



## 2023 XR NORTHERN SPORT MODIFIED RULES & SPECIFICATIONS

(Revised January 8, 2023)

**UPDATED ITEM(S): Clarified verbiage regarding weight rule (20.1).**

THE RULES AND/OR REGULATIONS SET FORTH HEREIN ARE DESIGNED TO PROVIDE FOR THE ORDERLY CONDUCT OF RACING EVENTS AND TO ESTABLISH MINIMUM ACCEPTABLE REQUIREMENTS FOR SUCH EVENTS. THESE RULES SHALL GOVERN THE CONDITION OF SPEEDWAY EVENTS AND, BY PARTICIPATING IN THESE EVENTS, ALL RACEWAY COMPETITORS ARE DEEMED TO HAVE COMPLIED WITH THESE RULES. NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF, OR COMPLIANCE WITH THESE RULES AND REGULATIONS. THEY ARE INTENDED AS A GUIDE FOR THE CONDUCT OF THE SPORT AND IN NO WAY ARE A GUARANTEE AGAINST INJURY OR DEATH TO PARTICIPANTS, SPECTATORS OR OTHERS.

References are made throughout these regulations requiring and/or recommending that products meet certain specifications. These products are manufactured to meet or exceed certain criteria and are labeled as such upon satisfying those criteria. Any change to these products voids that certification. Under no circumstances may any certified product be altered from the “as manufactured” condition or such certification is voided.

All participants and officials are expected and required to additionally be familiar with the definitions and details in the XR General Rules, Regulations & Procedures. XR Events shall hereafter be simply referred to as the XR throughout the rules description. XR official(s) shall include all personnel employed as an official by the participating racetrack.

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- **1.0 SAFETY:**
  - **1.1:** Rules apply to all cars when on track. Any safety rule will always take precedence.
  - **1.2:** Snell-rated SA2015 or SA2020 helmet required.
  - **1.3:** Roll bar padding required in driver compartment (Fire retardant recommended).
  - **1.4:** SFI-approved fire suit, Fire retardant gloves, shoes and neck brace (or head and neck restraint) required.
  - **1.5:** Mandatory driver's side window net with minimum 16" inch by 20" inch ribbon or mesh style, and must be mounted to the roll cage so the latch is at the top front of the window. Maximum 4" inch tall visor attached to window net.
  - **1.6:** Safety Belts
    - **1.6.1:** Minimum 2" inch wide SFI-approved five point safety belt assembly required, must be mounted securely to rear main hoop crossbar.
    - **1.6.2:** Recommended: Safety belts no more than 3 years old. Any safety belt or safety net deemed to be unsafe by showing signs of weathering, fraying, or other reasons by officials or race director(s) will be illegal and unable to race.
  - **1.7:** A battery disconnect switch is required and must be clearly marked "OFF" and "ON". Must be within reach of the driver when strapped into the driver seat.
  - **1.8:** ALL drivers and cars are required to pass a safety inspection before being allowed to compete.
  - **1.9:** All safety equipment must stay on and in place whenever the car is on the racing surface.
  - **1.10:** Approval of a race car by inspector shall mean only that it is approved for participation in a competitive event and shall not be construed in any way to mean that it is guaranteed mechanically sound, safe, or completely legal. XR and/or the inspector shall not be liable for any mechanical failure nor for any losses, injuries or death resulting from the same.
  - **1.11:** XR recommends all competitors to follow manufacturer's recommendations for installation, usage, and replacement of all safety equipment.
- **2.0: FRAME**
  - **2.1:** 1964 or newer OEM perimeter American rear-wheel drive passenger car frame only. No sports car frames.
  - **2.2:** Must be full, complete frame.
  - **2.3:** Can not be widened or narrowed. Must be able to support roll cage on both sides.
  - **2.4:** A weight jack in the original centerline of the spring tower is allowed.
  - **2.5:** Frame horns may be removed in front of the steering box.
  - **2.6:** Front crossmember may be cut and boxed for radiator and/or steering clearance.
  - **2.7:** 2 inch wide by 4 inch tall frame stiffener may be welded directly to the outside of the left side frame rail, left top frame rail can be removed inside the cockpit.
  - **2.8:** Minimum wheelbase 108.0 inches to a maximum 112.0 inches with a maximum one inch difference from side to side.
  - **2.9:** Maximum overall width from outside of tire to outside of tire is 78.0 inch.
- **3.0: ROLL CAGE**
  - **3.1:** Roll cage must be of continuous hoops with a minimum 1.75 inch O.D. x 0.095 inch wall thickness for main cage.
  - **3.2:** Must be frame-mounted in at least six places, low carbon or mild steel recommended.
  - **3.3:** Must consist of a configuration of front, rear and top hoops connected by tubing on sides or side hoops.
  - **3.4:** Driver's head must not protrude above the cage when strapped in the driver seat and with helmet on driver's head.
  - **3.5:** Roll cage must be securely supported and braced with a minimum one crossbar in the top halo.
  - **3.6:** Main cage can be no further forward than the rear of the engine.
  - **3.7:** All bars forward of the main cage must be lower than the hood.
- **4.0: DOOR BARS**
  - **4.1:** Driver side door bars and uprights must be a minimum 1.5 inch O.D. x 0.083 inch wall thickness.
  - **4.2:** Minimum three driver side door bars that are parallel to ground and perpendicular to the driver.
  - **4.3:** Front and rear of the roll cage must be welded together with bars on each side.

- **4.4:** Passenger side must have at least one cross door bar that is horizontal or angled with a minimum 1.25 inch O.D. X 0.083 inch wall thickness.
- **4.5:** Passenger side must have one top door bar with a minimum 1.5 inch O.D. x 0.083 inch wall thickness.
- **4.6:** Must have a steel door plate that is 18 gauge or 0.049 inch minimum thickness and must be securely welded to outside of driver side door bars.
- **4.7:** Must be visible for inspection and cover area from top door bar to bottom door bar and from rear hoop down-post to five inches in front of the driver's seat.
- **5.0: BODY**
  - **5.1:** The only composite body panels allowed are the roof, rock guard and hood scoop.
  - **5.2:** Body and decking must be the same width front to rear and be parallel to the frame.
  - **5.3: Nose**
    - **5.3.1:** Nose panel may be aluminum and must be flat.
    - **5.3.2:** May have a maximum 2.250 inch side fins.
    - **5.3.3:** May use a MD3 plastic nosepiece, part#020-410 and may cut cooling holes in it.
    - **5.3.4:** Nose panel must remain within the confines of the front bumper and same width front to back.
    - **5.3.5:** Nose panel may be no lower than four inches below frame horns.
    - Sides must remain open in the Engine compartment.
  - **5.4: Hood**
    - **5.4.1:** Hood must be level or sloped down at front and be enclosed.
    - **5.4.2:** Hood may be a maximum two inches above interior deck at rear.
    - **5.4.3:** Air cleaner top may be a maximum six inches above hood.
    - **5.4.4:** No panel in front of the right door to the engine compartment and no inner panels.
  - **5.5:** May use full windshield but must have front windshield and rear window support posts.
  - **5.6:** 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.
  - **5.7: Roof**
    - **5.7.1:** Roof must be fiberglass or aluminum, full size and rounded down in all directions and mounted within 0.5 inch of rear roll cage.
    - **5.7.2:** No dished roofs allowed and roof hatch will be allowed.
    - **5.7.3:** A 1.5 inch rolled down rock guard will be allowed on the roof front.
    - **5.7.4:** Roof may have a maximum four inch sides.
    - **5.7.5:** Maximum one inch ridge down sides of roof.
    - **5.7.6:** Roof may have a maximum one inch rear stiffener that must face down.
  - **5.8:** Sail panels must resemble all aspects of drawing and may not extend ahead of the back of the seat.
  - **5.9: Rear Spoiler**
    - **5.9.1:** Rear spoiler (optional) may be minimum one inch to maximum five inches in material height and maximum 66 inches wide.
    - **5.9.2:** Spoiler may have rear stiffener and must be one inch or more down from top.
    - **5.9.3:** Maximum three spoiler braces allowed, must be mounted in line. Spoiler braces must resemble all aspects of drawing. Spoiler must be mounted within confines of spoiler braces.
    - **5.9.4:** One piece rear spoiler is allowed and no fins, lips, wings or wind generators allowed.
  - **5.10:** Tires must be the widest part of the car.
  - **5.11:** Car number must be minimum four inches thick and 20.0 inches tall and clearly visible, on both sides, top and back of car.
  - **5.12:** Maximum 4 inch plastic skirting allowed on bottom of doors, quarters and nose.
  - **5.13:** Rear filler panel is optional.
  - **5.14:** Refer to body diagram for complete details.
- **6.0: DRIVER'S COMPARTMENT**
  - **6.1:** Must have minimum three windshield bars in front of driver.
  - **6.2:** May have a Lexan or aluminum cowl panel in front of driver and can be no wider than the cockpit and no farther back than the steering wheel.

- **6.3:** A full floor pan is required and must be made with a minimum 0.125 inch aluminum, or 0.060 inch steel.
- **6.4:** 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 the bottom of frame rail.
- **6.5:** Cockpit must seal the driver off from track, driveline, engine, fuel cell canisters and pumps.
- **6.6:** Accumulators cannot be mounted between driver and left-side door bars.
- **6.7:** The only driver-adjustable devices allowed while the car is in competition is the brake adjuster.
- **6.8:** No mirrors of any kind permitted.
- **7.0: FRONT SUSPENSION**
  - **7.1:** All components must be steel, unaltered OEM, in OEM location, and replaceable by OEM parts.
  - **7.2:** May use tube-type upper A-frames with or without aluminum or steel cross shaft.
  - **7.3:** Upper mounts can be moved.
  - **7.4:** May use OEM replacement stamped steel lower A-frames with rubber, nylon or steel lower A-frame bushings.
  - **7.5:** No offset or bearing type bushings
  - **7.6:** One welded shock mount on lower A-frame.
  - **7.7:** No adjustable top shock mounts.
  - **7.8:** OEM or OEM replacement rebuildable ball joints allowed.
  - **7.9:** Must use right and left lower A frames of the same design and be on the correct sides.
  - **7.10:** Lower A-frame mounts and bolt holes on frame must be in OEM location.
  - **7.11:** No screw-in lower ball joints.
  - **7.12:** No sway bar.
  - **7.13:** No suspension stops of any kind allowed.
- **8.0: STEERING**
  - **8.1:** Rack and pinion steering is not allowed.
  - **8.2:** Idler arm, pitman arm, and center link must match frame.
  - **8.3:** All steering components must be OEM, steel and in OEM location and unaltered.
  - **8.4:** Outer tie rod end and adjustment sleeve may be replaced by a minimum 0.625 inch steel rod end and steel tube.
- **9.0: SHOCKS**
  - **9.1:** Only One non adjustable, unaltered steel shock per wheel.
  - **9.2:** All shocks must fully collapse and extend at any time.
  - **9.3:** Maximum 7.0 inch stroke on front shocks and maximum 9.0 inch stroke on rear shocks.
  - **9.4:** Shock body size can be no larger than 2.125 inch O.D.
  - **9.5:** All shock mounts must be welded.
  - **9.6:** Shocks cannot be mounted on screw jacks.
  - **9.7:** No shock may have external or internal bumpers or stops.
  - **9.8:** No shock can preload or pin any spring.
  - **9.9:** No coil over, air, bulb-type, threaded body or remote reservoir shocks. No Schrader valves or bladder type valve allowed.
  - **9.10:** Front half of any shock may be shielded and shield must be mounted on the shock.
- **10.0: SPRINGS**
  - **10.1:** Only one steel coil or multi-leaf, closed end spring per wheel allowed.
  - **10.2:** Minimum spring diameter is 4.5 inches O.D.
  - **10.3:** No progressive springs allowed.
  - **10.4:** Front coil springs must be 9.5 inch free height with 0.5 inch tolerance
  - **10.5:** Rear coil springs must be 11.0 to 13.0 inch free height with .05 inch tolerance.
  - **10.6:** No torsion bars, air bags, inner liners or spring rubbers allowed.
- **11.0: REAR SUSPENSION**
  - **11.1:** All components must be steel with all mounts and brackets welded or bolted solid.
  - **11.2:** One steel coil or multi-leaf (rear) spring per wheel only. Minimum 4.5 inches O.D., maximum 11.0 inches to 13.0 inches free height.
  - **11.3:** Coil springs must remain vertical and over the centerline of rear-end housing.

- **11.4:** No coilover eliminators, chains, cables or tethers allowed.
- **11.5:** A solid safety chain securely mounted frame to axle housing with no springs or rubbers is allowed. Must have slack during inspection.
- **11.6:** Rear shocks must be located behind rear-end housing.
- **11.7:** Shock must be mounted to bracket below bottom of the axle tube and to the upper frame rail.
- **11.8:** All rear control arms and panhard bars must be straight. Must utilize one of the following designs:
  - **11.8.1:** Aftermarket three link design requirements: Must use 16.0 inch minimum, 19.0 inch maximum lower control arms. Rear lower control arm must be centered under axle tube (1 inch tolerance) and bolted minimum 2.0 inches to maximum 5.0 inches from bottom of housing. Must use one upper control arm, solid tube only, located at top center of rear end housing and remain centered (one inch tolerance) on housing over drive shaft. Must use minimum 23.0 inch panhard bar located behind rear end housing. Lower spring perch must be welded to rear-end housing. Must use steel upper weight jack. No floating or bearing rear spring perches/cups allowed. No suspension stops or adjustable underslung of any kind allowed.
  - **11.8.2:** Multi-leaf spring design requirements: Must use steel multi-leaf springs with no additional suspension components besides one shock per wheel. Adjustable aluminum lowering blocks allowed.
- **12.0: REAR ENDS**
  - **12.1:** Any non-cambered steel OEM passenger car or truck rear end (housing and carrier) allowed.
  - **12.2:** All components must be steel.
  - **12.3:** Aluminum lowering blocks, axle cap, u-joint caps and drive flange allowed.
  - **12.4:** Safety hubs (floater) allowed.
  - **12.5:** A one inch Inspection hole in housing required. No heavyweight axle tubes (max .250" wall) or housing braces. Ring gear, center section, pinion and yoke cannot be lightened.
  - **12.6:** No scalloped ring gears.
  - **12.7:** Solid steel axles and Mini-spools only.
  - **12.8:** One piece drive flanges only.
- **13.0: BUMPERS**
  - **13.1:** Must have steel bumpers on front and rear at all times and welded or mounted with minimum .375 inch bolts.
  - **13.2:** Rear bumper must be constructed of minimum 1.25 inches O.D. x 0.095 inch wall thickness tubing and mounted a maximum of 6" inch beyond rear deck.
  - **13.3:** May be no wider than five inches outside of rear frame rails.
  - **13.4:** If wider than five inches outside rear frame rails it must be capped and bent forward 90 degrees or constructed in a loop design.
  - **13.5:** Must have at least one upright, minimum 1.25 inches O.D. x 0.065 inch wall thickness, from bumper to fuel cell guard.
  - **13.6:** Two-bar front bumper must be minimum 1.25 inch O.D. x 0.065 inch up to a maximum 0.095" inch wall thickness tubing.
  - **13.7:** Must be mounted frame-end to frame-end, no wider than width of material outside frame horns and with bottom loop parallel to ground.
  - **13.8:** Top bar must be directly above bottom bar, minimum 6.5" inches apart, measured center to center.
- **14.0: TIRES**
  - **14.1:** Must use unaltered Hoosier G60 (stamped or unstamped) or American Racer KK704 tires.
  - **14.2:** There will be no weight penalty for tire selection. Can mix and match brands.
  - **14.3:** No chemical softening, or conditioning of tires.
  - **14.4:** Tire samples may be taken at any time.
  - **14.5:** Tires may be ground, straight siped or grooved.
- **15.0: WHEELS, LUG BOLTS, LUG NUTS, AND MUD COVERS**
  - **15.1:** Must use three inch or four inch backspace wheel.
  - **15.2:** Adapters, spacers or bleeder valves are not allowed.
  - **15.3:** External, steel bead lock on right rear only and it cannot make wheel any narrower than 8 inches and no wider than 8.75 inches.
  - **15.4:** Must use only steel bolts.

- **15.5:** Must use minimum one inch O.D. steel lug nuts.
- **15.6:** Mud plugs allowed. Foam type or securely bolted plastic outer mud cover allowed on right side wheels.
- **15.7:** Outer mud cover mounting tabs and rings must be integral to the wheel or bead lock or be securely welded to wheel.
- **15.8:** Aluminum inner mud cover allowed on left rear only.
- **16.0: BRAKES, CALIPERS, AND HUBS**
  - **16.1:** Must be steel approved OEM, operative four wheel, drum or disc.
  - **16.2:** Hubs/rotors and calipers, cannot be lightened and must maintain minimum OEM dimensions.
  - **16.3:** Rear rotors may be aftermarket 0.81 inch thickness and vented solid surface rotors only.
  - **16.4:** No scalloped or ceramic coated rotors.
  - **16.5:** One proportioning device allowed (one-to-one ratio), front to rear only.
  - **16.6:** Brake lines must be visible and must connect directly from master cylinder to calipers with no devices in between.
  - **16.7:** Rear caliper brackets must be welded or bolted solid to rear-end housing.
  - **16.8:** No oil bath front hubs.
  - **16.7:** Bolt pattern may be changed and larger studs installed.
- **17.0: EXHAUST**
  - **17.1:** Round tube headers only.
  - **17.2:** At the same point, at end of header all primary tubes must enter directly into one collector.
  - **17.3:** Collector and turn down length maximum nineteen inches total.
  - **17.4:** Non-stepped, painted headers only.
  - **17.5:** No heat wrap on headers.
  - **17.6:** No exhaust sensors, merge collectors, cross-overs, extensions, inserts, or balance tubes permitted.
- **18.0: FUEL, FUEL CELL, AND FUEL SYSTEM**
  - **18.1:** Gasoline or racing fuel allowed. May use E10 and E85. Pump grade recommended. No Methanol allowed.
  - **18.2:** May not use performance enhancing or scented additives.
  - **18.3:** Fuel must pass both dielectric meter and chemical tests and sample(s) may be taken from any car at any time.
  - **18.4:** Racing fuel cell required, maximum 32 gallon capacity (12 gallon recommended), must be in minimum 20 gauge steel container. Must be securely mounted behind rear axle, between rear tires, minimum four inches ahead of bumper, minimum 10 inches above ground. Must mount with a minimum one inch square tubing or two solid steel straps around entire cell, two inches wide and 0.125 inch thick. All cell mounts must be steel, securely welded to frame/cage.
  - **18.5:** Protective tubing must cover rear and extend past both sides of cell. No part of cell shall be lower than protective tubing.
  - **18.6:** Fuel cell vents, including cap vent, must have check valves.
  - **18.7:** 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.
  - **18.8:** Pick-up must be on top or right side of cell.
  - **18.9:** One fuel filter allowed and no cool cans.
  - **18.10:** Mechanical OEM type push rod fuel pumps only.
  - **18.11:** Maximum 0.100 inch thick carburetor gaskets only.
- **19.0: CARBURETOR AND AIR CLEANER**
  - **19.1: CLAIM ENGINE**
    - **19.1.1:** Must use naturally aspirated, unaltered 500 c.f.m. Holley – part no. 0-4412 or 0-4412SA may be modified to Holley HP Dorton part no. 0-80583-1 specs only.
    - **19.1.2:** Float bowl must face forward.
    - **19.1.3:** Any adapter, maximum one inch thick.
    - **19.1.4:** No throttle bore adjustable carburetor spacers.
  - **19.2: B. GM CRATE ENGINE:**
    - **19.2.1:** May use any Holley 4 barrel carburetor

- **19.3:** All components (float bowls and main body) must be Holley manufactured. Metering blocks and base plate may be billet aluminum non-Holley.
- **19.4:** No aerosol-style carburetors allowed. May use one inch thick carburetor spacer, must use Moroso part #64940 or speedway Motors part #545-64940 with GM crate.
- **19.5:** Air cleaner top/stud and base cannot direct air into carburetor. No top flow air cleaner housings, air cleaner inserts or cold air boxes.
- **20.0: WEIGHT**
  - **20.1:** Minimum weight limit of 2,500 pounds. No additional weight is required if running the American Racer KK704 tire.
  - **20.2:** Weights must not be used in driver compartment or outside body.
  - **20.3:** All weights must be securely mounted with at least two 0.5 inch bolts and painted white with car number on it.
  - **20.4:** No titanium, magnesium, carbon fiber or tungsten components. Solid steel fasteners only.
- **21.0: BATTERY AND STARTER**
  - **21.1:** One 12 volt battery only, must be securely mounted between frame rails, and positive terminal must be covered.
  - **21.2:** Sealed batteries are recommended and NO lithium batteries.
  - **21.3:** Starter must directly engage flexplate/flywheel.bolt mounted in OEM location
  - **21.4:** Car must be able to start on its own without being pushed or pulled.
  - **21.5:** Car must leave initial staging area under its own power or may be required to go to rear of that race.
- **22.0: GAUGES AND ELECTRONICS**
  - **22.1:** No unapproved transmitting or listening devices (exception is mandatory one-way raceceiver radio).
  - **22.2:** No timing retard controls, digital gauges (including tach) or cell phones.
  - **22.3:** No electronic monitoring computer devices capable of storing or transmitting information except memory recall analog tach.
  - **22.4:** Must use 12-volt ignition system and OEM HEI distributor. Ford/Chrysler may use HEI distributor.
  - **22.5:** Billet housings or crank triggered ignitions are not permitted.
  - **22.6:** Must use OEM or OEM appearing ignition rotor, cap, coil and module.
  - **22.7:** Crate engine must use OEM unaltered MSD #8727CT rev-control and 6,200 rpm limit.
  - **22.8:** Claim engine must use unaltered MSD #8727CT rev-control with maximum 7,200 rpm limit.
  - **22.9:** Rev-control box must be accessible for inspection and out of reach from driver.
  - **22.10:** No ignition boxes, remote coil or additional unapproved ignition accessories.
  - **22.11:** All wiring must be visible for inspection.
  - **22.12:** Only gauges allowed are analog oil pressure, fuel pressure, brake bias, water temperature and tach.
  - **22.13:** Only OEM type alternator with internal regulator allowed.
  - **22.14:** No traction control devices of any kind are permitted.
- **23.0: TRANSMISSION AND DRIVESHAFT**
  - **23.1:** Must have neutral position and all forward and reverse gears must be operational.
  - **23.2:** With engine running driver must be able to engage car in gear and move forward then Backward.
  - **23.3:** Only OEM production transmissions allowed. No 'in and out' boxes or quick change devices allowed.
  - **23.4:** Shift levers must function and be in OEM location.
  - **23.5:** One steel or aluminum OEM style/size flywheel or steel OEM style/size flexplate allowed.
  - **23.6:** Flexplate or flywheel must be bolted directly to end of crankshaft.
  - **23.7:** Automatic transmission: Must be unaltered, two or three speed, OEM production case with a functioning OEM appearing pump.
  - **23.8:** Aluminum OEM bellhousing may be replaced with aftermarket explosion-proof steel or aluminum bellhousing.
  - **23.9:** OEM bellhousing must have approved scatter shield constructed of minimum 0.125" inch by three inch steel, 270 degrees around flexplate.
  - **23.10:** Only external lines allowed are for transmission cooler. Splined drive flange coupler or torque converter (10" inch minimum) only. No bump starts.
  - **23.11:** Manual transmission: Must be unaltered, three or four speed, OEM production case and have a working 7.25" inch minimum diameter, steel and/or aluminum, single or multi-disc clutch and pressure plate

bolted directly to flywheel/flexplate. These components must rotate, consistent with engine rpm, while the car is in any gear.

- **23.12:** Must use explosion-proof steel bellhousing with one hole for throw out bearing lever or hose, must be 270 degrees around top of clutch and flywheel/flexplate area.
- **23.13:** Hydraulic clutch pedal may be used with manual transmission only.
- **23.14:** Drive Shaft must be a minimum 2" inch diameter and painted white.
- **23.15:** Must use steel drive shaft and steel slip-yokes.
- **23.16:** 360-degree drive shaft loop required and must be constructed of at least 0.25" inch by 2" inch steel, or 1"inch tubing,
- **23.17:** Drive shaft loop must be mounted 6" inches back from front U-joint.
- **24.0: ENGINE LOCATION, PULLEYS, BELTS, and RADIATOR**
  - **24.1:** Rear of engine must be mounted at least 72" inch forward from centerline of rear axle.
  - **24.2:** Engine offset must be kept within two inches of centerline of front crossmember with engine level.
  - **24.3:** Minimum 11" inch engine height from ground to center of crankshaft.
  - **24.4:** V-belt aluminum or steel pulleys only.
  - Only copper/brass or aluminum radiator and must be mounted in front of engine.
  - **24.5:** No vacuum pumps, pan evac systems, oil coolers, oil pan vents, remote oil filters or sprinkler systems.
- **25.0: ENGINE OPTIONS AND SPECIFICATIONS**
  - **25.1:** All cars must clearly display on driver side front roof post which engine they are competing with. Must be contrasting in color from body, minimum 2-inches tall and display CLAIM or CRATE.
  - **25.2:** CRATE ENGINE: Must use unaltered sealed GM #88958602, #88869602 (Chevy cap seal), or #19258602 crate engine. All GM 602 Crate engines part #88869602 with Chevy cap seals. Upon inspection, any different, altered or missing GM seal bolts may result in disqualification.
  - **25.3:** Oil pan may be replaced by approved repair center with Champ pan #CP57LTRB and Champ pickup #1012SB, or Kevko pan #1090NRHw/ISP or IMCA90 and Kevko pick-up #1003-3/4.
  - **25.4** Disqualification for any crate engine not using required spacer, distributor, rev limiter, pushrods, valve springs or rocker arms.
  - **25.5:** CLAIM ENGINE
    - **25.5.1:** All engines must be able to be used in conventional passenger car without alterations.
    - **25.5.2:** External engine casting and threaded holes cannot be altered.
  - **25.6:** BLOCK
    - **25.6.1:** OEM steel passenger vehicle production block only. No GM Bowtie, Ford SVO or Chrysler W components allowed. GM approved block numbers are: 10105123,10066034, 3892657, 3914660, 3914678, 3932388, 3932386, 3956618, 3970000, 3970006, 3970010, 3970014, 10066033, 10066036, 10243880, 14010207, 14010209, 14010287, 14016376, 14016379, 10054727, 14088528, 14088548, 14088552, 14093638, 14101148.
    - **25.6.2:** Stroke must match block.
    - **25.6.3:** No 400 or larger cubic inch parts allowed.
    - **25.6.4:** Maximum 361 cubic inches, (GM); 363 (Ford); 370 (Chrysler).
    - **25.6.5:** Violation of cubic inch limit must be verified by removal of head and may result in disqualification.
    - **25.6.6:** Maximum compression ratio is 9.0 to 1.0, no tolerance. Compression ratio checked using Whistler and cubic inches checked using pump, OR by visual inspection of part and/or casting numbers, pistons, etc (track option which method is used).
    - **25.6.7:** Flat top or dished pistons only.
    - **25.6.8:** OEM or OEM replacement steel crankshaft only – cannot be lightened. No aerowing, bullnose, knife edge, undercut or drilling of second or third rod throws.
    - **25.6.9:** Cap screw allowed. OEM or OEM cast appearing replacement steel rods only - GM 5.7 inch, 6 inch or GM Vortec rod part number 10108688 allowed. No splayed main caps.
    - **25.6.10:** Conventional flat tappet cam and lifters only, cannot alter lifter bores.
    - **25.6.11:** OEM firing order cannot be changed (GM: 1-8-4-3-6-5-7-2).
    - **25.6.12:** May use oil restrictors.



- **25.6.13:** 'Wet' sump oiling system only.
- **25.6.14:** Steel oil pans only. Racing oil pans allowed. Mandatory one inch inspection hole in all pans – no obstructions to crank and rods.
- **25.7** Accumulator allowed.
- **26.0: CYLINDER HEADS AND INTAKE MANIFOLDS**
  - **26.1:** Steel only. Must be unaltered approved OEM and minimum 76 cc combustion chamber. Only GM OEM approved head numbers are: 14079267, 3986336, 3986339, 3986339X, 3986388, 3932441, 376445, 3928454, 3932454, 3876487, 3973487, 3973487X, 3973493, 3951598, 468642, 330862, 333882, 3998920, 3998991, 3998993, 3998997, 3970126. Maximum size valves on these heads are 2.02 inch intake and 1.60 inch exhaust.
  - **26.2:** May use Engine Quest (EQ) Stock Replacement (SR) cylinder head, part number CH350I, DART Speedway Motors part number 91624360, (EQ) Chrysler part number CH318B, World Products Ford part number 53030, head must remain as produced, seat angles and valve sizes can not be changed: three angle valve job only (absolutely no casting removal in valve pocket of EQ, Dart or World Products head, for any reason). No porting, polishing or unapproved alterations allowed to ANY cylinder head. Guide plates, screw-in shouldered studs (0.375-inch max) and polylocks allowed. No stud girdles. Steel roller tip rocker arms allowed. No beehive valve springs allowed.
  - **26.3:** Unaltered, approved OEM cast iron low rise intake manifold, two- or four-barrel permitted. Only unaltered (no porting or polishing) aftermarket aluminum intakes allowed are: Weiand GM #7547 or #7547-1; Ford #7515, #8023 or #7516; Chrysler #8022; Edelbrock GM #2701; Ford #7121, #7181, #7183; Chrysler #2176. Cooling lines allowed on aluminum intakes. Disqualification, loss of points, purse and \$250 fine if any alterations are found to heads/intake. Unaltered OEM type harmonic balancer only. OEM type steel or aluminum water pumps only.
  - **26.4:** GM - 1.250 inch ( $\pm$  .015 tolerance) maximum O.D. valve spring with magnetic steel retainer and maximum 5/16 inch pushrods.

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