance engines or cars. Example: Porsche will not be legal and not intended for this class.
4. Any four cylinder piston type engine front or rear wheel drive car. No convertibles, four wheel drive, jeep or truck type vehicle. Maximum wheel base 105 inches.
5. No porting and or polishing of heads and or manifold. Head may be resurfaced. Head and manifold must be stock. Head port casting must be able to be seen and or felt or it will be considered illegal.
6. Pistons must be stock type and profile with stock wrist pin height. No dome or pop-ups.
7. Stock fuel delivery system only. **FUEL CELL MANDATED BY N.J. STATE POLICE.**
8. No after market distributors and or distributor parts. No after market electronic computers and or components in ignition. Ignition must be stock for make of engine. Example: Toyota for Toyota, Ford for Ford. Fuel injection must be stock for vehicle running.
9. Electric fuel pumps are allowed and must shut off with ignition switch.
10. No aluminum flywheels. No flex plates. Single disc stock style clutch and pressure plate.
11. No adjustable cam gears
12. ALDL diagnostic connector must be functional

SECTION B – 1: FIRE WALLS, FUEL LINES AND FUEL PUMPS

1. Fire walls: All vehicles must have a permanent fire wall between the driver, fuel supply and motor.
2. Fuel lines and pump:
 - a. Fuel pump or fuel line is prohibited in the driver's compartment unless properly shielded. The shielding for fuel lines must consist of steel braided material. Fuel pumps in driver compartment must be

- properly shielded to prevent leakage in the event of damage or breakage of pump or lines.
- b. Fuel lines must be more than 3 inches from exhaust unless shielded by metal.
 - c. Fuel shut off mandatory within easy access to the driver, conspicuously marked with bright orange paint and labeled ON/OFF.
 - d. Fuel pressure must be stock spec.
3. Ignition Switch: All vehicles must have an ignition switch within easy access to the driver in the drivers compartment and CLEARLY MARKED.

SECTION B – 2: BODY, CHASSIS AND DRIVER REQUIREMENTS

1. Roll cage Requirements:

- a. Roll cage must be welded securely to frame using a six post design. Vehicles using a uni-body construction must install a 6 inch by 6 inch by $\frac{3}{4}$ inch thick base plate affixed to outer flooring of the car roll cage and must be welded to the floor of the car.
- b. Rear roll cage hoop must be 6 inches behind the driver's head and 3 inch minimum above the driver's head. There must be a minimum of 2 horizontal bars connecting front and rear roll cage hoops and be a minimum of 3 inches above the driver's head (seated in car with helmet on). Roll cage must extend from windshield to rear of driver's compartment with a loop at the front and rear. A one inch or better pipe placed at the center of the windshield. Two bars may be added from top of cage to rear of car (not to be attached to bumper). You may also run two bars from dash area to front in line with the frame rails but end 6 inches before front bumper.
- c. Uni-body cars are allowed frame bracing but no cross bracing.
- d. Driver side must have three or more horizontal bars in door area, passenger side two or more. A $\frac{1}{4}$ inch steel plate may be installed from bottom side. Roll cage to be to rocker panel below rear of seat forward.
- e. All roll cages must be of construction and quality to afford driver maximum protection against injury. Petty bars recommended.
- f. Nerfing bars are recommended, but not required. Nerfing bars must give the driver maximum protection. All nerfing bars must turn into car at ends. No angle cuts. Bars must be mounted flush against body, NO DEVIATIONS.
- g. Roll cages must be a minimum of 1 $\frac{1}{2}$ inch OD-.095 wall tubing.
- h. SFI roll bar padding required.
- i. Unibody cars – frames can not be twisted to gain Left rear to Right front percentage before the roll cage is installed. YOU WILL BE SCALED.
- j. A minimum clearance of three inches between the top of the roll cage and the top of the driver's helmet is mandatory.

2. **BODY REQUIREMENTS**

- a. NO shortening allowed. Interior skin may be removed. Opening of wheel well no larger than one inch of stock allowed as desired. Car must not appear as a sheet metal box.
- b. If roof is removed for roll cage installation, they must be re- attached in stock form and location.
- c. Trunk and hood lids may also be stripped.
- d. Hoods must have a 5 inch opening for fire-fighting purposes.
- e. Hoods must be kept in place by secure quick release pins.
- f. **ALL DOORS MUST BE WELDED SHUT.**
- g. All glass and lights must be removed. All open exterior holes must be covered after lights are removed.
- h. No after market spoilers of any type.
- i. Stock metal only. Reproduction fenders and doors may be used. Must look stock.
- j. No fiberglass bumpers.
- k. Both bumpers must be securely fastened to vehicle and welded solid to chassis.
- l. Bumpers must contain an easy, visible and accessible way to be hooked and towed off the track...**NO SHARP EDGES.**

3. **SUSPENSION REQUIREMENTS**

- a. No racing shocks or racing springs.
- b. No cutting of suspension with the exception of top of strut tower. Shifting of strut is permitted as it stays within the original strut tower.
- c. No steering quickener allowed.
- d. Camber: 7 degrees maximum allowed.
- e. Different length spacers allowed with rubber or urethane bushings.
- f. Coil springs cannot be cut or bent.
- g. Chassis can not be lowered.
- h. No spring rubbers or additional bump stops

4. **INTERIORS**

- a. All seat cushions must be removed.
- b. Rear seat shelf must remain in vehicle.
- c. The stock floor plan, firewalls, trunk, floor, and wheel wells must be retained.
- d. No built up interiors of any kind.

- e. Mirrors allowed. Receivers or scanners required.
- f. All holes in firewalls and floors must be filled in with at least 20 gauge steel.
- g. Windshield area must have heavy screen, no chicken wire. Lexan windshields MANDATORY. NO GLASS.
- h. No plexiglass anywhere on the body.

5. TIRES AND WHEELS

- a. Stock or racing wheels.
- b. 7" rim tires and wheels.
- c. DOT street tires with 300 minimum tread wear, No Hoosier Street Tires.
- d. Tire tread width 7" maximum with ¼ inch tolerance.
- e. All rims same offset.
- f. No broken or missing lug nuts. Right side 1" lug nuts recommended.

6. DRIVE TRAIN

- a. Stock transaxle, rear, clutch assembly and flywheel only.
- b. Stock drive train only.
- c. Automatics must have working torque converter.

7. AIR CLEANERS

- a. Any air cleaner system is permitted as long as it is not air induction.
- b. Air cleaning system must be kept in engine compartment.

8. BRAKES

- a. Stock brakes in stock mounting position.
- b. All brakes must be working at all times.
- c. No after market proportioning of valves permitted.

9. DRIVERS

- a. All drivers must be at least 16 years old to participate.
- b. All drivers must have fire resistant underwear, gloves, shoes, and a one piece fire suit.
- c. All drivers must have a neck brace and driver side window netting.

10. BATTERIES

- a. Batteries in driver's compartment shall be secured and shielded to prevent leakage in the event of a turnover.

- b. Battery shall have a marine style box cover secured to the metal box as to not allow movement of the battery.
- c. Batteries located adjacent to the fuel supply of the vehicle must be secured in a metal box bolted to the frame of the vehicle by at least four 3/8" line bolts and in such a manner to apply maximum pressure against the metal box to the frame.

11. SEATS

- a. Molded metal high back seat with opening to allow seat belts to pass through.
- b. Seat shall be attached to the frame with at least 4 three line 5/16" bolts. Two bolts shall be installed at the bottom of the seat not more than three inches from the outside edge and two bolts shall be installed at the two most practical widely spaced points at the top of the seat back.
- c. Vehicles with metal seats do not require straps, but do require large washers at each bolt.
- d. Straps must be 2 inches wide and 1/8" thick connecting each set of bolts on fiberglass seat.
- e. Seats must be mounted in front of doorpost and to the left side of the drive shaft tunnel.

12. SAFETY BELTS AND HELMETS

- a. **Quick release type five point harness ONLY.**
- b. All connections are to be secured at frame.
- c. Shoulder harness must pass over a round bar located at the driver shoulder height.
- d. No alterations to manufacturer's design.
- e. All belts must be in good condition and bear the date and manufacturer name.
- f. Date of manufacture cannot be more than 2 years.
- g. Helmets must be Snell rated according to New Jersey State rules.

13. EXHAUST SYSTEM

- a. The outlet for the exhaust system shall be outside of the vehicle and extend past the driver's door.
- b. Exhaust flow must be directed out and away from the driver.
- c. Mufflers not required.
- d. No headers. Stock exhaust manifold only.

14. FUEL SYSTEM

Fuel Cell: An approved fuel cell must be used. Maximum capacity is 22 gallons. Cell must be encased in an approved steel container made of 20-gauge steel. The fuel cell must be mounted in the trunk area and four straps minimum 1/8" X 1" wide steel must secure the cell.

The cell must be mounted as far forward as possible and be centered in the car.

A 1" maximum vent to the outside of the body at the left rear taillight must be installed.

A rear bar will be allowed around the fuel cell for additional protection. Bar must be located behind the fuel cell and go from frame rail to frame rail. This bar may additionally be connected to the angled down bars of the roll cage. 1 3/4 x .095 max tubing size.

Fuel Pump

- Aftermarket fuel pump allowed. Stock fuel pressure must be maintained.

Fuel Lines

- Half inch fuel line running under car.
- Fuel shut off within reach of driver-Mandatory.
- Shut off must be clearly marked with a bright and contrasting color.
- Must be steel (fuel lines)

15. WINDOW NET

Must be used on driver's side.

16. STEERING WHEELS

- Padded center. Quick release pull pin type recommended.
- Helmets must meet Snell requirements of N.J. state rules.

17. WATER OVERFLOW AND RESERVOIRS

Can not be mounted in driver's compartment.

18. DRIVE SHAFTS

The drive shaft must be enclosed and secured front and rear by a 2" wide, 1/4" thick flat steel rod, or a 1" steel tubing with .06 wall thickness.

19. WEIGHT

- a) All cars must weigh 2400 lbs minimum total weight determined by the horsepower weight scale, before the race with the driver.

- b)** Added weight must be added to the center of the chassis front to back. Rear 53% left side maximum CAN NOT BE INCREASED.
- c)** Failure to meet minimum weight and or go over the scales before the race will be cause for immediate disqualification
- d)** Maximum OEM stated horse power allowed -190 HP.

Horsepower-to-Weight:

120 horsepower	2400 pounds
130 horsepower	2430 pounds
140 horsepower	2470 pounds
150 horsepower	2510 pounds
160 horsepower	2550 pounds
170 horsepower	2600 pounds
180 horsepower	2650 pounds
190 horsepower	2700 pounds
200 horsepower	2750 pounds
210 horsepower	2800 pounds
220 horsepower	2850 pounds

If your horsepower number falls between two numbers:

For horsepower ending in 1 to 4 – use lighter weight option

For horsepower ending in 5 to 9 – use higher weight

Example: 120 – 124 HP weighs 2400 lbs, 125 HP – 129 HP weighs 2430 lbs

QUESTIONS about the event? Call Wall Stadium Speedway at 732-681-6400 or email wallstadiumspeedway@gmail.com