

Lake of the Woods Speedway

2024 Pure Stock Rules

This class is also required to comply with all rules and procedures in this document including:

- WISSOTA Safety Gear Requirements, Point System, Protest Rule, Pumping Rule, etc.
- **WISSOTA Pure Stock Rules CANNOT Intermarriage with Local Rulebook**

LOW Speedway reserves the right to refuse any car if it is not within the original concept or rules of this class and any clarification it deems necessary to manage tech inspection accurately.

Cars

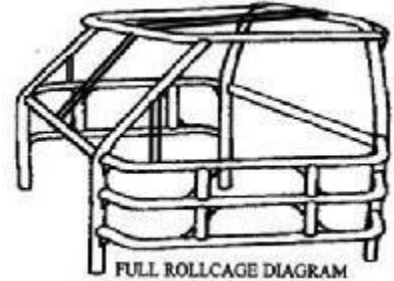
- Minimum wheelbase of 100 inches.
- No trucks, vans, or convertibles of any type.
- All bodies, steering parts, bumpers, transmissions, and frames must remain stock OEM and in stock locations unless otherwise specified.
- No add-on parts allowed unless specified.
- Frame cannot be stretched to fit minimum.
- No shortening/lengthening of frame to fit body.

Body

- Body can be lengthened/shortened to match any year frame of same manufacturer as long as no alterations are made to the frame in order to fit body. (Ex. GM Frame with a Pontiac Body)
- Ranchero and El Camino bodies allowed.
- No spoilers allowed.
- Front Firewall and floorboards must remain stock. No "Flat" Firewalls
- Allowed to cut floorboard behind main hoop but **MUST** use decking to separate driver from fuel cell/trunk area.
- Rear Firewall between driver and fuel cell must be steel or aluminum (No plastic).
- All upholstery must be removed from the car. All body panels may be gutted, including fenders, doors, hood, rockers, roof, quarters, and trunk, but must remain original size.
- Door skins and quarter panels may be replaced with stock OEM or sheet metal of the same thickness and must conform to the body and remain stock in appearance.
- Wheel wells may be cut out and rounded.
- Rear trunk floor may be removed for both full frames and uni-bodies.
- Passenger and driver's side floor can only be repaired with sheet metal but must be same minimum thickness as the stock metal floor or thicker.
- Closing in of the passenger-side compartment is allowed (cockpits). Can be no higher than top of door bar/below bottom of window, must be flat (equal) from side to side and front to back.
- All window openings must remain open.
- Decking must have a way to be removed quickly so inspection can be made of rollcage/interior.
- IF not using decking**, must use sheet metal from top of speaker deck down to the floor behind the bottom of driver's seat in a straight line to cover area of potential debris entry.
- It is **recommended** that a nerf bar/bumper is built, no more than fourteen (14 inches) from the ground, from back of fuel cell to protect the back of the fuel cell, frame rail to frame rail.

Roll Cage

- a) Rear Hoop of Roll Cage be no further back than 28" to the centre of the rear axles on a 108" wheelbase (ie: GBody) or 33" to the centre of the rear axle on a 112" wheelbase (ie: Cutlass/Chevelle) or 38" to the centre of the rear axle on 116" wheelbase (ie: Caprice)
- b) Steel tubing for roll cage must be at least 0.095-inch (1.565 on micrometer) wall and 1.66 minimum outside diameter.
- c) No pipe fitting or galvanized tubing allowed.
- d) Must have a 3/16th inspection hole in a non-critical area.
- e) Offset cages are allowed, but cannot protrude past/outside the body.
- f) Driver's top of helmet cannot extend past top of roll cage.
- g) A 4-point or 6-point frame mounted roll cage is mandatory and must have one main rollover continuous hoop to extend from the frame up to the roof, across and back down to the opposite side frame.
- h) Must have two bars from top of the main hoop, going forward, bent (approx. 30 degrees) at the top of front window and (approx. 60 degrees) at the bottom of the window, continuing to front frame (both sides).
- i) All other cross bars to be gusseted and butt welded.
- j) A minimum 18-gauge door plate is mandatory. The door plate must be attached to the outside of driver's door bars and extend from the top of the door bar to the bottom of the door bar and extend the full coverage of the seat area with a minimum of 6 inches in front of the seat area.
- j) Minimum of 3 Torso or Kidney bars made of the same material standards as previously listed, must be welded horizontally and equally spaced between window opening and lower door jam. These bars must be welded to the roll cage with ¼ inch gussets along the inside of the driver's door.
- k) Roof bar, front window bar and front corner posts required.
- l) Must have an Earnhardt bar located in the middle of the *windshield* and be the same thickness and material as the roll cage.
- m) All bars must tie into frame with gussets.
- n) Full size uni-body cars must use a minimum 12-inch x 1/8th inch square floor plate bolted or welded to floor (for roll cage).
- o) Uni-body cars must use a sub-frame connector; minimum 2" x 2" x 0.125-inch square tubing.
- p) Full frame cars may replace rear frame rail from center of diff back with 2" x 3" x 0.125 inch minimum in stock location.
- q) Any other frame repair must use 0.125 wall metal.
- r) All doors must be bolted, chained, or welded shut.
- s) All cars equipped with a sunroof must cover sunroof opening with a 1/8th inch steel plate.
- t) 1 ¼" minimum material diameter with wall thickness of (13 Ga.) .095". Fastened to the halo at or in front of seat headrest. Out and down to top door bar or angle back to the top door bar or B



bar that goes up to the halo. One horizontal bar from extra bar to B bar, does not have to be 1 ¼" – *STRONGLY RECOMMENDED IN 2024 for local rulebook, MANDATORY in 2025.*

Race Seat

- a) Racing seats only. No homebuilt seats.
- b) Race seat mounted securely to roll cage at 4 points, bolted only with a minimum of 3/8" bolts.
- c) No self tapping screws.

Crash Bars

- a) No front or rear crash bars.
- b) All bars must remain within the perimeter of the frame (except door bars).
- c) Bars allowed in front of the rad must be flush. 1" tolerance.
- d) No front or rear bars past the end of the frame.
- e) No sharp edges.
- f) No excessive bars.

Bumpers

- a) Front and Rear Bumper covers must be stock appearing in stock location.
- b) Front and rear stock bumper mounts may be replaced with a 4-inch or 6-inch 0.125 square tubing mounted at a right angle to frame.
- c) Maximum length is 6 inches: bolted or welded.
- d) No sharp edges.
- e) Racing nose cones may be used with fabricated bumpers.
- f) Fabricated bumpers are to be made from the same round tubing as the roll cage with maximum of two (2) horizontal bars.
- g) Bars must be rounded at ends to avoid piercing though the sides of other cars.
- h) Must be mounted like a stock bumper. (Speedway Motors part number: 910-54721 as reference)
- i) No excessive fabricated bumpers made of square tubing or channel iron.

Windshield

- a) The windshield must be removed and either a heavy gauge screen or a minimum of 4 ¼" bars are to be mounted in front of the driver in the windshield opening.

Hood

- a) There may be a hole in the hood directly above the carburetor.
- b) No hood scoops, but a hood deflector is allowed.

Engines

Up to 400ci and 602 CT 350

- a) All engines: 8-cylinder naturally-aspirated engines.
- b) 400ci max. (Anything larger than 360ci to be phased out by 2026).
- c) Entire engine must remain OEM stock unless otherwise specified. GM 602 CT 350 (Sealed Crate) engines allowed. Must clearly display "Crate 602" on either side of the hood.
- d) Only GM motor allowed in GM, Ford in Ford, etc.

- e) No modifications to enhance horsepower.
- f) Air conditioning, alternator, pollution devices, and heater may be removed.
- g) No engine setback allowed. Engine must remain in stock OEM location.
- h) No racing or high performance parts allowed unless specified.
- n) Flat top or dished pistons only.
- o) Pistons cannot go past top of block.
- p) Maximum camshaft lift intake/exhaust is 0.450 inches including stock rocker ratio.
- q) Hydraulic cams only.
- r) No roller rocker/lifters.
- s) Aluminum intakes allowed (Do Not Apply to 602 Crate):
 - a. Weiand – GM 7547, Ford 7515-8023-7516, Dodge 8022
 - b. Edelbrock – GM 2701, Ford 7121-7181-7183, Dodge 2176
- t) Cast iron exhaust manifolds or Hooker header part number 7543HKR and 2466HKR is allowed. No stainless, no ceramic, no merge collector, no X-pipes, no 2-into-1, and no heat tape. May remove three-bolt flange. Must have a manufactured muffler and a turn down on each exhaust pipe. Must have a 3" exhaust pipe and must exit from engine compartment and under the car. Minimum of 18" and maximum of 24" length of exhaust pipe including the muffler, pipe and turn down. Length measurement is measured from the weld on the 3" collector from the factory spec header to the end of the completed exhaust pipe.
- u) No center dumps or factory tuned manifold.
- v) No LT1 manifolds.
- w) Stock-type ignition system for that make of car or HEI.
- x) No performance ignition parts. Must remain stock for make of engine. Max overbore 0.060. Max 9.5:1 compression.
- y) Oil pan must have inspection hole that can be accessed and removed at the track.
- z) Cooling System: Belt-drive water pumps only. Any radiator in stock location. Mechanical fans only. No electric cooling fans allowed.
- aa) Small Block Chevrolet: 327ci + must use a cylinder head with a minimum of 72cc, 1-cc tolerance. No centre hole (valve cover) heads (e.g., Vortec).
- bb) Small Block Ford: 351ci+ must use a cylinder head with a minimum of 60cc. 1-cc tolerance. No Boss heads.
- cc) Small Block Chrysler: 360ci + use a cylinder head with a minimum of 72cc, 1-cc tolerance. No magnum heads.
- dd) No Vortec heads allowed except 602 Crate.

Truck Engine: GM 5.3 Litre LS, Year 2000 and Up

Note: All these engines must be inspected, tagged, and sealed by Dragmart Performance, 1248 Main St., Winnipeg, Manitoba, prior to installation. Service fee paid directly to Dragmart Performance.

- a) Factory GM iron-production engine block ONLY (Maximum overbore +.060).
- b) Factory GM style replacement pistons ONLY (1.5mm/1.5mm/3.0mm rings).
- c) Factory GM crankshafts must remain 3.622" stroke with no modifications allowed.
- d) Factory GM connecting rods only, must remain 6.098" length.
- e) Balancing of rotating assembly is permitted.
- f) 5.3 GM 862 or 706 casting head ONLY. Must remain with stock 1.89 intake valve, 1.55 exhaust valve, stock length, stock stem 0.313". No rectangular port heads allowed.
- g) No porting, polishing or angle milling allowed.
- h) Factory rocker arms ONLY. Rocker arm trunnions can be upgraded.

- i) Up to 562 cam shaft lift allowed.
- j) ONLY single beehive valve springs permitted. Must use factory GM valve spring retainers and locks.
- k) Ignition control MSD 6014CT box with stock GM truck coils.
- l) 8727 CT rev limiter to a maximum of 6200 RMP.
- m) Edelbrock RPM intake part #71187. Performance World 650021 LS1 dual plane carbureted intake manifold. No porting or polishing allowed.
- n) Holley 4412 2-barrel 500 CFM carburetor.
- o) Holley 80 red electric fuel pump.
- p) Holley safety fuel pressure switch 12-810.
- q) Pump gas only
- r) Adjustments to package may occur if needed

Aspiration (400ci / Crate 602)

- a) 1 ¼" carburetor adapter plate may be used.
- b) Distance from intake to base of carb must not exceed 1 ¾".
- c) One 2-barrel carb only: Max. 500 CFM
- d) Choke may be removed: no other work allowed (NO milling, grinding, removing of airhorn).
- e) Holley 500CFM 2-barrel, part #4412 allowed, all components must be for a 500 Holley.
- f) Holley must have 1-11/16-inch throttle bore.
- g) All carbs must use Holley-style straight-leg or down-leg boosters only.
- h) All carbs must have stock measurements.
- i) Shaft must remain round.
- j) No addition of materials such as glue, silicone, or other forms of foreign substances/materials.
- k) Must be mounted with float bowl facing forward.
- l) Linkage may be welded to the end of throttle shaft (All Carbs)
- m) Devices below the carb designed to increase the flow of air are not allowed.
- n) Only air entering the engine will be required to enter through the top of carb.
- o) No high-performance adapters allowed.

Transmission

- a) Stock-type automatic transmissions only: GM with GM; Ford with Ford, Chrysler with Chrysler.
- b) No standard transmissions allowed.
- c) No power glides allowed.
- d) No in-and-out transmissions allowed.
- e) Stock-type torque converters only, with a minimum of 10" in diameter.
- f) Car must be able to idle in gear (1000 RPM or less).
- g) No torque converter lockups.
- h) All ranges must work (e.g., Park, Reverse, Drive, 2nd, 1st).
- h) Any size transmission cooler allowed.
- i) Cooler must be mounted away from driver as to not spray on driver if ruptured.
- j) Cooler lines cannot run through the driver cockpit. Must be steel or high-pressure rubber hose. If not high-pressure hose, rubber hose can be used only for a flex and not be longer than 12 inches.

- k) Only one (1) piece steel or high-pressure rubber hose cooler lines through passenger side of interior.

Differential

- a) Stock passenger rear-ends allowed. GM with GM, Ford with Ford, Chrysler with Chrysler.
- b) Ford 9" rear axle/rear-end (or any make or model) is allowed. Max 4.10 gears. Drum Brakes Only.
- c) No moving mounts to fit.
- d) Steel Mini-Spools are allowed.
- e) C-clip eliminators are NOT allowed.
- f) Differentials may be locked or welded.
- g) OEM for that make of the car.
- h) Any stock gear ratio allowed for make of vehicle.
- i) No traction control devices.
- j) If not a factory/stock part that came with the differential for the make and model of the car
- k) After-market C-clip eliminators are not allowed.

Drive Shaft

- a) Must be painted white and have a front continuous loop around the drive shaft within 6 inches of the front universal joint.
- b) A second loop at the back is recommended.
- c) Loop must be made of steel at least ¼ inches thick by 2 inches wide.
- d) No chains.

Battery

- a) Only one (1) battery may be used in each car.
- b) Batteries must be securely mounted and contained/shielded.
- c) Mandatory approved shut off/disconnect in reach of the driver.
- d) Battery must be either mounted in front passenger floor area or trunk area in a marine battery case only and securely mounted with a hold-down strap (e.g., seat belt).
- e) Highly recommend an AGM Battery
- f) No Lithium batteries
- g) Only 12V batteries allowed.

Steering Column

- a) Steering column must be collapsible.
- b) After-market steering columns are allowed but must have a slip-joint or a double U-joint.
- c) No solid shafts allowed.
- d) Quick-disconnect steering wheels are allowed.
- e) Steering Quickeners allowed.
- f) No sweet boxes

Suspension

FRONT

- a) All components and mounts must be steel, unaltered OEM in Stock location and match frame.
- b) Steel lower A-frame bushings are allowed but must be in OEM location, no offset.

- c) Stock passenger spindles and hubs only.
- d) OEM or OEM replacement ball joints allowed.
- e) No screw in or rebuildable ball joints
- f) Sway bars allowed.
- g) Non-adjustable spring spacers allowed on top of front coil springs only.
- h) No chains or cables
- i) OEM upper A-frame may be replaced using aftermarket tubular upper A-frame (steel or aluminum cross shaft allowed) but must be stock OEM measurements.
- j) Upper A-frame mount MUST remain OEM and cannot be moved.
- k) No suspension stops of any kind allowed.

REAR

- a) Stock OEM rear links in stock OEM locations and stock length. Can be boxed in for added strength.
- b) No manipulation of mounting locations on rear end of car
- c) No lightening or grinding of any suspension part allowed.
- d) OEM rubber or steel control arm bushings allowed, Bolt hole must be in center of bushing, not offset.
- e) No adjustable shims allowed.
- f) No added traction devices
- g) Leaf springs must be stock, or replacement must use original mounts and non-adjustable.
- h) No multi-hold shackles allowed.
- i) Lowering blocks allowed on Leaf Springs only.

Shocks

- a) Only one (1) shock per wheel stock mounted in stock location.
- b) No preloaded shocks and must completely collapse any time.
- c) No coil-overs allowed.
- d) No adjustable shocks.
- e) No coil-over eliminators
- f) No internal or external bumpers or stops.

Springs

- a) One steel closed end spring per wheel only in stock location.
- b) Minimum 4.5 inches outer diameter
- c) Maximum thirteen (13) inch free height, non progressive coil springs only
- d) Rear Spring heights must match. (1" tolerance)
- e) No spring rubbers allowed.
- f) Any spring rate allowed (No spring rate adjusters)
- g) No weight/screw jacks of any type

Fuel System

- a) Pump gasoline only; no racing fuel. Maximum 10% ethanol enriched. No nitro, alcohol, or additives allowed.

- b) Fuel cells are mandatory.
- c) Mechanical fuel pumps only, no electric fuel pumps allowed.
- d) Max 3/8th inch steel fuel line recommended inside the car.
- e) No excessive fuel line or size.
- f) No filler spots on fuel tanks.

Brakes/Pedals

- a. Four wheel working stock steel OEM equivalent brakes are mandatory. Cannot be lightened.
- b. No scalloped or ceramic coated rotors
- c. No anti-lock brake systems
- d. Steel brake lines only
- e. No aftermarket brake pedal assemblies, break shut-off, bias adjuster or pressure sensitive devices.
- f. Master Cylinder must be mounted in factory location on firewall.
- g. No extended brake or gas pedals. Must be mount in stock position.
- h. No bending of brake pedal
- i. No aftermarket master cylinders.
- j. If driver is too short for pedals, shortening the steering column is allowed.
- k. All four must lock up and they will be checked at the track.
- l. No adjustable brake bias valves.

Tires and Rims

- a. Maximum tire size 275-60 series radial tires only.
- b. No off-road, recaps, or snow tires allowed.
- c. Used Hoosier racing tires allowed; can be grooved and siped.
- d. No new tires allowed. DOT – All-season M&S tires allowed.
- e. No M&S truck tires unless all-season radials.
- f. No defacing of any tires.
- g. Tread must measure 7/32 or less in one of the grooves, as marked in the image to the right.
- h. Steel rims only: 8 inches maximum.
- i. 5/8th inch wheel studs only
- j. No rims with bead locks allowed.
- k. One-inch wheel spacers allowed; must have 5/8-wheel studs to use wheel spacers.



Weight Rule

- a. Minimum 3200 pounds with the driver after the race and no allowance for missing body parts.
- b. All cars that cannot meet the 3200-pound rule may add weight mounted anywhere on the car with a minimum 2, 1/2" diameter bolts.
- c. Lead weights MUST be painted white and have Car Number
- d. No Ballast Allowed