A – Preface

These rules were not written for the betterment of any one car, chassis or engine. Any variation from these rules must receive prior written approval form the technical committee. Based on reasonable fact, the technical committee may recommend adjustments to these rules to level the competition. The majority of adjustments will be made with the addition or removal or required race weight.

Weight adjustments are intended to provide a fair and equitable racing venue, but not to give advantage or penalize any one individual or class of car/engine unless it is clearly illustrated that there is an obvious advantage that needs to be addressed and that the current rules do not address.

Technical committee may permit minor deviation, impose further restriction and with discretion provide interpretation and deviation that in their opinion do not alter the minimum acceptable standard and provide equality of competition. Their decision is final.

Drivers that haven't competed with the Northern Outlaws 4s class or PGARA pro mini's must have a min. 2" x 36" visible yellow rookie stripe on the rear bumper. The driver must complete 3 main events. They will start at the rear of the field for three full events. After that they will start where they qualify.

B. – Compliance/Declaration

Required

1. An owner shall declare to the technical committee:

    1. Engines are to be" make to make", (original source may be requested), and displacement in cc's
    2. Body model/style and year
    3. Body, suspension/pan/frame and engine are to be from a single OEM manufacturer

C – Eligibility

Allowed

Parts Sources – Bodies, chassis, and pans, suspension components, engines and transmissions are to be sources from a 4 cylinder, (forward facing seats) vehicle originally intended for sale in North America (except where otherwise noted in the rules) removed 4 passenger seats.

Prohibited

Vans, t-roof or soft top cars, compact utility vehicles, independent frames (truck), all wheel or 4 wheel drivers, 4 wheel steering. Rotary and diesel engines.

Variation

D – Body

Required

1. Removal, all interior flammable material, glass windows and operators, door latches (doors to be welded or bolted shut, or replaced with door skin.

2. Lexan windshield, minimum 1/8” thickness, if no center bar is provided in cage, back up with a ½ “x 1/8 “bar or ½ “diameter tube securely mounted. Cars allowed to run windshield bars with full face helmet. (6 bars total)

3. All exposed metal edges to be rolled or suitably finished for safety.

4. Soft nose bumper skins, tailpieces, feathering smoothly to body lines, securely mounted with contact point at 16” ride height.

5. Bumpers not to extend more than 32” at contact point beyond tires at front and 38” behind tires at rear.

6. Top of rear / front tire tread to be contained within body line by either extending fenders or providing rigid fender extension. Max 2” flares allowed and rub rails.

7. Body supports to be constructed of small diameter round tubing. No angle. ½” square tube for hanging body panels allowed. Recommended twisted flat bar.

8. All body components to be fastened securely by smooth faced mechanical fasteners (exposed fasteners should be pan head bolts or rivets)

9. Paint schemes to be contrasting tasteful graphics suitable to the class and visible in darkness.

10. Car number to be 12 (change to 18” high on both doors, 18” high on roof (change to 22” and 4” high on the front/rear of car in contrasting colour, sharp edges. Number must of contrasting color or highly visible for lap counter.

11. Top 5” of windshield to be left for series sponsor.

12. Displacement cc’s (needs to be decaled) 2” high on upper left fender/hood. No tape or hand written on.

Allowed

1. Street style ground effects, air dams and splitters securely mounted, 3” minimum height above ground if solid/metal and no minimum height if flexible (bumper skin, rubber, etc). Air dams and splitters not to extend more than 3” in front of bumper or outside body lines on side.

2. Wings or spoilers, street styled, factory or similar design appropriate to car, rigidly mounted not to extend outside deck sides, beyond bumper or above roof. All wings and spoilers. 6” max height from top of deck lid.

E – Driver Compartment

Required

1. Firewall factory sealing engine compartment. Fuel compartment must be min 0.020” sheet metal steel.

2. Installation of minimum 0.020” steel skin above driver (hoop) and door skin if fibreglass body is installed

3. Driver’s compartment to be sealed from passage of flame, gas fumes, and exhaust fumes

4. Seal all holes over 1” diameter with steel sheet metal of same thickness.

5. All cars are required to have mirrors. Left hand and rear view.

F – Cage and Frame

Required

1. Full roll cage and door bars constructed of minimum 1 ½ “ diameter x 0.090 wall thickness seamless or electric weld rolled steel tube consisting of

1. minimum roll bar with diagonal brace from top to bottom, and lower and mid spreader bars
2. three horizontal drivers side door bars with two vertical door bars (top bar at top of door skin)
3. two horizontal passenger side door bars with two vertical door bars (top bar at top of door skin)

4. two front vertical posts spread with a dash bar and transmission bar (transmission bar may consist of portions of existing floor pan and transmission support if restrained)
5. Hoop (halo) bar

2. All connections of roll cage to be welded and gusseted

3. Front and rear braces, seat support frame and a foot bar constructed of minimum 1 ½ " diameter x 0,060 wall thickness seamless or electric weld rolled steel tube

4. Weld 1/8 " thick steel plates to factory sheet metal (floor pans and light gauge frame rails) to allow distribution of forces when attaching roll cages and braces (minimum of 1" beyond tubing) floor pan must remain stock from firewall to axel centerline at rear. And rocker to rocker

5. Nose/tail pieces backed by rolled internal bumper, minimum 1 ½ " diameter x 0.060 wall and mounted at 16" height, attached to frame clip with nested pipe or crush mounting and shear pins/bolts (1/4 " recommended). Ends to have radius and extend 4" alongside of car.

6. Crush zone of 12" from front or rear bumper to any rigid portion of the frame. Bumpers or bodies on front wheel drives may be extended slightly to achieve this

7. Removable Nerf (rub) rails of maximum 1" x 2" rectangular or 1.5" diameter steel tube extending to within 6" for tires, mounted at MID-TIRE height alongside of body, ends turned into body and smooth, rail face to be inside tire lace.

8. All bars except nerf bars to be contained inside body skin.

9. Easily accessible hook up/lift points at front and rear of car. Points to be marked and labelled for emergency crews.

Recommended

1. Windshield (Ernhardt) bar

2. Center Halo bar

3. Attachments to roll cage made by welding tabs or solid eye bolts.

4. Additional reinforcement/cage to limit suspension mount/pan damage.

Allowed

1. Factory Bumpers will be allowed, Ends must be capped and have radius that extend 4” alongside of the car so they cannot be caught up on other cars.

Prohibited

1. Stock internal bumper crush panels and bumper shocks

G – Chassis & Suspension

Required

1. Maximum wheelbase 105”, No minimum Wheel base

2. Maximum width 74” measure to outside bulge on tires.

3. Minimum 3” ride height to any rigid portion of car, or engine. Oil pan and transmission are not to be the lowest point of cars.

4. All components, wheel base, and mounting for suspension must match make and model of declared STOCK suspension.

5. Any component and mount configuration may be used in a declared MIXED suspension.

6. Spring location to match suspension declaration and component selection.

7. Tires to club spec for season. Hoosier or American Racer

8. Rims 13” or 14” diameter x maximum 7” width steel racing type.

Allowed

1. Existing floor pans may be reinforced with minimum 1 ½ “x 0.060 wall square tubing frame rails

2. Frame horns may be reinforced or replaced with minimum 1 ½ “x 0.060 wall square tubing.

3. Maximum of four shock absorbers, one per corner. Macpherson struts may be drilled or drained. Heim ends not allowed

4. Non-externally adjustable, steel bodied race shocks allowed. Adding a shock to replace Non re-valve able shocks. Coil overs allowed.

5. Maximum of 4 height adjustments allowed, may be, jacking bolts on arm mounted springs, coil over sleeves over shocks/struts.

6. Control Arm and sub frame components may be adjustable and fabricated to match dimension and style of OEM factory components. Must remain in stock location.

7. Strut towers may be removed and custom mounts built in stock location. Macpherson struts may be adjusted for camber and caster by relocation of top mount or use of adjustment plates.

8. Macpherson strut lower spring cup may be repositioned by sleeve or clamped brackets.

9. Heim ends/bump sleeves allowed on outer tie rods.

10. Adjustable sway bars

11. Mounting points may be reinforced, slotted and elongated on strut tower

12. Stock or OEM replacement bushings, polyurethane bushings.

13. Aftermarket and cut OEM springs

14. OEM steering components from any manufacturer

15. Solid metallic ballast blocks allowed, minimum 10 lb securely fastened to floor pan or frame by multiple fasters and washers, painted white and labelled with car number.

16. Outboard shocks / struts allowed

17. After market Coil overs.

Prohibited

1. Spherical bearings or solid bushings.

2. Drop spindles (homemade)

3. Any chemical alteration of tire compound. Tires having durometer readings lower than the range of other cars and are subject to disqualification

H – Engines

Please check with tech for legality of engine modifications

1. 1 lbs per CC of engine as recommended by members. Min weight 2100 lbs.

a. Carbureted, any naturally aspirated single overhead cam 4 cylinder engines up to a maximum 2500 cc overall displacement

Required

1. OEM production block, crank and heads, (same manufacturer)

2. Two barrel Carburetor not exceeding 350 cfm, 1.21” maximum venture size, with original air horn.

3. OEM intake, may be port matched to head and carb, max 1 ½ “depth, factory runner surfaces.

Allowed

1. Any engine up to a maximum of 2500 ccs overall displacement

2. Smaller engines are not limited on bore oversize (1800 CC ONLY)

3. Any cam and valve train, hydraulic, roller or solid

4. Any OEM or forged pistons

5. Stock or oversize valves

6. Multi angled valve grind,

7. Minor clean up of casting imperfections such as ridges and sharp corners

8. Beaming, shot peening and balancing of rods

9. Aftermarket steel alloy rods with solid web and beams

10. Any header with muffler

11. Carburetor adapter plate and gaskets up to 2 ¼” maximum thickness. Adapters allowed (must be within thickness rule)

12. Carburetor may have choke assembly removed; power valves and jets may be changed.

13. Aftermarket ignition systems (MSD, etc) distributors and crank triggers

14. Aftermarket connecting rods

15. Mixing and matching of Make to Make. Must be OEM Parts

Prohibited

1. Porting or alterations of internal cast surfaces, except as noted in #7 above

2. Magneto ignitions

3. Dry sump oil systems

4. Internal modifications to carburetors/metering blocks

5. Lightening of crankshafts/knife edging

6. No standalone systems

Variations

1. Engines built of various block, head, crank combinations or de-injections require prior approval by technical committee and will receive individual base weights if approved.

2. Keith Dorton 2300 style carburetor allowed, model 0-80787-1 and metering block #134-27

b. Fuel injected or double overhead cam

Any 4 cylinder engine up to a maximum overall displacement of 2500 cc.

ECU- . Chips for removal of factory rev limiter. Fuel Mapping only. No standalone ECU systems.

Aftermarket ignitions must be approved

Required

1. All engine, air intake and fuel delivery, ignition components to remain OEM, Fuel pressure to remain within factory spec

Allowed

1. Engines up to a maximum of 2500 cc overall displacement

2. Clean up of head and block surface only.

3. Any air cleaner

4. Any Exhaust manifold/header with muffler

5. Removal of emissions controls (EGR, EVAP, Air injection/pumps, and catalytic converters)

6. Adjustable Cam gears

7. Mixing and matching is allowed. Make to make (OEM Compon

8. Maximum .40-inch overbore to an overall engine displacement of 2500 cc.

9. OEM Cams allowed, After Market, regrinds

10. Connecting Rods must stay stock, Larger OEM Pistons allowed

Allowed

1. Exhaust system and muffler exiting behind drivers back,

2. Mechanically sealed dipsticks

3. Minimum 1 litre metallic radiator overflow/catch can sealed

4. Radiator remaining in stock location (front of engine). Mounting may be changed

5. Operating starter

6. Engine mounts may be reinforced or manufactured (solid)

7. Balancing of crankshaft

Prohibited

1. Engine setback. Engine location determined by bell housing relation to firewall or front axle centerline.

2. Removal of any casting identification or serial numbers on engine parts, sensors and accessories

3. No portion of exhaust is to be exposed in driver's compartment.

4. No SVT, SRT, or GM Performance parts allowed

I – Fuel

Required

1. Fuel lines including (EFI) returns, running through driver's compartment must be enclosed in steel

2. Electronic fuel pumps require a shut off switch (oil pressure switch) Momentary override allowed for start up

3. Fuel cell designed for circle track racing, max 8 gallon size enclosed on min 22 gauge steel, securely mounted and protected by 1 ½ " x .125" strapping or 1x1 tubing, attached to cage or frame/body.

4. Fuel cell is to be located minimum 12” from bumper, in opposite end of car from engine, and have 10” ground clearance.

5. Fuel cell may only be filled through a cap mounted directly on cell. May use engineered quick fill (no homemade systems)

6. Quick turn caps are to be tethered by safety cable. Metallic filler necks and cell components are to be grounded to car frame.

7. Fuel cell vent lines must have check valves for rollover. (Accepted fuel line with double loop)

8. Car equipped with plastic fuel tank in front of rear axles. Must have aluminum skid plate installed under tank.

Allowed

1. Automotive fuel dispensed from a retail service station (unmarked) maximum octane rating of 94

Prohibited

1. Aluminum lines

2. Rubber fuel lines under floor plan

3. Race fuels and home brews.

J – Transmission & Driveline

a. Standard Transmissions (OEM)

Required

1. OEM stock clutch and single disc

2. OEM standard transmissions

3. Operational first and reverse gear.

4. OEM stock flywheel may be lightened and balanced, or billet steel flywheel

5. LSD Transmissions allowed

Prohibited

1. No aftermarket Aluminum flywheels, ram clutches, couplers, mini clutches or multi disc clutches

b. Automatic transmissions (OEM)

Required

1. Operational torque converters

2. Sealed dipstick

Prohibited

1. Electronic control alteration

c. Driveshaft on real wheel drives

Required

1. OEM drive shaft painted white

d. Differentials on real wheel drives

Required

1. OEM axle/differential, solid or independent depending on construction

Allowed

1. Open style or locked by welded spiders or mini spools, and LSD

2. Rear end swaps maintaining same attachment style and configuration

Prohibited

1. Quick change rear ends, full spools or lockers

K – Brakes

Required

1. OEM type operational brakes required on four corners of the car

2. OEM stock mounts and brackets for front brake calipers

Allowed

1. Rear brakes may be converted to disc brakes using all OEM calipers and ferrous rotors

2. Tilton style/proportioning dual master cylinders

3. Proportioning valves

4. Custom brackets for rear disc brake calipers

Prohibited

1. After market or home grooving, drilling, venting of rotors.

2. No traction control systems like ABS

L – Electrical

Required

1. Battery restrained in a securely mounted to a solid portion of the floor pan or frame in driver's compartment behind driver

2. Battery terminals are to be protected against shorting.

3. Battery master (kill) switch mounted in a conspicuous and easily reached centered dash or tunnel position that is accessible by driver and track safety staff from both sides of car. On/Off positions to be clearly labelled.

M – Safety

Responsibility

1. Each owner/driver is responsible for their own safety equipment as it pertains to condition and wear, expiry dates and suitability of use in racing events. Drivers should fully understand the limitations of protective ratings such as SFI ratings.

Required

1. One or two piece race suit.

2. Helmet rated for automotive racing (current Snell or equivalent) Pgara does require SA rated helmets, no motorcycle helmets.

3. Balaclava for non-fire rated helmets

4. Fireproof driving gloves

5. Fireproof driving shoes

6. Neck collar or restraint system

7. Five (5) point seat belt system, 2.5” double shoulder strap, 2.5” lap belt with quick release, 2.5” for the use with head restraints, 2” sub belt, mounted securely to cage on welded tabs and bolts, max 5 years old.

8. Fire resistant roll bar padding on all bars within reach of the driver’s limbs.

9. Window net manufactured for racing with quick release mechanism positioned for removal by both driver and safety crews.

10. 2 ½ lb class BC fire extinguisher in driver’s compartment or fire suppression system.

11. High back (headrest) one piece aluminum racing seat (with headrest braced)

12. Collapse mechanism on steering shafts.

Allowed

1. All safety equipment exceeding these minimum requirements

Recommended

1. Hans style neck restraint system, recommended.

2. Sternum strap

3. Functional quick release on steering wheel

4. On board fire extinguisher systems,

5. Aluminum leg, rib, helmet, and shoulder extensions providing further restraint/support of driver or containment seats.

N – Communication

Allowed

1. Radio communication between crew and driver is a priviledge allowed, but may be revoked for unsportsmanlike actions.

2. All cars are to register their radio models and frequencies with the club.

Club spec for tires:

1. Current tire – Supplied by Finishline. Hoosier racing tire, short trackers, 23” or 23.5”, 700 series compound 13”x7. AR 705 / Hoosier 800.
2. Maximum of 12 new tires in season, serial number to be recorded to tech committee
3. Replacement of tires above the limit allowed only if damaged tire are inspected at the race event where the damage occurred and approved by the tech committee

Car race weight and adjustments recommended by tech committee

1. Cars are to weight a minimum of the engine base weight combined with any appropriate additional weights added to the engine base weight and resulting in the required Car race weight.
2. Weight additions
    1. For mixed suspension vehicles (Not single model), add 50 lbs
3. Minimum race weight with deductions/additions 2100 lbs
4. No car will be required to weigh more than a maximum race weight of 2700 lbs with driver
5. At any given time, during a sanctioned event, all cars must weigh their minimum race weight with driver.
6. Maximum of 56% left side weight with driver
7. On weighing of cars, no topping off of fluids allowed. Parts lost or removed during race cannot be added to achieve weight.
8. The board of directors may direct the addition of weight to cars to equalize the level of competition.