

# #400 - #400 SPORTSMAN LIMITED 4X4 TRUCK TECHNICAL SPECIFICATIONS

## DEFINITION

- A 4-wheel-drive pickup or sport utility vehicle built on tubular frame.
- Vehicle engine and body must be from the same manufacturer.
- Limited 4WD Trucks are regulated by the following rules as well as all CCR and Safety Rules.

## CHASIS

- All tubular frame chassis trucks are allowed. All trucks must be left-side steer only.
- Maximum overall track width 93 inches
- Maximum wheel base 122 inches, no minimum

## SUSPENSION

- Wheel travel maximum, 16 inches front, 18 inches rear
- Independent rear suspension is not allowed
- Coil carriers allowed
- 4 inch travel bump stops allowed
- Coil over remote reservoir and bypass shocks allowed
- No air shocks or air springs allowed
- Minimum ride height 10 inches after race

## VEHICLE WEIGHT

- WSORR Ultra 4 trucks that use the chassis and suspension limits from the 2011 rules will have a minimum weight of 3800#. May use the Super Truck engine package. There is no pounds per cubic inch rule.
- Full sized trucks will have a minimum weight of 4300# and be min 10 pounds per cubic inch with driver
- WSORR Ultra 4 trucks that use the non spec motor must be min 10 pounds per cubic inch with driver
- No less than 48% on front weight distribution

## BODY

- Body must be stock production size and appearance.
- Body must be 15 years or newer.
- Stock grill or aftermarket exact duplicate
- Headlight openings must be covered

## FUEL CELLS

- MANDATORY – CCR RULES APPLY

**Starting 2016, all Sport 4x4 Limited Race Trucks will be required to run the Super Truck engine package unless the grandfather rule applies**

## SPEC AND NON SPEC MOTOR | TRANSFER CASE PACKAGES



### (SPORT 2) SPEC MOTOR | TRANSFER CASE PACKAGE

**ENGINE BLOCK** – Motors other than those listed may be used only when approved by TORC Series Tech

- Maximum: 410 cubic inches
- Cast iron blocks only | OEM design and material
- No titanium or composite materials allowed
- No aluminum rods allowed

## **CAST IRON HEADS – TORC Series Approved Cast Iron Heads Only.**

- Chevy “bow tie” heads-intake port size 1.240 width, 2.0140 height, and exhaust port size 1.365 width, 1.300 height. No turbo heads.
- World Products Sportsman Part No. 1115, Casting No. 1-037. Intake port size 1.235 width, 2.035 height, exhaust port size 1.425 width, 1.345 height. Early Sportsman: intake 1.235 width, 2.010 height, exhaust 1.420 width, 1.500 height.
- Chrysler W-2 heads only. Intake port size 1.350 width, 2.250 height, and exhaust port size 1.450 width, 1.440 height.
- Ford S.V.O. cast iron head, part No.’s M-6040-E-351 and M-0649-N351. Intake port size 1.18 width, 2.03 height, exhaust port size 1.50 width, 1.33 height.
- Match porting by removal of material allowed within the last ¼ inch of the port opening.
- No polishing, porting, or material added
- Polishing of combustion chamber allowed
- Competition valve job permitted with the bottom cut not to exceed ¾ inches below actual valve seat Ford and Chrysler only. One inch below actual valve seat on the SRT Super Truck head and 1-1/4 inch on the bow tie heads. Any cut over 60 degrees must be cut with cutter not by a stone. Cut must be concentric with valve guide.

## **ALUMINUM SPEC HEADS**

- Only TORC Series approved Brodix heads allowed. Part numbers allowed are:
  - Chevrolet – SPCH WISSOTA
  - Ford – SPFO WISSOTA
  - Mopar – SPMO WISSOTA
- No removing, relocating, grinding, polishing or defacing of any letter or number cast into the cylinder head ports.
- Valve guides must remain in original angle and spacing as manufactured. Valve guides may not be tapered, thinned, or shortened in any way.
- No welding or adding material allowed
- Removal of material is only allowed as listed below:
  1. Combustion chamber may be ground for clearance and polished.
  2. Intake port – Intake bowl 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.
  3. Exhaust Port – 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.
  4. May machine for push rod clearance.
- No grinding or polishing of any kind other than stated above.

## **TRANSFER CASE**

- Any transfer case is allowed but it must always be engaged in 4 wheel drive
- Changing of internal gearing to under-drive front end allowed
- Any rear end final drive ratio allowed

## **IGNITION**

- MSD 6AL or 6ALN only | One box per truck | Wiring subject to inspection
- MSD box must be out of reach of driver but accessible to tech officials
- Max 7000 RPM chip



## **(NON SPEC) MOTOR | TRANSFER CASE PACKAGE**

### **ENGINE**

- Engine must match body style
- Flat top pistons only
- Cast iron blocks only
- OEM cast aluminum or cast iron intake manifolds are required | Intake carburetor flange must be 4150 style (no dominator intakes allowed)
- OEM production style cast aluminum or cast iron heads are required
- Dry sumps are allowed

### **FUEL | IGNITION**

- 110 Octane max | No additives are allowed

### **TRANSFER CASE**

- Aluminum or cast iron production cases only
- No external underdrive | overdrive units allowed
- Variable control of cases not allowed
- Must always be fully engaged in 4-wheel drive during competition
- Changing of internal gearing to under-drive front end is allowed
- Transfer case main shaft must be 1 to 1 from input shaft to output shaft
- Nothing is allowed to disengage or slip in the front end

### **CARBURETOR**

- Truck may have one four barrel Holly, Series 4150 HP carburetor
- Intake manifold must be available through regular retail sources and available to the general public
- In lieu of competition some engine, carb, intake – combinations raced in 2014 would be considered in 2015

### **IGNITION**

- MSD 6AL or 6ALN only | One box per truck | Wiring subject to inspection
- MSD box must be out of reach of driver but accessible to tech officials
- Max 7000 RPM chip

### **TRANSMISSION**

- Automatic transmissions must operate through a conventional torque converter
- Manual shifting of all transmissions is mandatory, unless other method need be employed for handicap condition of driver. TORC Series technical director must approve all non-manual shifting procedures.
- Aluminum torque converters or drive drums not allowed

### **DRIVE TRAIN PARTS**

- Drive train must be in stock order, engine, transmission, transfer case and differential
- Rear differential must be spool type only, and approved by TORC Series technical director
- Rear differential must have a minimum of one inspection hole 1-1/2 inch diameter located in such a manner that TORC Series tech can see and identify spool. If inspection hole does not exist, crew chief will remove differential for TORC Series technical inspection.
- Front differential, any front gear ratio allowed | Open carrier only
- Front differential CV joints allowed on front axle shafts

## **WHEELS AND TIRES**

- Maximum 10"x15", 10"x16", 9"x17" wheels allowed
- Bead locks with recessed bolts
- Maximum tire size 12.50" x 35"
- Inner liners not allowed
- DOT tires minimum tire pressure 13 PSI. Project tires minimum tire pressure 16 PSI at starting line

## **BRAKES**

- No restrictions on rotor or caliper size
- Steering or cutting brakes on front allowed
- Only 1 brake pedal that stops all 4 wheels

**RADIOS** Must be equipped with a two-way radio and a spotter | Frequency must be registered with TORC

## **GRANDFATHERED TRUCKS**

●Any truck/driver combination using the NON-SPEC motor package may continue using this motor package by following rules below.

1) The truck and driver combination from the 2015 season must be kept. If the truck is sold or a new driver put in the truck full time, the spec motor package must be followed.

2) The truck and driver combination must compete in at least 4 rounds of racing per year to qualify to use the grandfathered rules. If a season is missed or at least 4 rounds of racing not completed, the spec motor package must be followed.

01.23.2016