

2021

Roadrunner

Rules

*An entry-level stock class of
four-cylinder, front wheel drive, fuel injected
cars*



A limited number of grandfathered cars may be allowed at the discretion of RAR officials. Any car for consideration **MUST** have been ran on RAR track in 2020 a minimum of one event.

1 General

1.1 Glossary

Original Equipment Manufacturer: Manufactured by the original manufacturer.
The part may not be modified in any way that affects the performance specifications.

1.1.2 Stock

OEM, or after-market with performance specifications that are comparable to that of the OEM part.

The part may not be modified in any way that affects the performance specifications.

1.1.3 Technical Discretion

Inspection and assessment according to the spirit and intended purpose of the rules. The spirit, intended purpose, and safety concerns will always override the current wording of the rules.

1.1.4 Abbreviations

OD Outer Diameter Tube or hole cross-section diameter measured from the outer edges.

ID Inner Diameter Tube or hole cross-section diameter measured from the inner edges.

1.1.5 Measurement Units

A double-quote (2") inches, A single-quote (2') feet, Ci = volume in cubic inches

Psi = pressure in pounds per square inch, Rpm = revolutions per minute, A super-script circle (90°) angle in degrees, Sound level (90dba) A-weighted decibels A measure of sound weighted by how it affects the human ear. 0 dBA is barely not hearable in a quiet room, and 140 dBA will cause pain.

1.2 Rule changes from the previous year are highlighted in gray (for each year after 2021) (Spelling, wording, and format changes are not).

1.3 All rules are subject to Technical Discretion.

1.4 All parts must be OEM unless otherwise specified in these rules.

1.5 No traction control (TC / ETC) devices are allowed in any part of the car.

2 Models

2.1 Year -1968 or newer Domestic or foreign, front engine passenger car

2.1.1 Includes: Station Wagons, Compact sedan, Two (2) or four (4) door passenger cars.

2.1.4 Excludes: , Mustang II, Carmagia, Dautson 510, Exotic Sports Cars, all two seat only cars

2.2 Wheelbase

2.2.1 Maximum 103", $\pm 1/2$ " of the stock wheelbase

3 Weights

3.1 Minimum Total 2,100

3.1.1 Subject to technical discretion

3.2 Maximum Left Side 52% or as adjusted by technical discretion

3.3 Weights

3.3.1 Each 0 – 100 lbs. of weights must be secured to the car with either two (2) 1/2" bolts or four (4) 3/8" bolts..

3.3.2 Must be painted white and clearly marked with the car number.

4 Chassis

- 4.1 Must be Uni-body.
- 4.2 No tube chassis.
- 4.3 Uni-body sub-frames may not be altered or stretched.
- 4.4 The Uni-body may be reinforced with box tubing (maximum 2" and 0.095" thick) located in a straight line between the front and rear sub-frames.
- 4.5 Front and rear hoops are optional. If used, they must be made from material no larger than 13/4" OD 0.095" thick tubing and may not protrude past the bumpers.

5 Suspensions

- 5.1 All suspension mounting brackets must be of stock components and in stock location for make and model.
- 5.2 Upper strut mounts cannot be moved. May brace from strut tower to strut tower.
- 5.3 All springs must be stock. Spring Rubbers Okay.
- 5.4 All shocks must be stock. After Market struts okay
- 5.5 Sway Bar
 - 5.5.1 After market sway bars okay, must be mounted in stock location..
 - 5.5.2 All thread allowed.

6 Bodies

- 6.1 Manufacturer
 - 6.1.1 The body manufacturer must be the same as the chassis (Toyota to Toyota, Ford to Ford, etc.).
 - 6.1.2 Interchange of body parts within the manufacturer's line is allowed.
 - 6.1.3 Parts may be fabricated, but must match the body type and retain stock appearance within the manufacturer's line
- 6.2 Appearance
 - 6.2.1 The body must maintain a stock appearance.
 - 6.2.2 No chopped tops.
 - 6.2.3 Anything that may shatter or break off during the normal course of racing, such as lights and their socket assemblies, all chrome and trim or plastic grills must be removed.
 - 6.2.4 Track officials reserve the right to reject any exotic or non-stock appearing bodies.
- 6.3 All skin parts must be made out of the same material with the same thickness as the OEM part.
- 6.4 Any open-able or removable part (hood, doors, trunk lid, etc.) must be secured to the car (chained, bolted, pinned, etc.).
- 6.5 Wheel openings may be cut a maximum of 2" from the tire, and should be rolled under to avoid exposed edges.
- 6.6 After market rear spoiler okay
 - 6.6.1 5" maximum height
 - 6.6.2 Maximum width is equal to the width of the car body
 - 6.6.3 Subject to tech discretion.
- 6.7 Front and rear bumpers are required and must be stock.
- 6.8 Side Rub Rails
 - 6.8.1 Optional single horizontal 1 1/2" OD .095" thick square or round tube for each side to protect the bodywork.
 - 6.8.2 Must be mounted flush to the body.
 - 6.8.3 End mount points must be within 6" from the end of the bar.

- 6.8.4 Ends must be closed and angled or turned into the body.
- 6.8.5 No sharp edges or protruding ends that might be hooked.

6.9 Windows

6.9.1 All window openings must remain stock size.

6.9.2 Windshield

6.9.2.1 Must be safety glass, lexan, or 1/4" to 3/4" metal screen mesh.

6.9.2.2 If Lexan, must be braced by an inside vertical metal strap at least 1" wide x 1/8" thick mounted as close as possible to the center of the windshield.

6.9.2.3 Safety glass or lexan must be additionally secured by 4 brackets a minimum of 1" wide x 4" high x 1/8" thick.

6.9.2.3 No cracked windshields will be allowed

6.9.3 Door windows may not be covered or obscured by anything other than safety netting (see 17.2.8).

6.9.4 Rear-quarter window openings may be covered.

6.9.5 Rear window of Lexan or 1/4" to 3/4" metal screen mesh is optional.

6.10 Paint

6.10.1 Any images or content visible on the car is subject to the approval of the track officials.

6.10.2 The paint scheme, images, and lettering must be done in a neat and professional "Racing Paint Job" style.

6.10.3 Car Numbers

6.10.3.1 Must be a contrasting color and easily readable by the track officials.

Do not use reflective or silver paint or tape (like duct tape) as it can not be seen at night.

6.10.3.2 Top (oriented to the right side) and side numbers must be at least 18" high with a line width of at least 4".

6.10.3.3 Front and rear numbers are required and must be at least 6" high with a line width of at least 1".

7 Roll Cage

7.1 The purpose of the roll cage is to protect the driver from injury during a crash, and not to stiffen the chassis.

7.2 Material

7.2.1 Roll bar tubing at least 1 1/2" OD .090" thick.

7.2.2 No galvanized or black pipe.

7.2.3 The design, materials, construction, and welds of each roll cage is subject to Technical Discretion.

7.3 Design

7.3.1 A full four-point cage over and around the driver.

7.3.2 One (1) dash bar.

7.3.3 Two (2) bars from the top rear of the car to the rear frame or trunk floor.

7.3.4 Any additional roll cage bars are optional, but the design, constructions, and materials are subject to technical discretion.

7.3.5 Doors Bars

7.3.5.1 Three (3) horizontal and two (2) vertical bars on the driver door.

7.3.5.2 The door inner panels may be removed to fit the door bars, but the bars must be flush with the inside of the exterior skin.

7.3.6 Door Plates

7.3.6.1 The driver sides may have door plates installed between the door bars and the door skin, made from at least 1/8" (0.125") thick steel

7.3.6.2 Must at least completely cover the door bar openings from the top to the bottom door bar, and from the rear to the front upright posts.

7.3.6.3 If welded to the door bars, can be separate and must have 3" of weld for every foot.

7.3.6.4 If bolted to the door bars, must be a single plate and mounted with at least 6 grade 5/8" bolts.

7.3.6.5 Must be visible from the interior for inspection.

7.3.7 Gussets for all pipe and tubing angles are required, and subject to technical discretion.

7.3.8 Extra safety bracing allowed.

7.4 Unibody Mounting

7.4.1 Each upright post can be welded to a foot plate – minimum 1/4" thick 4" square. The foot plate must be bolted through the pan to another foot plate underneath with a minimum of four (4) 3/8" (grade 5) bolts.

7.4.2 Each upright post can be welded to the stiffening box tubing between the sub-frames (see §4.4).

8 Engines – **MAXIMUM 160 HP**

8.1 Engine must be VIN specific to Year/Make/Model.

8.2 Four (4) cylinder only. No turbo engines.

8.3 All engine components must be stock.

8.4 Engine must remain in stock location for make and model.

8.5 Firewalls may not be moved or altered.

8.6 Stock production cylinder head only. No shaving, enlarging, polishing or grinding of head ports. No aluminum heads other than stock.

8.7 Stock flywheel only.

8.8 Intake and exhaust manifolds must be stock, with no match porting, grinding, or polishing of the head.

8.9 Fuel Delivery

8.9.1 Any OEM fuel delivery system

8.9.2 Must have at least two throttle return springs anchored in two different locations in opposite directions.

8.9.3 Must be stock or aftermarket fuel pump. NO performance pumps allowed

9 Fuel and Fuel Systems

9.1 Fuel

9.1.1 Gasoline only.

9.1.2 No Nitrous (N2O), or any other fuel or combustion additive.

9.1.3 Aftermarket air cleaners ok.

9.2 The stock gas tank may be used in the stock location, but a fuel cell located in the trunk behind a firewall is strongly recommended. If stock fuel tank is located behind rear axle the stock fuel tank must be relocated to inside car in area behind driver and enclosed in steel can. It is preferred there be a fire wall between the driver and the fuel tank.

9.3 The gas cap must be clearly marked with the car number.

10 Radiators / Cooling System

10.1 One radiator only, mounted in front of car.

10.2 Adequate radiator catch tank mandatory. Minimum 1/2 gallon capacity. Plastic jug (i.e.:

anti-freeze or detergent container not acceptable).

10.3 Positively No antifreeze or coolant. Water Wetter Ok.

10.4 No cooling or filter systems allowed in driver's area.

11 Electrical Systems

11.1 Battery

11.1.1 Must be mounted in the driver's compartment, must be enclosed inside a covered and vented box that is mounted on the floor.

11.1.2 The battery box must be mounted with at least two (2) 3/8" or larger bolts attached to at least a 1 1/4" x 1/8" metal strap across the top.

11.2 Race Receivers are required/No other communication devices are allowed.

11.3 Transponders

11.3.1 Must be located ten feet six inches (10' 6") from front of car, subject to technical discretion.

11.3.2 To pass technical inspection, the transponder must be in place prior to inspection and must remain in working condition for the rest of the event. Measure and adjust your transponder mount before every event.

11.3.3 If the bumper-to-transponder distance changes for any reason (like damage, repair, or modification), either the front nose or the transponder mount must be adjusted to re-establish that distance before every event.

12 Steering

12.1 Steering must be stock for make/model of chassis.

12.2 Steering box must remain in stock location.

12.3 Must have the stock steering column with the steering lock removed. May have quick disconnect installed for steering

13 Drive Trains

13.1 Stock type clutch and pressure plate. No racing clutches or pressure plates.

13.2 Transmission

13.2.1 Must be stock for make and model.

13.2.2 Automatics OK

13.2.3 Reverse gear required.

14 Rear Ends

14.1 Stock.

15 Exhaust Systems

15.1 Tail pipe must extend past driver's seat and be securely fastened. No turn downs. After market exhaust ok.

15.2 Any muffler meeting sound level of 90 DBA at 100' allowed.

16 Wheels

16.1 Steel rims only.

16.2 Each wheel must have stock brakes in good working order.

16.3 Tires

16.3.1 No wider than 8"

16.3.2 Wheel / Tire sizes may be 13, 14, or 15 inches

16.3.3 DOT or Race tires allowed (American Racer tires from the track or used Legend tires)

16.3.4 No altering, conditioning, or softening.

17 Safety Requirements

17.1 All safety equipment is subject to technical discretion.

17.2 Interior

17.2.1 Full stock firewall and fire shields to completely separate driver from trunk and engine compartment are required.

17.2.2 Full stock floor pan required.

17.2.3 The interior compartment must be completely sealed from the track with no open holes in the floor.

17.2.4 All padding must be resilient and effective.

17.2.5 Roll cage bars around the driver must be padded.

17.2.6 The steering wheel center must be padded.

17.2.7 The driver window must have SEMA approved window nets mounted securely and for quick and easy removal from either the inside or the outside.

17.2.8 Must have a fire shield between the drivers compartment and the fuel cell compartment made from at least 24 gauge sheet steel.

17.2.9 A motor kill switch must be installed, clearly marked, easily identifiable, and easily accessed by the driver or anyone reaching through from the driver or passenger window.

17.2.10 Must have at least one (1) fire extinguisher of at least 2 lb., or a commercial fire system, mounted in easy access of the driver and passenger, and with gauges or status indicators readable from either the driver or passenger window.

17.3 Driver Equipment

17.3.1 Must have an aluminum racing seat with a padded head rest no more than 4" from the driver's helmet, and with the back secured to the roll cage.

17.3.2 Head and neck restraints are strongly recommended.

17.3.3 Must have a 5 point SEMA approved racing harness with at least a 3" wide lap belt, 2" wide shoulder harnesses, and a crotch strap. Must be directly secured to the roll cage. No chain extensions are allowed. The shoulder harnesses must be mounted with stress point at shoulder height.

17.3.4 All belts must have the manufacturer's date tag, be no older than five (5) years, and in good and serviceable condition.

17.3.5 The driver must wear a 1995 or newer Snell approved racing helmet with goggles or a face shield.

17.3.6 The driver must wear an SFI approved fire suit in serviceable condition. There can be no holes or rips.

17.3.7 Fire proof gloves and shoes are strongly recommended.

18 Policy Statements

18.1 Any modifications not covered in these rules will not be allowed unless approved by Speedway Officials

18.2 Equipment will not be considered legal simply because it went through inspection unobserved or because a rule has not been written against it.

18.3 Cars are subject to inspection at any time.

18.4 Officials reserve the right to confiscate and hold any parts and/or equipment not conforming to the rules

18.5 Officials reserve the right to judge, decide, and establish what constitutes a legal part of car.

18.6 Weight may be added or adjusted at any time to benefit or equalize the racing program.

18.7 OFFICIAL'S DECISIONS ARE FINAL

19 Domination Rule

19.1 Any car is subject to adjustment by the officials to help equalize competition.

All Tech Officials' decisions are final
All rules subject to change