Technical Specifications- PRO 2 Truck

Overview - Vehicles that are custom built or manufactured as a full size two-wheel drive type utility vehicle. Vehicle must be a standard manufacturer production model available to the general public in the United States and produced in amounts of a minimum of 5000. Class rules supersede CCR.

P2T-1 **CHASSIS**

A. PRO 2WD is based on a standardized frame, which must be constructed of 2"x 3" rectangular tubing only, with a minimum wall thickness of .120". Frame profile must be built to TORC print and remain unchanged. The 2" x 3" rails must remain intact from front to rear.

B. NEW Chassis must be constructed according to TORC chassis prints and must be approved by the Technical Director.

C. Wheelbase must be 117" plus or minus .5"

D. Previously raced non-standardized chassis trucks must be maintained primarily as originally constructed and must be approved by the technical director 30 days before being allowed to race. Non-standardized chassis must be determined to be safe on not provide improved performance over standardized chassis trucks.

E. Maximum overall track width of 93" as measured outside of tire to outside of tire at a ride height of 10".

F. Truck wheelbase and overall tread width will be measured with all tires inflated to race pressure (min 13 PSI) in outer tire.

P2T-2 **SUSPENSION**

A. Spindles may be reinforced or manufactured and must retain the same basic design and concept as originally mounted and produced.

B. No limits or restrictions on ball joints, spring rate capacities, pivot point bushings.

C. All four corners must be coil over suspension.

D. Front wheel travel limit is 18" maximum. Rear wheel travel limit is 20" maximum.

E. Four-bar rear suspension only.

F. Rear axle may not rotate separately from axle housing mounts.

G. Rear suspension links must be one-piece construction between the rear axle assembly and the chassis.

H. Independent rear suspension not allowed.

P2T-3 **SHOCK ABSORBERS AND SPRINGS**

A. Maximum of two shocks are allowed per corner.

B. One spring stack is allowed per corner, with a maximum of three springs per shock.

C. External bypass is allowed on one shock per corner.

D. Bump stops will be allowed on front and rear of the truck. Bump stops will only be legal if they absorb the last 6” of upward compression.

E. TORC Series technical director must approve all shocks.

P2T-4 **RIDE HEIGHT**

A. Ride height must be a 10” min.

B. Trucks will be measured with all tires inflated to race pressure in outer tire.

C. Minimum pressure is 13 PSI. You cannot adjust tire pressure after tech.

D. Measurement to be taken between A-pillar and B-pillar. Bolts will be excluded from measurement.

E. Trucks may be measured for proper ride height before and after competition.

P2T-5 **TRUCK WEIGHT**

A. Vehicle weight is set according to the following formula:

B. Two valves per cylinder must weigh 10lbs/cubic inch.

C. Trucks must weigh a minimum of 4000 lbs. including the driver.

D. Weight is subject to change in interest of competition.

E. Minimum front axle weight is 45% of total truck weight.

F. All trucks must meet minimum weight and front percentage both pre and postrace.

P2T-6 **TRUCK BODY**

A. All fender and box side mounts must be a looped design only. Box sides must be full length including the taillight wrap around.

B. Maximum body width 80” as measured from pillar A to pillar B measured from side to side at the bottom of the door side window openings.

C. Roofline, rocker panels and top of bedside must be parallel to the horizontal frame members.

D. Vehicle appearance must remain as factory produced. TORC Series

E. Technical Director must approve changes in appearance.

F. Tires must retract inside of fenders.

P2T-7 **ENGINE**

A. Engines must be based off of OEM design with a 410-cubic inch maximum

B. Cast iron blocks ONLY.

C. Block must be available to the general public at a price competitive with other manufacturers.

D. Maximum of 8 cylinders and 2 valves per cylinder.

E. Centerline of crankshaft cannot be less than 8” above the lowest part of the frame rail as measured from the front of the engine.

F. The maximum engine setback is 42” from the front spindle centerline to rear of bell housing mount flange on rear of block.

G. No titanium or composite materials are allowed.

H. No aluminum rods are allowed.

P2T-8 **CYLINDER HEADS**

A. Only Series approved spec Brodix heads are allowed. No removing, relocating, grinding, polishing or defacing of any letter or number cast into the cylinder head ports is allowed. Approved part numbers:

1. Chevrolet — SPCH WISSOTA
2. Ford — SPFO WISSOTA
3. Mopar — SPMO WISSOTA

B. Valve guides must remain in original angle and spacing as manufactured. Valve guides may not be tapered, thinned or shortened in any way.

C. No welding or adding material is allowed.

D. Combustion chamber may be ground for clearance and polished.

E. Intake bowel may be blended and polished from the valve seats to the edge of the letter C in the word “SPEC” on the roof and floor of the intake port. The side of the intake may be blended and polished from the valve seat to the same point as the roof and floor. No grinding or polishing along the sidewalls where the spec logo is cast.

F. Exhaust seat may be blended into the exhaust bowl and port may be polished as long as the word “SPEC” is in the roof of the exhaust port is not touched and the exhaust port exit at the header flange remains in the original as cast location, size and shape.

G. Cylinder heads may be machined for push rod clearance.

H. No grinding or polishing of any kind, other than stated above, is allowed.

P2T-9 **HEADERS -** As specified in Combined Class Rules (CCR)

P2T-10 **MUFFLERS -** As specified in Combined Class Rules (CCR)

P2T-11 **CARBURETOR**

A. Trucks may have one four barrel Holly, Series 4150HP carburetor.

B. Intake manifold must be available through regular retail sources and available to the general public.

P2T-12 **IGNITION SYSTEMS**

A. MSD “6-series” ignition boxes are required with a Max 7500 RPM chip.

B. Dual boxes with an A & B switch are permitted.

C. The MSD ignition module cannot be located within the reach of the driver.

D. Wiring for the MSD box must be separate from other vehicle wiring, and have no extra connectors or termination.

P2T-13 **DRIVE TRAIN PARTS**

A. Engine to transmission adapter plate can be a maximum of ½” thick.

B. Auxiliary under drive and overdrive units are permitted. Multiple-speed under drives are NOT permitted.

C. Engine crankshaft must be connected to the transmission input shaft via a vane type torque converter.

D. Must be in stock order, engine, transmission, and differential via a drive shaft.

P2T-14 **TRANSMISSION**

A. Only GM Turbo 400 automatic transmissions are allowed, and must operate through a torque converter.

B. Aftermarket Turbo 400 Transmission cases meeting SFI 4.1 are allowed.

C. Non SFI cases must have SFI scatter shield installed or ¼” aluminum plate protecting driver from ring or planetary gear explosion.

D. Steel or Aluminum torque converters are permitted.

E. Bolt together torque converters are permitted.

F. Manual shifting of all transmissions is mandatory, unless other method need be employed for handicap condition of driver. Series technical director must approve all non-manual shifting procedures.

G. Rear axle assembly must be Spool type Ford 9” style only. Rear axle ratio is “Open”. 9”, 9 1/2”, or 10” gears are allowed as are aluminum or steel third member housings.

P2T-15 **TIRES**

A. Only D.O.T. tires available to the general public are permitted. TORC Series definition of the term D.O.T. tires is as follows:

B. Tires must meet all D.O.T. guidelines and tests and be stamped accordingly

C. Tires must be part of a full line of like tires available through retail dealers

D. Tires must be readily available to the general public in quantity if requested.

E. Model of tire must be offered in multiple sizes and conform in size with Industry standards.

F. Retail pricing must be competitive with other manufacturers of like tires.

G. Maximum size: 35 x 12.50 or the approximate metric equivalent

H. Tire must be 35 inches or less at end of race

I. Inner liners are ~~not allowed~~ optional

J. Only six (6) new tires will be allowed each race weekend. Used tires can be saved from previous races. Tire numbers will be recorded by USAC officials at the beginning of each race weekend.

K. Manufacturers wishing to compete in a D.O.T. Class must submit the following to TORC no later than 30 days prior to use in any race:

L. Size or sizes of tires intending to use

M. Design measurements and weight of tire

N. Target design durometer measurement of tire, using an ASTM type A Durometer.

O. Digital picture of tread area as molded

P. List of retail distributors where tire is available

Q. “One-off” or limited run tires will not be allowed

R. All tire measurements will be taken at 20.0 PSI unless otherwise noted

S. Minimum air pressure at the starting line will be 13.0 PSI.

T. Maximum tread width is 10.20”. The maximum tread width will be measured from the outermost edges of the tread block on a new tire. If after competition the material used to support the sides of the tread block enters the tread width, allowances will be made providing the design is not intended to circumvent the rule.

U. Maximum section width is 13.20”. Section width will include any side blocks including staggered side blocks.

P2T-16 **WHEELS**

A. Maximum wheel size is 10”x 15”, 10” x 16” or 9” x 17”

B. Minimum backspacing for all wheels will be 3 ¾”

P2T-17 **ELECTRICAL ACCESSORIES**

A. No communication/telemetry will be allowed between the vehicle and/or data acquisition system with any other item and system during any sanctioned TORC event (practice, qualifying, or racing) with the exception for the request of television; certain vehicles may compete with telemetry systems, as so installed by the TORC Series television production network requesting such information.

B. Vehicles cannot carry on board computers, micro-controllers, processors, recording devices, electronic memory chips, or traction control devices. However, data acquisition systems (digital dash logger) are allowed in all classes.

P2T-18 **TRACTION CONTROL**

A. Traction Control of any type is not allowed.

B. Entrants whom commit a traction control offense, as determined by USAC, will lose all season points and be subject to suspension and fines.

P2T-19 **DATA ACQUISITION**

A. Limited data acquisition systems are allowed but restricted to the following sensors only.

B. Only type of sensors allowed are: Temperature, Pressure, Voltage, RPM, Oxygen, Exhaust Temperature, Throttle Position and Speed.

C. All sensor data must be recorded on the data acquisition system

D. Any sensor not sending data to the data acquisition system must be removed from the vehicle

E. Data acquisition systems used during any sanctioned TORC event (practice, qualifying, or racing) will be limited to only the collection, display, and storage of data.

F. Any system that is capable of modifying/activating ignition timing, air or fuel ratio mixtures, traction control, throttle position, or any other setting on the vehicle is expressly forbidden.