



- **IF A SPECIFICATION IS NOT OUTLINED IN THE RULE BOOK.THE OEM SERVICE MANUAL MUST BE USED AS A REFERENCE POINT, CORE ENGINE TO REMAIN STANDARD. MANUFACTURING TOLERANCES MUST BE TAKEN INTO CONSIDERATION WHEN COMPARING TO OEM SPECIFICATIONS.**
- **IF IT'S NOT IN THE RULE BOOK IT'S NOT ALLOWED**

LICENCES.

- All Australian Wingless Sprints Drivers must have a minimum NASR "A" licence.
- No AWSR driver is to compete in a wingless sprint race meeting not sanctioned by the state body or with non registered cars.
- Ambulance requirements to be as per relevant NASR safety standards.

TIME LINES

- The Engine Rules Are Frozen until 30/6/2012
- An option to extend these engine rules for a further 2 years subject to engine availability.



ENGINE MANAGEMENT.

- Standard VN,VP or VR OEM Electronic Control Module must be used,
- Fitted with a standard or after market MEMCAL.
- Maximum rev limit up to 6000 rpm.
- Sequential Fuel Injection not permitted.
- No “programmable on the fly” MEMCALs or MEMCALs that can be reprogrammed by the driver whilst racing are allowed.

DATA LOGGING

- Only dedicated, non downloadable, engine RPM measuring devices allowed.
- Multi channel data logging devices not allowed

IGNITION SYSTEM

- Direct fire ignition module and coil pack must be used.
- After Market Brands permitted.

PRE RACE SCRUTINEERING.

All AWSR car owners/drivers are to complete and sign a pre-scrutineering sheet prior to presenting their car for scrutineering at every race meeting

CHECKS.

- Engine sealing optional at state level, may be over ridden by event supplementary regs.
- Engines and rev limits may be checked at any time by race officials or scrutineers.
- The owner/driver or their representative must remove any required components as directed by the scrutineer/machine examiner or tech committee with in one hour of being asked to do so.
- Engines may be checked and sealed prior to and throughout the season by appointed AWS engine measurers at the car owners discretion, sealed engines will not be required to undertake re inspection of sealed components as long as seal is intact.
- If the engine or rev limit is outside the above specifications the engine will be deemed illegal and the penalties as per open sprintcar will apply.
- At the discretion of an AWSR scrutineer any suspect engines may be sealed and will be required to be presented to a location as directed, within the registered State of the car in question within 21 days for further technical inspection / measuring.
- Infringements for engine rule breaches may be handed out up to 21 days after an event where further technical investigation / measuring is required.



INJECTORS AND FUEL RAIL

- Fuel injectors may be modified to suit methanol.
- Aftermarket fuel injectors allowed provided there is no additions to the engine management system, fuel rails or manifold
- Fuel rails and injector ports in the inlet manifold must remain standard.
- A dash 6 fitting may only be added to the end of inlet spigot tail that bolts to the fuel rail. The inlet spigot tail must attach to the fuel rail by the standard method.
- The pressure regulator is not to be modified in anyway. The Vacuum line maybe disconnected
- No Mechanical forced induction or carburettors permitted.

FUEL PUMP AND LINES

- Electric fuel pump must be used, wired with a tachometric or oil pressure signal required for operation. **Single fuel pump only to be used.**
- Fuel pump must be mounted forward of engine plate and in the engine bay..
- Fuel return line must be fitted to the standard OEM fuel pressure regulator and return back to the fuel tank without any restriction.
- Fuel tap must be fitted to the feed line between the fuel tank and fuel pump on the right hand side of the cockpit, clearly marked ON/OFF.

SUMPS

- Engine oil pan and pick up may be modified.
- External pick up line permitted.
- No dry sumps permitted.
- A minimum 25mm inspection plug must be mounted into the oil pan above the oil level and close to the oil filter. (Or owner/driver must be prepared to remove sump if asked to do so for checking)



BORE AND STROKE

- (nominal) 96.52 x 86.36 mm
- Stroke must remain standard 86.3mm
- Maximum overbore of 0.040" allowed. Standard type replacement pistons can only be used. No race series pistons allowed.

CAMSHAFT

- Camshaft may be replaced with a standard aftermarket camshaft AWS to supply source of replacement camshaft.
- Aftermarket timing chains and gears may be used. Cam timing must be set to zero degrees advance when using adjustable chain/gear sets.

INLET MANIFOLD AND ACCESSORIES

- Throttle body must remain standard but may be repositioned on the manifold, internal dimension is 60mm max.
- Inlet manifold must remain std except for the following modifications:
- Throttle body mount may be repositioned on top of the manifold by use of a 3" **OD** tube in the center of the manifold without any major modifications.
- PCV Valve or passage **must** be blocked off and the return to the throttle body from the inlet manifold may be vented to the atmosphere. Additional natural crankcase ventilation via tappet covers allowed, no vent pumps, etc allowed.
- Water jackets maybe drilled and tapped to allow fitment of additional cooling outlets and fitment of water temperature sensors. No other water jacket reworking allowed.
- **Inlet manifold may be EXTERNALLY coated or machined for aesthetic purposes only.**
- No internal modifications allowed
- Throttle Linkage must be fitted with 2 independent return springs one on the butterfly and one on the pedal. **The OEM return spring fitted to the butterfly shaft is counted as one spring.**
- A half stirrup toe clip must be fitted to the accelerator pedal to enable manual closing of the throttle.

BALANCE

- Engine may be balanced as per OEM ie EXTERNAL BALANCE
- No "knife edge", no major modifications to con rod balance pads, no counter weights or balance shafts to be removed or disabled.



TYRES

- Tyre make and compound is open.

ENGINE.

For approved component part numbers refer to the AWSR website. Any part numbers not on the approved list are to be referred to the National Technical Committee.

- Engine must be a standard 3800cc V6 as used in the Holden Commodore and Toyota Lexen VN series II, VP or VR pre-Ecotec.
- VN series I and Ecotec engines are not permitted.
- The core engine must remain standard as per OEM.
- Harmonic Balancers must remain standard and cannot be modified at all. Different sized steering pump and water pump pulleys may be used.
- External modifications, which do not in any way affect performance gain, are allowed. **Example:** Aftermarket rocker covers, external oil filters.

COMPRESSION RATIO

- Compression ratio must not exceed 9.5:1
- As a guide the following website calculator can be used to calculate compression ratio:
<http://www.csgnetwork.com/compcalc.html>

CYLINDER HEADS

- Must remain standard OEM
- No Ecotec or aftermarket heads permitted.
- Valves may be replaced by .254mm oversized OEM valves.
- No head porting or valve inserts permitted.
- Valve seat min 1.0mm
- Valve springs may be replaced with aftermarket springs that comply to the same physical dimensions as the OEM springs.
- Shims may be used under the valve springs to obtain uniform seat pressure.

NON TECH ITEMS

- Engine Fasteners other than **NO** titanium allowed in the engine.
- Gaskets
- Alternator
- Power Steering Pump
- Air Cleaner
- Sump
- Rocker covers



- Minimum tube size for parallel 2 bar type HPB to be 1" OD x 0.095" W.T.
- Minimum tube size for T style HPB to be 1 1/4" OD x 0.083" W.T.
- Clamp on HPB must use minimum grade 5 bolts. Minimum bolt size 5/16" x 2 bolts per clamping point.

NUMBERS

- All cars to have a number fitted on the nose panel, Numbers must be as large as possible and carry a prefix according to car registration state, Northern Territory cars to have a NT prefix.

WINDOW NET

- Approved design compulsory on right hand side.
- Cars Fitted with Halo must have one on both sides.
- Exception, cars fitted with professionally built full containment seat, safety net is optional, including if fitted with a Halo.

WINGS.

- For Australian Wingless Sprints class NO wings or aerofoils permitted.

TRANSMISSION.

- For Australian Wingless Sprints class direct drive only.
- Must be able to disengage drive either (in out) in diff or driveline. Flex plate and ring gear must be forward of the engine plate.
- Aftermarket flex plates allowed.

ELECTRICAL.

- Battery location in the car is optional and can be placed under the seat.
- All batteries must be sealed no wet cell batteries allowed.
- Battery Mounts must be welded or bolted to the chassis. No clamps allowed.
- All cars must have a cover over the battery that will prevent shorting of terminals on any metal work.
- All cars must be capable of starting by a starter motor permanently fixed.

SUSPENSION

- No cockpit/driver adjustable sway bars allowed.



Supplementary Rules

Australian Wingless Sprint Racing

SUPPLEMENTARY RULES

It is the intention of the AWSR rules to allow competitors race a standard engine from a road going Commodore and be competitive. These rules are intended to allow freshening of a standard engine only

Australian Wingless Sprints class must meet all of the SCCA inc. regulations and specifications as listed in the rulebook. (Unless they are in conflict with these supplementary rules), plus meet any additional Australian Wingless Sprints supplementary rules.

WEIGHT.

- For Australian Wingless Sprints class only, minimum 635 kg. (1400 lbs) With driver as raced.
- Ballast is permitted as per SCCA open Sprintcar rules.

TRACK

- The front track of all cars shall be 1700mm maximum

ADDITIONAL CHASSIS BARWORK.

Head Protection Bars (HPB):

- Head protection bars (HPB) are mandatory and must be professionally welded or bolted to the side tubes of the main chassis roll cage. "T" style HPB must be professionally welded or bolted to the rear roll cage on the first straight piece of tube across the rear of the roll cage.
- The driver must be able to exit through the roof of the car with all of the safety gear fitted.
- All HPBs must be Chrome moly Steel tubing.
- HPB must offer protection of min 130mm from rear of roll cage
- HPB,s must be curved upwardly to give added strength.
- HPB's must pickup 3 spots min on the top of the roll cage
- The clearance between the topside of the roll cage, not including the HPB (no padding) is a min of 80mm.