

# ARCA WEST SPORTSMEN SERIES

## 2010

- 1.0 **BODY STYLES:**
- 2.0 **WHEEL BASE:** 104 ½ to 108" maximum
- 3.0 **TRACK WIDTH:** 69" maximum as measured at spindle height from center of tire to center of tire. Cars with 66.5" track width can remove 50 lbs from total weight.
- 4.0 **BODY:** All bodies must be mounted to reflect a stock body. No wedge or down force bodies allowed. No radically altered bodies allowed. Bodies parts may not be altered. Composite bodies only. No carbon fiber bodies allowed. Aluminium door panels are allowed. Tires may not extend outside the body lines. Bodies must be in good condition at all times. Bodies must be free from sharp edges. Roof height 47" minimum without driver. No under car aerodynamic devices allowed.
- 5.0 **INTERIOR:** All cars must have a full floorboard from fire wall to fire wall. A minimum of 16 gauge steel is required under the driver. Driver to be surround by 22 gauge steel including foot box, tunnel and behind driver seat. The rear area of the interior may be paneled straight across from the window lines. The forward part next to the driver may slope from the of the tunnel to the right side window edge.
- 6.0 **WINDOW GLASS:** A full front windshield, minimum .125" and a rear window a minimum .093" made of carbonate (Lexan) is required. Front window supports are required.
- 7.0 **SPOILERS:** Front spoiler and side skirts minimum 4" ground clearance. Rear spoiler 6 ½" height maximum. No wrap around spoilers allowed. Spoiler may not extend past the body.
- 8.0 **SEAT:** ARCA approved racing quality seat is mandatory. No plastic or fibreglass seats. All seats mounting bolts, minimum 3/8" or larger with a minimum 1" washer. Seat must be mounted to the frame and roll cage. It is recommended that the seat provides support to driver's ribs, shoulders and legs when sitting in a normal racing position. Headrest/head surround must be mounted to seat or roll cage that will give full support to driver's helmet when sitting in a normal racing position.
- 9.0 **CHASSIS:** Car may be fabricated tube chassis or stock clip either perimeter or offset design. Fabricated frame rails must be a minimum of 2 x 3 x .095" steel tubing. Stock front clips may be notched and boxed for clearance of bottom cross member. Chrome molly not recommended.

Skid plates are allowed, and must provide for access by tech for checking crank height and access to lower control arm pivots.

- 9.1 ROLL CAGE:** The roll cage must be constructed of a minimum of 1.75" x .095" wall round seamless tubing. Joints in major locations, door bars, dash bars, roof bars, must be gusseted. A minimum of 3 door bars are required on the left side and 2 on the right side. Left side door bars must curve out to the outer most part of the door design. All bends are to be mandrel bent. No exhaust bends, or links or welded elbows are allowed. A 16 gauge steel plate must be added on drivers door, from the rear hoop of the main cage to the front firewall and from the top door bar to the frame.
- 9.2 ROLL BAR PADDING:** All bars within the drivers reach must be padded with padding acceptable to ARCA West officials. Recommend padding Which meets SFI 45.1 specification.
- 9.3 CLEARANCE:** 4" minimum ground clearance of all parts of the car, including chassis and body, except tires. Front cross member on GM clips 3" minimum ground clearance.
- 9.4 MIRROR:** Rear view and side view mirrors must be mounted inside the car.
- 10.0 SAFETY EQUIPMENT:** An ARCA West approved window net is mandatory on all cars. Net must be installed so it is tight. Window net anchors must be attached to the roll bars, not the body. Window net must be quick-release type. Nut must be permanently anchored at the bottom and release from the top, with a minimum of one quick-release. Wide mesh nets only .recommend window net meets SFI specification 27.1, with a minimum of ½" ribbon or larger. Full face helmets which meet Snell SA 2005 or SFI specification 31.1 or more recent standards are to be used. It is highly recommend that the drivers wear driving suits of fire resistant material that effectively covers the body from the neck to the ankles and wrists. Recommended that the drivers suite meet SFI specification 3.2A/5 . It is also recommended that the driver wear fire resistant underwear full coverage fire resistant gloves which meets SFI specification 3.3/5. Fire resistant shoes which meets SFI specification 3.3 are highly recommend .ALL cars will be equipped with a minimum 3" wide seat belt, two piece shoulder harness and a crotch strap with a metal-to-metal center release. Recommend drivers restraint system which meets SFI specification 16.5, **All safety belts must be mounted**

**per manufacturers recommendations.** This system must be in good condition with a five year maximum dating. Shoulder harness should run through a welded loop behind the driver seat. Restraint system must be securely attached to the roll cage structure. **All drivers are to use an ARCA West approved head and neck restraint system. Recommend restraint system which meets SFE specification 38.1.** Any driver removing head and neck restraint system on the track will be black flagged. Safety inspector has final say. All cars must be equipped with a five pound fire extinguisher, fully charged, Halon Type, DuPont FE36 or equivalent, securely mounted with working gage. The fire extinguisher must be mounted within easy reach of the driver in the normal seated race position. Gage should be mounted in a manner to be read from the top side.

**An emergency main shut of switch which disconnects all power must be located in the center of the dash panel. The switch must be labelled clearly NO/OFF. Moroso switch PN 74100 or comparable is mandatory.**

11.0 **WEIGHT:** All weights will be race ready with driver and gear in seat and full of fuel. All ballast weights will be securely fastened and painted white with the car number on them. Total weights are:

Sportsman, Series cars, perimeter chassis, pro-stock factory front clip with fabricated chassis, 3100 lbs minimum, 56 % percent left side and 49% percent rear.

Fabricated front clip with fabricated chassis, 3150 lbs minimum, 56% percent left side, 49% percent rear. A total of 50 lbs is to be added. Two 25 lbs blocks of lead are to be mounted to each frame rail. The entire 25 lbs must be within 18 inches of the weight jack bolt, to the rearward of the car.

12.0 **ENGINE LOCATION:**

All cars maximum 1 inch engine set back from the #1 spark plug to the lower ball joint center. 108" inch wheel base cars may set engine back 2" inches from the #1 spark plug hole to the lower ball joint center. Ford and Dodge engines may set back 2" inch from the #1 spark hole, and 3" inch on 108" inch wheel base cars. Crank shaft height must be 11" minimum from the ground up to the center line of the crank shaft.

13.1 **ENGINES:** There are three types of engines programs allowed.

13.1 **WCSS/Kanata:**

13.1.1 365 cubic inch maximum

13.1.2 Heads, stock OEM or listed aftermarket , World Products S/R torquer #042660, 042750, Windsor JR #053030, Chrysler P5007950, Pro Top Line vortec #223 6494 083, #223 6494 906, these heads are only allowed with 1:94 intake valve and 1:50 exhaust valve. Original GM vortec heads allowed a 2:02 intake

- valve and 1:60 exhaust valve.
- 13.1.3 Vortec heads numbers 10239906 and 12558062.
  - 13.1.4 No titanium Valves allowed.
  - 13.1.5 Four barrel aluminium intake manifolds are allowed.
  - 13.1.6 Two bbl Holley 4412. Base plate must match. Choke plate may be removed, must have chock horn. Carburetor must meet attached sheet.
  - 13.1.7 No dry sumps or external wet sumps allowed except CASCAR cars may use wet sumps. Single stage external pump for Ford, must have wet sump.
  - 13.1.8 Must have flat tapped cam. No roller cams, mushroom lifters or radius lifters are allowed.
  - 13.1.9 11:1 maximum compression.
  - 13.1.10 Cast iron production blocks only. No aluminium blocks.
  - 13.1.11 Engine must be mounted within 1" inch of the frame center line.
  - 13.1.12 Engine blocks and heads may not be lightened.
  - 13.1.13 No vacuum systems allowed.
  - 13.1.14 No magnetos.

### **13.2 CRATE ENGINES:**

- 13.2.1. 604 crate engine, #88958604 is approved. Must remain unmodified. Must have OEM balance. Must have 6400 rev chip maximum.
- 13.2.2 Mini clutch - Quarter master part #100-28590ZZ
- 13.2.3 Advise new crate engines use full fly wheel. You may take 25lbs off total weight.
- 13.2.4 All dynoed engines will be allowed to compete when dyno sheets have been received and approved by ARCA West. Authorised Dyno Facility is Richmond Engines.
- 13.2.5 Schoenfeld 135VCM3 crate motor headers only.
- 13.2.6 Holley 0-80541-1 650 CFM 4 bbl carburetor only, no modifications allowed.
- 13.2.7 Maximum 94 octane fuel. No additives allowed.
- 13.2.8 No vacuum systems.
- 13.2.9 Must use OEM balancer supplied with crate engine

**ARCA West reserves the right to have the engine dynoed at any time.**

### **13.3 WASCAR ENGINES:**

- 13.3.1 Sealing of engines mandatory.
- 13.3.2 All stock casting numbers must be retained.
- 13.3.3 No rev kits allowed or any other timing assistance for valve, lifter, and pushrods opening or closing allowed.
- 13.3.4 Mechanical fuel pump only. No electric pumps allowed.
- 13.3.5 No glass or plastic fuel filters allowed.
- 13.3.6 Wet sump oiling only. No dry sump or external pumps or oil reservoir allowed.

- 13.3.7 No after market block or mounts allowed. Max overbore .060 only stock bore and stroke combinations, Dodge 360, Ford 351w, GM 350.
- 13.3.8 Blocks may be decked and de-burred. Internal oiling may be modified.
- 13.3.9 Must maintain stock firing order 1 8 4 3 6 5 7 2
- 13.3.10 No vacuum systems allowed.
- 13.3.11 Steel after market oil pans and pickups allowed. No aluminium oil pans.
- 13.3.12 Lifter valley and oil pan baffles allowed. Oil holes and return screens are allowed.
- 13.3.13 No relocation of lifters bores allowed.
- 13.3.14 Camshaft lubrication holes can be modified.
- 13.3.15 No strokers or de-stroking allowed. Ie...350 +/- .015
- 13.3.16 No performance enhancing coatings of any kind on engine parts is allowed.
- 13.3.17 Chevy, Pins, rings, bearings, rod bolts, nuts minimum weight 1280 grams assembly. Flat top pistons only.
- 13.3.18 Crankshaft minimum weight 48 lbs. No excessive machining.
- 13.3.19 Heads 76CC or larger open chamber cylinder.
- 13.3.20 No porting or Port matching or porting allowed.
- 13.3.21 Dual valve springs allowed. No beehive springs.
- 13.3.22 Roller rockers, 1.5 ratio only are allowed.
- 13.3.22 No neck down or super flow valves allowed. No back cutting of valves allowed. No titanium valves.
- 13.3.23 No fuel injected type heads.
- 13.3.22 Protopline heads #2237694167-194cc only. # angle valve grinds. Standard valve lengths only, standard stem 11/32 valves only.
- 13.3.24 Single plane aluminium intake only. Victor Jr. 2975 or Weiland TG7530.

14.0 **OILING:** Note the engine specification in 13.0. Super series cars may run dry sump. Only super series cars may run dry sump.

15.0 **CARBURETORS:** Crate engines Holley 0-80541-1 650cfm 4 bbl only with no modifications. WESCAR, WCSS and Katana engines Holley 4412 2bbl only with no modification allowed. Tech sheet attached.

15.1 Must have two (2) return springs at all times. Must be working.

16.0 **EXHAUST:** All cars must have a working muffler that can meet a noise level of 95 decibels at 100 feet. Exhaust must exit under vehicle and behind the drivers seat. It is recommended that it exits through the body or rear quarter panel. May not protrude outside the body with proper shield in place. No stainless steel systems allowed. System may be jet coated. No merge collectors.

17.0 **TRANSMISSION:** Any standard transmission is allowed. Must be in general production from Ford, GM, Dodge. Must function in all gears and can not be lightened or modified. No gun drilling or exotic parts. Richmond T-10 is allowed as long as it is synchronize and works in all gears.

17.1 No special built Brinn, Jerico or T-10 modified racing or standard racing

- built allowed.
- 17.2 No automatic transmissions allowed.
- 17.2 A clutch scatter shield is required. Clutches are to be stock diameter with stock diameter steel flywheel and steel pressure plate. Must be a 153 tooth and measure 12 7/8 diameter. Clutch disk must be 10 ½" inch in diameter and be steel.  
No Richmond 2 speed dog transmissions allowed.
- 18.0 **DRIVESHAFT:** Driver shaft must be steel. No aluminium or carbon fiber drive shafts allowed. Drive shafts must be painted white. Drive shaft hoops are mandatory and must be ¼" inch thick by 2.0" inch wide and mounted to the frame within 6.0" inches from the front yoke and 12.0" inches from the rear yoke.
- 19.0 **FUEL SYSTEM:** Fuel cell mandatory, maximum 22 gallons and must be an approved racing type soft bladder only. Fuel cell must be mounted behind the rear axle housing, between the frame rails. All fuel cells must be mounted no lower than 10.0" inches from the ground. Fuel cell must be enclosed in a separate container made of a minimum of 22 gauge steel. Fuel cell must have 2 guard protector bars centered behind the cell. Fuel cell must be a minimum of 8" inches from the rear bumper. Fuel cell and container must be mounted to the frame.
- 19.1 Fuel cell must have a roll over check valve in working order. Filler tube must be grounded to the fuel cell container.
- 19.2 Fuel cell must have a vent tube that exits the car at the rear and is venting no higher than the bottom of the fuel cell.
- 19.3 Fuel lines must be mounted above the bottom of the frame rails and between the frame rails. All fuel line must be made of steel or braided type fuel line only. No copper or aluminium line allowed. Fuel lines are not allowed in the drivers compartment. No electric fuel pumps allowed. All fuel filters must be metal case type.
- 20.0 **COOLING SYSTEMS:** All systems must be front mounted. The hood must close properly. One coolant overflow tank with a minimum of 1 quart is required. **No ethylene glycol based anti-freeze can be used.**
- 21.0 **ELECTRICAL/IGNITION:** All cars must have a working starter. The battery must be located outside the drivers compartment and securely mounted within the frame rails. Any stock distributors are allowed. No magnetos. Ignition switches to be clearly labelled in the off position and within the drivers reach when buckled in. May use after market ignition system.
- 22.0 **RADIOS:** Radios are required for all drivers, crew chiefs and/or spotters. All spotters are required to have radio, in contact with the driver, and recommend they monitor race control during the race. **All spotters must be in the spotters area as set up by ARCA West officials during the race. All radios frequencies must be registered with ARCA West.**

## **23.0 SUSPENSION:**

### **FRONT:**

- 23.1 5 inch or larger coil. Must seat in factory spring recess.
- 23.2 Stock OEM lower control arms. May be modification only for the addition of ball joint sleeves.
- 23.3 Port City/Victory Circle HD tubular arm #100-202-CL/R, and #100-202-CL/R-1 lower control arms are allowed. Tubular upper arms are allowed. Non adjustable.
- 23.4 Laser cut center links are allowed. Modified stock center link are allowed.
- 23.5 Rod ends can be used in place of tie rods. Aluminium tie rod sleeves are allowed. Highly recommend steel tie rod sleeves.
- 23.6 Stock production steel spindles only. No pinto spindles allowed. Must be dimensionally correct to factory specifications. No grinding or bending of spindles allowed. Spindle may be drilled for tie rod bolts.
- 23.7 No mono type ball joints allowed.
- 23.8 Steel bushings are allowed. No threaded rod ends on lower pivots Are allowed. Spherical bearings are allowed.
- 23.9 Sway bar must be one piece only.

## **REAR SUSPENSION:**

- 23.10 Leaf springs or 3 link only. No spring links allowed. 3<sup>rd</sup> link rubber bushings are allowed. .
- 23.11 No springs or shocks may be used to control the torsional rear end housing movement. No spring pan hard bars.
- 23.12 No spring, rubber or poly link trailing arms or pan-hard allowed.
- 23.13 Coil springs must be a minimum of 5" inches in diameter.

**24.0 STEERING:** Stock steering box and idler arm only. All steering must be approved by ARCA West.

## **25.0 SHOCK:**

- 25.1 Must be a steel body shocks only. Single or mono tube only. Non-adjustable shocks only. Schrader valves allowed.
- 25.2 Approved shocks are:
  - QA Shocks # 21, 22, 50,55, 57, and 59,
  - Bilstein # SZ, SL, SNS
  - Afco R19XX, S12XX and S10XX
  - Pro-TA, PGAll other shocks must be approved by ARCA West prior to use.
- 25.3 No exotic racing shocks allowed. No external or enlarged reservoirs.
- 25.4 No aluminium parts on shocks. Only aluminium exterior part can be the shaft side end gland. Rod ends must be steel.
- 25.5 Must be mounted directly to suspension. No cantilever or linkage set ups.

- 25.6 Only 4 shocks on the car.
- 25.7 No shocks inside springs.

**26.0 REAR ENDS:** Quick change or full floaters only. Must have steel axle tubes. No aluminium carries on 9" inch rear ends. Hubs may be steel or aluminium. Axels may be gun drilled. Opened or spooled rear ends only.

**26.1** No cambered rear ends are allowed. No exotic parts or metals allowed.

**26.2** No traction control devices of any kind are allowed.

**27.0 Brakes/Rotors/Hubs:** Must use a single piston cast iron/factory calliper. Check valve style circulatory systems allowed. No pump style systems allowed.

**27.1** May use aftermarket hub, but must be steel. Rear hubs may be aluminium.

**27.2** Brake rotor/hub must be dimensionally equal in size and weight to available factory hub. Rotor diameter must not exceed 12 inches.

**27.3** No wide five hubs.

**27.4** All cars must have 4 wheel disc brakes in working condition. No scalloped front or rear rotors.

**28.0 WHEELS:** Steel wheels only. Maximum wheel width is 10" inches. No home made wheels. Must have a minimum of 5 lugs, must be steel. Must have a minimum of 1" lugs nuts. Must have all lugs nuts in place.

**29.0 TIRES:** The official tire will be Goodyear. Right side tire 2863 and the left side tire 2862. Tires must be run in this combination

**29.1** The tires you qualify on, must be the same tires you start races on. Officials will determine tire rules for heat races.

**29.2** No tires softeners or treating of tires allowed. No altering of the tire is allowed.

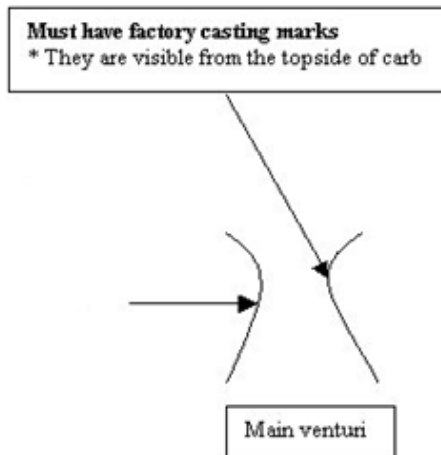
**29.3** Bleeders are allowed.

**29.4** Tire consumption may apply. Check with tech.

### **29.5 CARB TECH SHEET**

**Understand that there is ZERO tolerance on carb tech. Every part of the carb must be exact to the rules. If you have purchased your carb from a rebuilder, it is your responsibility to ensure the carb is correct. Carbs will be teched EVERY RACE. The carburetor rule is intended to allow all competitors to purchase a legal and competitive carb over the counter. Only minimal modifications are allowed to prepare this carb for oval racing. If your carb does not meet all of the specifications listed below, it is the responsibility of the driver or car owner to ensure the carb is legal.**

## Choke Horn



Must be completely intact and untouched.  
Choke plate, choke shaft and all other choke related linkages and components may be removed.

## Air Bleeds

Factory type air bleeds only.  
No screw in air bleeds Main Venturi/booster Venturi.  
No modifications to the main venturies or booster venturies.  
Booster venturi must be standard Holley airfoil type.  
Booster venturi must measure 0.385 +/- 0.010 ID.  
Booster venturi must measure 0.615 +/- 0.010 OD.  
Main venturi casting mark must be visible on apex of main venturi.  
Must pass Holley venturi tool.

## Carb Body

Mill mating surface for metering block square ok.  
No other milling, drilling or grinding allowed.

## Throttle Plate/Base Plate

Must be stock bore 1.6875 +/- 0.010.  
Must have factory brass Phillips screws – untouched.  
Swaged part of throttle plate screw must be intact.  
Throttle shaft and plate combined thickness must be 0.200 +/- 0.010.  
May have holes drilled in throttle plate.  
Must pass Holley base plate tool.

## Float Bowl

Must have factory float bowl.  
May use oval track float.  
May use h/d needle and seat.

## Metering Plate

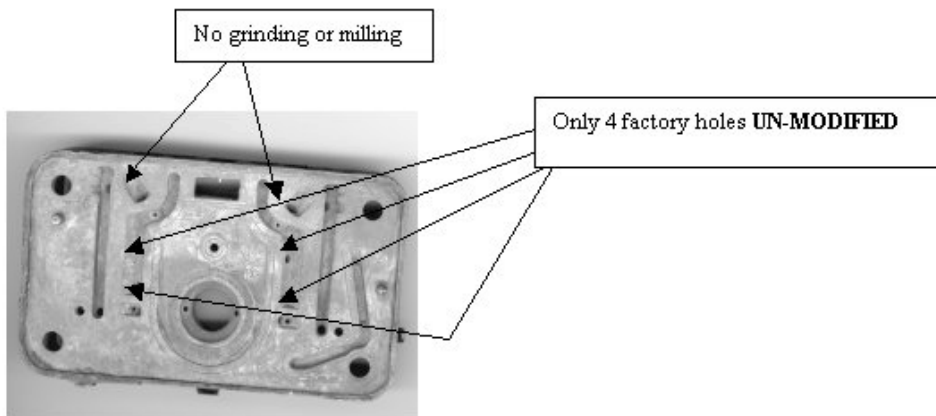
Must be factory production metering plate (no performance types).  
No external mixture adjusters allowed.

## Jet Side

2 holes for jets only, no other modifications allowed.  
Jets may be changed.

## Power Valve Side

May plug power valve.  
May change power valve.  
No grinding or modifying of metering plate.  
No extra holes allowed.  
No extra emulsion holes allowed in main well (only 4 factory holes TOTAL).



SEE PICTURE FOR CLARIFICATION\* If you have any questions, please check with the tech crew.