08/11/25

Small Tire Prostock/STPS

CLASS OVERVIEW

Small Tire Prostock/STPS is a heads-up class designed for naturally aspirated small block and big block engines.-combinations. -Small block engines have a maximum engine size of 470 inches. Big block engines have a maximum engine size of 700 inches. With no major engine limitations, STPS is one of the nation's premier naturally aspirated drag racing series classes for engine builders and racers alike. All entries have a minimum wheelbase of 96 inches and must compete on a true 10.5 racing slick using originally manufactured automobiles.

Note: This set of class rules is presented to all competitors under the assumption that any modifications not specifically written within these rules shall be deemed illegal, unless the competitor has the expressed written consent from the-Tech Director.

CLASS DESIGNATION = STPS

Class Car Numbers - 5000-5999

RACING FORMAT

This class will be an all run heads-up field, ***NHRA Pro Style Ladder*** on a .400 Pro Tree.

BASE WEIGHT

Base weight must be declared, based on actual/claimed cubic inches. Example: 450 CI would use 440 base + the cubic inch adder. 450 = 2714 + (10 cubic inches x 2.55 lbs. per cubic inch = 25.5 lbs. adder) = 2739 lbs. base weight. All Combinations are based upon closest in cubic inches without going over. (ie 399" combinations are factored off the 380" base)

SMALL BLOCK BASE WEIGHT (max cubic inch 470)

300 = 2400 + Over 300 add 1.25 lbs. per cubic inch **(300-339 CI only can use 1.25 lbs. per cubic in.)**
340 = 2450 + Over 340 add 2.50 lbs. per cubic inch
360 = 2500 + Over 360 add 2.75 lbs. per cubic inch
380 = 2555 + Over 380 add 2.70 lbs. per cubic inch
400 = 2609 + Over 400 add 2.65 lbs. per cubic inch
420 = 2662 + Over 420 add 2.60 lbs. per cubic inch
440 = 2714 + Over 440 add 2.55 lbs. per cubic inch
460 = 2765 + Over 460 add 2.50 lbs. per cubic inch
470 = 2815

BIG BLOCK BASE WEIGHT (max cubic inch 700)

440 = 2860 + Over 440 add 2.60 lbs. per cubic inch
460 = 2900 + Over 460 add 2.55 lbs. per cubic inch
480 = 2940 + Over 480 add 2.50 lbs. per cubic inch
500 = 2990 + Over 500 add 2.45 lbs. per cubic inch
520 = 3039 + Over 520 add 2.40 lbs. per cubic inch

540 = 3086 + Over 540 add 2.35 lbs. per cubic inch
560 = 3133 + Over 560 add 2.25 lbs. per cubic inch
580 = 3178 + Over 580 add 2.10 lbs. per cubic inch
600 = 3220 + Over 600 add 2.00 lbs. per cubic inch
620 = 3260 + Over 620 add 1.80 lbs. per cubic inch
640 = 3296 + Over 640 add 1.60 lbs. per cubic inch
700 = 3392

Big Block entries over 700 cubic inches will be assessed a 4lb per cubic inch weight penalty to the 700 cubic inch base weight.

Godzilla and Gen III Hemi combinations must use small block base weight matrix.

Buick, Olds and Pontiac combinations must use big block base weight matrix.

How to figure your weight: Weight additions for the above categories are based on taking the engine cubic inch and multiplying it by the indicated percentage and converting that number to pounds. IE: 400 cubic inch (base of 2609) with a category 2 head adds 15% = 60lbs. = a total car weight of 2669 lbs.

WEIGHT ADDITIONS/DEDUCTIONS

- DRCE and/or Spread bore small and big blocks must add 5% of engine size in pounds.
- Two (2) Throttle Body combinations (with injectors in base of manifold) must add 5% of engine size in pounds.
- Two (2) Carburetor combinations or Two (2) throttle body (with injectors in the throttle body or with injectors in the top of the manifold) combinations must add 10% of engine size in pounds.
- Multiple fuel injectors per cylinder must add 10% of engine size in pounds.
- Pontiac engines may deduct 100 ~~165~~ **LBS.** (refer to engine family configuration chart in Section Engine 1)
- Buick, Olds, and AMC engines may deduct **190 LBS** (refer to engine family configuration chart in Section Engine 1)
- Mopar big block wedge engines may deduct 125lbs.
- ~~Ford Modular Engine Combinations add 200lbs. to base weight.~~
- Any 4 or 5 forward speed automatic or clutch assisted transmission add 12.0% of engine size in pounds.
- Any Ford/Chevy Big-Block Category-1 cylinder head combination, with more than +/- 2 degree OE valve angle, add 5% of engine size in pounds.

- -25 lb. Deduction for Automatic transmissions

- **BOP (Buick, Olds, Pontiac) Weight Deduction Notes**
- GM (or aftermarket) Blocks with 4.840 or 4.900 Bore space are NOT eligible for the BOP weight deduction, regardless of part numbers or brand castings/markings. To receive the BOP weight deduction, the engine MUST have the following bore space:
- Pontiac: 4.620''
- Oldsmobile: 4.625''

- Buick: 4.750''
- The 5% add for Spread Bore blocks may not be used in conjunction with the BOP weight deduction to use a larger bore space engine. Bore Spacing will be measured externally using different features of the cylinder head / attachment. "If" bore spacing cannot be determined this way or it is disputed by the competitor, a cylinder head must be removed for final measurement/decision.

TIER WEIGHT BREAK LIST

If your vehicle is not listed, it must run at Base cubic inch weight.

TIER 1 – DEDUCT = 25 pounds
TIER 2 – DEDUCT = 50 pounds
TIER 3 – DEDUCT = 75 pounds

TIER 1	
GM F Body	67-79
GM G Body	78-88
Chevy II/Nova	62-67
Dodge Valiant	59-62
Ford Falcon	60-65
Ford Maverick/ Mercury Comet	70-77
Lancer	61-62
Plymouth Barracuda	64-69
Corvette	68-82
TIER 2	
Dodge E Body	70-74
GM A Body	68-77
Ford Mustang	64-73
Mercury Cougar	67-70
Chrysler A Body	63-76
Nova	68-79
Cutlass	61-63
TIER 3	
Chevrolet BelAir	55-58
Chrysler B Body	66-75
GM B Body	58-76
GM A Body	64-67
Fairlane	62-69

Ford Torino/ Mercury Montego 68-74

REQUIREMENTS & SPECIFICATIONS

ENGINE: 1

BLOCK

Any aftermarket cast iron or cast aluminum block is permitted. Billet blocks are prohibited.

HARMONIC BALANCER

SFI Spec 18.1 balancer is required.

ENGINE MOUNTS & LOCATION

Engine/motor plates and mid-plates are permitted. Engine block and cylinder heads cannot be in contact with the firewall.

CYLINDER HEADS

Any aftermarket cast iron or aluminum cylinder heads are permitted. Cylinder heads must be overhead valve, two valves per cylinder maximum (Ford Modular engine combinations are permitted stock configuration 4 valves per cylinder), and single spark plug per cylinder design. BILLET HEADS ARE PROHIBITED. Mopar OEM or aftermarket Hemi heads run same as Chevy or Ford. All Pro Stock style cylinder heads no matter what year produced are Category 3 regardless of brand and are not available for an OEM manufacturer weight break. Pontiac, Buick, Olds, AMC and Mopar cylinder heads must maintain the factory OEM port layout to receive a base weight deduction. Except as listed below.

Small Block Engines:

- Category 1 heads: run at may deduct 50 lbs. from base weight.
- Category 2 heads: add 10% of engine size in pounds.
- Category 3 heads: add 25% of engine size in pounds.

Small Block Heads: (see weight add section)

- Category 1: Inline valve heads measuring 1.000 or less bottom of intake port to deck.
- Category 2: Inline valve heads measuring 1.001 + bottom of intake port to deck. ● Category 3: All non-inline valve heads. (canted and splayed valve)

Big Block Engines:

- Category 1 heads: run at base weight. (must remain at +/- 2 degree OE valve angle) ● Category 2 heads: add 5% of engine size in pounds.
- Category 3 heads: add 10% of engine size in pounds.

BOP Combinations

- Non-OEM port configuration heads: add 20% of engine size in pounds

Big Block Ford & Chevy Heads: (see weight add section)

- Category 1: Heads measuring 1.000 or less bottom of intake port to deck (Any Category 1 nonOE Valve Angle combination refer to weight adder/deducts list)
- Category 2: Heads measuring 1.001 / 2.000 bottom of intake port to deck. ● Category 3: Heads measuring 2.001 + bottom of intake port to deck.

Note: All cylinder head intake port measurements will be measured after all work has been completed and in ''race'' form. The lowering of intake runner height to circumvent the port height weight penalties is prohibited.

ENGINE FAMILY CONFIGURATION CHART

The data below reflects the spacing of cylinder bores in the engine block cylinder bank. Motors in the same table row generally have a common origin and similar development. In some cases, crankshaft interchange may be possible among motors in the same row; major machining may be necessary. This is also a useful indicator of potential intake manifold adaptation, not only among motors in the same row, but (with more extensive modification) between motors with very similar bore center distances. E.g.: Chrysler B/RB at 4.80" and Buick BB at 4.75" are very close.
Column 2 ("Ports") indicates the intake port layout pattern. "00-00" represents 2 pairs of ports on each cylinder bank, "0-0-0-0" is equally spaced individual ports, and "0-00-0" is unique to early Buicks (resembles common exhaust port layout).

	Motor	Ports	Year	ID	Displacement	Bore Ctr.
	Ford "Modular" V8	0-0-0-0	1991-*		4.6, 5.4	3.9370"
	Chrysler late hemi	0-0-0-0			5.7, 6.1	4.09"
	Dodge hemi & poly	0-0-0-0	1953-58		241, 259, 270, 315, 325"	4.1875"
	Buick	0-00-0	1962		215"	4.240"
		00-00	1965-70		300, 340, 350"	
	Oldsmobile, Pontiac	00-00	1962-?		215"	
	DeSoto hemi	0-0-0-0	1952-57		276, 291, 330, 341, 345"	4.3125"
	Ford	0-0-0-0	1962-*	335, M	221, 260, 289, 302, 351, 400"	4.380"
	Chevrolet	00-00	1955-*	SB	265, 283, 302, 327, 350, 400"	4.400"
	Plymouth	0-0-0-0	1956-*	poly A	277, 301, 303, 318, 326"	4.460"
		00-00	1964-*	wedge LA	273, 318, 340, 360"	
	Chrysler hemi & poly	0-0-0-0	1951-58		301, 331, 354, 392"	4.5625"
	Pontiac	00-00	1955		316, 326, 347, 350, 370, 389, 400, 421, 428, 455"	4.620"

	Oldsmobile	00-00	1964-*		330, 350, 400, 403, 425, 455”	4.625”
	Ford	0-0-0-0	1958-71	FE	332, 352, 390, 406, 427, 428”	4.630”
	AMC	00-00	1966-*		290, 304, 343, 360, 390, 401”	4.750”
	Buick	00-00	1967-*	BB	400, 430, 455”	4.750”
	Chrysler	00-00	1958-78	wedge B/RB	350, 361, 383, 400, 413, 426, 440”	4.800”
		0-0-0-0	1964-*	hemi RB	426”	
	Chevrolet	00-00	1958-*	W & BB	348, 366, 396, 402, 409, 427, 454”	4.840”
	Ford	0-0-0-0	1968-*	385, FF	370, 385, 429, 460”	4.900”
	Cadillac	00-00	1967-*		425, 472, 500”	5.000”

INTAKE MANIFOLD

Any intake manifold permitted.

EXHAUST SYSTEM

Any exhaust system permitted. All exhaust systems must be directed out of body and away from driver and fuel tank.

FUEL SYSTEM

Any electronic, mechanical or belt driven fuel pumps are allowed. Electronic fuel pumps must shut off with the master electric cut-off switch. Fuel cell must have a pressure cap and be vented to the outside of the body. Front mounted fuel cells must meet SFI Spec 28.1 and be mounted between the frame rails or enclosed in a round tube frame. A round tube frame must be constructed of a minimum of 1 ¼-inch O.D. x .065-inch chrome moly tubing. Artificial cooling or heating of fuel (i.e., cool cans, ice, Freon, etc.) prohibited. Circulating systems that are not part of the normal fuel pump system are prohibited. All fuel lines must originate and return to one fuel cell. A check valve mounted between pressure regulator and carburetor and/or fuel rails for fuel removal is mandatory. All Fuel Samples must be supplied through the Check Valve between pressure regulator and carburetor and/or fuel rail.

EFI SYSTEM

Any aftermarket electronic or mechanical fuel injection may be used. Fuel injector size and or type are unlimited. One injector per cylinder permitted without weight adder. All 8 injectors must be mounted in the same location. Multiple injectors per cylinder permitted with weight adder (see add/deduct list). All unused injectors must be removed from the engine.

THROTTLE BODY

Any aftermarket throttle body/bodies permitted. Maximum of two throttle bodies permitted. Throttle bodies that do not mount to a conventional 4150/4500 flange (adapters prohibited) must run dual carburetor weight adder.

CARBURETOR
Any aftermarket carburetor permitted. Split or inline style carburetors prohibited. Carburetors that do not mount to a conventional 4150/4500 flange (adapters prohibited) must run dual carburetor weight adder.

FUEL
Failure to pass fuel check is grounds for disallowance of the run during competition and disqualification from the event during eliminations.

DRIVETRAIN: 2

CLUTCH, FLYWHEEL & FLYWHEEL SHIELD
Flywheel and clutch meeting SFI Spec 1.2, 1.3, 1.4, or 1.5 is mandatory. Flywheel shield meeting SFI Spec 6.1, 6.2 or 6.3 is mandatory. Clutch must be manually operated by the driver's foot. Electronics, pneumatics, hydraulics, or any other device may in no way affect the clutch system. The throw-out bearing must release all fingers, levers, stages, etc. simultaneously. Staged or variable release clutches are prohibited.

MANUAL TRANSMISSION
OEM or aftermarket transmissions with a maximum of 5 forward speeds permitted. Clutch-less models permitted. Pneumatic, electric, hydraulic, etc. shifters permitted.

AUTOMATIC TRANSMISSION
Any OEM or aftermarket converter driven automatic transmission is permitted with a maximum three forward speeds. Any automatic with more than three forward speed will run under the transmission weight penalty. Any torque convertor is permitted. Trans-brakes are permitted. Pneumatic, electric, hydraulic, etc. shifters are permitted.

DRIVELINE
Any steel, aluminum or carbon fiber driveshaft meeting SFI 43.1 spec is required.

BRAKES, STEERING & SUSPENSION: 3

BRAKES
Automated brakes are prohibited. The application and release of the brakes must be a function of the driver. Four-wheel hydraulic disc brakes are mandatory. Steel brake lines are mandatory. Brake lines must be out of flywheel and driveline areas. Line-lock is permitted only on the front wheels. One linelock solenoid with one button is permitted. Any other electrical, pneumatic, hydraulic, etc. switch in braking system is prohibited. Dual master cylinder is mandatory and must be mounted above the lower frame rails.

STEERING
Any automotive type steering system permitted. If competitor is using a commercially available quick disconnect steering wheel, it is mandatory that it meet SFI Spec 42.1.

~~**SHOCKS/STRUTS**~~

~~Coil over shocks are permitted front and rear. Shocks must be stand-alone and may not be adjustable during run via electronic and/or other means. Electronic programmable shocks prohibited. Each vehicle must be equipped with one operating shock for each sprung wheel.~~

FRONT SUSPENSION

Coil over shocks allowed. Aftermarket K members, upper and lower control arms allowed. Each vehicle must be equipped with one operating shock for each sprung wheel.

REAR SUSPENSION

Stock type, ladder bar and 4-link style suspensions are permitted. Each vehicle must be equipped with one operating shock for each sprung wheel.

WHEELIE BARS

Wheelie bars are permitted with a maximum length of 80 inches. ~~Wheelie Bar height must be set before burnout.~~

FRAME: 4

CHASSIS

Frame rails and sub frames forward of the suspension mounting points may be modified. Sub frames on uni-bodied cars may be joined under car. Aftermarket or custom designed (square or round tubing) rear frame rails permitted from the frame kick up point, aftermarket frame rails forward of the kick up point may be tied into the stock floor pan. All vehicles must have a chassis that meets the guidelines set by SFI for their respective speed and elapsed time. A valid NHRA serialized sticker is mandatory at an NHRA Member Track.

GROUND CLEARANCE

A minimum of 3 inches from the front of the vehicle to 12 inches behind front spindle centerline is mandatory. A minimum of 2 inches for the rest of the vehicle is mandatory (except for oil pan and exhaust headers).

WHEELBASE

Entries must retain stock wheelbase dimensions of + or – 1 inch.

TIRES & WHEELS: 5

Wheels

Maximum width rear wheel permitted is 14 inches. 12 inch or wider wheels Beadlocks required

TIRES

Maximum rear tire permitted is a 30.5-inch tall by 10.75-inch wide bias-ply slick. Maximum allowed measured tread width at all times is 10.75-inches.
Maximum allowed measured circumference is 96.0 inches at a maximum 10 psi.

Tire width will be measured by a “go-no go” gauge after conclusion of run at scale area. Tire tread may not extend outside of the fender.

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UPHOLSTERY
Factory appearing dash is recommended, Factory door panels or door panels made of aluminum or carbon fiber are required

WINDOW NET
Window net meeting SFI Spec 27.1 is mandatory.

BODY: 7

BODY
All vehicles must maintain OEM appearances for their specific year, make, and model being used. All entries are required to have the OEM body shell intact from the firewall to the taillight panel. Lightweight body parts are restricted to the following: hood, fenders, bumpers, doors, and trunklid/deck-lid. Hood, trunk-lid/deck-lid, and doors must be hinged or be lift off models. Alterations or aerodynamic modifications are prohibited.
Front overhang Extender permitted. Front-end overhang may not exceed 45 inches, with or without extender. Frontend overhang is measured from the centerline of the front spindles.

HOOD SCOOPS
Forward facing and factory OEM hood scoops are permitted.

GRILLE
All entries are required to have an OEM type grille. Covering in front of or behind the grille is permitted and must maintain a ‘’professional appearance’’.

FIREWALL
A non OEM firewall will be allowed provided it is in the stock location and must be one piece of at least .024 or greater steel material fully attached in an in stock location.

FLOOR
Driver’s side floor pan must be steel and welded into place. The remainder of the floor section can be .024 inch steel, .032 inch aluminum or Carbon fiber. The use of magnesium is prohibited. Transmission tunnel may be removable and must be made of either .024 inch thick steel, .032 inch thick aluminum or carbon fiber.

WING/SPOILERS
All entries are permitted to use rear wing/spoilers. Wing/spoilers are allowed a maximum length of 26 inches. Any adjustments to the wing/spoiler during a run are prohibited.

STREET EQUIPMENT
OEM headlights and taillights for year/make/model of vehicle being used must be intact. Taillights must be operational.

APPEARANCE
All cars in competition must be painted or wrapped. Advertising graphics are permitted on the body. In order to be eligible for the STPS official contingency program, all contingency sponsors' decals must be easily visible and located on the outside of the vehicle. Failure to do so can result in the driver **forfeiting** all claimed contingencies for that particular event. The STPS requires that all entries run the following decals:

1. STPS Windshield Banner: Decal needs to be located on the top of the windshield or just above the windshield located on the body.
2. STPS: Decals (2) must be located on each side of vehicle. Either on the side windows or decals can be located on the body right beside the side windows.
3. Class & Competition Numbers: Numbers must be easily visible/legible and located on the front, back, and both side windows.

ELECTRICAL: 8

BATTERY
A maximum of two batteries is allowed.

MASTER CUTOFF SWITCH
A master cutoff switch is mandatory.

SUPPORT GROUP: 9

COMPUTER/DATA RECORDERS
Computer/data recorders are permitted and must standalone and to be only used for information gathering purposes.

BRACKET RACING AIDS
The use of any bracket racings aids such as optical sensors, delay boxes, shutter boxes, throttle stops, etc. are prohibited. The use of any device (electrical or mechanical) that allows a driver to ascertain the position of their vehicle to the starting line is prohibited.

PRESSURIZED BOTTLES
A maximum of one pressurized container (excluding nitrous and fresh air systems) per vehicle is permitted. All pressurized bottles must meet D.O.T. 1800lb minimum specification.

TOW VEHICLES
The use of tow vehicles is permitted.

DRIVER: 10

DRIVER

The driver when in the vehicle, from the ready line until the vehicle is safely stopped on the return road, **is required to have all safety restraint systems (including the helmet) on and be securely fastened in the vehicle at all times**

A head and neck restraint device/system meeting SFI 38.1 is mandatory for any vehicle running 150 mph or faster for 1/4 or 1/8 mile or running 7.49 (*4.49) E.T. or quicker or by Class Requirements. An SFI 38.1 head and neck restraint device can be used with, or without, a neck collar; when a neck collar is not used, an SFI 3.3 head sock or SFI Spec 3.3 skirted helmet is required.

CREDENTIALS

A Valid state or government issued driver's license beyond a learner/s permit level is mandatory for cars running 10.00 or slower. A valid NHRA competition license is mandatory for cars running 9.99 or quicker, at a NHRA Member Track. A valid NHRA or an IHRA competition license is mandatory at an IHRA Member Track.

Note: It is ultimately the competitor's responsibility to familiarize themselves with ~~t~~he STPS class requirements as well as ***all NHRA safety requirements***. The competitor agrees they bear the ultimate responsibility when it comes to safety and how it complies with the STPS and NHRA rule books. The competitor also agrees that no one else other than the competitor is in the best position to know about how their particular race car has been constructed and how to safely operate it.