

Classic Rivals Class

April 16, 17 & 18, 2026

Race Engine Challenge

Questions? Contact Greg Finnican: 704-408-7356

This contest WILL NOT use a cubic inch divider. Scored test RPM range is 3500-7000 RPM at 500 RPM's/second. Dyno correction factor will be SAE J607. Scores will be determined by averaging three of the best average HP dyno pulls out of up to the ten pulls permitted. The sum of the average corrected HP will determine the winner.

100 – ENGINE

Small block Chevy, Small Block Ford and small block Mopar. Power adders prohibited. Any method of artificially heating and/or cooling engine fluids, fuel, and/or air prohibited (not to include thermal or friction coatings). This includes, but is not limited to, heating and cooling by mechanical device such as an external cooler or radiator/heater exchanger, pre-heating or cooling of any fluids with an oil heater or fuel heater/cooler, or the addition of a temperature-altering device designed to cool or heat the incoming air charge by mechanical means such as an intercooler, chemical means such as a chemical to cool either the incoming air/fuel charge or intake manifold, or electrical means such as an electric oil heater inside or outside the engine. Aftermarket SFI spec 18.1 harmonic balancer is mandatory.

101 – DISPLACEMENT

410 cubic inch maximum, 400 cubic inch minimum. Cubic inch is calculated by bore x bore x stroke x 6.2832. Any part of a cubic inch is rounded up to the next highest inch, i.e. 408.3 = 409.

102 – ENGINE BLOCK

Any domestic OEM passenger car or commercially available aftermarket block. 9.2" SBF and 9.2" SBM deck height permitted.

103 – CRANKSHAFT

Any commercially available crankshaft permitted.

104 – CYLINDER HEADS

Commercially available 23° Chevy, 20° Ford, 18° Mopar with standard intake port height and location required. Porting or epoxy inside the original port casting permitted. Only modification to the exterior of the cylinder head is milling. Angle milling prohibited. Altered valve spacing (e.g. 60/40) permitted. Exhaust ports can be raised and be spread port. Steel valves only. **HEADS TO BE USED MUST BE SUBMITTED FOR APPROVAL.**

105 – IGNITION

Distributor or coil on plug. No crank trigger. ECU and ignition components may be mounted either on the front or a plate attached to the flywheel side of the engine block and/or back of heads/intake manifold.

106 – CARBURETION

Any four (4) venturi carburetor. Water or any other auxiliary fluid injection systems prohibited. Must be equipped with a single point rearward pull mechanical throttle linkage compatible with the dyno actuation linkage. **A bracket providing an anchor point for the dyno throttle cable and a compatible linkage ball is required at the pull point.**

All engines will utilize an electric fuel pump with regulator and supply line filter supplied by the dyno facility. Each engine builder utilizing a carburetor will determine the fuel pressure. Both single and dual feed applications will be given one (1) type 8 AN connection fuel line.

107 – FUEL INJECTION

Any style throttle body. 65 psi maximum supplied fuel pressure at dyno gauge. Water or any other auxiliary fluid injection systems prohibited. Must be equipped with a single point rearward-pull mechanical throttle linkage compatible with the dyno actuation linkage. A bracket providing an anchor point for the dyno throttle cable and a compatible linkage ball is required at the pull point.

Fuel pressure regulation will be provided by a system consisting of an electric fuel pump, regulator and supply line filter as part of the dyno fuel system. Fuel pressure will be set at 65 PSI maximum on the dyno fuel pressure gauge. Fuel pressure will be set prior to engine start up (engine off). This is a supply and return system. A single -10 AN fitting will be required for fuel hook-up to the fuel rails and a single -8 AN fitting will be required for the return fuel line. The use of any commercially available bolt on stand-alone throttle body unit is permitted.

108 – AIR SUPPLY

Provided by a plenum in the ceiling with air coming in at a 45-degree angle. No structure, deemed by the event management as designed to take advantage of air flow in the dyno room installation, is permitted.

109 – AIR FILTER

Not permitted. Structures such as ram tubes, velocity stacks, etc. attached to the inlet portion of the carburetor/fuel injection are permitted. Velocity stacks, ram tubes or other devices attached to the throttle body/carburetor limited to six (6) inches maximum.

110 – CAMSHAFT

Unlimited. Cam journal size no larger than 2.081".

111 – CAMSHAFT DRIVE

Three-piece chain drive must be under the timing chain cover.

112 – LIFTERS

Any lifter type permitted. .903 diameter limit. Lift bushing permitted.

113 – VALVE LIFT LIMIT

.715 cold engine.

114 – IDLE

Engine must be able to idle under 1,100 RPM's.

115 – INTAKE MANIFOLD

Engine must use a mass produced commercially available cast aluminum or composite manifold. Internal porting of the manifold permitted. The only welding/epoxy permitted on the exterior is for installing injector bungs. Water lines from the back of the manifold to the front permitted. Maximum thickness between intake manifold and cylinder heads of .125 inches. From the china wall to the top of the Carb/TB pad including spacer is limited to 9.5". Front throttle body FI is limited to 12.5" from the china wall to the top of the plenum. Velocity stack permitted.

116– CONNECTING RODS

Steel.

117 – PISTONS AND RINGS

No smaller than .9 mm, .9 mm with lateral gas ports or gas ported rings.

118 – COMPRESSION RATIO LIMIT

11:1.

119 – FUEL

Sunoco 260 GT 100.

120 – ROCKER ARMS

Unlimited.

121 – HEADERS

Chassis-style exhaust headers that run down and back from the front of the engine required. Port matching of the header flange permitted. Headers and slip-on style collectors are acceptable. Maximum collector diameter 3.5 inches. Minimum collector diameter 3 inches. No crankcase exhaust ventilation permitted.

Bungs for Lambda O2 sensors are permitted. Thermal header wraps (such as Kevlar fabric) not permitted. Adapter plates between cylinder head and header permitted. Exhaust "port plates" permitted. A minimum of 22 inches between collectors.

122 – OIL PAN/SCRAPER

Pan must be of a stepped sump design with no more 9" in depth from the oil pan rail. Pan restricted to a maximum of 2" wider on one side than the widest portion of the rail. Sump configuration may be front, center or rear. Sump must be a maximum of 11" long and 6" minimum from the front of the pan to the sump and have at least 2.5" to 3" differential from the lowest section of the pan to the sump. Dual sump pans that have a sump in the front and rear (e.g. 79.93 Mustang pans) must also have the same differential as above between the two sumps and the center section.

Applicant will submit the pan to be used. Dry sump systems and vacuum pumps prohibited. Oil pumps with scavenging stages or used in conjunction with external tanks is prohibited. Oil system accumulators prohibited. Electrically powered oil pumps prohibited. No external vacuum pump. Oil pump must mount to OEM location. Internal custom scraper and baffle permitted. Temp sensor will be attached to the surface of the oil filter.

123 – OIL

All engines must be shipped "dry". Engine will be required to use at least 5 quarts of oil. Participants will use only the oil supplied for the competition. Competitors will have their choice of viscosity.

124 – OIL ADDITIVES

No oil additives permitted.

125 – WATER PUMP

Belt driven mechanical water pump or electric. Use of cooling system thermostat prohibited. Water pump must be mounted in the OEM location. External water lines permitted. Water in and out for dyno hook-up requires your engine to have a 20 AN male.

126 – ELECTRICAL CONNECTIONS

Contestants will be supplied three (3) 12 Volt 20 AMP, one (1) switch 12V and four (4) negative connections.

127 – STARTER

Dyno will provide the starter.

128 – FLYWHEEL/FLEXPLATE

Any commercially available, SFI-certified domestic manual STEEL transmission flywheel is mandatory.

Flex plates are prohibited.

129 – COATINGS

Any commercially available performance coating permitted.