

## **2021 - 105 Speedway Pure Stock Rules**

**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 particular 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. Changes and additions to the 2021 105 Motor Speedway Pure Stock rules are underlined and highlighted in red. Changes made for grammatical purposes or to improve clarity are not highlighted. All participants and officials are expected and required to additionally be familiar with the definitions and details in the 105 Motor Speedway General Rules, Regulations & Procedures. The 105 Motor Speedway shall hereafter be simply referred to as 105 throughout the rules description. 105 official(s) shall include all personnel employed as an official by the racetrack.

GENERAL RULES PURE STOCK IS STOCK DIVISION FOR THE BUDGET MINDED RACER. IF YOU HAVE THE FINANCIAL MEANS OR DESIRE TO MODIFY YOUR CAR OUTSIDE OF THE FOLLOWING RULES PLEASE CONSIDER RACING IN THE APPROPRIATE DIVISION. Minimum age requirement is 12 years of age. Ages 12-17 must have a notarized release form signed by their parent or legal guardian on file with 105 Speedway.

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## **Article 1: BODY**

- 1.1 Bodies must be stock appearing; panels may be replaced with stock appearing steel or aluminum aftermarket panels (18 or 20 gauge). Example: Five star or Performance Bodies stock replacement panels.
- 1.2 Small lift to hood over engine is allowed for accommodation of aftermarket hoods, but breather cannot protrude above stock hood line height.
- 1.3 No wings, skirts, air scoops, or anything that alters stock appearance.
- 1.4 Bodies cannot be moved from the original rubber bushing location no more than + or – 1 inch.
- 1.5 No spoilers
- 1.6 Can enclose cockpit.
- 1.7 Upper front windshield visor is allowed not to exceed 7 inches in width.
- 1.8 Doors must be bolted or welded shut, sunroofs and T-Tops must be reinforced and enclosed.
- 1.9 All glass, plastic, upholstery, lights, mirrors, and trim must be removed. From inner fender wells may be removed.
- 1.10 Car must have A, B or C pillars.
- 1.11 Front and rear firewall, floor pan must remain stock be full and complete and remain in stock location, floor pan may be cut for roll cage installation clearance only. All openings must be covered with 20-gauge steel to isolate the driver. Any rusted out or partially missing floor pans may be replaced or patched with 18-gauge steel.
- 1.12 Front and rear outer fenders may be cut for wheel and tire clearance. No excessive trimming of fenders or hoods allowed, must maintain stock appearance.
- 1.13 Truck floor may be removed.
- 1.14 Racecar and body should be maintained in such a manner as to keep a presentable appearance.

- 1.15 Inner skin may be removed from hood, truck lid, and doors.
- 1.16 Hood and trunk must be secured with hood pins, no holes allowed in hood except for hood pins. Must start each race night with all body panels including hood, trunk lid, fenders, nose or tail piece, and bumpers.
- 1.17 Cars with floppy or loose body parts considered as a safety hazard will not be allowed to compete until requested repairs are made.
- 1.18 A minimum of three vertical windshield bars are required in front of driver, must be solid steel bars minimum 3/8-inch OD (also required on passenger side if passenger is in car) and must extend from upper windshield flange at roof to lower windshield flange at cowl. No roof rake must remain as OEM produced.

## **Article 2: ROLL CAGE**

- 2.1 Minimum of a four-point roll cage with continuous hoops must be constructed of magnetic steel tubing of no less than 1.5-inch OD x 0.95-inch wall thickness and must be welded to OEM frame.
- 2.2 Main roll cage and halo must be a minimum of 1 inch above driver's head with helmet on and buckled into car.
- 2.3 Main cage rear hoop must have a minimum of one horizontal bar and one diagonal bar from top of hoop to bottom of down bar.
- 2.4 Main cage front uprights must tie together with a minimum of one horizontal bar.
- 2.5 Front left and right kickers required from main cage to in front of engine. Rear left and right kickers required from main cage to rear frame selection.
- 2.6 Front and rear loops allowed.
- 2.7 All welds must be complete.
- 2.8 Minimum of 3 drivers door bars 1.5-inch OD x 0.95-inch wall thickness, parallel to frame and perpendicular to driver. Minimum of 2 horizontal passenger door bars (passengers are allowed, but 3 bars also required on passenger side if passenger is in car).
- 2.9 Must be constructed with a minimum of 3 vertical bars from frame to top door in an intertwined fashion to strengthen door bar system.
- 2.10 Drivers side steel door plate of 18 gauge or 0.049-inch minimum thickness is required, plate must extend the full length of the door, may be welded into door bar system design (Also required on passenger side if passenger is in car).

## **Article 3: FRAME**

- 3.1 Any American made OEM 1964, newer full frame, or unibody full frame bodied rear wheel drive stock passenger car or full-size truck (S-10 or Ford Ranger Pickup, Station Wagon, Nova, El Camino and Camaro).

- 3.2 Any type of sports car, or any front wheel drives are allowed.
- 3.3 No Mustang, Corvette, Convertible.
- 3.4 Frames must be OEM stock, no cutting, shortening, lengthening, or modifying is allowed.
- 3.5 Minimum wheelbase of 108 inches (+ or – one inch). Frame may be X-Braced.
- 3.6 Unibody cars may replace rear frame section with minimum 2 inch x 3 inch x 095 steel tubing from 1 inch behind factory shock tower and must be the same length as material removed; shock tower must remain stock, be in stock location, and be full and complete.
- 3.7 Truck may C-notch and Flip kit rear frame and axle for lowering purposes and relocate upper shock mount. Check with tech before you do anything.

### 3.8 **NERF BARS**

- 3.8.1 One nerf bar per side allowed not to exceed 1 ½ inches from body line.
- 3.8.2 May be constructed of square or round mild steel tubing maximum of 1 ½ inch OD. Must be rounded or closed, no sharp edges.
- 3.8.3 Performance bodies type Lexan Decal Protection OK, must be mounted flush to body.

### 3.9 **BUMPERS**

- 3.9.1 Stock type front and rear bumpers.
- 3.9.2 Fabricated pipe front and rear bumpers will be allowed on cars with aftermarket nose and tail pieces. All support piping must be behind nose and tail pieces, support may extend past front frame horns, but no bracing allowed outside front frame horns.
- 3.9.3 NO CATTLE GUARD FRONT OR REAR BUMPERS – subject to track inspection and approval.
- 3.9.4 No sharp edges.
- 3.9.5 Must have a visible chain loop for wrecker hook up on front and rear of car.

## **Article 4: SUSPENSION**

- 4.1 Front and rear suspension must be stock for that make and model with no modifications. No alterations to any part of the suspension will be allowed.
- 4.2 Non-adjustable tubular type upper control arms are allowed must use steel cross shaft. Following part numbers allowed: -Day Motor Sports Part # UP-41000R/L, UP-910-34394R/L, Speedway Motors 910-34394R/L, or 910- 31134R/L, must install right on right (8” C-C), left on left (8-1/2” C-C). -Speedway Part # 910-34397-91/4.
- 4.3 Cannot relocate or move upper A-Arm mounts on frame.
- 4.4 Ball joints must be OEM replacement. No extended, low friction or rebuildable type ball joints.

- 4.5 Upper and lower A-Arm bushings may be replaced with OEM rubber type only. No offset, spherical or low friction bushings allowed front or rear.
- 4.6 Aftermarket steel springs allowed minimum 5-inch OD springs. No adjustable spring spacers or adjustable weight jacks of any kind.
- 4.7 Leaf spring cars may use nonadjustable lowering blocks, must use OEM replacement rubber style bushings in front and rear springs, rear sliders not allowed.
- 4.8 No bump stops of any kind allowed.
- 4.9 Sway bars allowed, must be OEM design, with equal height/spacing on each side, no preload.
- 4.10 REAR SPRINGS MUST HAVE A MINIMUM ON ONE PIGTAIL AND PIGTAIL MUST BE MOUNTED TO FACTORY AXLE PERCH. NONADJUSTABLE SPRING BUCKET ALLOWED ON REAR END IN STOCK LOCATION AND CENTER OF REAR END.
- 4.11 **SHOCKS**
  - 4.11.1 OEM stock mount replacement shocks only. No air shocks.
  - 4.11.2 Shocks must have stock type rubber ends, no screw on type rod ends, must be mounted in stock location on frame. Shocks must fully collapse and extend.
  - 4.11.3 Shocks can be aftermarket but cannot be rebuildable, adjustable, or special order.
  - 4.11.4 No shock spacers. No screw on type rod end allowed. Must be steel bodied shocks. KYB/BILSTEIN/MONROE SHOCKS ONLY.
- 4.12 **REAR END**
  - 4.12.1 Rear-end must be stock OEM for make and model of car. OEM brackets in stock location.
  - 4.12.2 Control arms cannot be lengthened or shortened.
  - 4.12.3 Any gear ratio is allowed as long as the housing doesn't have to be altered to accept.
  - 4.12.4 Rear end must be locked. Mini spools OK. No limited slip or Posi traction allowed.
  - 4.12.5 Aftermarket axles are allowed.
- 4.13 **STEERING**
  - 4.13.1 Must use stock OEM gearbox for make and model.
  - 4.13.2 May use aftermarket steering shaft, related components and quick release steering wheel disconnect.
  - 4.13.3 Quick steering is optional.
  - 4.13.4 Drag link, tie rods, and all other steering components must be OEM replacement for make and model.
  - 4.13.5 Bolt on spindle savers allowed.

## **Article 5: ELECTRICAL / BATTERY**

- 5.1 The car must have a battery disconnect switch located outside the car and easily accessible to emergency track personnel and clearly label.
- 5.2 If the car is equipped with a working alternator the switch must also disable alternator.
- 5.3 Only one 12-volt battery is allowed. Battery must be securely mounted.
- 5.4 If battery is located in driver's compartment, it must be in fully enclosed box. Recommended to be in trunk area and must be between and above frame rails, subject to track safety inspection and approval.
- 5.5 Aftermarket starter OK, must be block mounted.

### **5.6 IGNITION**

- 5.6.1 OEM stock type distributor in stock location only, can be HEI or points type.
- 5.6.2 Aftermarket OEM style replacement components OK.
- 5.6.3 All components of HEI distributor including coil must be internal, points ignition may run external coil.
- 5.6.4 No external spark boxes.
- 5.6.5 No traction control devices of any kind.
- 5.6.6 Excluding spark plug and external coil wired, maximum of 2 wires connected to distributor one switched positive for ignition and one for tachometer.

## **Article 6: FUEL/FUEL SYSTEM**

- 6.1 Racing fuel cell is required.
- 6.2 Maximum capacity of 22 gallons and must be enclosed in a 20-gauge steel container.
- 6.3 Must mount between rear frame rails and be properly supported and protected. A minimum of two solid steel 22-inch x 1/8-inch-thick straps are required around entire fuel cell.
- 6.4 Fuel cell may not be lower than rear frame rails.
- 6.5 Fuel cell may also be mounted on top of stock trunk floor pan and be secured with 1-inch x 1 / 8-inch straps or 3/8-inch steel cable.
- 6.5 Fuel cell or tank must have a one-way check valve to prevent fuel leakage in event of roll over.
- 6.6 No plastic boat tanks.
- 6.7 Pump Gas ONLY with no additives.

- 6.8 Mechanical fuel pump must be stock mount push rod activated; aftermarket manual type pump is OK (Example: Carter, AC, Holley).
- 6.9 Electric fuel pumps are not allowed.
- 6.10 Fuel lines which pass thru drivers' compartment must be enclosed in metallic conduit or pipe from front firewall to rear firewall.

## **Article 7: ENGINE**

**AMENDED ENGINE RULES (LS ENGINE) 1. 450 LIFT MAX ON LS ENGINE 2. 175 COMPRESSION 5 HIT 3. DUAL PLANE INTAKE ONLY (ALUMINIUM) 4. NO FUEL INJECTION 5. DISTRIBUTOR AND CARBURETOR ONLY 6. MECHANICAL FUEL PUMP ONLY 7. VACCUM RULE 15**

**To eliminate any gray area, if it is not listed in these rules that something is allowed, it is not allowed.**

- 7.1 ENGINE 602 GM CRATE ENGINE IS ALLOWED WITH NO MODIFICATIONS. MUST BE SEALED WITH CRATE ENGINE BOLT KIT. MUST RUN 2 BARREL 4412 CARB ON CRATE MOTOR OPTION. ANY CRATE ENGINE WITH ALTERED OR MISSING SEALS WILL BE TECHED AS AN OPEN ENGINE
- 7.2 Heads, intake, and cam from 602 allowed on open engines.
- 7.3 Any OEM factory production small block cast iron V-8 engine with a maximum of 364 cubic inch displacement.
- 7.4 Stock replacement 2 or 4 valve relief pistons, no lightweight pistons or wrist pins.
- 7.5 OEM or OEM replacement 5.7 connecting rods only, aftermarket rod bolts allowed.
- 7.6 Stock OEM or OEM standard weight replacement cranks, minimum crankshafts weight 48 lbs. No bull nosing, lighting holes, or knife edging allowed. Maximum stroke of 3.48 inches.
- 7.7 Engine balancing OK.
- 7.8 No splayed main caps.
- 7.9 Engine bolts may be aftermarket.
- 7.10 Aftermarket harmonic balancer OK.
- 7.11 Maximum engine cranking compression is 175 psi. For testing the engine rotating assembly will be "spun" by the starter, for five "hits" at full throttle on a cylinder being tested.
- 7.12 Aftermarket oil pans OK with a 1-inch inspection plug. The plug should be located on the left-hand side approximately 2" down from the pan rail and in line with a connecting rod assembly that is convenient to look at when the pan is installed in the car.
- 7.13 OEM type timing chain system only, double roller OK, no gear drives or belt drives.
- 7.14 Aluminum pulleys and serpentine belt systems OK.
- 7.15 Cast iron water pump and aftermarket power steering pumps with integrated tank OK.

7.16 Motor must be in OEM location; solid motor mounts allowed but must be OEM location, no tolerance.

7.17 UNSEALED MOTORS WILL BE ELIGIBLE FOR INSPECTION, NO EXCEPTIONS!

7.18 **CYLINDER HEADS**

7.18.1 OEM production unaltered cast iron cylinder heads with a minimum 72 cc combustion chamber.

7.18.2 OEM casting number must remain on heads.

7.18.3 Vortec or double hump OEM heads not allowed.

7.18.4 305 heads allowed on 305's only, 305 heads not allowed on 350's.

7.18.5 Maximum 1.94 intake valves and 1.50 exhaust valves, exception: 1.630 exhaust valves allowed on Chrysler Engines.

7.18.6 Heads may be flat milled for surfacing reasons only, no angle milling.

7.18.7 Valve spring OD diameter must not exceed 1.250 inch (+ or – 0.015 inch).

7.18.8 Guide plates, 3 / 8 x 7/16 screw in studs and poly locks allowed, pinning of OEM studs allowed. 1.5 or 1.6 stamped steel rockers on GM and Chrysler, 1.6 on Ford (No full roller or roller tipped rockers allowed).

7.18.9 No grinding of any kind allowed on heads, no gasket matching, no porting or polishing. After-market valve cover with breather tubes OK. Oil diverters are allowed under valve covers.

7.19 **INTAKE**

7.19.1 Stock Unaltered cast iron or aluminum OEM intake manifolds. No aftermarket, bowtie, marine, or high-rise intakes.

7.19.2 No internal modifications of any intake permitted. No deburring or grinding allowed. Must have 1/4-inch accessible vacuum port on intake for tech.

7.20 **CAMSHAFT AND LIFTERS**

7.20.1 HYDRAULIC Camshaft and hydraulic flat tappet lifters only.

7.20.2 no hydraulic OEM roller lifters. Rhodes, variable duration, or "bleed down" lifters are not allowed.

7.20.3 Maximum valve lift of .450 inch measured at steel retainer.

7.20.4 Solid lifter will be used at tech for testing purposes.

7.20.5 Maximum push rod length of 7.800 inch.

7.20.6 OEM firing order cannot be changed thru cam design. GM firing order 1-8-4-3-6-5-7-2.

7.20.7 Engine must have a minimum of 15 inches of vacuum at 1200 engine RPM. No tolerance or vacuum canisters allowed.



7.20.8 Brake boosters will be disconnected and capped during time of vacuum inspection.

**7.21 CARBURETOR**

7.21.1 One unaltered 500 CFM Holly 4412 2-Barrel is allowed and is subject to be checked with go-no-go gauge.

7.21.2 Removal of the choke flap is the only modification allowed, choke horn must remain, cannot be removed.

7.21.3 Must have two throttle return springs.

7.21.4 An adapter / spacer will be allowed under the carburetor, maximum 1-inch thickness.

7.21.5 No 4412 Ultra XP or HP series Carburetors will be allowed.

7.21.6 No GM Q / Jets, GM Spread Bores, Ford Motorcraft, or Chrysler OEM 4- Barrels allowed.

7.21.7 No fuel injection.

7.21.8 Maximum air cleaner of 14 inches diameter x 4 inches height. No top flow style air cleaners allowed.

7.21.9 No type of RAM Air or Forces Air Induction will be allowed.

**7.22 EXHAUST**

7.22.1 Stock cast iron exhaust manifolds only, marine, or tubular steel type exhaust manifolds.

7.22.2 No headers.

7.22.3 Exhaust pipes must turn down or extend past driver's compartment.

7.22.4 No porting, acid dripping, or modifying manifolds of any kind allowed.

**Article 8: TRANSMISSION / DRIVESHAFT**

8.1 Only OEM production transmission allowed, with the exception of No 5, 6 speed, or overdrive transmissions allowed.

8.2 All forward gears must be in working order on all transmissions, with a neutral and working reverse.

8.3 No aluminum or light weight flywheels.

8.4 AUTOMATICS Must have a fully operational torque converter with a minimum of 12-inch diameter with no modifications.

8.5 No "dummy" converters.

8.6 No direct drive automatic transmissions allowed.

- 8.7 Automatics must pass following inspection, with engine at idle, and brake applied. Transmission must shift from “neutral” gear to “reverse” gear and from “neutral” gear to “low” gear without causing engine to stall. Race car must remain stationary during such shifting and testing.
- 8.8 SFI Rated flex plate required, scatter shield recommended on all automatic transmissions.
- 8.9 Transmission cooler OK, if mounted in driver’s compartment must be shielded to protect driver from fluid in case of leak.
- 8.10 STANDARD transmissions must have a minimum of 10.5-inch clutch, pressure plate, OEM or OEM replacement steel flywheel.
- 8.10 Standard transmissions must have a 1/4-inch steel plate covering the bell housing 180 degrees over the side and top of clutch assembly or explosion proof steel bell housing.
- 8.11 Aftermarket clutch pedal, hydraulic master cylinder, and throw out bearing OK. Car must be self-starting. After market master cylinder allowed. Adjustable master cylinders are not allowed.

#### **Article 9: DRIVESHAFT**

- 9.1 All drive shafts must be steel with a minimum diameter of 2.5 inch, painted white and labeled with legible car number.
- 9.2 Drive shaft must have a 360-degree safety loop constructed of a min 0.25 inch thick by 2-inch-wide steel plate and mounted within 6 inches of the front u-joint.
- 9.3 No chain loops allowed.

#### **Article 10: BRAKES**

- 10.1 Single master cylinder and aftermarket pedal OK. No brake bias adjusters.
- 10.2 Car must have a minimum of 3-wheel brakes in working order at all times, right front shutoff valve is allowed. RF brake must be operational if valve is in open position.
- 10.3 For safety purposes, rear disc brakes optional, rear disc brakes must be steel components only; caliper must be of single piston type only.

#### **Article 11: TIRES & WHEELS**

- 11.1 Any 15-inch diameter x 8-inch-wide steel wheel permitted.
- 11.2 5/8” studs and 1-inch lug nuts are required.
- 11.3 Maximum 1-inch wheel spacers are allowed, minimum of 2 available threads must be visible on stud after tightening of lug nut.
- 11.4 No bead locks. Adapters, or tire screws are allowed.

## **11.5. TIRES**

- 11.5.1 8" Asphalt grooved, Hoosier G-60, American racer KK704 & h500 26.5/27 are allowed.
- 11.5.2 Grinding, siping, and grooving allowed on G-60 and KK704 tires only. Or Limited Modified Used H-500 tires.
- 11.5.3 No chemical softening or conditioning.

## **Article 12: RADIATOR / ENGINE COOLING**

- 12.1 Only one radiator is permitted in stock location, Aluminum radiator OK.
- 12.2 Radiator protection is required, must not extend outside frame horns or forward of hood.
- 12.3 Radiator core support may be removed, and alternate radiator support fabricated.
- 12.4 Water pump mounted fans only, spacers allowed. NO ELECTRIC FANS ALLOWED

## **Article 13: WEIGHT / BALLAST**

- 13.1 Minimum weight 3,200 lbs. / Aluminum body cars 3,300 lbs.
- 13.2 All ballast weight must be securely fastened with a minimum of Qty 2 x ½" bolts (Preferably Grade 8).
- 13.3 All weight must be painted white and include car number.
- 13.4 Ballast weight cannot be mounted inside driver's compartment.

## **Article 14: CAR NUMBERS**

- 14.1 All numbers must be a minimum of 24 inches in height and 4 inches in width; must be on both sides of car and positioned on roof so it can be read from passenger side of car.
- 14.2 All numbers must be of a contrasting color and easily read from scoring tower.
- 14.3 Recommend one 6' number on front of roof to aid in line procedures.

## **Article 15: DRIVER RESTRAINT/SAFETY**

- 15.1 All Safety Equipment is subject to track inspection and approval, applies to all times a car is on the track including packing, both driver and passenger.
- 15.2 SA2015 & SA2020 Snell-Rated Helmet in good condition, SFI-Approved full fire suit, fire retardant gloves, shoes, and neck brace (or head and neck restraint system).

- 15.3 Minimum three-inch-wide SFI-Approved Five Point Safety Belt Assemble required (2 inch with head and neck restraint system) and must mount securely to main roll cage with 7/16" bolts.
- 15.4 SEATBELTS MUST BE NO MORE THAN 3 YEARS OLD, RECOMMENDED NO MORE THAN 2 YEARS OLD. If the MFG date cannot be determined, then you will not be allowed race.
- 15.5 Fire-Resistant roll bar padding required on any part of roll cage the driver or passenger may contact while buckled in.
- 15.6 Aluminum high back racing seats required, (Driver and Passenger) must be securely mounted with a minimum of four 3/8 bolts.
- 15.7 Seat mounting must be integrated into roll cage design and be in stock OEM seating location, seat cannot be bolted to floor plan.
- 15.8 Minimum 16-inch x 20-inch driver's side window net or arm restraint is required and must be mounted to roll cage so that latch is on top and front of window opening. (Also required on passenger side if passenger is in car).